TWO TO TANGO

Public-Private Collaboration for Productive Development Policies

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IDB

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Table of Contents

Preface

PUBLIC-PRIVATE COLLABORATION FOR PRODUCTIVE DEVELOPMENT POLICIES (PDPs) CANNOT BE FOUND IN ECONOMIC TEXTBOOKS. IN CONVENTIONAL THEory, either the market provides the best solutions based on its know-how and profit incentive or, when private returns deviate from social returns, the public sector takes note and intervenes with policies that correct the market outcome. If the market works well, the public sector should abstain from interfering; if the market fails, the public sector should act to bring it into line. In no case is there room for collaboration.

However, public-private collaboration figures prominently in the actual experience of successful productive development policies, some of it documented in the last chapter of the book. Policymakers need to access the deep knowledge held by private producers in order to learn about market failures and formulate the right policies to address them. Private actors may benefit from coordinating around public initiatives and sharing the broader purview that the public sector brings. Both public and private sectors can win from collaboration in information sharing and coordination, increasingly so as the economy modernizes.

On the other hand, public-private interaction may open the door for private capture of public policy and lead to damaging productive development policies. For all the promise of collaborative win-win solutions, private businessmen will always prefer to receive preferential treatment and subsidies over good policies. Good government is required to make the endeavor of public-private collaboration worthwhile. The history of industrial policy in Latin America often dominated by private capture of public policy is a reminder that strong institutions of public-private collaboration are needed.

This book analyzes 25 examples of public-private collaboration for PDPs in Argentina, Colombia, Costa Rica, Chile, and Uruguay with an eye to understanding the rationale and value of such collaboration as well as the challenges it poses. The cases reviewed clearly show that there is active private sector engagement in a wide variety of modalities, some more intense and proactive than others. The focus of this book on the interaction between the public and the private sector in connection with productive development is highly relevant for current practice in Latin America. The question is how to foster public-private interaction to make it a safe and effective tool of productivity growth and economic transformation.

Overall, the cases suggest that public-private collaboration free from capture is commonplace and brings a number of additional, unintended benefits. The experience shows that public-private alignment towards fruitful collaboration can in fact be accomplished in Latin America. Interestingly, some of the major impediments to better public-private collaboration were due not to private misbehavior but to insufficient public sector capabilities to deal with the private sector and coordinate a coherent public sector response. At the same time, the cases reviewed show that the threat of capture is, nevertheless, alive and remains a reason for concern. They shed light on some of the conditions that tend to keep the risk of capture under control but, at this stage, do not reveal systematic efforts at institutional design to address it effectively. How to advance firmly in this direction to deepen public-private collaboration remains an open challenge for researchers and policymakers alike. This book is a sound starting point in that quest.

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The editorial team was fortunate to have the contribution of the distinguished researchers whose work is featured in the book chapters. The construction of the book was a lengthy process during which the team benefited from many other valuable inputs. Some of the foundational ideas of this project originated in a seminal workshop at Harvard's Kennedy School where we benefited from inputs by Ricardo Hausmann, Dani Rodrik, Andrés Rodríguez-Clare, and Ben Ross Schneider, among others, The design of the terms of reference leading to the call for country papers was informed by background papers prepared by Jorge Cornick and Robert Devlin. The research conducted for the book was enriched by valuable comments and advice by many people during the authors' workshops celebrated in Washington. Finally, we thank Rita Funaro, David Einhorn and the rest of the editorial team for the editing of the publication.

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Overview: Public-Private Collaboration on Productive Development Policies[1]

Eduardo Fernández-Arias, Charles Sabel, Ernesto Stein,* and *Alberto Trejos

In the traditional view of productive development policies (PDPs), the roles of government and the private sector are completely separated. Market forces are powerful, and largely lead to desirable outcomes. When a market failure does arise that requires government intervention, a public sector entity identifies the problem and designs a solution. Government sets the rules and conditions, pursuing some collective goals, and firms act within those rules and conditions, attempting to maximize profits. If the rules are well designed, the individual and profit-seeking behavior of the firms leads to good results. In that context, with very well-informed governments, there is limited room for public-private interaction in PDPs. Each side can do its part independently of the other. An important advantage of this separation is to reduce the risks of capture, which is the danger that, whether government knows it or not, the collective objectives that it pursues are supplanted by individual rent-seeking by the private participants through self-interested manipulation of informational asymmetries or outright corruption.

[1] This multi-country research project was prepared as input for the Inter-American Development Bank's flagship publication *Development in the Americas: Rethinking Productive Development: Sound Policies and Institutions for Economic Transformation* (IDB, 2014). This overview chapter draws in part from the analysis conducted in Chapter 11 of that publication.

The approach and findings of this study of 25 PDPs in Argentina, Colombia, Costa Rica, Chile, and Uruguay depart from that view. Following newer developments in the literature, we assume that under current conditions the public sector cannot hope to have all the required knowledge to assess the needs for intervention and design appropriate policy, for the fundamental reason that some of that information is held by private firms (Rodrik, 2004). In such cases, government needs to extract the information, yet the profitability of those firms is affected by the shape and size of the resulting policy. At the heart of this informational asymmetry lies a classic principal-agent problem: the challenge for government as the principal is to conduct this interaction in a manner that induces firms to provide their information completely and truthfully, rather than manipulating it in order to bias the policy design in their favor. More generally, in many cases, each policy phase needs the involvement of the private sector. The design, implementation, feedback, and redesign of policy cannot be done by the public sector without some cooperative interaction with private agents. The problem of lack of trust due to differing motivations of public and private agents is only one of the impediments to their interaction. This process is further complicated by other issues such as communication, coordination, and the manner in which private agents interact not only with government, but with one another. Using a common conceptual template, the investigation of the 25 cases accordingly focuses on these issues and how they were, or were not, resolved.

A key finding of the study is that this working assumption is valid. We found no cases where government, disappointed with the difficulties of collaboration, chose to sever ties or could make meaningful policy in isolation. More importantly, many of the most interesting and successful policy efforts proved to be dynamic processes by which new questions and challenges emerged and were solved, and the relevant information was learned gradually by all participants. There was ample scope for fruitful and sustained collaboration, and some of the PDPs with more potential actually *required* private engagement for success.

This process of acquiring knowledge and using it jointly is an integral part of the policy question. In this sense the study's findings support the view of Hausmann, Rodrik, and Sabel (2008, 5) that a government should evaluate its PDP framework by asking if it has "set up the institutions that engage the bureaucrats in an ongoing conversation of pertinent themes with the private sector…[and] has the capacity to respond selectively, yet also quickly and using a variety of updated policies, to the economic opportunities that these conversations are helping identify.” This approach turns on its head the traditional focus of PDP analysis, shifting it from static policy design in isolation to a discussion about PDP institutions and, in particular, their ability to interact with the private sector.

Nonetheless, this interaction might be expected to increase the risks of capture. Before this project started, the research prior was indeed that the key matter at hand would relate to capture, the issue that has received most attention in economic theory. The working hypothesis was that successful policies would be associated with strong provisions to avoid capture.

However, in a second departure from the conventional understanding, we found that in most cases the private sector was so keenly interested in the implementation and success of policy—which benefits them directly—that the exchange of information that took place was direct and frank, without the strategic considerations that were anticipated. Of course, problems did not go away by magic, and some of the cases did exhibit the capture that was feared: the potential risks are still very much real. In particular, unsurprisingly, designing and implementing appropriate PDPs in declining sectors is much more difficult than in growing sectors that aim to compete in international markets. Nevertheless, while it stands to reason that how well things work out regarding capture depends largely on approach and design, the study did not identify the precise institutional features that in the best cases encouraged forms of dynamic collaboration that also checked capture.

One plausible explanation for the observation of relatively infrequent instances of capture, and the scarce countermeasures to control it, may simply be that the case studies in this volume consist of mostly safe policies. Perhaps riskier policies are not being implemented out of prudence, precisely because the capabilities to keep them under control are not in place. Or perhaps the cases are not representative of actual practice because riskier policies are hidden from view and tackled in more obscure arenas where policymakers have ample space for arbitrariness and the private sector can influence policymaking covertly. But despite all these qualifications supporting the idea that there is a latent risk of capture that if effectively suppressed would enable better PDPs, the crucial finding remains that there is no inevitable trade-off between fruitful collaboration between the public and private sectors and increased risk of capture. Successful policy designs are both more productively collaborative and less prone to capture, even if we do not yet fully understand how to institutionalize this complementarity.

The cases of public-private collaboration reported in this book span the following sectors and countries:

- The fashion, software, biodiesel, and sugar industries, along with an entrepreneurship program, in Argentina;
- The tourism, global services, and aquaculture clusters, along with innovation programs in healthcare and fruits, in Chile;
- The "umbrella" setup for competitiveness issues and productive transformation programs in the cosmetics, cleaning, business processing, and palm oil industries in Colombia, as well as the workings of the Private Council for Competitiveness, a unique private institution that plays an important role in all aspects of PDPs in this country;
- The rice, tourism, fisheries, and coffee sectors, and experience with attracting foreign direct investment, in Costa Rica; and
- Beef, blueberry, biotech, tourism, and shipbuilding industry programs in Uruguay.

The use of a common lens to examine these 25 diverse cases yields useful knowledge about the promise and risks of public-private collaboration. The reader can find the details of the analysis in the subsequent country chapters, which are followed by an analysis of experiences outside the region—mainly from the Czech Republic, Finland, Ireland, and New Zealand—that may contain lessons transferable to Latin America and the Caribbean, and serve as well to put the experience in the region in perspective. As an introduction to the more detailed analysis in the country chapters, this opening chapter presents the conceptual framework supporting the research effort and summarizes some of the overall lessons.

The Case for Public-Private Collaboration

There is substantial uncertainty in the public sector about both the *what* and the *how* of appropriate PDPs. Contrary to the private sector, the public sector does not have readily available signals to guide its performance in fulfilling its objectives or a process of competition to automatically weed out ineffective decisions. In contrast, the private sector receives information from prices, feedback from profitability, and benefits from the natural selection of the most efficient initiatives and firms through market competition. Identifying and carrying out socially beneficial PDPs requires elaborate information that the government usually does not have, including detailed knowledge about the production, trade, and usage of goods and services.

The private sector often has such knowledge, mainly in firms and industry associations that own and use the technology in the market. They know from direct experience the problems they face or the costs such problems impose, and are better positioned to evaluate the repercussions of alternative conditions. The public sector still needs to validate and integrate the pieces of information it may gather in a fragmented fashion from private sector sources, so there is clearly much to be gained by directly engaging the private sector in public policy issues. The process of identifying policies and then implementing them through all the policy phases (design, execution, monitoring/evaluation) can substantially benefit from public-private collaboration, if only to guide the process during each phase. What is more, the private sector may be interested in proactively putting forth PDP proposals to the public sector. For example, most activities require the provision of sector-specific collective inputs (such as worker training, certification, or specialized infrastructure), and the private sector has an interest in demonstrating the need for such inputs to the public sector.

Likewise, the private sector also sometimes has incomplete information, and information from the public sector can complement that of the private sector. The private sector benefits from the comprehensive public perspective on issues that are relevant for business but are outside the direct realm of individual firms or the sector. In some instances, the basis for collaboration may not even be information-sharing, but rather "learning-sharing." In these cases, the motivation for public-private interaction may be the need to engage in co-exploration of new directions unknown to either the public or the private sectors, to their mutual benefit.

Private sector active engagement is important to keeping the public sector accountable for effective policy delivery. What is more, it may contribute to mutual cooperation by the relevant public sector units, often isolated in their own functional silos in the public administration. By posing demands that call for an integrated response, the private partner may be a coalescing force for the public sector. It may also help to protect PDPs from undue influences of the political cycle. This engagement may bring a long-term perspective to policy by providing a safeguard for the policies to survive changes in key public officials and, especially, election-induced reshuffling. Public-private collaboration can help create a consensus above the political fray (Stiglitz, 1998), and can substitute for the stability that a grand political agreement on state policies in this area could provide. It is not uncommon for governments to engage the private sector simply to help preserve their policies over time. In the right proportions, engagement of the private sector can provide the balance between stability over the political cycle and healthy flexibility to make room for the policy perspectives of new government administrations.

The Perils of Private Sector Engagement

For all its important benefits, private sector engagement in PDPs also involves serious perils that need to be contained. The challenge is that those parties with the information that the government needs also have a profit motive that may distort the information they are willing to share. While good PDPs are, for the most part, presumably also in the interest of the private sector subject to them, other inefficient but self-serving policies may be even better for their private bottom line. In that case, private sector engagement may not help and may hinder policy quality. In some cases, this contradiction is particularly salient. For example, the information advantage of the private sector may lead to biased information or half-truths that impede the discovery and implementation of the best policies. In the extreme, private sector engagement may end up being a mechanism for seeking privileges, or rent-seeking, rather than any kind of information-sharing. In other words, the policymaker may be subject to capture due to the informational asymmetry that governs the public-private relationship.[2]

The risk of capture ranges from occasional opportunistic behavior to private parties assuming complete control of policy instruments by political maneuver. Other potential problems arise not from capture but, on the contrary, from the private sector never engaging or developing sufficient trust in government agents to even participate, which is not necessarily counterproductive but can nevertheless impede PDPs. Lack of trust may stem from a firm's lack of information (for example, it may doubt the intentions of the government, or fear that a competitor may end up being the main beneficiary at its expense), or its pessimism about the effectiveness with which government acts, especially if it requires coordination.

The risk of capture and rent-seeking by a private party at the expense of the policymaker, and the risk of limited engagement due to trust issues, depends on the type of policy in question.[3]

By design, vertical (also known as sectoral) policies can create benefits for some firms at the expense of others, and are therefore more prone to rent-seeking. They also make capture more likely in the long run, since a concentrated impact on a few agents gives them strong incentives to try to influence decision-makers, because for them the stakes are very high. In this regard, vertical policies tend to incite private sector interest (as long as the public sector is able to deliver) but be riskier than horizontal policies. Market intervention policies such as subsidies are also risky because, by directly impacting firms' financial bottom lines, they create a strong constituency against discontinuing promotional instruments even if they do not work. For this reason, these policies are riskier than the provision of public inputs, which usually fulfill a permanent production need

[2] The engagement of multinational corporations may add further political economy complexities to this government-business relationship that this publication does not explore.

[3] PDPs can be usefully classified according to their scope as vertical (specific for an economic sector) or horizontal (for all sectors). They can also be classified according to the type of instrument used in the provision of productive inputs (such as infrastructure) and market interventions that affect the profitability of the private sector (such as subsidies). These classifications determine four classes of PDPs. See IDB (2014, Chapter 2), for a detailed analysis of a PDP typology based on these two analytical dimensions.

and can be cost-shared with beneficiaries. It follows that vertical market interventions are doubly risky. Riskier policies require institutional capabilities to run them well (IDB, 2014, Chapter 10). Conversely, horizontal public inputs are both the least controversial and the least-risky policies, but may fail to foster active participation unless the private sector is well organized in high-level associations than can coordinate across sectors.

There are other margins along which this tension may rise or fall. Consider a case where a government is trying to assess the size of the transfer to a particular sector to compensate for a negative externality that prevents the sector from growing to its optimal size. In this case, the objective of the firm could be to provide incorrect information that inflates the size of the externality and thus of the subsidy it will receive. Alternatively, consider a government trying to figure out the technical specifications of a necessary public input, or a precise question that requires some research. In these examples, the best interest of the firm would be for the government to obtain information that is as accurate as possible, and there is no tension.

These perils are real because opportunities for capture abound. The widespread skepticism about industrial policy hinges, in equal parts, on legitimate doubts about government's ability to know what policies ought to achieve and on the likelihood that such policies will be used to transfer rents to private groups with privileged access to power, rather than to increase productivity (Rodrik, 2008). Public-private collaboration needs to successfully deal with both concerns, demonstrating that it is an effective tool to discover and implement successful policies. As the country studies in this volume demonstrate, important improvements have been made, but an antidote for capture has yet to be found. Capture remains an important peril for more ambitious PDPs that would invite more opportunities for abuse. It would be naïve to assume that the risk of capture has disappeared and thus feel free to open the floodgates to private engagement without appropriate institutions to keep tabs on it.

The Private Sector Counterpart

It takes two to tango. Public-private collaboration requires strong counterparts with compatible characteristics. The success of PDPs is in good measure dependent on the quality of the counterparts. In particular, successful public-private collaboration requires appropriate private sector capability. If the private sector has weak capability, fails to trust the government counterparts, lacks enthusiasm about the possibility of success, or is represented by the wrong parties, it will be difficult for effective policy to emerge. The key policy questions in this regard are (1) how to select the most suitable private counterparts, and (2) how to best foster the capability and expertise of the private sector for this purpose.

In practice, motivation is a key problem. How can individual firms be encouraged to develop expertise and become involved in costly engagement with the public sector that will benefit all firms in the sector? Even if the private sector were to trust the public sector to put the collaboration to good use and deliver the needed policies, which is not always the case, individual firms would like to free ride on the others to support information-exchange. Industry organizations have multiple ways to solve this coordination problem among member firms and to assess the quality and intentions of government, and for this reason are often suitable counterparts. The government may want to help such organizations "upgrade" so that they become better counterparts for collaboration. Doner and Schneider (2000) provide numerous examples of business associations that have contributed significantly to economic development both by pushing for better market-supporting institutions, such as property rights, and by participating in the provision of market-complementing services, such as setting standards and coordinating joint efforts to upgrade quality.[4] Following the preparation of this chapter, Schneider (2015) analyzed the conditions for effective cooperation between government and business in Latin America concerning industrial policy.[5]

On the other hand, this optimistic picture contrasts with the view, usually associated with Mancur Olson and others, that business associations are rent-seeking interest groups. There are plenty of examples of industry

[4] Asocolflores, the association of Colombian flower exporters, is a clear example of an industry association that has been very effective in dealing with coordination failures and promoting collective inputs that have allowed the sector to take off as a competitive exporter (Arbelaez, Meléndez and León, 2012).
[5] The study by Schneider, which grew out of a series of papers and projects sponsored by the Inter-American Development Bank, discusses many of the cases included in the country chapters of this book.

associations that focus on lobbying for short-term benefits. Executives of such associations are sometimes less aware of the long-term issues than individual firms themselves. Lack of expertise may also limit the usefulness of business associations. For example, industry associations play a constructive role in some trade agreements, but the truly detailed information useful for developing negotiating positions must come from individual firms themselves.

The strength of business associations is certainly important for their effectiveness in reaching their own objectives—but not necessarily for their socially beneficial contribution to PDPs. Strength is defined in terms of their degree of representation and capacity to execute different actions by inducing their members to commit resources and abide by association rules and decisions. Strength derives mostly from the ability to provide crucial benefits only to members, thereby making membership valuable and making exit costly. It is precisely this ability that allows associations to resolve the free-rider problem and coordinate collective actions—a critical feature of an effective counterpart in PDPs. However, strong business associations can direct their efforts to productive development activities or to lobbying for rents.[6] In summary, institutional capability is neutral: associations can use it for good or ill depending on the circumstances (Doner and Schneider, 2000).

What leads some associations to serve constructive roles while others engage largely in rent-seeking activities? Why do traditional industry associations in some countries serve as important government counterparts in deliberations on PDPs, while in other countries "representative" firms or individuals are preferred? The countries analyzed in this book offer an interesting variety of examples. The answers to these questions are important in order to understand the role of business associations in public-private collaboration. The behavior of industry associations may actually be shaped by public sector capabilities. Associations may fail to be geared toward constructive PDPs when they have little confidence in the public sector's ability to deliver. Perhaps associations are organized

[6] The negative example of Costa Rican rice, described in Chapter 2, is the result of a strong industry association. So the characterization of strong associations as the best counterpart is not always applicable.

for rent-seeking because they have found too few opportunities for constructive interaction and too many for capturing rents. The bottom line is that the public sector may hold the key to orienting strong business associations toward collaborating by being more responsive to legitimate demands and by not offering channels of communication for undue demands. The paucity of collaborative business associations in Latin America may be a reflection of low public sector capabilities.[7]

The question of how to interact with the private sector is key for modern PDPs. One option is for the government to adopt an "open architecture" (Hausmann and Rodrik, 2006) that gives greater latitude to the specifics of the organization and relies on the self-selection of private sector participants, which are supported in their technical capability and encouraged to take the initiative. However, notwithstanding a government's best efforts to pursue an open process, in some cases it may have to pick the sectors or actors that have the required capability to interact with the public sector. In other words, the priority in terms of which sectors/policies to engage first may be influenced not only by the value and urgency of the actions involved, but also by recognizing the agents that can get things done. Priority may need to be given to sectors with a less confrontational history, stronger leaders, a more concrete knowledge of their problems and opportunities, better coordination and communication skills, or stronger relations with academia and other institutions.

On occasion, private-private coordination may be a problem that the public sector can help solve. Firms in an industry often vary widely in terms of their interests and levels of access to policymakers, which makes it difficult to create a cohesive private counterpart that reflects all views. The public sector may play a role in helping the private sector articulate a unified view.[8]

[7] This is consistent with the successful experience of East Asian countries in granting benefits to associations in return for enhanced economic performance by their member firms and sectors, a grand bargain based on the ability to impose discipline on business associations if they do not hold up their end of the bargain.

[8] A good illustration is the case of the tourism cluster in Colonia (Uruguay), where public officials in charge of the program spent much of their initial energy overcoming differences and grudges between the private sector actors (see Chapter 6).

The appropriate modality of interaction with the private sector also depends on the type of policy it is meant to support. Horizontal policies call for private counterparts cutting across sectors, be they broad collectives (such as chambers of exporters), or well-selected representative individuals from various industries. By contrast, vertical policies call for sector-specific or subsector-specific private counterparts that match the selectivity of such policies. These councils or ad hoc consultation groups are often regional rather than national, which further helps to focus policies on specific objectives.

Vertical policies concerned with solving coordination problems often related to the provision of public inputs typically rely on narrow public-private councils delimited by the type of coordination problem that the policy is designed to address. These public-private councils (*mesas productivas,* as they are called in many countries) can deal with the group of firms to which the vertical policy is applicable, either through parallel links (as in similar firms in need of a collective input) or backward/forward links (as in the case of a productive chain), or they may facilitate investment coordination to resolve a "chicken-and-egg" problem. Which public-private councils are worth forming? The process must contemplate listening to private demands and setting up specific councils to deal with problems that may require policy solutions. At the same time, the public sector may unilaterally identify certain councils that appear to offer good opportunities for PDPs. Vertical market intervention policies, however, may call for broad private counterparts when they involve strategic bets, typically designed to foster new sectors that are not yet established. These kinds of transformational policies may call for private counterparts such as the successful public-private alliances outside the region analyzed in Chapter 7 and in Devlin and Moguillansky (2009). This high-level collaboration may validate criteria used for selecting priority sectors to be promoted and generate consensus around a development strategy.

Making the Public Sector a Better Partner

Given the importance of the private sector for PDPs, the public sector needs to adapt in order to engage constructively with the relevant private sector actors. While always keeping in mind their public mandate, it is useful for the leading public sector managers to understand the culture and be able to "speak the same language" as their private sector counterparts. Beyond the ability of public sector managers to engage their private counterparts effectively, it is important to understand that solving complex private sector problems may require the participation—and cooperation—of various public sector agencies. Thus, public sector managers must also possess the capability to elicit cooperation from other public sector agencies that are needed to provide integral solutions to the most pressing problems.

For example, the ministry of tourism may lead the engagement with the tourism industry in order to develop a new tourist destination, but in order to deliver the public inputs that are needed to unleash the project's potential, the ministry may need to elicit the cooperation of the public works ministry to pave access roads and of the labor ministry to train the workforce. The tourism minister is not in charge of road construction or worker training, and does not have authority over other ministries, so a system needs to be put in place to ensure that the needed public goods are actually delivered.[9] The country studies reveal that in many cases this is the Achilles' heel of public-private collaboration.

The case of emerging sectors is perhaps the most demanding in terms of the public sector fine-tuning its ability to engage, because these sectors suffer from weak representation and low visibility. At the same time, providing public inputs to help them establish themselves and develop may offer a very high productivity payoff. This case may merit creating a specialized intelligence unit charged with searching for information and identifying promising emerging sectors with which to conduct a dialogue.

[9] This may require a special institution in charge of ensuring public-public coordination (like PEMANDU in Malaysia), a budgetary process in which the tourism minister receives a budget allocation that can be used to contract services from cross-cutting ministries (as suggested in Hausmann, Rodrik, and Sabel, 2008), or the assignment of responsibility for productive policies to someone above the ministerial level (such as the Prime Minister, Vice President, or Chief of Cabinet) who can then use his or her authority to enforce cooperation when it is not forthcoming.

Making the Partnership Work

Relationships are never easy, and public-private collaboration in PDPs is no exception. A system abused by capture and riddled with rent-seeking—as has often been the case in many countries in the past—is clearly faulty. But avoiding these risks by severing the private sector from the process of PDPs would also be a failure. Both public-minded and rent-seeking behaviours can be rational responses by private counterparts, so the key for government is to create an environment that favors the former and discourages the latter. In this regard, the first task is to determine whether existing institutions for public-private interaction offer a good foundation upon which to build.

Ideally, the incentives for collaboration on the part of the private sector would be self-enforcing—meaning that the environment for interaction is shaped in such a way that it is in the self-interest of the private sector to collaborate in the design of sound PDPs and then support their adoption. This section will discuss a number of ideas that may help align public and private incentives in this manner. Alternatively, monitoring and rewards (or punishment)—depending on observed behavior—may be needed to stimulate private sector collaboration. This section also offers ideas in this regard. Together with the quality of the public and private counterparts discussed above, these issues of institutional design for public-private collaboration were the basis of the working hypotheses used by the researchers who conducted the country studies to analyze the degree of success of public-private collaboration in practice.

Abstain from Riskier Policies

As discussed, in well-conceived PDPs, firms benefit from public sector input only to the extent that they use it in production, and in so doing increase productivity. In other words, firms reap benefits only from succeeding in the marketplace. A market intervention policy, in contrast, may yield profits for the firms without productivity gains or any effort at all on their part. By barring or discouraging the demand for risky policies, risk can be controlled and the incentives for collaborating on sound policies increased. For example, countries with weak institutional capabilities may need to restrict vertical public-private councils to a discussion of productive bottlenecks and coordination problems that can be addressed through public sector input and refuse to consider market intervention policies that would open up the discussion to subsidies.[10]

Share the Burden

Some policies may impose a bigger cost on the government than the benefit perceived by private agents. That makes them inefficient, yet firms may still demand them. If a cost-benefit analysis is conducted to guide decision-making, firms may have the incentive to exaggerate the benefit. Given their informational advantage, they stand a good chance of convincing the public bureaucracy. While this may not be the prevalent case, it is important to address this risk.

The incentive-compatible solution to this problem is to ask the private counterpart to engage and contribute to the costs or sacrifices necessary to adopt the policy, thus confirming its worth. While cost-sharing also saves fiscal resources, the argument here is not so much about fiscal costs but rather about how to align incentives to ensure that only sound policies are implemented. Ideally, the share of the cost that the private counterpart would contribute should correspond to the benefit that counterpart would enjoy. If benefits are concentrated and the private sector counterpart covers the main beneficiaries, the input should be mostly paid by the private sector. This cost-sharing principle can also be applied to signal the intensity with which firms may demand a variety of alternative public inputs and in this way prioritize their provision.

The key problem with burden-sharing is coordination. Individual firms benefiting from a collective input ("a club good") would rather not contribute and instead let other firms pay for the cost. The private sector can participate in cost-sharing only if it is able to get its firms to agree on this collective action, because otherwise no individual firm would be willing

[10] The Productive Transformation Program (PTP) in Colombia, which organizes public-private collaboration in a number of selected sectors, is an example of preventing capture by excluding risky policies from consideration for such collaboration (see Chapter 3). The program requires that the conversations relate to public inputs, coordination problems, and other initiatives that contribute to the sector's productivity. By design, subsidies and protectionist measures are not part of the conversation.

to pay. If individual firms can be excluded from the benefits of a collective input (such as certification of product quality), cost-sharing can be implemented through user fees or a "members-only" restriction. If that is not the case (for example, a research center), then an external incentive is needed to compel individual firms to contribute. The authority of the government may provide a solution to this coordination problem by imposing a tax on a sector, at its own request, that is earmarked for the provision of the collective input in question.[11]

Cross-examination and Prior Scrutiny

The private sector party has better knowledge than its public sector counterpart, but does not share the same objective. In economics jargon, the private sector party is a "biased expert" (Grossman and Helpman, 2001). Thus, it is critical to devise methods that encourage the flow of knowledge while controlling for biased distortions. One possibility is to utilize peer-to-peer monitoring, including additional experts with opposing biases, so that they check on each other. Additional experts may be from competing sectors, academia, or perhaps the same sector in other countries (or even individual firms or individuals within the sector that may have particular reasons to collaborate with the public sector). In particular, the establishment of cross-sectoral programs introduces checks and balances by bringing in sectors with different interests, making collusion between the private sector and the authorities more difficult.

Conditionality and Performance-based Policies

The social value of a PDP may be enhanced if private beneficiaries of the policies are induced to maximize the social benefits. This may be achieved by aligning incentives of the private parties with policy goals. For example, PDPs to boost firm innovation and spark positive spillovers are more effective if beneficiaries actively engage in dissemination, which may be

[11] An excellent example is the case of rice in Entre Rios, Argentina, where the tax on rice sales was used to finance public sector research to develop a new, more productive rice variety well adapted to local conditions (Crespi et al., 2014, 48–49). This idea can be generalized to set priorities through self-financing, industry-specific investment boards, as proposed by Romer (1993).

induced by the use of conditionality or incentives to make dissemination more attractive.

Another approach to induce better outcomes could be to devise mechanisms to hold the private sector counterpart accountable for its claims when making policy demands. The private sector could be invited to make policy proposals that are justified by their social returns and include performance goals that the private sector commits to attain and which would be reviewed ex post. For example, if the policy demand is justified based on expected positive spillovers, the proposal should provide indicators of spillovers after the policy is put in place. Such an approach would facilitate ex ante evaluation of the proposed policy, conditioned on the information provided, and would also facilitate testing the accuracy of such information based on ex post performance. Unbiased experts would conduct the ex post examination and reach a conclusion about the adequacy of the information provided in the proposal. If the test is favorable, the private counterpart could be rewarded with continued collaboration; if the test is not favorable, future interactions would be more guarded, and less accommodating. This "trust but verify" approach would in turn provide better incentives for less-biased proposals, since highballing benefits would be costly.

Evaluation: Good Performance before Renewing Policy

Even without any biases or impediments to collaboration, it is technically difficult to select the right policies. Thus policymakers willing to try PDPs ought to be prepared to fail sometimes. However, it should be more feasible to spot failed policies after the fact. It is important to define evaluation methods that are suitable to assess the degree to which the original policy justification was verified in actual performance and how the policy could be improved. All too often, there are no clear, evaluable goals or evaluation criteria for PDPs, let alone actual evaluations. A sound system would allow a reasonable number of policy experiments to go wrong and also have a systematic way to weed them out (Rodrik, 2007).

Policies involving market interventions such as subsidies tend to generate "addiction"—that is, an interest in prolonging the promotional policy forever, regardless of performance. Evaluation is key to stopping those policies that are not justified. One solution is to apply sunset clauses so policies expire unless reapproved.[12] For this system to work, both the process of evaluation, and acting upon evaluation, need to be systematic. It is important to include all policies in this system so that those policies benefiting private interests do not find refuge in loopholes to avoid scrutiny. In practice, the policies more hidden from scrutiny are often those that provide implicit subsidies in the form of tax exemptions, a favorite of rent seekers. Sunset clauses should apply to both explicit and implicit benefits. These evaluation checks may be critical to contain the risk of capture because the benefit of rent-seeking diminishes in a system in which only sound policies survive over time.

Evaluation must be strict and binding. Independent participants are often needed to ensure there is no conflict of interest to cover mistakes, or, worse, capture. Negative evaluations should have consequences: it is critical that evaluation be a learning experience that leads to redesign. Beyond the technical aspects of evaluation, stronger collaboration requires the political capability to ensure that evaluation is not pro forma, but rather a strict and credible instrument to effectively separate the wheat from the chaff.

Checks and Balances

Appropriate internal controls in the public organizational structure may be useful to check capture. The distribution of authority across agencies, such as separation between design and implementation or regional delegation subject to central oversight, may provide desirable checks and balances. At the same time, there is a trade-off between controls and effectiveness. These mechanisms should not take forms that excessively weaken the public sector, impede action, or make the already challenging public-public coordination problems unmanageable.

Transparency and Accountability

All of the steps described above would greatly benefit from transparency. Exposing policy proposals, how policies are chosen and costs shared, and performance evaluations to interested parties and the wider public would

[12] This assumes a permanent need for policy. If not, policies should consist of one-off incentives rather than recurring benefits. For example, policies to attract foreign direct investment could involve up-front grants, rather than tax exemptions that may generate expectations and lead to pressures for continuity.

shine light on issues worth probing and allow scrutiny from adversarial viewpoints. Ideally, transparency standards for PDPs would be established, and an independent agency would regulate and monitor them.

However, informal consultations may in some cases be necessary, either as a preliminary step to more formal collaboration or as a complement to formal processes. In fact, complete openness is not always the best environment for exploratory dialogue. So caution is necessary: the tension between probity in the use of public resources and responsiveness versus discretion on the part of bureaucrats is especially high in these instances. Since responses to specific problems of productive sectors cannot be codified in advance, authorities need room to maneuver and react, albeit at the cost of some risk. This kind of flexible interaction will be accepted as legitimate and incorporated in mainstream policymaking only if it is known and transparent. This requires well-known rules and procedures for participation in the dialogue and for receiving policy benefits, as well as transparency in their application. Transparency should not be confused with an undue formality that impedes fluid dialogue, or with inclusiveness with no clear purpose.

Accountability is a necessary complement to transparency. The results of the interaction process should be evaluated credibly, and the evaluation should be disseminated to key stakeholders and the public at large. Every collaborative scheme ought to make sure that there is a mechanism for the private sector to hold the public sector accountable for following up on the decisions that are reached and for receiving feedback during the implementation of policies in response to perceived needs.

Public-Private Interaction in Practice

This section summarizes some of the main observations and lessons about public-private collaboration derived from the cases studied in Argentina, Colombia, Costa Rica, Chile, and Uruguay. It serves as an introduction to the detailed analysis in the country reports. The 25 Latin American experiences studied in this book display an interesting diversity not only because of the different country settings but also because they span successes and failures. Some feature task forces to address a very specific problem in a limited time period, while others involve permanent development programs. Some are umbrella efforts spanning the entire economy with involvement at the highest level, while others address horizontal policies, and yet others address industry-specific projects.

Wide Variety of Types of Private Sector Participation

Perhaps the most interesting contrast across our cases is the degree of engagement of the private sector in the process. In some, especially those in countries where the relationship between policymakers and private agents has traditionally been distant (even when cordial), the degree of involvement of the private sector is very limited. At the same time, and especially in places where the private sector is used to being more engaged, our cases stretch along several types of collaboration.

In some instances, the private sector assumes a consultative role in which government informs the private sector about its policy choices and decisions in a dialogue-based and participatory process, but private agents have a limited role that simply involves validating (or not) what they hear and perhaps volunteering some information. Deeper involvement by the private sector may include its participation in the joint design of the policy instruments. In this case, government engages private agents in the discussion about what to do, instead of just requiring information. This implies that the private sector plays more than an informational role. This broader participation may even include joint implementation, and perhaps also joint assessment, validation, and redesign. In some interesting instances—perhaps the most successful—public-private collaboration is a dynamic process that involves joint learning and a long-term effort, with evolving policies and objectives. In the extreme, private participation brings to mind the notion of policy outsourcing, as we documented in some cases where policy management is delegated to private actors, or at least to public-private institutions dominated by private actors. Such is the case of rice policy in Costa Rica, which is dominated by CONARROZ, the association of rice producers and processors. Depending on the circumstances this can be interpreted as an extreme form of capture.

The degree of private sector engagement in the policymaking process seems to be influenced not only by the nature of the policy, sector, and problem, but mostly by political traditions and expectations. In some places, business is expected to be near the policy design process on matters that affect it directly, while in others government (especially high-level officials) keeps a distance. In some examples—such as those documented cases in Chile—mere access to a high-level official seems to be infrequent for even the large entrepreneur, and thus direct contact between them is itself a valued result of their interaction. By contrast, there are other more "corporatist" situations—among our cases the extreme is Costa Rica—where access to government is taken for granted. In these settings, it is difficult to even validate policy initiatives if the affected private parties have not been consulted or have not participated in a significant way, sometimes even supplanting government altogether and, in the extreme, fully capturing the policy and the institutions involved. As a result, policies in Chile tend to be top-down while policies in Costa Rica tend to follow a more participatory, bottom-up approach.

Public-Private Collaboration Brings Additional Indirect Benefits

The value of collaboration may stretch beyond the resulting PDP and affect intangibles such as trust, market expectations, or disposition for future policy engagement. Dialogue in itself is valuable, and in some instances the public-private collaboration regarding one or many industrial policies may simply be the mechanism, or the pretext, through which deeper interaction between the two parties can start.

For example, the public-private collaboration in Argentina's Empleartec, a training program for the IT sector designed by the Software and IT Services Chamber of Commerce (CESSI) and the Ministry of Labor, Employment and Social Security (MTEySS), was greatly facilitated by the history of prior collaboration in the design of other training programs between these private and public actors. The program expanded its focus over time from training human resources in specific technologies defined by sponsoring firms (Microsoft, Oracle, Sun, Cisco and IBM) to include free and open-source programs and applications. This is one of a number of cases where part of the success derived from actions that were not envisioned at the outset, and where the flexible engagement of the parties allowed for responses to expand or modify the original purpose to address other problems.

Another example is the fashion industry collaboration between the textile chapter of Argentina's National Institute of Industrial Technology (INTI-Textiles) and Pro-Tejer, a nongovernmental organization created to advocate on behalf of the country's textile and apparel industry. The Street Design Circuits (SDC) program, which aimed to attract attention to the country's signature design phenomenon and which was the main program that came out of this collaboration, led to the creation of a forum called *Las cosas del quehacer*. Signature designers from all over the country were invited to the forum to discuss the country's fashion design issues. Interestingly, while the original SDC program lost momentum, *Las cosas del quehacer*, which was not part of the original program goals, grew into a new public-private collaboration initiative.

The international experience analyzed in the final chapter of this volume also shows that meaningful public-private dialogue with an open agenda, and in the spirit of co-exploration and consensus-building, has been important for some of the successful "catch-up" stories such as Finland, New Zealand, and Ireland.

Public-private collaboration efforts often play the simple role of providing a long-term perspective to policy. Engagement by private actors with long-term horizons may generate demands for policies to survive changes in key public officials and, especially, election-induced reshuffles. It is not uncommon that government seeks cooperation with the private sector simply to make sure that certain valuable initiatives are preserved over time. The case of the entrepreneurship program in Buenos Aires is an example: participants valued it, and despite contrary initial inclinations, a new government kept it going because of this interest. Of course, this is not the case in all political transitions, as Chile's Cluster Program illustrates.

Collaboration Free from Capture Is Commonplace

Before this project started, the research prior was that the key matter at hand would relate to capture, the issue that has received most attention in economic theory. The working hypothesis was that successful policies would be associated with strong provisions to avoid capture. However, in most cases analyzed here the private sector was so keenly interested in the implementation and success of policy—which benefits them directly—that the exchange of information that took place was direct and frank, without the strategic considerations that were anticipated. Examples are the very constructive and un-strategic cooperation and exchange of information that took place in the software and the textile cases in Argentina, or the successful Uruguayan cases. Of course, there are examples to the contrary as well. The manner in which collaboration unfolds in this regard depends largely on approach and design.[13] The key aspects of public-private collaboration that determine success or failure usually relate to practical problems of organization, communication, and trust.[14]

By and large, provided some basic conditions, firms appear willing to engage. As long as there is trust in the public sector's intentions and abilities, private agents commit significant costs and human resources, even when their direct reward is not obvious. Our cases include examples of private agents truly opening up their information and devoting key human resources to a surprising extent. For instance, in Chile's Clusters Program, when there were clear changes to be expected from their work, private agents engaged significantly with no apparent interest in free-riding.

Payoffs to such constructive efforts can be high—collaboration leads to virtuous circles by which private and public actors bring out the best in each other. Because of the frequent mistrust in the past, especially in times of greater interventionism, many barriers can only be removed if there are constructive attitudes on all fronts. For example, in Uruguay, the innovativeness of the private sector in proposing new solutions in the shipbuilding and biotech industries raised the quality of the government's involvement.

Other Unsuspected Major Constraints to Collaboration

One key constraint to collaboration is insufficient public sector capabilities. In particular, a recurrent problem appeared to be insufficient public-public cooperation. The organizational structure of most governments

[13] The textile case in Argentina is interesting in this regard. Pro-Tejer, as the name suggests, has traditionally advocated for protection of the sector. During a period when protectionist policies were off the table, Pro-Tejer came up with an interesting initiative to incorporate design into the textile and apparel sectors in Buenos Aires that, if successful, would result in more demand for the sector's products. Once more protectionist policies were on the table again, a number of participants gradually lost interest in the design project and reverted to their roots.

[14] At the same time, there may be some selection bias in our choice of cases to study, as the sample is geared toward learning lessons from what actually works. In fact, it is the case in the region today that riskier policies, such as those promoting strategic bets with subsidies, are often left off the agenda precisely to prevent capture.

impedes an integral approach to the private sector. Small, industry-specific ministries and institutions are in charge of interaction with private agents in a given industry, and tasked by mandate with the industry's progress. However, the policy instruments they need to carry out that mandate are not available to them, but rather are at the disposal of larger, more powerful ministries (transport, education, finance) that do not focus on particular industries. The authors of the Uruguayan cases attribute the success of the Meat Traceability Project to the fact that, due to the nature of the problem, the entire responsibility fell on a single ministry. Therefore, the inter-institutional communication problems that often arise in other cases were not present there. By the same token, the authors argue that the multiplicity of institutions involved in the innovation cabinet explains the difficulties faced in the Biotech Cluster.

This complication gives the private sector an additional role: its support or political pressure may be the tool that the weaker, industry-oriented institution in charge of *designing* the PDP uses in order to influence the stronger, more broadly oriented institution that holds the purse strings necessary for *implementing* the PDP. In some cases, public and private agents focused on the industry band together, so that the former uses the political value of the latter to leverage action in other parts of the public sector over which the public agent does not exercise direct control.

The quality of the public sector staff in charge is particularly important when the private sector is involved. Collaboration often breaks down if the private sector perceives that the government officials involved, either because of their lack of training or rank or their attitude, are either incapable or lack the authority to deliver their end of the bargain. In Chile, the problems of some consortium efforts stemmed from this issue. Low-level public officials prompted the participation of low-level officials from firms and chambers, and in the end the capacity to make decisions was curtailed.

As a solution, it is not uncommon for governments to set up special teams comprised of professionals of higher quality than regular bureaucrats and who earn better pay and do not belong to the civil service, and for this reason are freer to hire, fire, or reassign. One example of this approach, in Colombia, is the transfer of responsibility for the Productive Transformation Program from the Ministry of Commerce, Industry and Tourism to Bancoldex, a public bank whose management reports to this ministry but that operates under a private law regime, and thus has more flexibility to hire and fire personnel. Despite the obvious coordination problem this may create between these teams and the rest of government, bodies of this kind often are better able to deliver results.

In Uruguay, a source of problems was the tension between the civil service—which did not have the capability needed to foster collaboration—and the capabilities that were created outside the bureaucratic structure. The insiders resented and impeded progress by the outsiders, and the latter had more knowledge about the matters at hand but less political and administrative savvy. When this problem was well managed—as in the meat-industry case, where the necessary capabilities eventually were assimilated by institutions within the Ministry of Agriculture—good results emerged. It is often the case that the expertise of a key individual can make a disproportionate difference, as in the case of tourism in Chile, where the resignation of a single person completely changed the results of the program, or the case of shipbuilding in Uruguay.

Another key constraint is private-private cooperation. Often, firms in an industry are widely heterogeneous and have opposing interests and disparate levels of access to policymakers. For example, in the Costa Rican cases of fisheries and rice, large firms appeared to be in control of the interaction with policymakers, to the detriment of small producers.

Hence, because it is difficult to create an articulated private counterpart, it is also often the case that the public side has the mandate to make sure that the unheard voices and undisclosed information on the weaker end of the private side get heard and addressed. A nice illustration is the Tourism Cluster in Colonia, Uruguay, where much of the initial efforts of public officials in charge of the program was directed toward overcoming differences and grudges among the private sector actors. Their success at smoothing these troubled relationships is portrayed as one of the most important and durable benefits of the program, as it enabled future collaboration. Some of the actors involved in the Uruguayan case, such as the *Buquebus* transportation company, the Hotel Chamber, and the Gastronomy Chamber, were well-established and organized, and some had good access to local and national authorities. However, other cluster participants, such as the association of handicraft artisans and the rural tourism providers, were not being heard. The public sector was instrumental in making sure that the interests of these weaker actors were taken into account.

Interestingly, the engagement of the public sector can be the reason why private-private cooperation or academia-private sector cooperation emerges. In the case of consortia in Chile, the key actions in the more successful cases were not policy actions but rather efforts undertaken by private agents that in theory could have made those efforts without government participation. The role of the public sector was to act as a catalyst that brought those actors together in a constructive manner.

Last but not least, the rules and organizational structure for public-private collaboration matter. Our cases revealed a variety of mechanisms that worked, from large consultative bodies in Colombia to structured mechanics that determined participants and representatives in the coffee sector in Costa Rica, and to open mechanics about who engaged in the tourism board of the same country. While the actual organizational details vary widely, what is common is that the clearer the rules and the representation, the better the results. All the authors attribute negative results to some form of unclear rules, especially the absence of measurement and evaluation procedures (Chile, Uruguay). This is perhaps the key conclusion from some of the relatively unsuccessful Chilean cases that were analyzed. Despite the very high level of institutional capital in the country (arguably the highest in Latin America), the lack of a tradition of joint public-private learning and decision-making took its toll. Arms-length relationships were the norm, and few public officials had been in the private sector or spoke its language, and vice-versa. The lack of assessment mechanisms suitable for the clusters projects in Chile, and the frequent rotation of individuals in charge of the consortia projects, were partly responsible for the huge swings with the political cycle.

The Risk of Capture Persists

While the studies revealed that collaboration without capture is commonplace, they did not identify policy features designed to control capture that could account for this finding. The observation of relatively scarce capture in this set of case studies may simply indicate that the cases consist of mostly safe policies. Perhaps riskier policies are not being implemented out of prudence, precisely because the capabilities to keep them under control are not in place. Or perhaps the cases are not representative of actual practice because riskier policies are hidden from view and tackled in more obscure arenas where policymakers have ample space for arbitrariness and the private sector can influence policymaking covertly.

A closer look reveals a latent risk of capture. Some of the cases analyzed involved capture to various degrees and are an important reminder that the risk of capture needs to be controlled. In these cases, capture sometimes took a subtle and strategic form stemming from asymmetric information, while other times capture was more obvious, as when it resulted from the outright abuse of political power. The cases of rice and fisheries in Costa Rica clearly illustrate how private producers are ready to seek rents and protect unproductive activities if they are given the opportunity to succeed at it.[15] The agenda for institutional design outlined in the previous section remains central to seizing the potential for public-private collaboration for successful PDPs.

One general lesson in this regard is that designing and implementing appropriate PDPs in declining sectors is much more difficult than in growing sectors that aim to compete in international markets. When a country has a (real or latent) competitive edge in a particular activity and the need for policy emerges from the desire to exploit, enhance, or take advantage of that edge, the gains from doing so are potentially large enough to concentrate all the attention of the participants, who then engage with fully aligned objectives. A good example is Empleartec, a collaborative program between Argentina's Software and IT Services Chamber and the Ministry of Labor. This program focused on overcoming this rapidly growing industry's most salient constraint: the lack of adequately trained human resources. In this case, policy successfully addressed a specific shortage of skills in the sector and even managed (once public-private cooperation got going and trust was generated) to move on and target other skill gaps involving different types of firms and target populations.

[15] The worst example is perhaps the case of rice and CONARROZ in Costa Rica (see Chapter 2). One of the consequences of the policy has been the reduction of aggregate agricultural productivity. But the main implication is taxing away from the poorest 20 percent of the population as much as 6 percent of their real income, only to channel nearly two-thirds of that revenue to around 30 large landholders who also control the processing and commercialization of the product.

However, when an industry is declining, uncompetitive, or phasing out, even though there may be policies that increase productivity and reduce or minimize problems, it is far more tempting for the private sector to seek transfers or distortions that help this industry at the expense of others, rather than efficient solutions. Costa Rican cases illustrate this disparity clearly: competitive sectors like coffee and tourism prompted constructive collaboration while declining sectors, such as fisheries and rice, bred rent-seeking.

Another important observation is the corroboration that different types of PDPs involve different risks of capture. Market intervention instruments that transfer public financial resources directly, or the design of regulatory policies compliance with which may be costly to producers, can often lead to capture. This is in contrast to PDPs based on public inputs, especially those that address specific problems, where collaboration appears to flow naturally without the need for restrictive institutional designs to align incentives. The Street Design Circuits program in the fashion design sector in Argentina is illustrative in this regard. The program, which created a series of urban tours centered on fashion design stores, brought together the textile chapter of the National Institute for Industrial Technology (INTI) and Pro-Tejer, a nongovernmental organization created to promote the interests of the country's textile and apparel industry. Pro-Tejer initiated the program and provided a substantial portion of the funding for what turned out to be a constructive and successful collaboration. However, once the government increased its protectionist stance through a stringent system of discretionary import licenses, the behavior of Pro-Tejer shifted to lobbying for protection. Similar issues emerged when dealing with the entrepreneurship program, which allocated public funds. Meanwhile, other cases from Argentina, or the blueberries, shipbuilding, and meatpacking cases in Uruguay, did not present similar distractions or temptations due to the type of policy instrument and objective.

The cases analyzed in this book tend not to venture into risky policies. Perhaps for this very reason they do not exhibit most of the sophisticated institutional features designed to control capture described in the previous section. As mentioned, abstaining from risky policies is a way of making the partnership work. The Program for Productive Transformation in Colombia, which organizes public-private collaboration in a number of selected sectors, is a good example of preventing capture by excluding risky policies from consideration for public-private collaboration. The program requires that public-private conversations relate to public inputs, coordination problems, and other initiatives that contribute to the sector's productivity. By design, subsidies and protectionist measures are not part of that conversation.[16]

[16] Unfortunately, this does not preclude rent-seeking from taking place through other, sometimes more informal, channels.

2

What Works and What Doesn’t: Collaboration Costa Rican Style

Jorge Cornick, Jorge Jiménez,* and *Marcela Román

Following the crisis of the 1980s, Costa Rica’s economic policy, much like that of the rest of Latin America, shifted from inward-looking protectionism to export promotion and integration with the global economy. In Costa Rica, the public and private sectors have been deeply engaged in policy design and implementation, and their cooperation frequently takes the form of co-governance in which an autonomous institution in charge of policy for a particular economic sector is created with a board of directors comprised of representatives from both the public and private sectors, often with the public sector in a minority position.

This chapter analyzes five cases—tourism, fisheries, rice, coffee, and the attraction of foreign direct investment (FDI)—in which vertical productive development policies have been implemented within a framework of public-private collaboration. These cases encompass two success stories (tourism and FDI), one case that appears to be a social but not necessarily a productive success (coffee), and two cases that are outright failures (fisheries and rice).

Tourism

Costa Rica has succeeded in creating a world-class international brand in tourism based on the country’s natural environment, democratic institutions, and history of peace. Locally captured value added is high, there are many small and medium-size operators, and the industry is distributed throughout the country.

Lately, conflicts have arisen in some local communities regarding the use and availability of water. Environmental groups have objected to some projects, and development has taken place without adequate planning and infrastructure. Moreover, the tourism industry has become more diversified, and some analysts worry that the country might be at risk of losing its unique brand and veering toward undifferentiated mass tourism (Pratt, 2002). Despite these challenges, the industry has shown great resilience, visitor levels have returned to pre-crisis levels,[1] and new hotels are being built.

Overview of the Tourism Cluster

The private sector in the tourism cluster has a number of salient features:

- Many types of operators, including hotels, local and international airlines, ground transportation companies, restaurants, tour operators, nature guides, and car rental agencies, and around them, complex supply chains. Generally, they are well organized and, for the most part, prosperous.
- Heterogeneous operators, ranging from very small to very large, from rural community tourism to top-of-the-line international hotel chains, from exclusive independent boutiques to mass-market-oriented and all-inclusive resorts, and from rough adventure to ultimate comfort.
- A ubiquitous presence—while rice, fisheries, and coffee are naturally confined to certain geographical areas, tourism spans the country from the Pacific to the Caribbean coasts, from humid to dry tropical forests, from beaches to mountains, and from rural to urban areas.
- Well-organized participants, including two umbrella organizations that are the main voices of the sector: the Costa Rican Chamber of Hotels (CCH), whose membership includes the largest international

[1] According to data from the Costa Rican Tourism Institute, 2.1 million tourists visited Costa Rica in 2008. By 2011 the number was 2.2 million.

hotel chains as well as many local, independent hotels; and Canatur, the National Tourism Chamber. The CCH is a very influential organization, even though only 239 of Costa Rica's nearly 4,500 hotels are affiliated with it. Canatur has a more numerous and heterogeneous membership, including travel agencies, hotels, restaurants, regional chambers, tour operators, mass media and rental car agencies. Other smaller organizations represent the interests of particular subsectors within the cluster.

- Two important annual events, the National Hospitality Congress organized by the CCH, and the National Tourism Congress hosted by Canatur, which are the high points of the public-private dialogue process during a given year.

The Costa Rican Institute for Tourism (*Instituto Costarricense de Turismo* – ICT) is the public sector organization directly responsible for tourism policy. It is governed by an executive president (CEO and chairperson) and a six-member board of directors, half of whom are appointed by the cabinet at the beginning of each presidential term for eight-year terms. Its members include political appointees as well as representatives of the industry who are frequently appointed as CEOs. The board operates with considerable independence, as the law states that "the members of the board will discharge their duties with absolute independence from the executive branch" (Law 1917, Article 20). However, implementation of current tourism policy requires the cooperation of a wide swath of Costa Rica's public sector, including organizations in charge of transportation, energy, telecommunications and water infrastructure; training; environmental regulations; construction permits; and many others.

The ICT was created in 1955 by Law 1917 with a simple goal: to increase tourism in Costa Rica, as part of a wave of old-style industrial policy interventions. It was granted the authority to build and operate tourist facilities and to set and supervise prices charged for tourism services. However, tourism and the ICT gained prominence in Costa Rica much later, when the country shifted to an economic strategy that promoted integration into world markets rather than import-substitution industrialization. The ICT was assigned the roles of promoter of private sector development, coordinator of sectoral dialogue, and administrator of tourism development incentives. In 1985, the Law on Tourism Incentives (Law 6990) created an income tax credit equal to 50 percent of investments in certain tourism activities, subject to approval by the Tourism Regulatory Commission. This commission was abolished in 1992. While the incentives were justified in terms of national competitiveness, perhaps their role can be better understood as compensating for information asymmetries: when they were created, the tourism industry was already starting to take off, but no international hotel chains were operating in Costa Rica. With these incentives in place, local entrepreneurs were able to lure these chains into the country. From this standpoint, they can be considered a success, as currently many different chains operate in the country and build new hotels without fiscal incentives.

Law 8694 of 2008 boosted the ICT's resources with the creation of a US$15 tax levied on all tourists arriving by air. The proceeds from this tax are to be used exclusively for promotion and marketing (Article 2). This tax solves a free-rider problem: if promotion of Costa Rica as a destination were left to private operators, none of them would reap the full benefits of such promotion, and even those who spent nothing on it would benefit. Consequently, the level of investment would be suboptimal.

Although tourism was already a growing industry in the 1980s, it came of age in the 1990s. In 1991, the number of tourists coming to Costa Rica surpassed half a million.[2] By 1999, the country welcomed over a million tourists, and that number surged to 2 million by 2008. Total revenues contributed by the industry increased from US$719 million in 1997 to $2.174 billion in 2008 and, after a moderate contraction in 2009 and 2010, reached US$1.975 billion in 2011. Tourism as a share of GNP peaked at 7.9 percent in 2008, and has declined since then, mostly due to the rapid growth of the business services industry. Investment in projects that were awarded ICT's classification as a tourist attraction grew steadily after 2004 and reached US$696 million in 2008. Following a dip in 2009, investment accelerated, reaching US$233 million in 2011, near 2007 levels. From 1995 to 2011, the number of available hotel rooms grew from 25,329 to 44,307, while the number of hotels grew from 1,599 to 2,476.

[2] Unless otherwise indicated, all data are from ICT's Statistical Yearbooks from 2005 to 2011.

The average number of rooms per hotel remains at 17.9, indicating a high percentage of small and medium-size businesses in this segment of the industry. The ICT (2007, 2010) indicates that tourism benefits all regions of the country.

Institutional Arrangements and Current Policy

Costa Rica's tourism development policy can be divided into three stages:

- Spontaneous takeoff in the late 1970s to early 1980s, which capitalized on previous investments in environmental protection and human development.
- Incentive-based growth in the mid-1980s and early 1990s, which attracted international chains, including some first-tier players.
- Promotion-based development after 1992, when major tax incentives were abolished.[3]

The National Sustainable Tourism Plan lays out Costa Rica's current long-term tourism policy and establishes three key strategic pillars: differentiation, new products, and growth. It proposes four elements as the cornerstones of the country's brand—nature, coasts, culture, and sustainability—and defines four norms to guide activities: innovation, authenticity, sustainability, and improvement of current products.

The elements of the plan are a compromise between different visions of the sector. It proposes a diversified portfolio that will include large beach and sun projects but will emphasize authenticity, differentiation, the relationship with nature, and local culture, in which local small businesses will continue to play a central role. To deliver these products, the plan projects a need to increase the country's logistical and tourism capacity and emphasizes land-use planning and zoning regulations.

Interaction between the public and private sectors has been frequent and intense, and the industry has had considerable input in defining the promotional campaigns run by the ICT in its target markets. In the 1980s, an "industry competitiveness" exercise took place under the auspices of

[3] Promotion was part of the policy package all along but became the main component once fiscal incentives were abolished.

the INCAE Business School that appears to have had a long-lasting effect in terms of creating a shared vision regarding the foundations of Costa Rica's country brand and competitiveness in the tourism sector.

In the National Sustainable Tourism Plan, now in its third iteration, consultation and consensus are frequently mentioned. The process of developing the plan was not documented, but this analysis was able to reconstruct the process that led to the latest version of it. A draft of the first two chapters (Assessment and Vision) was prepared by the ICT and then submitted to a discussion group convened by Canatur. Some niche and regional chambers were also consulted. Finally, a two-day meeting with the participation of an estimated 50 industry representative, was held and consensus was reached. Based on that consensus, the ICT prepared a second version of the first two chapters, and presented them to its board for approval. Once approved, the operational portions of the plan were prepared, and the results were presented at the National Tourism Congress.

This is an interesting process in many ways. First, it is clear that the government went to great lengths to listen to the concerns of the private sector. Second, the issue of who actually represents the private sector is left to the sector's umbrella organization, Canatur, to sort out. Any organization that feels excluded has to raise the issue with Canatur, not with the ICT. Finally, the mandate (assessment and vision) is conceived jointly, but the programmatic portion—the technical details—are worked out by the ICT and presented to the industry's congress once they are nearly finalized. In other words, the public sector consults with the private sector but avoids the political problems associated with picking and choosing participants, and reserves for itself considerable leeway to adjust and fine-tune the final plan. Once the plan is adopted, an annual meeting with the private sector is scheduled to revise and update it.

Other mechanisms for cooperation are also in place. The most prominent is the regular appointment of private sector representatives either as ministers of tourism or as members of the ICT board. Sector appointees and political appointees are rotated on a fairly regular basis as heads of the ICT, and the private sector is nearly always represented on the board.

This form of cooperation raises several issues. First, the government has complete discretion as to whom it appoints. Whether the appointees represent a particular vision or subsector of the industry or are widely recognized as industry leaders with a comprehensive understanding of it is always an open question, and between these two extremes the government can choose as it wishes. Second, when active members of the sector are appointed to political positions, issues of conflict of interest, or at least the appearance of it, are likely to arise. Critics of the ICT accuse it of being nothing more than a tool in the hands of large-scale developers.

There is broad cooperation at the operational level, including joint public-private working groups on tourism promotion, sustainability certificates, water management certificates, security, and education. Cooperation also takes places on an ad hoc basis. For example, when the government was attempting to persuade airlines to schedule regular flights to the Daniel Oduber Airport in Guanacaste, private hoteliers financed a bond to guarantee to the first airline that decided to use the airport—Continental—that any losses incurred as a result of the new route would be covered by them, not the airline. The new route was a success, and the guarantee was never called. Finally, there are frequent informal consultations, and on critical issues higher authorities are normally available for consultations with the heads of Canatur and CCH and the managers of large or important projects.

While some nongovernmental organizations are part of Canatur, such organizations are, for the most part, excluded from the policy dialogue and process. Local communities have a well-defined participation mechanism, if not in the broader policymaking process, at least in the approval or rejection of particular projects, as community town meetings and consultation with local communities are mandatory elements of environmental impact studies. Moreover, organized communities can and have taken to the streets and to the courts and have delayed some projects for years.

Tourism policy in Costa Rica has a clear mandate: to promote the development of the sector and to increase the number of tourists arriving in the country. In a narrow sense, policy governance is simple: the ICT leads public policy for tourism, but it is empowered to foster a dialogue within the sector and to promote Costa Rica as a tourist destination, using special, earmarked taxes for this purpose. The private sector is involved in consultation processes, but it also has a say in defining the ICT's policies and actions through its representatives on the ICT board, participation in working groups, or more directly when sector representatives are appointed as ministers of tourism.

However, current policy, as expressed in the Sustainable Tourism Plan, calls for broad public sector interventions. Implementation of the plan requires the cooperation of authorities who deal with zoning regulations, fresh water supply and sewage disposal, logistics and transportation infrastructure, security, training and education, energy, telecommunications services, compliance with environmental standards, and other matters. When considered from this broader perspective, policy governance is particularly poor, because the ICT does not have the formal or informal authority required to align all (or any) of the relevant public sector entities with the National Sustainable Tourism Plan.

Policy Outcomes and the Role of Cooperation

Tourism developed spontaneously in Costa Rica, capitalizing on the country's investments in environmental protection and human resource development. The public sector did not choose it as a winner, but was quick to support it once it revealed itself as a potential winner. Fiscal incentives played a critical role in bringing international hotel chains to Costa Rica, and their success is evident in the fact that after the incentives were discontinued, international brands and investment continued to flow into the country. A sector-wide tax is used for international promotion and private sector representatives are part of the ICT's marketing committee. This arrangement, similar to the investment boards proposed by Romer (1993), has been quite successful.

An intensive dialogue between the private and public sector has been a constant in sector policy and has used a variety of channels, including formal and informal consultations, private sector representation on the board and on several ICT working committees, and the frequent appointment of industry leaders as CEOs of the ICT. Although cooperation has been close, the public sector has retained control over policy, and while some important players may have privileged access to public authorities, small operators of all kinds are prosperous and well organized and their voices are part of the policy process. Moreover, while fiscal incentives and tax exemptions were once quite generous, the sector continued to thrive after they were discontinued and has always been subject to market discipline. Public sector incentives have been properly aligned as well: both the ICT and its CEO have no other mission than to foster the development of tourism. Looking ahead, the main challenges are the shift from a narrow, vertical policy that capitalized on previous investments to a broad policy that will require the cooperation of vast swaths of the public sector, and managing growth while preserving the unique characteristics of Costa Rica's brand of tourism.

Fisheries

The fisheries sector is a story of failure: productivity has not increased, poverty among fishermen is endemic, natural stocks are being depleted, and even the ocean floor is being damaged by the use of wasteful and outdated fishing techniques.

The main features of the private fisheries sector in Costa Rica are the following:

- Many types of operators: fishing fleets from international industrial to local artisanal; intermediaries who collect fish from different parts of the coast to sell it for local consumption or for export; and exporters of canned, fresh, and frozen fish and seafood.
- Socioeconomically heterogeneous operators: from prosperous industrial-scale operators to poor artisanal fishermen.
- Geographic concentration: mainly along the Pacific coast.
- Unorganized small producers, with little voice in or impact on the policy process.

The main public sector institution that oversees fisheries is the Costa Rican Fishing Institute (*Instituto Costarricense de Pesca y Acuicultura* – INCOPESCA). While several ministers sit on INCOPESCA's board of directors, the fisheries sector is not a high priority for any of them. Formally, INCOPESCA is under the direction of the Ministry of Agriculture, whose main priority, not surprisingly, is agriculture, not fisheries. Many other entities have responsibilities regarding the sector, including the National Animal Health Service (SENASA), the Coast Guard, the Ministry of Environment and Energy (MINAE), Customs, the Institute of Social Welfare (IMAS), and the Costa Rican Oil Refinery, which provides subsidized fuel. A multi-institutional commission, created by executive decree in 2010,[4] was given a mandate to coordinate activities on the seas, including fishing. However, it has never been convened.

Sustainability and sector development were the justifications for the creation of INCOPESCA by Law 7384. However, production was dwindling and poverty was widespread among fishermen. Unlike in tourism, in which the productive development policy supported a winner, in fisheries the productive development policy aimed to save a loser. INCOPESCA's primary responsibilities include coordination of the fisheries and aquaculture sectors, promotion of their development, and the conservation and sustainable use of marine resources. It is in charge of proposing a National Fishing and Aquaculture Development Plan to the Ministry of Agriculture, monitoring the industry, issuing fishing licenses, promoting fish consumption, and regulating the consumption of marine products.

Law 8436 bestowed new responsibilities on INCOPESCA such as the monitoring of scientific research (Articles 17–22), the development of coastal communities (Article 3, clause o), and the supervision of community projects carried out by beneficiaries of economic subsidies. It also provided additional financial resources to INCOPESCA, granting it 20 percent of all payments received for licenses, registrations, and fines imposed on foreign vessels.

Coastal fish and shrimp were the predominant landings before the 1970s. Later, pelagic fish species and shrimp species from deeper waters began to dominate. By the mid-1980s, coastal water species had dwindled, and dolphin, tuna, sharks, billfish, and other deep-water species became the main landings.

National fleet landings grew steadily from 10,000 metric tons (MT) in the early 1980s to 27,000 MT in 2001, while annual reported landings of the international fleet were in the 3,000–6,000 MT per year range. Thus, at their peak in 2001, total fish landings were around 32,000 MT. Additionally, tuna captures reported by the international fleet (not landed in Costa Rica) amounted to between 20,000 and 30,000 MT per year.[5]

[4] Executive Decree No. 36005 MP-MINAET-MAG-SP-MOPT-TUR-RE.

[5] See the INCOPESCA website at http://www.incopesca.go.cr.

The decline in many of the fish populations was already taking place in the 1980s, but fishermen were constantly shifting toward other species so that total landings remained high or even increased until 2001. However, the ratio of coastal to deep-water landings shifted from 3:2 to 1:4, masking the decline in coastal landings (Mug-Villanueva, 2002).

In 1960, the trawling fleet had six boats. That number increased to 35 by 1980 and to 70 by 1989 (Alvarez and Ross, 2010), but declined to just 23 boats currently operating on a part-time basis. Similarly, shrimp landings had reached 500 MT by 1960 and increased to 4,500 MT by 1985, but fell to less than 1,000 MT in 2008 (Araya et al., 2007). The number of shrimp-exporting companies fell from 17 in 1999 to 7 by 2008.[6]

Fish-exporting companies have seen a similar evolution, falling from 35 companies in 1999 to only 27 by 2008, according to INCOPESCA. By 2001, seafood exports were close to US$134 million. A steady decline in seafood exports followed, falling to only US$77 million by 2007. The total value of fisheries production (including tuna landed by the international fleet) was US$299 million in 2001, but by 2007, it had further declined to US$187 million (IICE-UCR, 2010).

Although there has been a significant decrease in the number of fishing boats, it has not been sufficient to produce a recovery of fish stocks. While small and medium-sized artisanal fishermen reaped few benefits from the boom years, they have clearly felt the impact of the collapse of most fish stocks.

Institutional Arrangements and Current Policy

Fisheries policy is vertical but wide: it requires the participation of authorities in sanitation, trade, law enforcement, welfare, and energy, as well as public training institutions to fully carry out its mandate. However, INCOPESCA has neither the informal leadership nor the formal authority over the institution in charge of those policies. INCOPESCA has not fulfilled its legal obligation to develop a National Plan for Fishing and Agriculture (Article 5, Law 7384) due to a lack of the resources required to fulfill this regulatory role. Only 14 inspectors are available to enforce regulations in at

[6] Ibid.

least eight ports that operate 24 hours a day. Moreover, most of the catch is captured beyond 40 miles from the coastline, but INCOPESCA does not have a single boat able to sail in those waters. A resource that could potentially support INCOPESCA is the revenue received from licenses and permits. However, these fees have been set at very low levels, and the board has rejected any increases above adjustments for inflation, despite a specific order from the General Audit Office to do so.[7]

INCOPESCA's supreme governing body is its board of directors, made up of five representatives from the public sector and seven from the private sector.[8] Thus, the private sector has such tight control of the board that the public sector representatives frequently do not come to board meetings.

The public sector members are the chairpersons of the board and CEO, appointed by the Cabinet, the Ministers of Agriculture and of Science or their representatives, and a representative of the government, also appointed by the Cabinet. The private sector members are three representatives of local fishermen's associations, three representatives of the fisheries industry, and one representative of the export sector. The Cabinet, from short lists submitted by the private sector, appoints all representatives. Artisanal fishermen, by far the most numerous, are seldom represented on the board, which is dominated by the sector's largest players.

NGOs are usually quite critical of INCOPESCA's performance but support some institutional activities, particularly those aimed at promoting the sustainability of fishing practices. However, their involvement in the policymaking process is quite limited. Regional and global organizations, such as the Food and Agricultural Organization (FAO), the Organization of the Fisheries and Aquaculture Sectors in Central America (OSPESCA), and the Inter-American Tropical Tuna Commission (IATTC), influence policy development at INCOPESCA through regional collaborative agreements.

INCOPESCA's goals are broad and vague. They encompass resource protection, the development of coastal infrastructure, aid programs for

[7] Contraloría General de la República (2007).

[8] As regulated by Article 7 of Law 7384.

fishermen, training programs, the development of a national fleet, the development of industrial processes, the strengthening of seafood commerce, and others. The institution spreads itself among a great number of activities within a reduced budgetary framework.

With no plan, no participation of political authorities, no outside supervision, and weak representation of the majority of fishermen, decision-making is casuistic and probably influenced by short-term considerations rather than guided by long-term resource sustainability criteria. The weak presence of government representatives at board meetings cedes the initiative to the private sector. Private sector representatives propose most of the subjects discussed at the board meetings.[9] Rather than designing a mechanism that would allow it to extract useful information and implement productivity-enhancing policies, the public sector has surrendered policy management to the upper echelons of the private sector.

Policies and regulations are seldom implemented. Illegal fishing by national and international vessels is only loosely controlled. The potential for large-scale, unregulated, and unreported fishing is high, and INCOPESCA has not implemented any study or process to monitor the availability or conservation status of key fish stocks. No statistics on fisheries have been produced in the last five years and, consequently, policy and management decisions are made in an information vacuum.

Policy Outcomes and the Role of Cooperation

Overall performance of the sector has been poor: landings have been reduced by half, and the average income of artisanal fishermen has grown only 8 percent during the last decade (Alvarez, 2009). Most of the fish stocks have dwindled and, in the last decade, imports of fish from Asia and the United States have grown from almost none to 4,000 MT (OPESCA, 2009).

The connection between policy, goals, and activities is seriously hampered by the work of the board of directors. Its composition is a clear

[9] This is evident in the analysis of the minutes of the meetings of the Board of Directors from 2006–2011.

breach of the principle of neutrality insofar as members of the regulated sectors are members of the regulatory body. Public sector representatives are seldom present at the board meetings, which means that the private sector representatives on the board are the de facto decision-makers. It would appear that successive administrations over the past two decades have simply ceded policy to private sector actors.

The administration of a common good demands a delicate balance between promoting the activity and regulating the use of the resource. By withdrawing from the policymaking process and relinquishing policy control to a small but economically important subsector within the fishing industry, the public sector has all but guaranteed that such a balance will not be achieved and that the result will be overexploitation, or destruction, of the fishing stock.

In the 18 years since its inception, INCOPESCA has not been able to either prevent the overexploitation of fish stocks or significantly increase productivity and income for most fishermen. This is not the result of inept administration or even of inadequate resources, but rather the inevitable result of a deeply flawed institutional design.

The main source of profits for at least part of the fishing industry lies not in what the policy does but in what it fails to do: enforce the rules. This enables overexploitation, the use of illegal gear, banned activities (shark finning), and so forth.

Rice

Like fisheries, the rice industry is also a story of failure. A very heterogeneous sector, with both large and prosperous producers and small, poor, and poorly organized ones, it has established a system of rules and incentives that predominantly benefits large, prosperous producers. Rice is an important item in the budget of the poorest Costa Ricans, and the main result of the policy currently in place is to make this staple more expensive for them.

Overview of the Rice Sector

Currently, 1,490 farmers and 13 agro-industrialists, operating 17 processing plants, are registered with the National Rice Corporation (Conarroz), while the Ministry of Foreign Trade (COMEX) reports 144 importers, 13 of which have no contingent quota assigned. In addition, the production chain includes exporters, retailers, and seed, chemical, and equipment suppliers.

Conarroz is the primary institution in charge of rice sector policy. The National Groundwater, Irrigation, and Drainage Service (SENARA) and COMEX have a direct influence on sector activities. The Ministers of Agriculture and Livestock (MAG) and of Economy, Industry, and Commerce (MEIC) have a permanent seat on the board of directors of Conarroz, which has voting 11 members. The remaining members of the board are four representatives of agro-industry, five representatives of rice farmers, and an auditor elected by the General Assembly who has no voting power. Equity among market participants was put forth as the primary justification for the productive development policy, while increasing productivity was a secondary consideration. The need to protect and promote domestic rice production was also used to justify the need for government intervention.

Law 8285 of 2006 created Conarroz. Its main objective is to establish a system of relationships between rice farmers and agro-industrial companies that guarantees the rational and equitable participation of both sectors in this economic activity and fosters competitiveness and development of rice production while ensuring the availability of rice for local consumption.

Under Law 8285, purchases from farmers are audited, and farmers are prohibited from selling on behalf of another person or from reporting planted areas owned by someone else. Rice processors are required to pay producers no later than eight days after delivery of the product and are charged interest if payment is delayed. Likewise, agro-industrialists must submit a sworn statement to Conarroz detailing purchases, sales, prices, and inventories for the month being reported. They are also required to receive all of the rice offered to them, with some exceptions having to do with quality, market conditions, and processing capacity. Therefore, the majority of rice sales are guaranteed to the farmers. If there is excess production, surpluses can be exported (as long as at least three months of domestic supply is assured). When there is a shortfall, imports are allowed once Conarroz informs the MAG or MEIC of supply needs, either of which must then issue a decree.

By law, the MEIC can set maximum prices at different stages along the value chain (retail, wholesale, and exporters) based on technical information submitted by Conarroz. The profit margin between agents of the value chain of rice is determined by the price fixed by the MEIC: from 10 to 24 percent for the industrialist, depending on the milled rice quality (percent whole grain),[10] 5 percent to wholesalers, and 7 percent to retailers. The producer margin varies from 20 to 40 percent depending on the scale of the planting, the production region, and the technology used. Prices have consistently been set above the international price and are thus considered a subsidy by the World Trade Organization (WTO) well in excess of the maximum agricultural subsidy allowed for Costa Rica under its WTO obligations.

When national production is below national consumption (as it normally is), the law authorizes Conarroz to import at zero tariff. Import quotas are allocated to industrialists in proportion to their historical market share. Since the sale price remains at the fixed, above-international-market level set by the MEIC, importers make a substantial profit selling in the local market. Anyone who pays the 35 percent tax is free to import.

Domestic production has seen important variations in the last few years. The sown area grew from 47,252 hectares in 2006–2007 to 81,022 hectares in 2010–2011, while the number of farmers increased from 970 in 2008–2009 to 1,490 in 2010–2011. These increases were due mainly to the National Food Plan of 2008. This plan promoted rice production as part of a Food Safety Policy, which aimed to cover 80 percent of local consumption with domestic production. Together with the price-setting mechanism already described, this encouraged even cantaloupe growers to switch to rice production. In October 2011, the industrial sector refused to purchase all of the domestic production, alleging that inventories were excessive and that the higher price with regard to the imported husk rice made the activity unfeasible.

A high-level commission named by the Executive Branch was created within the framework of Conarroz, and an agreement was reached to

[10] The high end of this range (24 percent) is for the category with greater presence in the domestic market.

reduce the number of hectares from 81,000 to 60,000 and to lower the self-supply goal to 60 percent of domestic consumption. Some 100 farmers are expected to leave the sector. According to Conarroz data, rice production in 2010–2011 was 290,474 MT of paddy rice, with a planted area of 81,792 hectares and an average yield per hectare of 3.58 MT. This contrasts with average yields of 7 MT in the United States and 8 to 9 MT in Egypt and Australia, with the differences mostly due to natural conditions.

According to the Executive Secretariat for Agriculture Sector Planning *(Secretaria Ejecutiva de Planificación Sectorial Agropecuaria* – SEPSA), under the domestic prices set, all domestic producers are profitable, with profitability varying from 20 to 51 percent of revenues per hectare (SEPSA, 2008). However, when international prices are used, only large-scale producers under the irrigated sowing system are profitable. In this case, the producers from the Chorotega region included in the study showed lower production costs per MT than in the United States. Even though local agricultural yields are lower, the difference in price is attributable to private direct subsidies granted to producers in the United States. This means that without subsidies, Costa Rica's large producers could be competitive with U.S. producers in terms of yield.

In terms of area, rice farming in Costa Rica is dominated by upland rice (72 percent), while low-risk, irrigated rice represents 28 percent of the total area planted. Rice production is highly concentrated: 18 percent of producers contribute more than 80 percent of national production. These producers, with medium-size and large farms between 50 and 200 hectares, have nearly a 4.8 MT per hectare yield. In contrast, small producers, which account for 82 percent of the total number of rice producers, contribute only 22 percent of total production. These producers own farms that are between 10 and 50 hectares, and average less than 2 MT yields per hectare (MAG, 2012).

According to data from COMEX for the period 2010–2011, four industrial rice companies dominated 72 percent of the local grain market. Two are cooperatives sharing 17.6 percent of the market, and one—Coopeliberia—represents 88.8 percent of this total. There are 144 importers of milled rice and 12 of paddy rice. In both cases, the market is highly concentrated. In the case of paddy rice, 72 percent of the import quota goes to three agro-industrialists, and in the case of milled rice, nine companies account for 69.7 percent of total imports. Of the 12 industrial companies, five are among the major importers of hulled rice.

Institutional Arrangements and Current Policy

Rice policy is a narrow, vertical productive development policy. As explained earlier, Conarroz's objectives include equitable relations between market participants, productivity increases, and ensuring the availability of rice for domestic consumption. Conarroz has been for the most part successful in preventing social conflicts between market participants, but it has failed to improve sector productivity or promote technological innovation.

In order to promote domestic rice production, Costa Rica relies on high (35 percent) import tariffs and a system of prices set by the MAG at the wholesale and retail levels, based on technical production information submitted by Conarroz. When local production is not adequate to satisfy local demand, industrialists are allowed to import rice at a zero tariff and sell it at the previously fixed price, even though international prices are well below domestic prices. Importers are thus guaranteed a hefty margin. Large, highly productive local producers would be profitable even at world prices. Small, low-productivity producers, however, are barely profitable, if at all, even at the elevated domestic price.

As in fisheries (formally) and tourism (informally), cooperation between the public and private sectors in the productive development policy for fisheries has taken the form of co-governance: a specialized institution has been created to manage sector policy, with a board of directors that includes representatives of both the public and private sectors but in which the private sector is in complete control.[11] Private sector participation on the board is defined by law and, as in the case of fisheries, the public sector is in the minority. The rules for the selection of private sector representatives are clearly defined, and rice is a priority sector for the Ministers of both the MAG and MEIC.

The General Assembly is Conarroz's supreme governing body. It is made up of 16 producer representatives, 13 agro-industrialist representatives, and

[11] Something that might be perfectly fine when the institution is funded by the private sector, but hard to justify when funding comes from tariffs that allow overpricing of a basic component of the diet of the poor.

the Ministers of Agriculture and Livestock and of Economy. The board of directors is made up of four agribusiness representatives and five producer representatives appointed to two-year terms. In addition to the Minister or Deputy Minister of MAG, the Minister of MEIC also participates. The law also created a forum for public-private dialogue and negotiation—the National Rice Congress—made up of representatives of producers and agro-industrialists, with the participation of public authorities.

The three main instruments of sector policy are the (very high) external tariff; the allocation of tariff-free import quotas to ensure the availability of rice for local consumption, plus a small quota set in the United-States-Central America-Dominican Republic Free Trade Agreement (CAFTA-DR); and internal price setting. In theory, the government could liberalize internal prices at any or all stages in the production and marketing chain, and it could also unilaterally reduce the import tariff. Also in theory, the organization of Conarroz looks very similar to that of the Costa Rican Coffee Institute (ICAFE) (discussed below), and a fair representation of all segments in the production chain seems to be ensured by law. In practice, however, the situation is quite different.

All non-vertically integrated rice producers are dependent on agro-industrialists to sell their crops, and while the law minutely regulates the relationship between producers and processors and virtually guarantees that crops will be sold, the reality is that processors can refuse to buy the entire crop—as they did in October 2011, claiming excess inventories—and in so doing, inflict considerable damage on small producers.

Despite clear violations of its international obligations regarding agricultural subsidies, the government has been loath to liberalize domestic prices, and in fact has not done so. Every time it has made an attempt, producers and industrialists have announced and carried out protests, and the government, unwilling to see social peace disturbed, has systematically given in to those protests. It should be noted that these protests are legitimized because they are staged to defend small peasant farmers who would not remain in the market if international prices prevailed in the local market. These producers have not been presented with a credible alternative—which could be an exit strategy—to the current price support system. Therefore, they are more than willing to defend it, even if most of its benefits accrue to large producers and it does not make small producers prosperous. In short, the public sector does not exercise its authority, and small producers have been manipulated by large producers into becoming stalwart defenders of a policy that keeps them, at best, in a very precarious economic situation.

Both the MAG and the MEIC must submit an annual report, including sector policies, to the General Assembly. However, in the opinion of key interviewees, the report that is normally sent provides no more than a general outline, with little impact on the actual programs adopted by the board of Conarroz.

Conarroz also produces an annual report, but decision-making seems to be oriented by strictly political rather than technical criteria, and the report does not undertake a serious evaluation of the current policy and its effects. Despite this, at a technical level, the MAG, the MEIC, and, more recently, COMEX have tried to document concerns about the price distortions and international treaty violations brought about by the current policy.

Policy Outcomes and the Role of Cooperation

Conarroz has a dual mandate: to guarantee equitable relationships among all market participants and to foster sector growth and productivity. In practice, it has done little to increase productivity, and it has used the equity mandate to justify highly distorted prices for rice in Costa Rica that are well above international prices.

Most domestic rice producers would not be profitable at international prices, and they remain in the market only because high tariffs and high prices set by the public sector protect them from competition. Some large producers would be competitive at international prices, because even though their yield per hectare is lower than that of the United States (the main source of Costa Rican rice imports), their costs are also lower. However, 18 percent of all producers (medium and large) are responsible for 80 percent of rice production. Large producers also tend to be vertically integrated and participate in rice imports, and tariff-free rice is sold at the same price as tariff-paying rice, with the importers pocketing the difference under rules that make the largest companies the biggest winners. Thus, the benefits from high domestic prices accrue disproportionately to a small number of producers that do not need them, but poor consumers mainly pay the cost of high domestic prices, as rice is an important budgetary item for them. Policy design achieves goals that are very different from those stated in the law creating Conarroz and the current policy framework. This is not a failure of policy administration, but rather of policy design: both the policy mechanisms and the governance rules are skewed in favor of large producers and industrialists. These results may be surprising, given that Conarroz's organization and the rules regarding margins along the production chain resemble those of ICAFE, which has achieved very different results.

There are two key factors that explain the striking differences in performance between rice and coffee, despite the formal similarities between ICAFE and Conarroz. First, Costa Rican coffee is internationally competitive, and only those that succeed in the marketplace can make profits. The regulatory system ensures—or at least tries to ensure—that profits are equitably distributed among market participants. The situation in the rice sector is almost exactly the opposite of that in the coffee sector: most Costa Rican rice producers are not internationally competitive and, due to natural conditions, cannot aspire to become so. A price and import system that makes them privately profitable creates benefits that accrue mostly to large, prosperous, and vertically integrated producers, and is paid for by all consumers, with a particularly negative impact on the poorest. It is true that these producers would be competitive at international prices. What the current system does is turn normal profits into extraordinary profits, created by policy, not by success in the marketplace.

Second, in the coffee sector, small producers are well organized and almost as productive as large producers. The contrary is true in rice: small producers are not organized and their productivity is low, which means they are poor and have little influence in the policymaking process.

Coffee

Coffee production in Costa Rica dates to the 19th century. It was the country's first successful export crop, and a large number of small producers participated in the industry. Early on, coffee became a heavily regulated activity: the Defense of Coffee Institute was created in 1933. It was renamed the Costa Rican Coffee Office in 1948, and in 1985 became the Costa Rica

Coffee Institute (ICAFE). Its mission is to promote the activity and ensure equitable relations between producers, processors, and exporters, “not based on the economic rules of supply and demand, but through a public process of mediation…where, although the price of coffee is determined in international markets, it is datum for the determination of the agents in the coffee industry” (Aguilar, Barboza, and León, 1982, 132).

Coffee policy can thus be viewed as social policy with a productive development component, rather than as a pure productive development policy. The public sector’s intention was neither to support an incipient sector that had already demonstrated a competitive advantage—as in the case of tourism—nor to rescue a failing sector, such as fisheries. Rather, it was to ensure that the income created by Costa Rica’s most successful export sector (at the time) was equitably distributed and, almost incidentally, to promote the activity.

Overview of the Coffee Sector

Four different types of private agents participate in the coffee sector: growers, millers, toasters, and exporters. In some cases, producers are vertically integrated into milling, toasting, or exporting. Currently, there are 50,631 coffee growers (down from 76,163 in 2000). Of these, 92 percent have less than five hectares and represent 44 percent of the planted area; 6 percent have between five and 20 hectares, representing 21 percent of national planted area; and the remaining 2 percent have plantations over 20 hectares, representing 35 percent of the planted area.

There are 172 millers (up from 97 in 2000), 57 percent of which qualify as small (with an output of less than 3,000 bushels) and process 3 percent of the coffee produced; 38 percent of millers are considered medium-sized (between 3,000 and 7,000 bushels) and process 52 percent of the harvest; and 5 percent are large millers (more than 7,000 bushels) and process 44 percent of the harvest. There are 57 registered toasters and roasters, six more than a decade ago. About 16 percent are cooperatives. Finally, there are 336 exporters, 7 percent of which are cooperatives that place coffee with importing companies and/or roasters in consumer markets and capture the bulk of national production. Most exporters are small-scale (70 percent), and 95 percent of firms use futures markets for coverage.

Most participants in the coffee market belong to one of several organizations. The three most important ones are the National Chamber of Exporters of Coffee, the National Chamber of Coffee Growers, and the National Chamber of Coffee Producers, Millers, and Processors.

The National Chamber of Coffee Growers[12] is comprised of 33 coffee-producing firms (including farmers and coffee processors) that represent about one-fifth of all producers registered with ICAFE.[13] Its main objectives are to monitor national coffee policy and to defend and promote the interests of the sector. The National Chamber of Producers, Millers, and Processors was created in 1979 and brings together 23 roaster companies that offer the product (gold bean, roasted and packaged) to national and international consumers. According to ICAFE records, the chamber currently includes 40 percent of all roasters.

A second group of organizations includes the International Coffee Week Association (SINTERCAFE), Specialty Coffee Association of Costa Rica (SCACR), National Federation of Coffee Cooperatives RL (FENAC-Café, RL), and Women in Coffee Alliance of Costa Rica (WCACR).

ICAFE is the main public sector organization in charge of coffee sector policy. It is an autonomous institution, with a board of directors that includes both private and public sector representatives. Other government agencies that have an impact on coffee sector performance include the Ministry of Transportation, Ministry of the Environment, and National Bureau of Immigration. The latter is particularly important because most seasonal workers on coffee plantations are immigrants from Nicaragua and, to a lesser degree, from Panama, who are granted temporary work permits. ICAFE also provides information for national accounting purposes and guides decision-making in economic and trade policy, together with the Central Bank of Costa Rica, COMEX, and other agencies involved in the sector.

Equity was the main concern that led to the formulation of detailed regulations for the coffee sector and the creation of organizations

[12] See http://www.cafedecostarica.com/Coffee-Community/es/national-coffee-chamber/.
[13] In an interview, the Executive Director of ICAFE quoted a higher number of members. The text data is displayed on the chamber's website.

charged with applying them. It was feared that, in the absence of such regulations, processors and exporters would ignore the interests of the many small producers. Productivity was also a consideration, although a secondary one.

Law 2762 of 1961 on Coffee Producers, Processors, and Exporters defined the rules governing the relationship among sector participants. Law 6988 of 1985 created ICAFE. This legislation sets profit margins for millers (who obtain coffee from producers) and exporters (who obtain it from millers). Millers are permitted a 9 percent margin, and exporters a 2.5 percent margin. The rest, after costs have been deducted, accrues to producers. ICAFE estimates that producers receive 80 percent of the international reference price. Additionally, the regulations define payment procedures and times.

Implementation of these regulations requires detailed record keeping, and ICAFE has developed the operational capabilities to achieve this. No market participants appear to be interested in liberalizing the operation of the sector. All market participants must register with and be authorized by ICAFE and are bound by the rules established by law or by regulations issued by ICAFE. There is no "opting out." ICAFE is funded by a 1.5 percent tax on the free on board (FOB) value of coffee exports.

When considering volume produced, Costa Rica ranks 15th among coffee producers. Brazil, Vietnam, Indonesia, Colombia, India, and Ethiopia lead the ranking. In Latin America, Mexico, Honduras, Peru, Guatemala, El Salvador, and Nicaragua also rank above Costa Rica in terms of volume produced. Production has fallen significantly since 2000, when it reached 3.6 million fanegas (the agricultural unit of capacity). By 2009 production had declined to 1.9 million fanegas, recovering slightly to 2.1 million in the 2010–2011 harvest.

In Costa Rica, 92 percent of producers have less than five acres and deliver less than 100 bushels of coffee a year. Their plots represent 44 percent of the total growing area and 41 percent of national production. Medium-sized producers, defined as those with five to 20 hectares each, represent 6 percent of all producers and 21 percent of total planted area and contribute about 24 percent of national production. Finally, large producers, accounting for 2 percent of producers and 35 percent of the cultivated area, provide 35 percent of total production. Clearly, on a per-acre basis and in stark contrast to rice, small producers are almost as productive as medium-size and large producers.

On the industrial side, in 2010–2011, small millers processing less than 3,000 bushels processed 3.3 percent of the harvest; medium-sized millers represented 37.5 percent of all millers and processed 51.9 percent of the harvest; and the remaining 5.2 percent of millers, the largest ones, processed 44.8 percent of the harvest.

Prices for berries delivered by producers have been trending upward, going from CRC 16,774 in 1994 to CRC 93,084 in 2010. Average prices for exported coffee declined from 1994 to 2001 and have shown an upward trend since then. Costa Rica sells a significant and increasing portion of its harvest on the international market, with price differentials related to quality. On average, between 2006 and 2010, Costa Rica obtained an additional $16.70 per 46 kg bag.[14] Among 13 leading coffee-producing countries, Costa Rica ranks third in terms of price per kilogram, exceeded only by Kenya and Colombia (ICAFE, 2012).

It should be noted that Costa Rica sells mostly products with low value added. Green coffee represents 99 percent of total exports by volume, with roasted coffee representing 0.9 percent of exports and coffee extracts, essences, and concentrates representing 0.1 percent. However, in recent years the volume and share of roasted coffee have increased, indicating greater specialization in the sector. The main export destinations are the United States (56 percent of Costa Rican exports), Belgium and Luxembourg (11 percent), Germany, and Italy.

Institutional Arrangements and Current Policy

The coffee productive development policy is vertical and narrow: inputs supplied by the broader public sector are already largely in place, which is not surprising given coffee's long history in Costa Rica. This productive development policy places great emphasis on detailed regulation of the relationships between market participants in the coffee sector, to the point of making coffee the most highly regulated economic activity in

[14] The behavior of the FOB export price obtained by Café de Costa Rica with respect to the average price of the first and second positions of futures contracts traded on the Intercontinental Exchange.

the country. A democratic and clearly defined governance structure, adequate funding, meticulous record keeping, and administrative independence and skill have enabled the productive development policy to fulfill its role with great legitimacy, very little conflict between market participants, and the general acquiescence of all agents in the coffee sector.

The productive development policy has taken the form of co-governance. Policy implementation is delegated to an autonomous institution, governed by a board with public and private sector representatives, on which the public sector is in the minority. Unlike other sectors, the rules for the selection of private sector representatives are defined by law and rigorously enforced, so fair representation of all market participants is ensured. The existence of strong private sector organizations at all levels of the production chain, including cooperatives that bring together small producers, facilitates this participation and provides the coffee industry with the most democratic productive development policy in terms of private sector participation among the five cases under study. ICAFE governs itself with considerable independence from political authority. Unlike the rice and fisheries sectors, small producers are well represented, and the legal framework is designed to guarantee them a considerable share of the sector's earnings. The National Coffee Congress appoints ICAFE's board of directors, following detailed sector representation rules. Both the Congress and the board are organized along democratic principles, and all participants in the coffee industry are represented. The Congress is comprised of representatives of producers (the number of delegates varies, with one for every 1,500 farmers recorded by each coffee region), nine representatives of processors, six of exporters, two of roasters, and one from the executive branch.

The board is composed of nine members and eight alternates: five members and four alternates are from the productive sector, covering all of the coffee electoral regions, and one member and one alternate are for the exporters, millers, and roasters. Finally, the Minister of Agriculture and Livestock or another representative of the executive branch with equal or higher rank are appointed by the Governing Council, along with a deputy. The board, in turn, appoints its president and an executive director.

ICAFE has administrative autonomy, but it is subject to the rule of law and must follow the General Law on Public Administration. It is accountable to the General Audit of the Republic (GCR). As established by the GCF Organic Law (Law 7428 of September 7, 1994), the General Law on Internal Control (Law 8292 of July 31, 2002) and related regulations, ICAFE has an Internal Auditor that follows the guidelines set by the GCR and reports directly to the ICAFE board. The auditor carries out surveillance, monitoring, and control of the status and progress of the institute (Article 125 of the Regulation). ICAFE publishes an annual financial statement in the official Gazette as well as an annual report of its activities. At the close of each fiscal year, a financial report is prepared and presented to the National Coffee Congress and certified by an external auditor. In general, the reports published are complete but descriptive, with no results-based evaluation of ICAFE's activity.

Policy Outcomes and the Role of Cooperation

ICAFE is a well-funded organization that has exhibited the organizational and technical capabilities required to fulfill its main responsibility: to administer a system that regulates the relationships between coffee sector participants with the aim of ensuring fair and equitable participation in the sector's profits by producers, millers, roasters, and exporters. From this point of view, ICAFE has been quite a success. The fact that the public sector has only marginal participation in running the organization has not hindered its effectiveness, as ICAFE has proven itself capable of enforcing the laws governing the sector. Two key success factors are that small producers are numerous, well organized, and well represented at all levels of ICAFE's organization, and that they are almost as productive as larger producers.

However, ICAFE or, more generally, Costa Rica's coffee sector productive development policy, can also be seen as a missed opportunity. While the country has produced high-quality coffee, it has not aggressively sought price differentials based on quality, nor has it climbed up the value chain. Most Costa Rican coffee is sold as dry but otherwise unprocessed grain. Although producers of high-quality coffee are increasingly able to obtain a price premium, and small-scale efforts to sell processed, packaged coffee have proven successful, this has been the result of private initiatives rather than broad efforts coordinated by ICAFE.

One perspective is that Costa Rica has been able to grow high-quality coffee and ensure equitable relationships among market participants, and this coffee is bought at relatively good prices by foreign importers. But Costa Rica has done very little to actually sell coffee, let alone high-value-added, branded, consumer-ready coffee. Given the high level of organization of producers, including small producers, and the demonstrated capabilities of ICAFE, this seems to be a missed opportunity. Climbing up the value chain could, however, disrupt the current arrangements, and would require a less regulated and more innovative and initiative-inducing market. Costa Rica has done well with the current productive development policy. To do better, it might need to redefine the current model.

Attracting Foreign Direct Investment

After the economic crisis of the 1980s, Costa Rica shifted from an import-substitution and industrialization economic strategy to one that emphasized integration into the global economy via exports and the attraction of FDI. Like many other countries, Costa Rica's first priority in the aftermath of the crisis was employment creation. However, unlike most other countries, Costa Rica has been able to systematically climb up the value-added chain and move from (cheap) labor-intensive exports to increasingly complex and knowledge-intensive exports, fueled by the country's very successful FDI attraction programs. Attracting FDI was entrusted to the Costa Rican Investment Promotion Agency (*Coalición Costarricense de Iniciativas de Desarrollo – CINDE*), a private organization that collaborates closely with COMEX and the Export Promotion Agency (Procomer) of the government of Costa Rica.

Overview of Foreign Direct Investment

Although multinational corporations are the target of Costa Rica's FDI attraction programs, they did not play a significant role in the design of those programs. Once established in Costa Rica, however, multinationals do have an interest in policy continuity, and they convey their concerns and preferences to the government, either directly or indirectly, via CINDE and other channels.

CINDE, on the other hand, is probably best characterized as a quasi-public entity: it is formally private but fulfills a public role and is recognized as the country's FDI attraction agency. A third and frequently overlooked private sector segment is free-zone operators and their association, AZOFRAN. This association has not played a role in the design of FDI and export promotion policies, but it does play a role in the stability of free zone legislation.

The organization directly responsible for trade policy and FDI is COMEX, created by Law 7638 in 1996. This law also created Procomer, an export promotion agency that works under COMEX but has an independent board of directors and private sector-like rules of operation.

The Customs Service, part of the Ministry of Finance, plays a crucial operational role. Other entities are involved on an ad hoc basis. These include the Costa Rican Power Institute (ICE), which was crucial in building power lines without which Intel's plants in Costa Rica could not operate; and the Ministry of Transportation, which has on occasion built small infrastructure projects specifically tailored to the needs of free-zone exporters.

Like the Costa Rican Institute for Tourism (ICT), COMEX lacks formal authority over those public agencies whose cooperation it needs to fulfill its mandate. Unlike the ICT, however, the interventions that COMEX requires tend to be surgical, and COMEX has had enough high-level political support to ensure that those interventions are delivered, although not always as quickly as desired.

Costa Rica's policy of integration into the global market has been broadly justified with standard economic arguments. There was a recognition of both the limitations of the local market as a basis for economic growth and simultaneously of the gains from trade that a small economy like Costa Rica could realize if it abandoned its inward-looking economic policies in favor of an outward-looking policy.

As this policy has been implemented through various legal instruments, formal policies have been put in place to support each one of them: presidential decrees reducing tariffs; laws setting up fiscal incentives for nontraditional exports to third markets (that is, markets outside Central America); policies for tourism; the creation of public institutions in charge of trade policy; special importation regimes for exporters; and the creation of free zones or special processing zones (for export-oriented companies initially, and today for all companies that meet certain requirements needed to comply with WTO regulations).

Delving into the details of each of these instruments would take us too far afield. Suffice it to say that the country recognized the need to compensate for its previous anti-export bias and to jump-start export-oriented activities. At the same time, it recognized the need to create permanent institutions in charge of trade policy, which it achieved by transferring a project ascribed to the Office of the President to the Ministry of Trade, and to create special processing zones for exporters that would offer fiscal incentives, mechanisms to expedite what could otherwise be paralyzing red tape, and the infrastructure required for the operation of companies with exacting needs in terms of access to transportation, telecommunications, energy, and other public services. This was achieved through the creation of free zones.

To promote integration into the global economy and exports, Costa Rica has adopted a number of laws that, while not directly regulating CINDE's FDI attraction activities, provide the institutional and regulatory framework without which those activities would be fruitless.

Tariff Reductions

Tariff reductions began in 1986 and intensified by 1988. Since then, Costa Rica has signed free trade agreements with countries that represent more than 80 percent of its external trade, setting tariffs at zero, with a few exceptions that will be phased out over time.

Fiscal Incentives for Export Promotion

Fiscal incentives for export promotion, known as CATs, became important in 1984, when an emergency law provided exporters of nontraditional goods with tradable certificates equivalent to 20 percent of their sales. While these are no longer available, they played an important role in jump-starting nontraditional exports.

Free Trade Zones

Law 7210 of 1990, amended in 1994, 1998, and 2010, created free trade zones. Initially, only export-oriented firms could apply for this support. The main purpose of the 2010 amendment was to make the regime legal according to the WTO, with no special provisions for exporting firms.

World Trade Organization and Free Trade Agreements

As part of its efforts to insert itself into the global economy, Costa Rica joined the WTO in 1995 and has signed free trade agreements with Central America, Mexico, Canada, the United States, Chile, the Caribbean, China, Panama, and the Dominican Republic. Agreements with Peru and Singapore have been negotiated and are pending legislative action. Negotiations of an Association Agreement with the European Union have been completed and the text is in the process of review. Agreements with Canada and with the European Free Trade Association, and an update of the treaty with Mexico, are being negotiated.

Total exports of goods and services were estimated at slightly more than US$1 billion in 1980, and reached almost US$16 billion by 2012. Traditional exports, which comprised over 55 percent of total exports in 1980, declined to 7.9 percent in 2012 (COMEX, undated). The surge in total exports has been driven largely by Costa Rica's success in attracting FDI, which rose from US$52.7 million (0.9 percent of GDP) in 1980 to US$2.5 billion (5.3 percent of GDP) in 2011, well above the OECD average for most developing countries.[15] High-tech exports represent 40 percent of manufactured exports, one of the highest percentages in the world.[16]

Institutional Arrangements and Current Policy

CINDE, in tandem with COMEX, has been a high-performance organization in a context in which much of the public sector can be described as anything but that. Three factors may explain this.

First, while CINDE is currently a highly specialized institution, with a relentless focus on attracting high-tech FDI organized around a few well-defined clusters, it was not always so. As it has evolved, CINDE has enjoyed the benefit of a generous budget, private sector rules, and a creative board of directors that allowed it to explore many different areas of action before discovering its competitive advantage.

Second, CINDE is part of an organizational network that includes COMEX, Procomer, international FDI attraction agencies, multilateral trade organizations, multinational companies, and firms that provide

[15] Source: COMEX, using World Bank data.
[16] Ibid.

services to those multinationals, which makes it a very attractive career option, in stark contrast to most of the rest of the public sector. Young professionals who start their careers at COMEX, CINDE, or Procomer will work with outstanding senior professionals, have a good chance of becoming a trade expert after a few years, and have strong career prospects.

Third, CINDE, COMEX, and Procomer share a common vision of foreign trade policy, which allows for exceptional coordination among them, not because there are hierarchical lines of control but because of that shared vision.

While in its early days CINDE undertook many different activities with varying degrees of success, its most enduring role was that of a think tank and lobbying organization. CINDE collaborated with public authorities to design the instruments required to make the new policy of global integration and trade promotion a success, drafting the relevant legislation and then steering it through Congress until it was finally approved.

Gradually, as the legal and institutional pieces of the puzzle were put in place, CINDE shifted its focus to providing services that the public sector probably should have provided but was not prepared to provide: lab services, market intelligence, funding for new projects, national competitiveness strategy design in collaboration with the Central American Institute of Business Administration (*Instituto Centroamericano de Administración de Empresas* – INCAE) and Harvard University, training of the diplomatic corps in business and FDI attraction issues, and training of local businesses to help them increase their technological capacity and quality and take advantage of trade opportunities.

CINDE has transferred most of these functions to public agencies and now focuses on two tasks: attracting FDI and providing post-investment services to multinational corporations that set up operations in Costa Rica. This is by far the deepest case of cooperation of the five case studies presented in this chapter, as it has involved policy design, policy implementation, support from the private sector in operational tasks that the government was not prepared to undertake directly, and specialization based on institutional competitive advantage.

But this is only one part of the cooperation. More players have been involved, and the manner in which they have cooperated warrants explanation. In the early stages, the U.S. Agency for International Development (USAID) was a major player, providing funding and political support. USAID engaged the Costa Rican private sector through carefully selected leaders, and developed a pro-growth economic transformation agenda that was fully embraced by Costa Rican business leaders, academics, and policymakers. The effort to attract FDI became a Costa Rican endeavor, an unorthodox, pro-growth project in the midst of economic stabilization. This seminal cooperation laid the foundation for today's successful collaboration between CINDE, potential multinational corporation investors in Costa Rica, and the Costa Rican public sector.

The final aspect of the cooperation model is the collaboration between CINDE and the multinational corporations. CINDE is organized around three services:

- Information services: While CINDE actively tries to convince multinational corporations to invest in Costa Rica, it starts by providing accurate, complete, and timely information to facilitate the multinationals' decision-making.
- Facilitation services: CINDE works side by side with potential investors from the moment the investment decision is made to the moment the project is in operation.
- Post-investment services: Once a company is established in Costa Rica, CINDE is available free of charge to advise on anything from navigating government regulations to ensuring that potential workers have the required qualifications.

Today, CINDE is a small organization with a well-defined organizational structure. A board of directors defines strategy, while an executive director and several area managers implement it and tend to day-to-day business. However, most decisions affecting FDI in Costa Rica are made outside of CINDE, so what is remarkable is how successful CINDE has been in influencing those decisions, from the approval of crucial export-promotion legislation to the most recent modification of free trade zone legislation.

CINDE's success (and that of its allies) is that it has been able to create a mindset and a conceptual framework regarding (1) the importance of FDI for Costa Rica's development, (2) the type of FDI that Costa Rica should seek, and (3) the incentives and requirements that need to be met in order to succeed in attracting the type of FDI that the country wants. It is not a stretch to say that all institutions and a high percentage of decision-makers and opinion leaders directly involved in trade and FDI concur with the broad outlines of this framework.

Nonetheless, difficult challenges lie ahead. For example, Costa Rica will need to upgrade the quality of its primary and secondary education, particularly in mathematics, science, and languages, and increase the amount, quality, and relevance of the training offered by vocational high schools. This will require commitment and participation by the Ministry of Education, an entity that has not been directly involved in trade or FDI attraction policy and whose priorities are not necessarily aligned with the country's needs in this area. It will also require more and better-trained engineers, scientists, statisticians, and mathematicians, which will require the cooperation of Costa Rica's public and private universities, over which CINDE has little influence.

The challenge, then, is to be able to achieve a broader national consensus on FDI attraction policy that goes beyond the specialists and dedicated institutions. Influencing decisions on such a wide and large scale is something that goes well beyond what CINDE has achieved to date.

Policy Outcomes and the Role of Cooperation

Cooperation took place initially between two actors that did not have a direct financial stake in FDI policy—USAID and an elite group of Costa Rican businessmen—and not between multinationals and the Costa Rican government. Cooperation was eventually established between COMEX, a public entity, and CINDE, a private entity fulfilling a public role but with the flexibility to make quick decisions and the budget and mindset required to evolve as an institution.

Coordination among policy participants, so often a thorny and seemingly unsolvable problem in public policy, was achieved not on the basis of hierarchy, mandates, or controls, but rather through a shared vision of foreign trade policy that was the result of a long, deep, and continuous process of dialogue, cooperation, and interaction between the public and private sectors. The private sector participants were the spokespersons for a clearly defined vision of what Costa Rica's economic development should be. This shared vision has brought about remarkable policy stability for more than 30 years.

Cooperation has also taken the form of a flow of key personnel between COMEX, CINDE, and in some cases, multinational corporations. It is not infrequent for former Ministers of Trade to become chairs of CINDE's board of directors, and some senior personnel have moved from CINDE to work in multinational corporations, further reinforcing a common vision or mindset.

Finally, cooperation has been organized around instruments and services that alter relative prices but do not insulate beneficiaries from the discipline of market competition.

Public-Private Collaboration in Costa Rica: Some Preliminary Lessons

In Costa Rica, public-private collaboration often takes the form of co-governance. The law defines the broad policy outlines. A specialized entity is created for the purpose of implementing the policy, and that entity has a board of directors with both public and private representatives, with the private sector often in the majority. In the extreme case, one could argue that the public sector forfeits its rights and duties as policymaker, and simply outsources policy management to autonomous institutions run by the private sector.

Two of the cases under study can be considered failures. In the case of rice, the current policy's main effect is to increase prices to consumers and rents accruing to the large, vertically integrated producers, while small, low-productivity producers receive neither the tools required to move out of rice and into a more productive activity nor the tools that they would need to become more productive. Similarly, in the case of fisheries, under current policy a relatively large number of artisanal producers merely scrape by, while larger industrial-scale producers, many of them foreign and paying small fees for licenses, are allowed to overexploit and deplete valuable fish stocks.

Coffee is a success from several standpoints. First, Costa Rica has continued to be a successful coffee exporter and has been able to climb up the value chain, sell at better prices, and differentiate its product. Second, relatively prosperous small and medium-size producers produce a significant portion of the coffee harvest.

However, as perhaps was to be expected by a policy borne out of considerations of equity rather than productivity, Costa Rica has for the most part remained at the low end of the coffee value chain, and exports of roasted coffee, let alone branded coffee, are at best incipient.

Tourism is a success. After decades of growth and pioneering policies first in eco-tourism and later in sustainable tourism, Costa Rica remains a prime tourist destination and an attractive destination for industry investors. Small and medium-size businesses make up most of the sector, which creates revenue for a wide variety of businesses throughout the country.

The attraction of foreign direct investment is also a success. FDI has increased exponentially, to the point that Costa Rica's net inflow of FDI as a percentage of GDP is one of the highest in the world, and its manufactured exports are among the most knowledge-intensive.

Shared Shortcomings

These five cases have some shortcomings in common, despite their varying degrees of success. They are elucidated in the following subsections.

Difficulty Mobilizing the Rest of the Public Sector

All of the cases studied are "vertical" policy cases. In all cases, however, instances can be found at different points, and for different purposes, where there is a need for broader public sector intervention or, at least, intervention by an entity outside the vertically defined policy process. In no case have effective mechanisms for the deployment of the rest of the public sector been devised. It would seem that the price paid for the creation of a specialized institution, run in large part by the relevant segment of the private sector, is that the institution is largely on its own when it comes to achieving its policy objectives, which are not seen as collective public sector goals but rather as isolated institutional goals.

Less than Perfectly Open and Transparent Dialogue

A feature shared by all five cases is permanent dialogue between the public and private sectors. However, the degree to which the dialogue is organized according to well-publicized rules and is open to all interested parties varies considerably from one sector to another. Transparency and access to files documenting the dialogues and the agreements reached, if any, also vary considerably from one sector to another.

In short, there is a quite a bit of leeway for public authorities in deciding whom to invite to participate in the process, and to interpret the results of the interaction. This probably comes in handy for political authorities and, if done skillfully, can preserve the legitimacy of the process, but it is less than perfectly transparent.

Weak Accountability

It can be argued that accountability is weak in the Costa Rican public sector in the sense that policy generally lacks well-defined and measurable goals and efficiency metrics. Consequently, it is difficult to evaluate whether policies are reaching their goals at a reasonable cost. In the case of public-private collaboration on productive development policies, accountability is further weakened by a lack of transparency. Given the many informal and discretionary dialogue processes, with no recording of agreements, it becomes impossible to determine if agreements were fulfilled and hard to evaluate if policy goals were met.

No Performance-related Incentives for Public Sector Officials

In none of the cases studied here are there performance incentives for public officials tied to policy outcomes. This has not prevented some of them from performing outstanding work.

Failures

Two failures, rice and fisheries, have a few suggestive features in common, described in the following subsections.

Many Small, Low-Productivity Producers with No Independent Political Voice

In both cases, a few large producers coexist alongside a large number of very small, frequently poor producers who lack the organization required to balance the power exercised by the few large producers. Moreover, policies (and particularly subsidies) are justified on the small producers' behalf but are designed in such a way that small producers receive only a small proportion of the benefits from them.

Isolation of Market Discipline or Breakdown of Market Mechanism

In the case of rice, high tariffs and the ability to import rice without paying the tariff and sell it as if the tariff had been paid are the key to large profits. Producers who are able to secure duty-free import rights become profitable because the tariff allows them to overcharge consumers. In the case of fisheries, the (private) profit-maximization rate for any individual producers leads directly to overfishing, depletion and, potentially, extinction of valuable species. As private prices are very different from social costs, reliance on price mechanisms to determine the amount of fish captured leads to socially undesirable results.

The Public Sector Forfeits its Role

At both INCOPESCA and Conarroz, public sector representatives are a minority on the board of directors. Ministers who sit on those boards can be and are easily overruled, when they attend at all. For all intents and purposes, policymaking has been outsourced to the very sector the productive development policy was supposed to foster and regulate.

The Successes

The success cases also have quite a few features in common, as described below.

Subject to Market Discipline

In the cases of tourism, coffee, and the attraction of FDI, producers compete in an open market. Incentives and rules may make their jobs easier or Costa Rica a more attractive FDI destination. But in the end, either these producers find, capture, and retain customers in an open, competitive market, or they fail. In all of these cases, then, public policy has been a means to identify, support, or strengthen market competitive advantages, not to create private profits in the absence of such advantages.

Either Homogenous in Size, or Well Organized and Competitive

In the case of FDI, most companies that operate within special regimes are large and technologically advanced. From a broad perspective, they are quite homogeneous. This is not the case in tourism or coffee, but small tourism operators and small coffee growers are highly organized (the latter even vertically integrated into processing and exporting, to some degree). Thus, they have a voice and they are instrumental in ensuring that policy delivers results that benefit the sector as a whole, rather than just a few powerful producers.

Organizational Focus and Alignment of Incentives

The only purpose of ICT is to develop tourism. CINDE is entirely focused on attracting a specific type of FDI. In contrast, INCOPESCA, and even ICAFE, have many different goals—some productive, some social, and others even further afield. With focus comes the alignment of incentives within the public organizations (or in the case of CINDE, quasi-public) in charge of policy. The path for a successful career for anyone working at ICT or CINDE is to be successful at doing what the organization is meant to do.

Some Preliminary Lessons

The first lesson is quite obvious. When a productive development policy creates mechanisms that allow private producers to turn a profit isolated from market discipline, it will result in rent creation, not productivity enhancement. Similarly, when market prices are relied upon in a market where private and social costs are severely misaligned, the results will be private profits but at a cost to society that decreases social welfare.

The second lesson is that when dealing with sectors that are heterogeneous in the sense of having a few large, high-productivity agents and many small, low-productivity agents, it behooves the public sector either to help organize and educate the small producers so that they have a significant voice in the policy process, or to ease them out of the sector. Otherwise, there is a considerable risk that policy will be justified using the small producers, but designed to benefit mostly the bigger ones, at considerable social cost.

A third lesson is not quite as obvious from the preceding analysis and requires some context. The Costa Rican coffee sector benefited from extensive public sector investments in road infrastructure dating to the 19th century. High-tech manufacturing benefited from investments in human capital formation that also have roots in the distant past, and tourism benefited from education, infrastructure, and environmental protection. In other words, the success cases are vertical and even narrow productive development policies that capitalized on previous, very broad public policies and made them the foundations of competitive advantage in the contemporary economy. The lesson seems to be that just as supporting sectors that have already revealed some signs of competitive advantage is a wiser course than picking winners, capitalizing on "social stocks" created by earlier policies (infrastructure, human capital, and natural capital in the case of Costa Rica) is likely to yield results faster than policies that require the creation of those stocks from scratch. The corollary is that those preexisting stocks will always be finite. At some point, either they need to be increased or the limits of growth will be reached.

Herein lies a fourth lesson that may be derived from the Costa Rican experience: even if vertical, narrow productive development policies are quite successful, sooner or later the ability to mobilize the rest of the public sector must be developed. Otherwise, the stocks on which the vertical policy is founded will be exhausted, and further growth will be severely constrained.

A fifth and final lesson has to do with the overall architecture of public-private cooperation. It is one thing for the public sector to organize itself in such a way that it can learn and elicit information from the private sector and engage with it in order to develop and implement policies that help a country discover and strengthen its competitive advantages and increase its overall productivity. It is another thing entirely when the public sector forfeits its responsibilities and simply hands policy or policy management over to the private sector. This is unlikely to be a good idea under any circumstances, but particularly so if the policy framework insulates producers from market discipline, or if producers operate in a setting in which there is a wide gap between private and social costs. In these cases, an increase in private rents, rather than an increase in social productivity, is the more likely policy outcome.

3

Even the Best Dancers Need a Good Partner: Collaborative Productive Policies in Colombia

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This chapter analyzes public-private collaboration in Colombia for the design and implementation of productive development policies. It focuses on the institutions that shape those interactions and on whether the resulting mechanics threaten or enhance the effectiveness of such policies. Colombia is an interesting case study because productive development policies there are, in principle, designed in the context of formal institutions and venues. These include the National Competitiveness System, an umbrella institution for productive development policies that has shaped public-private interactions regarding these types of policies. This system has been conceived as one in which the private sector plays an active role in the design of policies. Private sector representatives play consultative roles in different steps of the policy design process. But most importantly, private representatives sit shoulder-to-shoulder with government officials on the Competitiveness Commission's Executive Committee, the system's decision-making body. From the committee's inception, it has been the Private Council for Competitiveness (PCC) that has represented the private sector in this venue.[1]

This chapter focuses on two specific cases to analyze public-private interaction. First, given the prominent and peculiar role of the PCC in the

[1] See the next section for a detailed history of the involvement of the PCC in the system.

National Competitiveness System, the chapter examines the council and its participation in the design of productive development policies. To further ground the analysis, the chapter goes into deeper detail about the PCC's participation in two specific policy areas: innovation and transportation policies.

The PCC has also been involved in productive transformation policy, which constitutes a particularly fertile ground for understanding public-private collaboration for productive development in more vertical interventions. The World-Class Sectors Program (more recently known as the Productive Transformation Program – PTP) that lies at the heart of productive transformation policies is designed as a collaborative effort between the public and private sectors. In this sense, it is a policymaking experiment where the private sector plays a crucial role.

The PTP is the second case study. Since the PTP is composed of particular subprograms for different sectors of the economy, three specific sectors are highlighted: cosmetics and cleaning products, business process outsourcing, and palm and palm oil. These were chosen based on an interest in including sectors with different characteristics in terms of their industrial and political organization, and because of their different degrees of success in achieving the goals that were set for each of them in the PTP.

The way in which the public and private sectors interact could have an impact on the effectiveness of policies through different channels. Perhaps it is best to start with the understanding that, when private sector representatives participate in the design and implementation of policies that directly affect them, participation can ameliorate the difficulties faced by policymakers in the optimal design of policy, particularly difficulties arising from information asymmetries. Businesspeople are those who best identify the barriers they face when trying to serve their clients, access new markets, increase productivity, enhance their product portfolio and, more generally, expand their businesses. This in turn creates employment and growth opportunities for the economy as a whole. Businesses are also in a unique position to determine which of these difficulties is most pressing. For their part, consumers best identify signs of market power abuse. Also, both consumers and producers can point to existing policy interventions that have become more costly than beneficial. Collaboration with the private sector can yield important gains in the identification of areas where government intervention is most urgently needed and justified, and other areas where deregulation is beneficial.

At the same time, public-private collaboration encompasses dangers that may not only make it ineffective, but may even lead to damaging policies. The policies that producers in one sector would like to see enacted may be detrimental to producers in other sectors, or for consumers. They may also distort the allocation of resources across producers and sectors, creating additional hurdles for the ability of the economy to reach its full income-generating potential. This may occur if, for instance, policies that benefit inefficient producers eliminate their incentives to invest in improving their efficiency so that they can be more competitive in the global market and offer better-quality jobs. More worrisome, the degree to which policy responds to the demands of different producers frequently depends on those producers' ability to have their voices heard by the right government officials and to convince those officials to push for the policies they desire. This ability varies across producers, with the larger and more concentrated, organized, and politically involved producers often more effective in lobbying. To this extent, inappropriately conducted public-private collaboration may lead to a perverse allocation of policy benefits, whereby benefits go to the most politically powerful, rather than to the most economically promising. An additional problem is that policies benefiting specific sectors or groups frequently become irreversible, even after the reasons that first motivated their adoption have disappeared (Buera, Moll, and Shin, 2013).

The degree to which these problems materialize in costly policies is likely to depend on the quality of institutions that frame public-private collaboration initiatives, and on broader political economy issues such as alternate routes for the economically powerful to affect outcomes, including campaign financing, side payments, and lobby power enabling them to bypass formal consultation processes. There are many dimensions to institutional quality in this context. One is the degree to which institutions help to level the playing field for different private sector representatives so they can effectively voice their concerns. The way in which potentially conflicting preferences of different groups are aggregated into actual policies should also be a concern. A third question relates to whether mechanisms for public-private collaboration privilege the discussion of horizontal over vertical policies, or whether the opposite is true, and if they focus on rent extraction (protectionism, subsidies, tax privileges) or on solving market or government failures.

An area of great importance to which little attention has been paid in studies on productive development policies is the prominence given to interaction with the private sector within government. Is the government official designated to interact with the private sector sufficiently empowered to translate the conclusions of the interaction into actual policy projects? Is the government official perhaps too empowered, in the sense of there not being enough checks and balances to oppose regulatory capture by private groups? Is the official sufficiently prepared and informed to understand how demands from a specific group of private sector representatives affect others, and ready to bring those considerations into the discussion and final decision? Can the official understand the large heterogeneity within sectors or groups, and that he or she may be facing a nonrepresentative group of views even for a relatively narrow sector? The answers to these questions not only shape the final outcome of the interaction around given private sector proposals, but also are likely to shape those proposals themselves and outline the various goals the private sector seeks to achieve when interacting with the government.

This chapter addresses these different issues by characterizing the public-private interactions in the different case studies presented. In particular, and in consonance with the other country studies in this book, the chapter describes the private representatives involved in each of the case studies, including how they are organized, how representative they are of the relevant private interests, how able they are to make their initiatives heard and eventually adopted, and how "benevolent" they are in the sense of representing the collective interest rather than their own interests. Similarly, the chapter characterizes the government counterparts, including who they are, which officials interact with the private sector, how capable those officials are in translating the agreements reached into actual policies or decisions, and how discerning they are of particular interests hidden in private sector proposals at the cost of other interests. Finally, the chapter characterizes the mechanics of the interaction and its outcomes. Those descriptions then form the basis for our conclusions on institutions that enhance, and others that threaten, the effectiveness of public-private collaboration for the adoption of policies that boost productive development.

The stories documented herein show that public-private collaboration has been crucial in laying the foundation for a true state policy around productive development by allowing continuity of those policies across governments. Collaboration has also fueled particular achievements, such as helping overcome specific government failures and develop private organizational capacity. A central message is that formal institutions seeking to foster public-private collaboration, such as the ones adopted in Colombia over the last few decades, have important potential to advance appropriate productive development policies. It is important to keep these findings in context, however, and to remember that public-private collaboration for productive development policies, though very positive, has by no means brought about a development "miracle." Colombia continues to lag behind countries with similar income levels in international comparisons of productive development, making very little relative progress over the years.[2] Further, traditional rent-seeking continues unabated, often through parallel channels or direct influence over top officials and the legislature.

The Private Council for Competitiveness: Making the Private Sector an Active Participant in the Design of Productive Development Policies

Colombia's Competitiveness and Innovation System articulates policies aimed at strengthening competitiveness. The National Commission for Competitiveness, a consultative body in charge of recommending a competitiveness agenda on which a wide array of private and public interests are represented, supports the system. This broad representation of

[2] Colombia consistently ranks 65th to 70th among 125 countries in the World Economic Forum's Global Competitiveness Indicators, behind countries in the region such as Panama, Costa Rica, Uruguay, Brazil, Mexico, and Peru, not to mention Chile. Colombia performs particularly badly in comparisons of labor market outcomes, labor market flexibility, and infrastructure and transportation costs. The *2012 Global Competitiveness Report* also ranks Colombia 70th among 125 countries on its Innovation Indicator measure (a policy area on which one of the first case studies here focuses), well behind Chile, Brazil, and Mexico.

interests on the commission, and thus its large size, is critical to legitimizing the main policy strategies. However, it also renders the commission ineffective as a venue for day-to-day discussions. As a result, the true heart of the system is the commission's Executive Committee, composed of the heads of four government agencies and two private representatives: the PCC and the Association of Chambers of Commerce (*Red de Cámaras de Comercio* – Confecámaras).[3] Confecámaras only recently became a member of the committee by Decree 1500 in July 2012, given its role as main private sector representative on the Regional Competitiveness Commissions (RCCs). Thus, during the time covered by this analysis, the PCC alone represented the private sector. The Competitiveness Agenda was proposed and expanded by the Executive Committee. Though the agenda was later evaluated and finally approved by a series of other bodies in the National Competitiveness System, productive development policies are initially proposed and developed by the Executive Committee, and the PCC has been an active member of that small committee.

Public-private collaboration is central to Colombia's National Competitiveness System. Since its inception, bringing the private sector to the center of competitiveness policies has been one of the system's aims. While mechanisms permitting private sector representatives to voice their concerns and opinions have been formally established in Colombia for a long time, the current system, in place only since 2006, has brought private participation in policymaking to a different level. Not only are the

[3] The government representatives are the Minister of Trade, the Director of the National Planning Department, the Presidential Advisor for Competitiveness, and the Director of Colciencias, the latter only becoming a member as a result of Decree 1500 of July 2012. The Executive Committee was first called the Technical Mixed Secretariat because of Decree 61 of 2007, and was initially composed of the National Planning Department and "a private sector representative designated by the Commission." It was the PCC that received that designation. Though the commission could have in principle changed the identity of the private sector representative over time, it did not do so. Decree 1475 of 2008 added the Ministry of Trade to the Technical Mixed Secretariat. Decree 1500 of 2012 transformed the Technical Mixed Secretariat into the Executive Committee. The language about private sector representation changed from an open reference to a private sector representative to explicitly designating the PCC as a private member of the committee. This decree also expanded membership to Colciencias on the government side and Confecámaras on the private side.

interests of the private sector voiced through its representatives on the National Competitiveness Commission, but also, a representative of the private sector—the PCC, and more recently Confecámaras—is part of its Executive Committee. This mechanism has given the private sector a direct role in productive policy design. The presence of the PCC on these bodies, and more generally the active role of the private sector in the system and in some of the policies initially proposed in the context of the system, has been central to the greater stability of competitiveness policies over the last few years. This should become clear in the detailed discussion of selected examples of public-private collaboration. But too little time has passed to assert that such relative stability is here to stay.

Overview of the Public-Private Collaboration Scheme

Activities

The PCC brings together businesspeople, business associations, and individual experts, including presidents of prestigious universities, with the aim of boosting competitiveness in Colombia. Since its inception in 2006, the PCC's activities have revolved around the design and supervision, executed jointly with the government, of the National Competitiveness Agenda, which puts together the goals and actions of competitiveness policy.

The PCC has a staff of fewer than 10 researchers trained as economists, lawyers, and political and public policy scientists. The PCC's president and vice-president, positions that have been held by economists with strong backgrounds and reputations for technical knowledge and transparency, coordinate the staff. Staff members investigate economic outcomes and the state of policy in areas designated as priorities by the PCC board, and they also produce proposals. Their studies and the proposals endorsed by the board are published in annual competitiveness reports. These reports have become a vital instrument; they not only set the agenda for the PCC, they also have in practice become a crucial input—one could even say *the* crucial input—for the national competitiveness policy pursued by the National Competitiveness System. PCC staff members interact with relatively high-ranking government officials—at the level of division directors in the National Planning Department—in the development of these policy proposals. The PCC also issues a monthly publication, *Colombia Compite*, which monitors and evaluates the progress of productive development policies.

Since it was designated as a member of the system's Executive Committee at its inception, the PCC has been a key player in the design of the country's competitiveness and productive development policies. The system began with a mandate to design and regularly update an overall policy framework for productive development. The Executive Committee and the PCC were directly involved in the design of the first version of this policy framework. The process involved the president of the PCC sitting down with the Presidential Advisor for Competitiveness, the head of the National Planning Department, and the Ministry of Trade, along with their respective staff members, to create the initiatives that became the first National Policy for Competitiveness. The broader National Competitiveness Commission endorsed this agenda and recommended its adoption to the government. The policy was adopted by CONPES Policy Document 3527 (June 2008),[4] which summarized the basic conceptual framework to guide competitiveness policies, and structured a series of concrete actions to improve competitiveness. Some actions were as specific as establishing a World-Class Sectors Program (described in more detail later in this chapter) and a business plan methodology for the program, while others were as vague as strengthening the capacity of the state to solve controversies with investors.

The Presidential Advisor for Competitiveness, the National Planning Department, the Ministry of Trade, and the PCC developed the initial policy document. In other words, the first national policy for competitiveness was the result of active public-private collaboration, with the PCC playing an important role. More than lobbying for these policies, the PCC directly participated in their design.

Since promulgation of the policy, the PCC has exercised two roles: oversight of the execution of the policy framework and that of its successors, and continued active collaboration in design of other specific

[4] Documents prepared by the National Planning Department (*Consejo Nacional de Política Económica y Social* – CONPES) provide the guidelines for governmental economic and social policies. In a way, the guidelines state the commitments acquired by the government. While it is not unusual that many of those commitments are not fulfilled, CONPES documents are considered a necessary condition for any initiative to later come to fruition.

initiatives in productive development policies, following the model of collaboration that led to CONPES 3527. Regarding the first role, each year the PCC's competitiveness reports include an assessment of the state of execution of the competitiveness policy in place at the time. PCC officials also participated actively in the discussions that led to CONPES 3668 (2010), which evaluated the level of execution of actions contemplated in CONPES 3527. This was the first of the four annual evaluations of the competitiveness agenda required by law. The evaluation showed that most of the actions proposed in CONPES 3527 had been implemented, although the resulting improvements in competitiveness were disappointingly modest. The regular evaluations of progress of the competitiveness policy are unique. First, Colombia seems to be exceptional in the Latin American context, not only for having formal umbrella institutions for the advancement of productive policies, but also in the sense that those formal institutions require periodic evaluations of these policies. Another unique feature in Colombia is the role of public-private collaboration in the evaluation and oversight of policy through the PCC's participation in its formal evaluations and its annual reports.

With respect to policy design, the model of public-private collaboration that led to CONPES 3527—an agenda jointly proposed by PCC staff members and government officials, then endorsed by the Executive Committee and further pursued by its members—was later replicated for other policy initiatives. The PCC subsequently had similar direct participation in the creation of initiatives that implemented actions contemplated in CONPES 3527, such as the National Logistics Policy (CONPES 3547 of 2008), the Policy for the Strengthening of Human Capital (CONPES 3674), and the First Employment Law (Law 1429 of 2010).[5] More generally, the council presents proposals for the continued advancement of

[5] The direct participation of the PCC is explicitly recognized in some of these documents, such as CONPES 3674 and CONPES 3527. In other cases, it is reported by PCC staff members and not contested by others participating in the design of these initiatives. CONPES documents are not in themselves regulations. They set the stage for the adoption of programs, laws, and other regulations. In the specific case of the competitiveness agenda, at least some of the initiatives proposed in these documents became reality, such as the World-Class Sectors Program.

the agenda that are brought to the Executive Committee of the National Competitiveness System.

Recently, with the execution of most of the (few) concrete actions proposed in CONPES 3527 and the beginning of a new presidency, the PCC directly participated, along with the rest of the members of the Executive Committee, in the design of the new competitiveness policy presented in 2012, known as the National Competitiveness Agenda. As with its previous version, CONPES 3527, the PCC was actively involved in drafting this policy. Working jointly with the Presidential Advisor for Competitiveness and the National Planning Department's Deputy Chief for Enterprise Development, the PCC led the process of putting together the draft. Consequently, several of its proposals to advance competitiveness in the country made their way into it. The National Competitiveness Commission endorsed the document, and it became the road map for competitiveness policy for the next several years. As with CONPES 3527, this agenda includes a list of concrete actions to be implemented, together with deadlines for their implementation and agencies responsible for the processes. Viewing as an example the proposed actions relating to the transport sector, some of these are as specific as expanding business hours at ports to 24 hours a day, seven days a week, while others are as general as promoting the development of intermodal transportation and studies for establishing logistical platforms.

The PCC has also had an indirect influence on the adoption of other productive development policies that have consolidated initiatives included in the national policy for competitiveness under its leadership and that of the other members of the Executive Committee. This is the case, for instance, of the progressive elimination of the tax on financial transactions, and of the creation of the National Agency for Infrastructure.

The PCC's role in the Executive Committee of the National Competitiveness System has made it the private sector representative that the government has chosen as its counterpart in other instances. The government frequently invites the PCC to discussions of all policies related to competitiveness. As an example, when in 2011 the government tried to abolish regulated freight tariffs, the PCC was called on to participate in the discussions as a representative of the productive sectors. This happened despite the PCC not being a representative of either the transport sector or the freight generators, the two sides that in theory these discussions were going to bring together. The PCC was also recently invited to join the National Council for Science, Technology, and Innovation Policies.

The PCC has also played a major role in keeping the government focused on issues of competitiveness and in achieving a degree of continuity in the process of formulating the content of the government's Competitiveness Agenda. This role was particularly important in the transition from the previous to the present government. The transition may have meant a whole new redesign of the institutions governing competitiveness policies, as was characteristic of presidential transitions in the past. But the National Competitiveness System was not overturned, and there is no sign of any intention to replace it with a new one. Of course, only one government transition has occurred since the current system has been in place and, moreover, since current President Juan Manuel Santos was part of former President Alvaro Uribe's cabinet and ran for the presidency with his support, the transition was probably modest. How representative it was of the role the PCC will play in the future remains to be seen.

In any case, several actors concur in pointing to public-private collaboration, and in particular to the involvement of the PCC in the National Competitiveness System, as the main explanation for the continuity. The council has helped to keep the Executive Committee active through the government transition. Several related elements contributed to this. First, in contrast with the pre-system analogues of the Competitiveness Commission, the effectiveness of the current commission (and particularly its Executive Committee) on competitiveness policy does not depend solely on the new government placing a high priority on its initiatives. The fact that there is now a nongovernmental stakeholder that wants to retain a prominent policy role guarantees continued activity by the commission. Beyond the institutions themselves, the PCC has also helped keep the policy initiatives of the commission alive through the transition, as those initiatives are no longer children of a given administration but closer to state policies, conceived and approved as the result of a collaborative effort of the government and the private sector.[6] Finally, the PCC not only was behind the adoption by the present government of an innovation policy agenda as one of its five economic priorities,[7] but it also pressured the government to refocus on it when implementation languished after a change in the leadership of the National Planning Department, the agency that had been pushing for its implementation.

The PCC has also influenced the stance of some business associations in particular areas of policy, though it has been, at least until recently, less active in promoting a culture of competitiveness and a corresponding agenda within the private sector itself. There is less agreement on the PCC's influence on and success with the operation of the RCCs. The RCCs, in existence for several years, have recently been recognized as coordinators of local competitiveness policies and were included in the new system of administration of royalties, at the suggestion of the PCC. In spite of efforts by the PCC and the National Planning Department to modernize the RCCs, where regional and local chambers of commerce represent the private sector, and governors and mayors represent the public sector, the RCCs remained largely ineffective until recently, with some exceptions such as in Antioquia, Bogota, and Medellin, where strong regional business associations and private sector leaders actively participate.

History of the PCC

The circumstances that led to the emergence of the PCC determined the type of entrepreneur that joined this effort, which has in turn shaped the

[6] For instance, by the end of the Uribe administration there had been discussion in the National Competitiveness System about how to transform the transportation sector to make it a world-class sector, in the spirit of the World-Class Sectors Program model. Discussion tables were established to agree on actions toward this goal, and some progress was made. But the government's term ended before the discussion converged to an agreement, and the initiative seemed to die in the Santos administration, to which it was alien. But the PCC continued pushing for it in the context of the system. The new agenda for competitiveness, recently launched by the Santos government, has a whole chapter listing actions toward the transformation of the transport sector. It is the feeling of the PCC staff that their efforts to keep this theme alive in the discussions of the commission were instrumental in getting the Santos administration to embrace that discussion.

[7] The other four are traditional sectors that are supposed to play a leading role in the present economic context: mining, agriculture, infrastructure, and housing.

perceived legitimacy and influence of the council. This section presents a discussion of the early days of the council, with some detail about the personalities and institutions involved in its establishment. Although the peculiarities of the process determined many of the features that characterize the PCC, those features turn out to be potentially replicable in other contexts and instructive from the point of view of lessons that the case yields for other environments.

Michael Porter, a renowned competitiveness expert and Harvard Business School professor, proposed the creation of the PCC to several entrepreneurs at an event organized by the Center for Leadership, a private organization that provides training to business leaders with the aim of fostering efficient, transparent, and sustainable models of management of public and private organizations in Latin America and helping the leaders in the region fulfill their responsibilities in terms of collective prosperity and sustainable development.[8] Though for-profit, the Center for Leadership has kept at the core of its activities a stated interest in training business leaders to foster what it calls "collective prosperity," an apparent result of the character of its founding members, many of whom later founded the PCC. President Uribe enthusiastically supported Porter's proposal to create a PCC, to the point of offering to establish formal institutional procedures for consultations between the government and the proposed PCC on competitiveness policy issues. The presidential endorsement was also central to the business leaders' decision to create the PCC, initially funded by contributions from its founding members.[9] The forum that sparked the creation of the PCC took place just when the government was designing the National Competitiveness System, so the PCC and the system emerged simultaneously. This explains why the presidential offer to create institutionalized channels of consultations with the PCC eventually materialized into the system's Executive Committee being a joint public-private committee, and the PCC being the private sector representative on that committee.

[8] See www.liderazgoygestion.com.

[9] In the words of one of the PCC founding members, "it would not have been worth the effort if the government had not been willing to recognize the Council as a formal counterpart."

The character of the council's founding members as a determinant of the perceived legitimacy of the PCC's role in the National Competitiveness System was a recurring theme in interviews with policymakers and PCC members alike. Most pointed to that characteristic as a sign of the government's willingness to recognize the PCC as a valid counterpart. PCC members identify themselves as particularly committed to collective welfare. While heads of other companies and associations have since joined the PCC, their membership has been via invitation from the earlier members, who state that those invitations are targeted toward entrepreneurs and leaders whom they view as similarly committed to those collective goals.

The special character of PCC members does seem to be reflected in the agenda the council has been advancing. In that respect, the council constitutes an interesting addition to the map of private sector organizations that seek to influence policies. There has been an explicit effort to stay away from initiatives easily perceived as reflecting rent-seeking interests. The PCC has been critical in its Competitiveness Reports of excessive tariff dispersion—it openly supported recent tariff reductions that were bitterly opposed by specific subsectors—and of tax privileges and subsidies to specific industries that lack strong support on analytical grounds.

The PCC's benevolent agenda is not only a consequence of the character of its members, but also a determinant of that character. Rent-seeking interests find policy lobbying attractive when this lobbying revolves around obtaining direct benefits for them. It is unlikely that they will be willing to devote energy and resources to more cross-cutting agendas that require investing in coordination efforts with other interests, that have more uncertain outcomes, and where they can only seize a small share of the benefits. As long as the PCC continues to be able to keep private interests from dominating its agenda, it will also likely keep rent-seeking interests away from its membership, and vice versa. When considering transplanting the PCC experiment to other contexts, therefore, establishing rules that limit the agenda to the more cross-cutting issues that have dominated the PCC can help build a membership whose character is, as in Colombia, more consistent with pursuing improved general competitiveness than increased rents for specific groups.

The selective nature of PCC membership, however, does not come without cost. The PCC faces a difficult trade-off between including the different private interests it is supposed to represent in the National Competitiveness System and keeping its membership selective enough to be effective and to maintain its focus on interventions that support competitiveness. Two different strategies have been used to address the concern about the PCC's potentially limited representativeness. First, the National Industrial Association (*Asociación Nacional de Industriales* – ANDI), the largest umbrella business association in the country,[10] the Association of Agricultural Producers (*Sociedad de Agricultores de Colombia* – SAC), and Confecámaras are all invited members of the council. Second, the PCC's board remains determined to keep the council away from proposals that clearly benefit specific producers at the expense of other producers or consumers, even if those proposals originate with or are supported by some of its members. For instance, the board endorsed a trade reform that reduced import tariffs in 2010, despite strong opposition from SAC. There are anecdotes about members of the PCC opposing proposals brought up by other members that are considered harmful for the wider interests of the country's competitiveness, despite bringing clear benefits to some PCC members.

The potentially limited representation of private interests in the PCC has been addressed by the government by having a broad range of representatives with varying interests sitting on the broader National Competitiveness Commission. The commission seldom meets because its size and the mix of conflicting interests it represents make it ineffective in making day-to-day decisions. But it plays an important role in legitimizing the policies that it endorses. Business associations are also members of a variety of sector-level and cross-cutting technical committees of the National Competitiveness System. Some of them are active and bring proposals to the Executive Committee, while others do not. Moreover, as mentioned, Confecámaras recently joined the PCC as a member of the Executive Committee.

Broad representation may be less important for the types of initiatives that the PCC has been advancing than in other contexts. Since the initiatives have frequently been either cross-cutting in nature or directed

[10] ANDI was founded in 1944 with the aim of disseminating and promoting the social, political, and economic principles of a free-market system. For more information see the association's website at http://www.andi.com.co.

at alleviating coordination failures and government failures, they are rarely significantly harmful to specific interests, even if those interests are not directly represented on the PCC. The hypothesis that broad representation is not crucial in the discussion of the policies that are arguably most relevant for competitiveness has the important implication that the selective nature and reduced numbers that characterize PCC membership, which have been crucial for its effectiveness in designing and pushing a competitiveness agenda, do not impose significant costs to sectors not directly represented by the council.

The fact that the creation of the PCC and the National Competitiveness System proceeded in parallel and coordinated fashion around 2006–2007 explains much of the subsequent involvement of the PCC in the making of competitiveness policy. McKinsey, Michael Porter, and other international experts played an important role as advisors both to the PCC sponsors in structuring the PCC—including helping organize trips to Ireland, Singapore, and the United States to examine other experiences—and to the government in transforming the existing institutional structure for competitiveness into the present system.[11] The joint emergence of the PCC and the National Competitiveness System, and the active involvement of the same group of experts in the two processes, determined the designation of the PCC as the private sector representative in the system's Executive Committee.[12] The designation is telling in itself, but is also important because the role would have been traditionally assigned to the Council of Business Associations (*Consejo Gremial*), a powerful association representing traditional business interests. The members of the *Consejo Gremial* contested the PCC's designation as a private representative on the system's Executive Committee.[13] The PCC had the advantage of being

[11] Later on, McKinsey and Ricardo Hausmann also played central roles as advisors to both the PCC and the government in setting up a modern public-private framework for a vertical productive development policy agenda, the World-Class Sectors, which later became the Productive Transformation Agenda.

[12] The Executive Committee was known as "Technical Secretariat" at the time.

[13] The *Consejo Gremial* was designated as private sector representative in the National Competitiveness Commission. While the commission is the supreme body of the system, it is too large and diverse to be effective as a venue for policy design. It seldom convenes, and when it does its role is to validate previously developed proposals. Thus, the PCC remains more influential than the *Consejo Gremial* in terms of competitiveness policy.

perceived as a representative of the private sector, but only of that part of the sector most aligned with collective interests. Two of the characteristics of the PCC were the main sources of this perception: its inclusion of benevolent entrepreneurs, and the endorsement of the council's initiatives by the international experts. Though there continues to be occasional discomfort among some business associations with the PCC's special role in the competitiveness system, ANDI, the most influential association, has in general been a supporter of this role. Luis Carlos Villegas, ANDI's president for decades, recognized advantages in being able to voice concerns and promote initiatives to government authorities not only directly, but also through the PCC.[14] Despite these efforts, there are three criticisms of the composition of the PCC raised by other private sector representatives in interviews. The first is that the agricultural and mining sectors, a crucial part of the economy, are under-represented, and therefore the PCC's initiatives and successes in these areas have been limited. The second is that the absence of some of the most powerful private industrial and financial groups limits the PCC's capacity to influence policies. The third is that other important business associations that are broadly representative and technically capable, such as ASOBANCARIA, should be members of the PCC. The latter two views are strongly contested by others, who believe it is more important that the PCC remain small enough to allow discussion and achieve consensus. Some interviewees also argue that only entrepreneurs who have shown strong commitment to innovation and modern development policies should be invited to become members, and that membership of stronger groups would tilt the balance of power within the council inevitably in favor of the interests of these groups.[15]

An Assessment of Perceived Strengths and Weaknesses of the PCC

The major strength of the PCC as perceived by the private sector is that it is formally recognized as the main private sector counterpart of the government on the Executive Committee of the National Competitiveness

[14] Interview with Luis Carlos Villegas, President of ANDI. It remains to be determined if his successor will be as supportive of the PCC's role.

[15] A PCC member mentioned that an initiative similar to the PCC failed in Mexico, in his view because it was captured by the all-powerful enterprises of the Carlos Slim group.

System.[16] In turn, the highest-ranking government officials view the council as capable of advancing sound technical proposals not regarded as representing narrow sector-level interests. By contrast, the initiatives and opinions of business associations are often perceived as being dominated by sector-level interests. In addition, most of the associations are viewed as having limited technical capacity.[17] Other government officials interviewed, at the level of division directors in ministries, seemed unaware of the PCC's degree of influence; one saw the PCC as just "another business association."

The relatively high technical capacity of the PCC—either in-house or from advisors—has been important on two fronts. First, it provides the government with an empowered counterpart with whom technocrats can interact, and it sometimes plays a neutral technical role among diverging positions of different public agencies. Second, it allows the council to propose an agenda that can come from the private sector, as it revolves around issues that the private sector identifies as barriers to its competitive advancement that it cannot solve independently.

In terms of weaknesses, the PCC has had a small staff and limited technical resources at its disposal. Though individual experts and technical staff from business associations participate in PCC technical committees in different areas, the staff relies extensively on research published by the academic community, and its capacity to carry out or contract out required additional analyses in the areas covered by the Competitiveness Agenda is limited to occasional instances when it receives support from multilateral institutions, such as the Andean Development Corporation and the Inter-American Development Bank. The scarcity of the PCC's own resources is generally seen as limiting its potential influence.

[16] Recently, Confecámaras has joined the PCC in that role (Decree 1500, July 2012).

[17] To an important degree, ANDI is an exception on both counts: it has generally recognized strong technical capacity, and because it has been broadening its constituency well beyond manufacturing, it is increasingly seen as aggregating broad private sector interests. For example, most large enterprises belonging to the financial, mining, energy, and infrastructure sectors are now members of ANDI and participate actively in its specialized chambers, even if they also keep separate business associations—as some industrial subsectors also do. Only a few other business associations, such as ASOBANCARIA, are also recognized as having strong technical capacity, and they are perceived as defending more narrow sectorial interests.

Another weakness of the PCC has to do with the fragility of the institutional structure of the National Competitiveness System and its dependence on the priorities and style of major government officials. During the Uribe administration, for instance, competitiveness was not among the president's priorities. The fate of the system depended significantly on who was appointed as presidential advisor in charge of coordinating it. On the positive side, the system's stability and its ability to set a competitiveness agenda and get the government to pursue it seem to have been strengthened by the PCC itself.

Further, though the PCC has had generally good access to the government and some capacity to influence its decisions or initiatives, it has had almost no access to or influence upon congressional decisions. Strong business associations have significant access to both the executive and congress and influence both. Also, though the PCC has influence with opinion leaders, the strongest business associations have a much more significant presence in the media. And the PCC has had little effective influence on efforts to improve competitiveness both within the private sector and within regions.

PCC Policy Case 1: Innovation Policy Reforms

Colombia has a longstanding science and technology (Sc&T) policy oriented toward strengthening the supply of scientific and technological services. The central governmental actor has traditionally been Colciencias, and later the Advisory Council on Science, Technology, and Innovation, led by Colciencias.[18] Despite its efforts over time, the system has not been effective in taking Colombia to the level of scientific innovation expected for comparable countries. Overall research and development (R&D) expenditure, at 0.16 percent of GDP in 2010, along with the number of patents per inhabitant, are among the lowest in Latin America. Colombia also ranks low in global innovation indexes: 97th out of 120 in the World

[18] Other government agencies with significant responsibilities in this area were Corpoica, a public corporation for research in agriculture; FOMIPYME, a fund to promote entrepreneurship in small and medium-size enterprises under the Ministry of Industry and Commerce; and SENA, the training institute under the Ministry of Labor, which was supposed to devote 20 percent of its generous budget to the agency that promotes entrepreneurship, Fondo Emprender.

Economic Forum's (WEF) Index of Knowledge Creation, and 91st out of 120 in patent registration (Dutta, 2012), to give just two examples.

The PCC has insisted since its inception that it was necessary to strengthen the Sc&T system, providing significantly higher public funding for Sc&T activities and instituting a National Innovation System, with a more holistic view that would link Sc&T to productive activities and the formation of human capital through the National Competitiveness System. Around 2010, the incoming Santos administration embraced a similar view and began taking steps toward implementation of such initiatives. First, innovation became one of five priorities to stimulate economic growth within the government's National Development Plan, the administration's road map for economic policy in Colombia.[19] Second, early in its term, the government pushed for a reform, rapidly approved by Congress, to devote 10 percent of the increasing oil and mineral royalties to financing innovation policies, following the example of Chile. Finally, the Sc&T system was "articulated"—though not fully integrated as originally envisaged—with the National Competitiveness System, which became the National Competitiveness and Innovation System by Decree 1500 of 2012. Colciencias became a member of the system's Executive Committee, together with the PCC and the other previous members. At the same time, the PCC began to be informally invited to attend the sessions of the Council on Science, Technology, and Innovation. Nonetheless, the stated goal of articulation remained rather elusive, in the opinion of several of interviewees.

Measures of a similar vein had been proposed previously by the PCC, and there are reasons to believe that the council's previous efforts had some influence on both the adoption and design of those measures. Those involved in writing the National Development Plan indicate that the design of the innovation policy in the plan benefited from previous work at the PCC. The policy contained specific measures previously proposed by the PCC, such as an increase in public financial support; provision of specific sector-level public goods to clusters; enactment of reforms to strengthen Colciencias and SENA, the national training agency; and creation of a Development Unit

[19] The other four policies involved rather conventional sectors: mining and oil, agriculture, public infrastructure, and housing.

within Bancóldex to be in charge of programs that support private sector innovation, based on the successful experience of CORFO in Chile.

Part of this translation of PCC proposals into government plans can be attributed to the closeness between previous PCC officials and the Santos administration—to a point where the former PCC president was the first National Planning Director of the administration. Though this closeness could be seen as an exogenous factor that gave the PCC accidental influence over the government, it also reflected the recognition by the Santos administration that PCC officials had developed a promising framework to fuel competitiveness and innovation, the latter being one the administration's priorities. In addition, the government hired a team of Chilean economists to design the policy. Those advisors had previously counseled the PCC on how to develop a system similar to the Chilean one.

The PCC, through its participation in the Executive Committee of the National Competitiveness System, had a lead role in drafting the Santos administration's Competitiveness Agenda, leading the reform of the Sc&T system, among other things. The PCC similarly participated in discussions leading to the design of programs such as Bancóldex's Innpulsa initiative to support private innovation, and the Modernization and Innovation Fund that supports this program. Further, the PCC's executive director is a member of the Modernization and Innovation Fund. Bancóldex' staff greatly value the participation of the PCC in this fund as well as on the Executive Committee of the National Competitiveness System. They see the PCC as providing a long-term vision that is often lacking in government agencies, acting as a broker among competing government agencies' interests, and helping to define the allocation of resources among competing programs and agencies.

The PCC had little influence on or participation in the proposal or discussion of the specifics of the Royalties Reform, envisioned as the mechanism to increase public funding to Sc&T. Moreover, after its involvement in the design of the competitiveness and innovation systems, the PCC's participation in implementing the changes was limited, and some of its achievements were jeopardized by the channeling of most of the new funding for innovation to regional actors with little or no capacity, experience, or incentives for productive innovation. The PCC lacks operational links with these new regional actors.

PCC Policy Case 2: The Private Council for Competitiveness and the Regulation of Freight Transportation in Colombia

Since its early days, one of the main focus areas of the PCC has been transportation and logistics policies. High transportation costs are a well-recognized obstacle to competitiveness in Colombia. Indicators are alarming. It is cheaper to move one ton of freight from Cartagena to Shanghai than to get it to Cartagena from Medellin (700 km) or Bogotá (1,050 km). Freight traveling from Medellin to Cartagena can experience dead times as long as 50+ days. Colombia ranked 95th among 142 countries in infrastructure in the WEF's 2011–2012 Global Competitiveness Indicators and has been consistently moving down in these rankings.

The focus of the national debate around these problems and policies to alleviate them has been the construction of infrastructure (which is not to say that infrastructure has effectively improved). In terms of productive development, however, infrastructure is only part of the problem. High transportation costs are also attributable to an important degree to logistical issues. For instance, road closures are only a small part of the reasons behind dead times in the transportation of freight; much more important are the numerous inspections that trucks have to go through, the port closures, the limited business hours at ports, and the long lines to access the ports. Another critical issue has been the low average quality of transportation services, part of it attributable to poor regulation: old trucks (the average age being 22 years), high informality, and, until recently, regulated floors for tariffs. To provide some quantification, the cost of logistics has been estimated at 23 percent of GDP in Colombia, compared to 9 percent in member countries of the Organization for Economic Cooperation and Development (OECD) and 18 percent in Chile.[20] A holistic reform of transportation and logistics policy has thus been a recurring theme of the PCC's recommendations. The recommendations have brought innovation to the debate over how to reduce the high transportation costs, which was otherwise centered around infrastructure. Since its first competitiveness report, the council has been insisting on designing a comprehensive policy to improve logistics and implement multi-modal

[20] Competitiveness Report 2011–2012, Private Council for Competitiveness.

systems in the context of the current system, which depends almost completely on road transportation. The success of the PCC's initiatives on this front, however, has been quite limited to date.

The PCC proposals to design an overall transportation policy were partially echoed by the first National Competitiveness Policy (CONPES 3527). This was a direct consequence of the PCC's active involvement in drafting that policy, as the PCC was one of the four agencies, and the only private one, in charge of its development. First, CONPES 3527 created a Technical Subcommittee on Logistics and Transportation for the Competitiveness System. It also established concrete actions to be implemented in the following four years. However, most of the concrete actions put forth in that document to facilitate logistics and develop inter-modal transportation were not particularly ambitious, or even truly concrete. Among the proposed actions, the only one that was sufficiently concrete to be implemented was the drafting and approval of a CONPES document on logistics policy. The other actions planned in CONPES 3527 were as vague as "develop efficient freight transportation systems and optimal regulation" and use an "intermodal model to establish priorities in terms of infrastructure and logistics projects." Subsequent evaluations of the execution of CONPES 3527, including its formal evaluation, CONPES 3668 of 2010, showed that very little was achieved in terms of attaining these additional goals.

With respect to the proposal to prepare a policy document with a road map for logistics policy, the document was drafted and approved as CONPES 3547, shortly after the approval of the competitiveness policy itself. The logistics policy instructed the government to strengthen the Technical Subcommittee on Logistics and Transportation as the "stakeholder" of logistics policy; implement a timely system of information on logistics; create "logistical platforms;"[21] and coordinate the different actors involved in inspections and certifications at ports to ensure that these requirements would be fulfilled in a timely manner. In this sense, the PCC had some degree of success in getting its proposals adopted as

[21] Logistical platforms are defined in CONPES 2547 as delimited locations where all of the activities related to logistics for transportation are concentrated.

official policies. The PCC had been proposing for some time that a logistics policy be drafted, and it actively participated in the drafting of the document itself, given its participation in the Technical Subcommittee on Logistics and Transportation.

Almost four years after the CONPES document was approved, however, progress on the actions it proposed has been minimal. Beyond drafting CONPES 3547, the Technical Subcommittee on Logistics and Transportation has remained rather passive, not playing the oversight role it was supposed to take on implementation of a holistic view for the sector. Feasibility studies for logistical platforms have proceeded at a slow pace, with no platform implemented to date. Dead times at ports remain extremely high. Little progress has been made toward getting the different agencies involved in the processes of inspections and certifications to coordinate their work to speed up shipments.

The PCC has continued to push the logistics policy as one of its main priorities, both in the public debate and in the formal arenas of the competitiveness system. It seems to be making some recent progress, with the inclusion of its proposals to pursue multi-modal transportation and to rethink the policy for freight transportation in an integral way in the Agenda for Competitiveness (July 2012). Some concrete actions toward these goals have been taken, such as implementing some degree of coordination between different agencies at ports in early 2013, but how far this implementation will go and whether other steps will be taken remains to be seen.

The limited success of the PCC in pushing for an effective reduction of logistics costs is perhaps surprising, as the weight of these costs on the competitiveness lag is high, and relatively straightforward actions—like getting the different agencies involved in port processes to conduct a single unified inspection and keeping an integrated single information system—could bring about major improvements. Why, then, has it been so difficult to effectively push this agenda? Several reasons seem to be behind this failure. While the responsibility for almost all other policy areas that bear on competitiveness lies in the hands of a clearly defined government agency, logistics does not. It is an area that demands intense coordination by different agencies, without any of them being the clear stakeholder. Logistics is also much less visible than infrastructure or labor regulation. As a result, the political will to move the issue forward is hard to garner. On the PCC side, the insistence on pushing for a holistic view of transportation policy seems to be clashing with the lack of a clearly established government counterpart to take the blame for a failure to adopt it. It seems that, insofar as that counterpart does not exist, the agenda-setting power in the competitiveness system would be better devoted to getting explicit and tangible actions incorporated into the competitiveness agendas that would serve as a road map for actual logistics or infrastructure policy. Some of this has been done, for instance through the inclusion of concrete recommendations such as the purchase of latest-technology scanners for merchandise at ports. Finally, the limited range of private interests present in the PCC may be bearing on the council's ability to influence transportation policy. In particular, the transportation sector itself has no direct representation on the PCC.[22]

Taking Stock of the Private Council for Competitiveness

Before moving to the second case study—the Productive Transformation Program, the conception of which involved active participation by the PCC—a few important facts relating to the PCC need to be highlighted. First, public-private collaboration has truly been at the heart of both the institutions for competitiveness policies and the design of the policies themselves. This goes beyond the private sector being able to voice its concerns, as seen in the fact that a wide range of private sector representatives hold seats on the National Competitiveness Commission. In particular, policies for competitiveness are initiated in the Executive Committee, with joint participation of the National Planning Department, the Ministry of Trade, the PCC, and, recently, Colciencias and Confecámaras. The PCC has played a central role in establishing policy priorities and designing broad policies for competitiveness. It has, in effect, retained a leading role on the Executive Committee. This role has been enabled by the high-level

[22] However, the PCC continues to be a private counterpart of choice of the government on transportation issues. For example, when the government removed regulated floors for freight transportation tariffs, the PCC was called on to participate in the negotiations to try to dilute the bitter and costly protests by transporters that initially brought the country to a halt for several days.

formal institutions designed to favor public-private collaboration, and by those institutions' formal empowerment of the PCC as a main player in policymaking for competitiveness.

The PCC's active role in the system, and in particular that of its Executive Committee, has been crucial to providing continuity to both institutions and policies for competitiveness. For the first time in 20 years, institutions for competitiveness policies survived a government transition. The same can be said about cornerstone policy initiatives, such as the World-Class Sectors Program. However, the PCC and the system are still sufficiently young that it remains to be seen whether the continuity will consolidate in the long run.

The legitimacy of the PCC as a private sector representative in matters relating to competitiveness has stemmed from its perceived focus on policies directed at enhancing overall competitiveness, as opposed to policies that benefit specific sectors or groups at the expense of others. This perception first emerged as a consequence of the reputation of its founding members. It was later reinforced by the PCC's vocal opposition to policies perceived as beneficial to concentrated interests and by its effective resistance to push for policies that specifically benefited its members. The technical advice provided by highly recognized technical experts and think tanks as input for the PCC's initiatives has also been instrumental in maintaining its reputation and legitimizing its activities. The PCC is today called upon to represent the private sector in policy arenas not directly part of the National Competitiveness System. The government seems to see the PCC as a valid and legitimate counterpart in these arenas.

Though these characteristics of the PCC derived from the specific circumstances that led to the council's emergence—and could thus be considered historical accidents—many of them are replicable in other contexts. Much of the PCC's influence depends on the fact that those circumstances led to the council being formally empowered within a set of umbrella institutions that, in turn, formally give public-private collaboration high stature in the making of competitiveness policies. Moreover, the scope of public-private collaboration for productive policies, at least in terms of collaboration of the type depicted in Colombia by the PCC's involvement in policy, can be restricted to policy dimensions where there are fewer opportunities for private rent-seeking, such as cross-cutting policies and policies aimed at solving government or private coordination failures.

The Productive Transformation Program for the Development of World-Class Sectors

Productive transformation has been at the heart of Colombia's recent competitiveness policies since the National Policy for Competitiveness of CONPES 3527 was launched. It was not only one of the five pillars of this agenda, it was also the most concrete of the broad policy priorities. This reflected the view that transforming the sector composition of production was crucial to making the country competitive in international markets, and especially to making it competitive in products that would contribute the most to the country's economic advancement. As conceived in the Competitiveness Agenda, and later effectively implemented, initiatives regarding productive transformation were originally condensed in the World-Class Sectors Program, known today as the PTP.

Launching the program was recommended by CONPES 3527, and CONPES also provided specific guidelines. As a result, the program itself was quickly launched: by the end of 2008, only a few months after the CONPES Competitiveness Agenda was issued, four sectors had already been selected as part of the program, and their business plans were either completed or under development. The PCC was actively involved in proposing this initiative, to the point that, according to several interviewees, the PCC's president, the Presidential Advisor for Competitiveness, and the Ministry of Trade were responsible for the initial design of the program.

The sections that follow first describe general features of the program, including the methodology that guides public-private interaction in this context and the organization of the public side of the program. An analysis is then presented on three specific sector productive transformation programs: cosmetics, business process outsourcing and offshoring, and palm oil. For each of these cases, the public and private sector actors involved are described, as is the manner in which public-private collaboration has effectively proceeded.

Overview of the Productive Transformation Program

Since its inception, the National Policy for Competitiveness has provided detailed guidelines for the PTP. The initiative was to identify sectors that had large potential as engines for export growth and productive development, and to help those sectors achieve that potential. The program started in 2008, when four sectors entered the program. The first round focused on emerging sectors. Two other rounds were subsequently held to include promising sectors among those already established—the *Más y Mejor de lo Bueno* ("More and the Best of the Best") round, and the Agro Wave round (agricultural sectors). Today, the program includes 12 sectors, four corresponding to each of the rounds: software, business process outsourcing, cosmetics, and health tourism in the emerging sectors category; textiles and apparel, energy, auto parts, and graphic arts in the established sectors wave; and shrimp harvesting, cocoa and its byproducts, beef production, and palm and oils in the agro round.

The methodology of the program follows three basic steps. Initially, sectors are selected to participate in the process. A work team is designated, including a public and a private manager for the respective sector, each paid by the respective side. In the second step, the work team collaborates to create a business plan that specifies a plan of action for the sector in a process facilitated by an international expert or team of experts. Finally, the plan is executed over the course of several years. A team of representatives consisting of private sector participants and public officials in the program coordinate and supervise the execution of the plan. Ongoing evaluation is also built into the design of the program, under the coordination of an evaluation unit in the PTP.

Public-private collaboration is essential, as is revealed by the mixed nature of the team and the participation of both sides in the program. Interviews of participants suggest that the mechanics of work by these teams is truly collaborative. The section that follows outlines each stage of the program, identifying actors and mechanics of interaction at each of these stages. A subsequent section will explain the organization on the public side of the program. Private actors are generically identified in the first of these sections, and are explained in detail later for each specific sector analyzed.

Steps of the Process: Actors and Mechanics of Interaction

The inclusion of sectors in the first and second rounds of the program followed two steps. First, the sectors of interest were identified and invited to submit a proposal. Second, participants were selected from those submitting a proposal.

In the first step, a wide range of indicators was used to identify the sectors to be invited to apply for the program. The stated aim was to find sectors that could become engines for export-led growth in the country. A very wide set of inputs was considered. These included studies by Ricardo Hausmann and Bailey Klinger (Harvard's Kennedy School), International Development Ireland, and other consultants; the results of consultations with representatives of all regions and sectors under the Domestic Agenda initiative (Eslava and Meléndez, 2009; Meléndez and Perry, 2009); studies by Colciencias; and other inputs.

The process to shortlist some sectors using all of these inputs was characterized by open discussions among the members of the Executive Committee, Technical Secretariat, and Competitiveness Commission. In the end, a call for proposals for a short list of emerging sectors was launched, quickly followed by another call for established sectors. Each of these called for proposals from around 10 sectors, almost all of which ended up presenting their proposals.

The findings of this chapter leave a number of open questions about the first pre-selection stage in at least two dimensions: (1) the procedures that characterized the process per se in terms of their coherence within the aim of the process, and (2) the final outcome of the process. In terms of the first dimension, only some inputs of the process responded to well-defined methodologies to identify promising sectors (e.g., the aforementioned studies by various consultants). These were also the inputs that had a more transparent role in the process. One first source of possible controversy was that, at least from the interviews conducted and the publicly available documents consulted, it is not clear what other elements were used as inputs in the selection process or how they were aggregated into a final decision.

A second source of open questions was that some of the other inputs mentioned by participants in the process were not in principle designed to identify sectors with high potential as engines of aggregate growth.

The Domestic Agenda, for instance, collected requests by sectors and regions for actions by the central government that they considered necessary to foster growth in the respective region. Some of these requests did respond to regional sector "strategic bets," but there was no unified methodology to identify these bets or others that resolved possible contradictions across regions.

In terms of the outcomes of the pre-selection process, the mixed nature of the pre-selected sectors in terms of whether they were new or established, rapid or slow growers, or high- or low-productivity sectors raises questions about whether their selection followed a coherent view about the characteristics that make a sector potentially promising as an engine of growth. To provide one example, the first wave of pre-selection was directed at emerging sectors and the second wave focused on existing sectors. Whether the pre-selected emerging sectors represented higher promise than the established ones is a relevant question in terms of the direction in which the government wants to tilt productive transformation—the very aim of the program. This question seems to have been neglected in the discussion and in the resulting selection of sectors.

These issues are left as open questions to which the discussion will return in the conclusions later in this chapter. We also note that even a negative answer about the benefits of the program in terms of directing the sector composition of production does not undo other important benefits that the program may bring for the development of the sectors that were selected, and, in turn, to overall growth in the country. In fact, many of the chapter's findings as described below point to important benefits in these dimensions.

The proposals presented by the pre-selected sectors for the selection round consisted of a diagnosis of their current participation in international markets and their ability to compete at the highest level in those markets; a vision statement for the sector in the short, medium, and long terms; and a statement of barriers to sector development together with actions necessary to boost exports by the sector. Sectors were expected to be or to become able to successfully compete under free market conditions, so when the aforementioned actions included requests to the government, these were expected not to be protectionist measures, subsidies, or similar policy benefits. A jury made up of the National Planning

Department, the PCC, Proexport (the export promotion public agency), and Bancóldex (the public development bank) selected the sectors to be included in the program from those presenting proposals.

This methodology for selecting proposals implies that private sector proponents self-selected into applying for the program. Sector leadership was not necessarily well established, especially in emerging sectors, and not necessarily concentrated in a single actor. Some of those making proposals were well-established business associations, while others were young associations or groups of associations. They were not necessarily recognized by all businesses involved as their representatives.

The degree to which those making proposals seemed able to identify problems in the sector, represent most relevant private sector interests, and organize to bring the business plan into effect appears to have been part of the criteria the jury took into account in selecting winners of the call. Furthermore, current guidelines for the program's future expansion explicitly call for greater attention to be given to these criteria (CONPES Document 3678 of 2010). Individual businesspeople and other private representatives were invited to participate at specific points in later stages of the process in order to empower them to voice their concerns. Despite these efforts, as will be shown in the description of specific cases, there has been some discussion about the degree to which the private sector representative that directly participates in the program is representative of all the private interests involved. In fact, for some sectors, private representatives other than the initial proponents were later invited to share the private leadership with those initial participants.

Development of Business Plans

Sector business plans were developed using a methodology of joint work between the public and private sectors and external consultants: McKinsey in the first two rounds and AT Kearney in the agro wave. Given that plans should emerge from collaborative work, entrepreneurs, business associations, government representatives, and academics were called on to participate in a process explicitly designed to make this possible. The private sector brought its business knowledge to the table; the public sector brought its knowledge of public sector dynamics and its view on productive development policies for each sector; and the external consultants acted as facilitators and contributed the methodology to develop the business plans, as well as information about the international experience to place the discussion in context. Not all sector PTPs were successful in reaching consensus at this stage. As a result, there was substantial variation in the level of precision with which goals and policy needs were included in the business plans. The methodology followed in the discussion was, however, similar in all cases.

Collaboration materialized through participation in three groupings:

- Work teams in charge of data collection, processing and analysis; interviews; workshops; general facilitation of the brainstorming process; and preparation of progress and final reports. These teams were composed of the assigned public and private managers and their teams and the external consultants, and included public managers in charge of thematic areas cutting across all sectors.
- Sector committees that met every two weeks to discuss and refine the diagnostics, gaps, initiatives, and action plans and to contribute to putting together final recommendations and implementation plans. In addition to the members of the permanent work teams, these committees included heads of business associations, leading entrepreneurs, representatives of Colciencias (the national agency in charge of technological innovation), and representatives of other ministries.
- Validation workshops that met on a monthly basis to validate the main initiatives of each business plan from a wider perspective, as well as to provide guidelines for its development. In addition to the sector committee members, validation workshops included smaller entrepreneurs representative of their sectors in the regions, academia, other members of the sectors' value chains, and representatives of other government authorities whose participation was going to be necessary for implementation of the business plans.

The process for developing each business plan lasted three months and was divided into three stages:

- Stage 1: Global diagnostics aimed at assessing the sector's potential for growth in the international markets and providing information about global players, best practices, and elements of success to place the conversation in an appropriate context.

- Stage 2: Sector assessments for Colombia to review the sector's development level, its competitiveness, its long-run goals, and the factors critical for productivity growth.
- Stage 3: A sector business plan, based on the sector's value proposal and the outcomes of the previous stages, to define a strategic agenda and a road map to achieve a set of concrete goals.

Implementation of Business Plans

The resulting set of initiatives in each of the sector business plans were to some degree similar to those arrived at in previous exercises arranged by the Ministry of Trade and the National Planning Department. The fact that there had been no success in translating those previous exercises into actions at the time the program was launched was interpreted as evidence of the poor implementation capacity of both the private and public actors involved. It led to the realization that implementation of the business plans should be based upon the same model of public-private collaboration used to develop the plan itself. This would facilitate the monitoring of progress toward a set of well-defined short-, medium-, and long-term goals.

Each initiative in a business plan was for this purpose translated into a road map that summarized goals, activities, responsible public or private actors, deadlines, risks, and an associated budget. The public sector created a structure to facilitate this monitoring.

Business plans are to be revised every two years to adjust to changing industry and business environment conditions. This will be done through continued public-private collaboration under the PTP.

Public Sector Organization

The PTP was, at its inception, formally organized as a program within the Ministry of Trade. As such, the ministry provided the basic organization on the public sector side, even though government officials from other agencies were called on to participate at specific stages of the process. The organization of the program included a general manager and four upper-tier managers under the general manager. Each of these managers was in charge of one of four thematic areas that are cross-cutting in all PTPs: human capital, the legal and regulatory framework, promotion policies, and infrastructure. These are the areas on which the public side of the program focuses its efforts to articulate the work of different public agencies. There was also a public manager for each sector, recruited and hired by the Ministry of Trade. These public officials acted as facilitators. They had the mandate to voice the concerns and requests identified within the PTP to the relevant government authorities and to monitor the progress of the initiatives agreed upon in the business plans. They also were in charge of the respective business plans. The program's budget was quite limited and included paying the salaries of these officials and paying part of the private consultancy that led to the development of the business plan.

During the first few years, part of the organization proved unstable, and that instability affected the degree to which business plan goals were reached. Public managers changed frequently. Even when managers were kept for a relatively long period, their contracts were short-term, with long gaps from contract to contract. As a result, private sector representatives at times had no public manager with whom to interact, or they had to establish a new relationship with a new manager. These changes seem to have been harmful to the extent that, according to the interviews conducted, the collaboration process relied heavily on close interaction between the public and private manager.

In 2010, a new CONPES document dedicated solely to the PTP (CONPES Document 3678 of 2010) identified weaknesses in public organization designed to interact with the private sector in the context of the program. Moreover, the Santos administration adopted the PTP as one of its leading programs in terms of competitiveness policy. As a consequence of these developments, the Santos administration's National Development Plan established a new character for the program within the government and defined a new form of organization. The program was removed from the Ministry of Trade, given autonomous resources, and placed under the administration of Bancóldex, which is governed by more flexible rules than other public entities because it has its own budget. With this shift, the program was freed from the bureaucratic and administrative barriers imposed by being part of a ministry. One consequence was the possibility of hiring public managers with longer-term contracts. The program also received a larger budget and was able to raise the salaries for its staff. Whereas before this reform the public managers had bachelor's degrees and a few years of experience in low- and medium-rank positions in the public sector, the current staff has higher levels of education. Some public managers now have a history of positions in the private sector and some experience in the public sector in positions such as advisors for high-ranking officials.

While there is now a special recruitment process for PTP officers, many of the lower-tier positions are filled with people who were already working for the PTP. These people received the PTP reorganization positively, and are undoubtedly more motivated to develop the program now that they have better employment conditions. The more competitive salaries also enabled the program to recruit highly qualified professionals for the more senior positions, such as its general manager. Reorganization has also contributed to improving the program's identity and the staff's level of commitment. Another change in the organization of the program was the inclusion of an additional upper tier of officers who coordinate broad sectors such as manufacturing and agriculture.

In addition, as part of Bancóldex, the PTP has a more flexible budget that enables it to pay external consultants and conduct studies if needed to support the sector's business plan initiatives. This budget in not enough for the PTP to be able to deliver on the provision of identified public interventions. But this is so by design, because the PTP was not conceived for that purpose.

There is a monitoring system designed to follow the progress of each sector's PTP, under the coordination of a special monitoring unit inside the PTP. Under this system, the public sector keeps a detailed record of activities and accomplishments. These records are intended only for this purpose, however, and in principle are not designed as a means to collect information to facilitate adapting the required policies as the PTP progresses. As conceived, however, interaction in the context of the PTP should allow participants to identify changing needs or request policy evaluations.

These organizational changes in the structure of the program have proven important in terms of the effective capacity of program officials to achieve the goals set forth in the respective business plans. One area where the heightened status and continuity of the officials has been important is their capacity to articulate the work of different government agencies whose intervention is necessary. The increased capacity of officials in preexisting positions has also been strengthened by the introduction of a new position across all of the PTP sectors that is in charge of reaching out to different government agencies and coordinating their work regarding business plan objectives.

The effectiveness of these changes has been enhanced by the public support the program has received from the president and its prominent place in the government's competitiveness policy. PTP participants frequently point to the important role that this visible support has played in helping to effectively achieve the goals set in the respective business plans. Though it is an open question whether the program can survive a transition to a government that gives it less priority, its ability to gather and transmit information from the private sector to relevant public agencies is welcomed by the latter and could remain effective for reasons not related to the priorities of one government or the other.

A drawback of the program is that there is no mechanism for the private sector to hold the public sector accountable for following up on decisions that are reached. There are, however, de facto opportunities for the public sector to receive continuous feedback from the private sector during the implementation of policies in response to perceived needs. By design, the frequency of the full-time work team meetings provides an opportunity for this.

Business Process Outsourcing and Offshoring

In 2008, business process outsourcing and offshoring was a small industry in Colombia, despite the country's clear advantages in terms of the low costs of the industry's main input: manpower. The very dynamic nature of the sector in global terms, the low cost of employment in Colombia, and the sector's unparalleled potential for job creation—in the context of a country with high and pervasive unemployment—made it very attractive as a source of growth. In this context, the sector was invited to participate in the first call for proposals by the World-Class Sectors Program.

The Contact Centers Association, a young association representing a narrow group of interests, submitted a proposal for the sector to join the program. This association was founded in 2001 to promote the interests of its members and strengthen the contact centers industry in Colombia.[23] By 2008, it represented most of the 25 contact centers nationwide. Its members made regular contributions to fund the association's small staff. The value proposal submitted by the association to the PTP was based on the high potential for growth the sector held in global markets and the fact that such high growth was impeded by factors that could only be modified with the government's participation. Perhaps the two most prominent such failures were a critical shortage of trained human resources—especially personnel capable of providing customer support in English—and weak data protection laws that made striking deals with international customers difficult.

The association's proposal was selected for the PTP, and the process moved on to its second stage: development of the business plan with the support of McKinsey. One feature of this business plan worth mentioning is that, unlike most PTP sectors, the government and the Contact Centers Association did not cofinance the outsourcing and offshoring business plan. Given the early stage of development of the sector, the plan was fully publicly funded with resources from the U.S. Agency for international Development (USAID). The business plan characterized the sector as still small (0.3 percent of the GDP, with revenues of close to US$350 million), domestically oriented, and mainly focused on contact centers and basic services. At the same time, it identified considerable growth potential, with an income target of $2 billion and an employment target of 109,000 by 2012.

To reach this potential, it was important to address various limitations. There was the shortage of human resources, regulatory weaknesses, weak sector organization, and lack of adequate infrastructure. The business plan listed a series of actions to address these difficulties, including issuing new rules for data protection; launching training programs focused on the sector's needs; establishing industrial parks where

[23] See the association's website at www.acdecc.org.

outsourcing and offshoring businesses had access to adequate data and voice transmission infrastructure and were close to providers and costumers; and strengthening the productive and associative capabilities of producers in the sector. Excessive concentration on the call centers segment of the market was mentioned, but no specific action to address this issue was proposed.

Interaction on the sector work team seems to have been relatively smooth, and the resulting business plan reflected the most salient concerns of the association. The plan was narrowly focused, in the sense of replicating the sector's concentration on call centers and basic services at the time. However, the actions listed in the plan were not sufficiently precise. As an example, regarding the need to adopt international-standard legislation to facilitate international trade, the sector's business plan only stated a need to optimize legislation for trade, customs, accounting, and currency exchange. In contrast, the plan for cosmetics (see the next section) had a longer and more detailed list of actions, including adopting production and classification rules according to international standards. These shortcomings reflected not only the scarce productive development of the offshoring and outsourcing sector, but also the organizational weaknesses of the Contact Centers Association at the time.

The implementation of the plan, however, addressed some of these problems. Apparently as a joint initiative of the government and business owners not represented by the Contact Centers Association—including some businesses not even in the contacts centers business—a new business association emerged for the sector: the Business Process Outsourcing and Offshoring (BPO&O) Chamber of the ANDI, funded by contributions of its members. The chamber sought to represent areas of the outsourcing and offshoring business other than contact centers and focus on the development of new forms of customer support.[24] The fact

[24] There is in principle no reason why these other areas of business process outsourcing and offshoring could not be characterized as contact centers, perhaps as a more modern type of contact centers. The Contact Centers Association itself characterizes the business as a broad one that evolves rapidly and moves into new ways of providing customer support. However, even if contact centers could be defined in a sufficiently inclusive way, some actors saw it as more convenient to develop a new association rather than expand the membership and aims of the association.

that the new association emerged as a chamber within the ANDI is by no means a coincidence: it comfortably responded to the business plan's call for greater organizational and associational capabilities, while also providing its members guaranteed lobby and research power. The chamber clearly emerged in the context of the PTP. The fact that the program provided guaranteed access to policymaking generated too good an opportunity for entrepreneurs not to seize it. Moreover, the program generated the need for the government to face a more representative group of private sector leaders. In this context, and since its inception, the ANDI's BPO&O Chamber has joined the Contact Centers Association as a recognized private counterpart to the government in the PTP.

As private sector representation was broadened to this second counterpart, the focus of the PTP was broadened to include activities other than call centers, such as customer support. This probably reflected a series of circumstances, such as the recognition of the ANDI's chamber as part of the PTP work team, the assessment in the original business plan of excessive concentration on call centers, and the rapidly evolving characteristics of the sector globally. With the support of the IDB and Proexport, a new study was commissioned to the consulting firm Tholons. The study found that the sector needed to move into data segments and other services with greater value added, and away from voice segments.

Despite the late addition of the ANDI chamber to the sector's PTP work team, there did not seem to have been any major struggle. The private side of the program seemed to work in harmony and dynamically. The mechanics of the interaction with the public manager and the rest of the PTP remained fluent and fruitful. However, before 2011—when the public side of the PTP was reformed—that interaction was also frequently interrupted by changes in the public manager (four different managers from 2008 to 2011), or by periods during which the contract of the public manager had expired and a new contract had not yet been signed. The government transition in 2010 also created a challenge. With the new organization of the PTP, the private representatives faced a much more stable environment. There is also the general feeling on the private side that, under the new arrangements and the new public manager, the public manager is more empowered and more capable of successfully articulating the efforts of other relevant officials at the PTP—such as the thematic managers—and of other government agencies. The work team meets every two months, but communicates much more frequently. As one of the private managers, half-jokingly put it: "I call the public manager five times a day."

Private sector representatives in the business process outsourcing and offshoring industry credit the PTP with several achievements. They value having a stable and institutionalized framework for interacting with the government. The early experience of the Contact Center Association trying to interact with the government was difficult. Being able to reach a given government agency provided few advantages in discussing a different issue with another agency. The PTP framework has in fact provided the articulation of government agencies that its officials are mandated to seek, with the sector's PTP public manager becoming the private associations' entry point to the government. In the process, the private managers have themselves developed the capacity to interact with high-level government officials in different agencies. Consider training, for example. Human resources are the most valuable and intensively used factor of production for this sector, which lacks an adequately trained workforce. In this context, the Contact Centers Association had always interacted with the National Learning Center (SENA), the government agency in charge of specific training, as a first priority, but had been unable to reach its highest levels. Interaction with this agency became more active in the context of the PTP. Today, the head of the Contact Centers Association interacts frequently with SENA, without the need to resort to help from the sector's PTP public manager.

More specific achievements are also ascribed to the PTP. In its first few years, the program achieved two major successes: the issuance of the Data Protection Law and the adoption of a series of government-led programs to expand the supply of an adequately trained labor force for the sector. Both initiatives rested on close public-private collaboration, which is central to the PTP. The private managers and their teams provided important inputs for the Data Protection Law. They researched international legislation, invited international experts, and traveled to Spain to research its law, which was important given the shared language. The legal advisor of the PTP, in turn, led the drafting of the law. Both the private and public sectors lobbied Congress for the law to be approved, while the private sector worked to raise awareness of the importance of the issue among its ranks and sought wider political support. Again, the process itself strengthened the capacity of the private associations, this time their political capabilities. As for the training initiatives, the PTP was instrumental in SENA's involvement in training human resources to adequately meet the needs for expansion of the sector. Training programs on customer support are regularly provided and are increased on demand. At the same time, a specialized program for the development of customer support services in English was launched, with support from the IDB.

These two examples effectively capture the purposes of public-private collaboration in the program: collaboration with the government is crucial for business development when it helps address regulatory and market failures, which are beyond the control of the producers. A regulatory framework that is up to international standards is crucial for the global expansion of domestic producers, while the mismatch between supply and demand for skills is the result of informational problems and adjustment costs.

Other benefits less clearly related to solving market failures were also listed in the original business plan for the sector. This is the case of the creation of industrial parks, which have sometimes been equated to special tax zones. This component of the plan, however, seems to have lost some of its steam recently. It seems plausible, as some actors have suggested, that the higher profile of PTP officials under the post-2011 institutional arrangements also serves to empower PTP staff to better discern the types of interventions the program should focus on.

The private sector has certainly benefited from close interaction with the government through the PTP in the case of business process outsourcing and offshoring. In addition, its participation has also been instrumental for the long-term success of policy initiatives. The frequent turnover of the person in charge of public management of the sector's program could have meant the abandonment of initiatives led by the current manager. One anecdotal example is useful to substantiate this claim: a public manager interviewed stated that he was never able to contact his predecessor, nor did he find any documentation left by that person. This official did not learn of any of the initiatives led by the program through public channels. Instead, the fact that the private sector representatives have stakes in each of these initiatives and are empowered by the program to keep them alive in work team discussions has been instrumental to the continuity of the projects.

Cosmetics and Cleaning Products

This sector is broadly defined to include products that fall into three categories: cosmetics and toiletries, cleaning products, and personal hygiene absorbent products. The sector had been growing at a 9.7 percent average annual rate between 2002 and 2007, prior to entering the PTP. In 2007, its sales were worth US$3.3 billion. Sixty percent of this value corresponded to sales of cosmetics and toiletries, 23 percent to cleaning products, and 17 percent to absorbent products. Additionally, in 2007 Colombia became a net exporter of cosmetics and cleaning products, its exports going mainly to Venezuela, Ecuador, and Peru, which together received 73 percent of the sector's exported value. Direct employment was around 24,000 in 2006, but the Colombian National Bureau of Statistics (*Departamento Administrativo Nacional de Estadística* - DANE) estimated at the time that indirect employment owing to the sector's activity was much higher, at around 750,000. Thus, while still relatively small, the sector had promising dynamics, which led it to be considered a good candidate for the PTP.

The cosmetics and cleaning products chamber of the ANDI, the national association of Colombian entrepreneurs, submitted a proposal for the sector to participate in the PTP. The ANDI's cosmetics and cleaning products chamber was created, among other reasons, to use its credibility, representativeness, and influence to eliminate legal, infrastructure, innovation, logistics, financial, and other obstacles to the sector's growth. Its affiliates include large multinational firms such as Procter & Gamble and Johnson & Johnson, as well as small and medium-sized Colombian firms.

The value proposal submitted to the PTP was motivated by the belief that the opportunity to work closer with the government for the sector's development had to be exploited. Exports in particular were being held back by delays in government actions associated with phytosanitary certifications. The industry saw an opportunity to push for red-tape reforms.

The proposal was selected and McKinsey was brought in to facilitate development of the business plan. Based on figures of per capita cosmetics and cleaning products consumption and per capita GDP, the business plan predicted that domestic consumption could double in 25 years. It also predicted that exports could quadruple in the same period if Colombia's exports-to-output ratio mimicked that of world-class producers such as Spain and Germany. To reach this potential, however, the industry had to overcome a number of difficulties contributing to low productivity compared to competitors: high input costs associated with high tariffs; a stringent and inflexible vigilance and control system with emphasis on ex ante rather than ex post controls, unlike in the United States; low investment in research and development; and insufficient human capital with sector-specific skills.

To address these difficulties, the business plan listed a number of actions, perhaps the most compelling of which were those in the category of regulatory reforms: (1) promoting a market-based system of vigilance and control, (2) facilitating access to inputs and technology at competitive prices, and (3) developing mechanisms to broaden the openness of objective markets. The plan also pinpointed the creation of networks for knowledge dissemination, and of regional industry clusters for economies of scale through associative processes, as critical actions for the sector's development. Those two factors are associated with a vision of a sector targeting the niche of natural-resource-based products to exploit local biodiversity.

Interaction at the stage of developing the business plan involved not only representatives from the sector's business association but also entrepreneurs from both national and multinational firms. Their direct involvement at this and later stages is viewed as one of the reasons for the relative success of this PTP in achieving a number of the goals set forth in the business plan.

Private management of the PTP was given to the director of the cosmetics and cleaning products chamber of ANDI. The tasks he has taken on as private manager are part of his job as representative of the business association, and his salary is covered by periodic contributions paid to the association by its members. There are no competing business chambers participating in the PTP, and, since his is the only association representing the industry's interests, the manager has been able to voice industry concerns in a centralized manner and has played a crucial coordinating role within the PTP.

Since its inception, the program has achieved several accomplishments, perhaps the most significant of which are reducing certification procedure times and supporting a CONPES policy document to promote the creation of a bio-prospecting research center.[25] Exports of cosmetics and cleaning products require a prior Mandatory Sanitary Notification (NSO) granted by the National Institute for Monitoring of Foods and Medicines (*Instituto Nacional de Vigilancia de Medicamentos y Alimentos* – INVIMA), the national authority in charge of sanitary monitoring and control. This requirement, which originated in Decision 516 (2002) by the Community of Andean Nations (CAN), had been interpreted more stringently at the local level than was originally intended. The result was that the procedure at INVIMA took more than three months, which impaired firms' ability to react to international demand within the required time frame. Lobbying within the government by government officials involved in the PTP led to a revision of the interpretation of Decision 516 and of the procedure to obtain an NSO, which now can be obtained over the Internet in 15 minutes.

A similar story applies to obtaining a Free Trade Certificate from INVIMA, which used to take three months for processing and was tied to the validity of the NSO. Now it can be obtained automatically over the Internet, and does not expire once obtained. The next step, which is under way, is the creation of a specialized cosmetics and cleaning products unit within INVIMA that will centralize interaction with the industry and is expected to further facilitate export activity.

CONPES policy documents are documents approved by a council of ministers that charts the course for public policy actions over particular issues in Colombia. The framework for access to and use of genetic resources for commercial use, critical for the production and trade of natural-resource-based products, was given by CAN Decision 391 (1996), but it is each member country's responsibility to develop its own rulings at the national level. Despite CAN Decision 391, Colombia has not moved forward to produce the necessary legal framework, with the result that it can take five to six years to process individual authorizations from the Ministry of Environment. Moreover, CONPES Policy Document No. 3533 of 2008

[25] Bio-prospecting is the process of discovery and marketing of new products based on biological resources.

questioned aspects of Decision 391 and recommended that Colombia propose a modification to CAN in order to ensure a framework that would truly facilitate natural-resource-based trade, something that Colombia has not achieved despite this mandate. CONPES Policy Document No. 3697 of 2011 reiterates that recommendation, orders the development of the corresponding legal framework, and recommends a study of the feasibility of creating a center (*Empresa Nacional de Bioprospección*) for the investigation of commercial uses of Colombia's natural species. Although CONPES documents are not always followed by action, they help chart the course in a particular direction, and they can facilitate decision-making within the government when there is more than one authority involved in the decision-making process. Thus, passage of a CONPES document may correctly be interpreted as a success of the PTP.

Another accomplishment is tariff reductions on imported inputs. Tariff decisions in Colombia are ultimately brought forward to be considered by a specialized committee called the Triple A. Firms identify the inputs whose tariff reductions have the most value to the industry, and the public side of the PTP puts them forth for consideration by Triple A, periodically, in groups of five. The goal of the plan is to continue to gradually and unilaterally liberalize trade, so that in a few years' time the industry will not have to bear tariff costs on inputs that are not locally produced. While gradual tariff elimination is part of a broader government policy, the PTP has enabled prioritization of the elimination of those tariffs that are costlier for the industry's development.

The mechanics of public-private interaction have evolved over time, particularly because since its launching, the PTP has gained stature within the government. By transforming the PTP into a unit of Bancóldex, it was possible to give the program a permanent, well-remunerated workforce. This helped improve the level of interaction with the government, particularly because it coincided with a high-level decision to raise the program's stature. As a result, the people in charge now have more ability to raise their concerns or present requests with the support of the president or the president's competitiveness advisor. Under the new arrangement, the public manager is more empowered, and more high-ranking participants from the public sector have become involved in the PTP. When asked to review the elements of the program's success, both public and private members noted that the main factors are that participation in the PTP, and the label of "world-class sector" that comes along with it, brings the industry's requests to the attention of crucial government authorities such as INVIMA. Before the PTP, the industry lobbied on its own for the reforms it identified as priorities. Lobbying with the backing of the PTP and the support of high-level officials has been crucial to make those lobbying activities effective.

Another factor identified by PTP participants as essential for success is having reached agreement, during preparation of the business plan, on the goal of positioning the industry in the niche of natural-resource-based products in global markets. Having a common long-term goal has organized activity both on the private and public sector sides within the PTP. Also, in the view of the private manager, the presence of multinational firms in the PTP has been important during implementation in helping minimize traditional lobbying and concentrating efforts on pushing for reforms associated with cost reduction and productivity enhancement.

The cosmetics and cleaning products PTP is perhaps the best example of public-private collaboration in which a relatively well-organized and dynamic industry benefited from having a direct channel to voice its needs and concerns in a way that was actually heard by the relevant public sector authorities. The industry had identified many of the necessary reforms and lobbied for them before the PTP, but had had limited success in convincing the government to take action. Within the framework of the PTP, it suddenly became relevant to all government authorities and not only those involved directly in the program. The other striking feature of this PTO is that the actions identified in the public-private conversation often referred to removing government failures either in terms of poorly designed interventions or mere lack of action.

Oil Palm, Oils, and Vegetable Fats

Five segments of the oil palm, oils, and vegetable fats value chain, which are associated with three alternative uses, comprise the sector participating in the PTP. The first is crude palm oil extracted from palm fruitlets, an edible oil suitable for use in a variety of food applications. Refined palm oil and fractions comprise the second segment of the value chain entering the PTP. The third segment is edible specialty fats that use palm oil fractions as an input and are substitutes for other types of fats, such as cocoa butter, milk fat, and butter. The fourth and fifth segments are oils and fats for uses other than food (e.g., biodiesel and glycerin) that result from further manufacturing transformation of palm oil and fractions.

Between 2005 and 2009, the oil palm planted area in Colombia grew from 163,770 to 235,914 acres, at an average annual rate of 9.6 percent. Meanwhile crude palm oil production grew at an average annual rate of only 5 percent, a performance mainly explained by a fall in output in 2008 and 2009 due to sanitary reasons. Colombia entered biodiesel production in 2007. Two years later, there were five biodiesel plants in operation, with a production capacity of 500,000 tons per year. In 2009, the five segments together sold 1,870 billion Colombian pesos worth of products, of which 67.4 percent corresponded to crude palm oil, 11.8 percent to refined palm oil and fractions, 20 percent to biodiesel, and less than 1 percent to glycerin. In international markets, 299.2 billion pesos of products were sold. Exports were mainly of crude palm oil, and they were much lower than in the previous year, due both to lower international prices and to lower export supply resulting from the introduction of biodiesel in the local market, which absorbed 153.5 tons of crude palm oil out of a total of 802.3 tons produced that year.

Other important characteristics and developments included the following: crude palm oil production was dispersed across country regions and varied in terms of productivity levels; the midstream segment of refined palm oil and fractions was poorly developed; refined oil and soy and sunflower bottled oil imports grew at significant rates; and there were large investments in refining capacity for biodiesel production.

This was the situation encountered when public and private actors first sat down together in the context of the PTP to discuss the sector's business plan. When the PTP called for value proposals from agricultural or agro-industrial sectors in 2010, two business associations representing different segments of the oil palm and oils sector submitted separate proposals: Fedepalma and Asograsas. Fedepalma is the business association representing firms involved in the cultivation of oil palm and the extraction of crude palm oil—the upstream segment of the value chain. It is a well-established association created more than 50 years ago, known for the effectiveness of its lobbying for preferential treatment. Its members are among the largest landowners in Colombia. Thanks in part to its lobbying ability,[26] oil palm and palm oil have benefited historically from a number of promotion and protection mechanisms in Colombia.[27] Asograsas is a younger association representing producers of edible specialty fats that use palm oil, fractions, and other edible oils and fats as inputs. These producers see their activity as being threatened by the high costs of domestically produced crude palm oil, and particularly by the growing demand for crude palm oil for biodiesel production, fueled by yet another substantial set of government subsidies.

The appearance of biodiesel as an alternative source of demand for crude palm oil has brought about a transformation of the business. In the past, most palm oil producers were vertically integrated downward into the manufacturing of specialty fats, and some of them into the production of glycerin and derived products, like soap. Some of them still are—those that refuse to shape their investments solely in response to government subsidies and prefer businesses they consider sustainable in their absence—but many have chosen to reshape their activity by turning toward biodiesel production. Together with inflows of imports of low-priced bottled oil from Argentina, this undoubtedly threatens the survival of the Colombian specialty fats industry.

The PTP received proposals from two segments of production that belonged in the same sector, but did not necessarily share their views about its future and had, on some levels, conflicting interests. Fedepalma saw an opportunity to strengthen the standing of palm and palm oil as a sector of choice of the government—which it already was in a sense, before being selected as a world-class sector, if measured by the policy benefits historically received. Asograsas saw a chance to bring to government authorities its members' concerns about protection mechanisms

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[26] Fedepalma's standing as a key interlocutor for the government is also related to the fact that, because of its geographic location in the country's rural areas, palm oil production has been in the middle of Colombia's civil conflict, either because producers have been subject to blackmail and/or violence from armed groups, the business has attracted illegal money from drug dealers and paramilitaries, or the industry has been viewed by the government as an ideal business to promote in regions where reconstruction must come after peace negotiations with particular groups.

[27] See Meléndez and Perry (2010) for a review of the history of industrial policies directed toward palm and palm oil.

affecting the domestic price of crude palm oil to the detriment of their competitiveness. In the value proposal submitted, Asograsas requested revision of the palm price stabilization fund, a mechanism conceived to protect palm oil producers from international price fluctuations that have resulted in practice in robust, justifiable high domestic prices and in significant subsidies. The government's response was to condition the palm and palm oil sector's participation in the PTP on an agreement to develop a unique business plan for the whole value chain. Fedepalma and Asograsas pledged to this, and the government called on Fedebiocombustibles, the association representing biodiesel producers, to join in.

An international consulting firm, AT Kearney, was hired to support the public and private team members in the creation of the business plan. The plan characterized the sector as lacking a clear public-private vision about the sector's future as a value chain, with no consensus about the required regulatory framework for development, in particular with regard to palm oil price stabilization, the need for adequate transport and logistics infrastructure, and the need for innovation and training efforts to control sanitary contingencies. The process proved challenging because, as stated in the business plan, the participating industry segment representatives had no shared view about the direction in which the sector should develop, and neither did participating government officials. To complicate things even further, on the public sector side representatives of the Ministry of Agriculture and of the Ministry of Industry, Trade and Tourism both had seats on the PTP team, and neither of them had a leading voice at this stage. The salary of the representative of the Ministry of Agriculture was at the time directly paid by Fedepalma.

In the end, three general strategies for sector development were identified in the business plan: (1) expand upstream supply with standards similar to those of global competitors; (2) gain scale at the regional level in midstream supply, or that of refined palm oil and fractions, and at the national level downstream, that of value-added products; and (3) generate conditions to ensure the competitiveness of all segments of the vertical value chain in sustainable conditions. The business plan stated ambitious goals for 2019 and 2032 in terms of production, productivity, employment, and exports. For example, crude palm oil production would grow from 802,000 tons in 2009 to 2.2 million tons in 2019 and 6.5 million tons in 2032; and refined palm oil and fractions production would grow from 32,800 tons in 2009 to 1 million tons in 2019 and 4 million tons in 2032.

Actions to implement the strategies identified were classified in broad categories in the business plan—sector strengthening, regulatory reforms, human capital development, innovation, infrastructure, and sustainability—and included a wide range of activities identified with varying degrees of specificity. For example, the plan identified the need to develop a phytosanitary management program for palm oil; strengthen R&D programs with public-private funds; extend electric energy infrastructure in palm oil crop areas; and homogenize basic procedures for environmental control. All of these constitute precise lines of action. Other recommendations, such as developing multi-modal transport infrastructure or aligning all institutional instruments with a sector vision, were much more vaguely stated. This was, no doubt, a result of the conflicting views of PTP members. Actions more concretely stated were those that generated less conflict at that stage.

The beginning of collaboration in the PTP framework was not smooth in this case, and it stayed that way for some time. After the plan was finalized and the implementation stage supposedly started, the palm and palm oil PTP seemed to be going nowhere. While all three business associations involved kept sending their representatives to PTP meetings, they hired a private manager to bring the voice of the private sector to the table and assume the role of the public manager's main interlocutor. Asograsas thought that this private manager had an unbalanced position and that its members' concerns were not being adequately brought into the conversation, but for a while it was unable or unwilling to do anything about it. When asked about the accomplishments of this stage in the collaboration, both the public and private sides mostly pointed to agreements reached to contract independent studies advising the PTP on critical issues, such as the palm oil price stabilization fund. This may seem a bit of a distraction, since in some cases, recent studies were available.[28] Agreement to conduct deeper studies of issues on which there were conflicting views could, however, be viewed as a step in the right direction.

[28] For example, Reina and Zuluaga (2011) studied the workings of the palm oil price stabilization fund and expressed criticisms of it.

During this stage, moreover, the public side of the PTP underwent the reorganization described earlier. For a while, the public manager had no work contract and, hence, acted with no institutional backing. Even after she was given a work contract at the Ministry of Industry, Trade and Tourism to act as its representative in the palm and palm oil PTP, she had a competing public sector interlocutor from the Ministry of Agriculture. Only after the revamping of the PTP under the umbrella of Bancóldex was the public manager empowered and placed in a setting where she had access to the support of higher-level officials whenever that proved necessary.

In 2012, the palm and palm oil PTP entered a new stage that seemed more promising due to at least three factors. First, participants in the PTP united around a common concern about the need to control the increasing flow of illegal trade of refined and bottled oil into the country. Working together toward a common goal was a satisfactory experience for all and apparently helped ease the conversation among private participants. Second, the private manager was replaced, much to the relief of the manufacturing segment business association that sees the PTP as a fertile area for public-private collaboration. Third, PTP officers brought concerns to the president about protectionist policies that raise the domestic price of crude palm oil, and the president publicly voiced his support for their revision. This last factor was perhaps the turning point and the reason why members of the PTP are today more optimistic about its potential to bring about sector development and growth.

The turnaround is a result of two factors: the manufacturing segment's success in voicing its concerns within the PTP, and the heightened stature of the PTP director, thanks to which these concerns reached the president. While it may not be the most desirable outcome in the short run for palm oil producers historically benefiting from artificially high prices, the fact that the president has set a direction for the sector on this particular topic greatly simplifies the debate. It seems, however, to suggest that the success of the PTP may be dependent on the degree of high-level support it receives. Only after the Santos administration made the program one of its leading initiatives, and publicly advertised this fact, did the PTP acquire the heightened stature that led to some of its recent successes.

It is not yet possible to claim this experience of public-private collaboration for policy design as a failure or a success. This is not only because it is still very young—its launching dating only to 2010—but also because it has faced a challenging combination of circumstances since its inception that have made the road bumpy. Bringing together segments of a value chain whose interests are not well aligned to work on a joint business plan for sector development seems naïve, even without considering the imbalance of power between private sector segments and between them and the public sector counterpart in the PTP. But even more detrimental to the collaboration process was the absence of a view about the sector in the long run from the public side of the conversation and, particularly, the absence of its view about the rationale for government intervention that prevented it from taking positions for or against policy demands from the private sector during the development of the business plan.

Despite a bad start, the mechanism for public-private collaboration is promising enough to have motivated private participants to be persistent, and to be responsive to adjustments from the public side. The sector's previous experience of interaction with the public sector was on different terms, so to some extent the PTP was successful in transforming the old framework. The fact that the PTP was able to bring the most conflicting issues directly to the president suddenly strengthened its standing as the channel through which to voice policy requests and concerns.

Taking Stock of the Productive Transformation Program

The PTP has been useful on two fronts: (1) helping the private sector set goals and identify bottlenecks that have impeded faster growth for the respective activity, and (2) coordinating efforts by government agencies whose joint participation is needed to overcome those bottlenecks. From a conceptual standpoint, the PTP is mainly helping to overcome coordination failures on both the private and public sides. To date, the PTP has not been an arena for the sectors involved to obtain direct benefits in the form of subsidies, or even the provision of state-financed goods geared exclusively to the sector—even if sometimes (e.g., the development of English training programs) it has resulted in the provision of goods from which the sector does benefit.

The degree of success with which the PTP performs that role, however, has varied depending on factors that range from the institutional organization of the program on the government side to the degree of homogeneity and organization of the private interests involved. These determinants of PTP success have in turn been influenced by the particular PTP itself. In the case of business process outsourcing and offshoring, for instance, the Contact Centers Association improved its capacity as a result of being empowered as a direct government counterpart in the PTP. Moreover, a new representative association, the ANDI's BPO&O Chamber, emerged and grew as a response to other sector players and to the government's receptiveness to the sector's need through the PTP.

Overall, the program is positively evaluated by participants in terms of the depth and direction of public-private collaboration, and on the two specific dimensions of coordination and government failures. Appropriate caution is important, however, in terms of the reach of these conclusions. One aspect that escapes the nature of the current analysis is how well the program serves its original aim of directing productive transformation, defined as a transition in the sector composition of the country's production toward a higher growth model. The positive aspects of the PTP this chapter has identified do not directly relate to that aim, and suggest that the benefits of the program could reach even further if the selection of sectors had more to do with the positive dimensions of the program that participants clearly identified. One question clearly suggested by the analysis is whether it would not be preferable to select participant sectors, clusters, or chains from calls open to all of the productive sectors, on the basis of the potential of the PTP to remove damaging bottlenecks. This would not only turn the focus to areas where the program has shown greater strength, but would also move a step away from the more controversial dimension of picking promising sectors. The criteria that are appropriate for that aim are far from settled, as is the political feasibility of strictly following those criteria.

Conclusions

The conclusions enumerated at the end of each previous section suggest lessons that can be applied to other contexts, as outlined below.

1. ***Umbrella institutions bring advantages for public-private collaboration.*** The existence of umbrella institutions that formally require

public-private collaboration for the design and supervision of policies, unique to Latin America in the Colombian case, brings advantages in terms of continuity. This includes continuity of policies and objectives, especially during governmental or administrative transitions, and continuity of the collaboration itself. This comes as a consequence of turning the private participants into stakeholders of the government programs and institutions. For the same reason, designating a permanent private counterpart can enhance these benefits, as happened in Colombia with the designation of the PCC as a member of the Executive Committee of the National Competitiveness System. Keeping the representation of the private sector concentrated in a single agency also seems beneficial. It has been beneficial in the Colombian case for two reasons. One, consolidating private demands through a single organization with heterogeneous membership almost inevitably requires abstaining from processing those demands that benefit parts of the represented private sector at the expense of others. Two, keeping private leadership unified in the process of dialogue with the public sector, as opposed to recognizing a fragmented albeit potentially highly representative set of private counterparts, makes that dialogue most effective and expedited.

Highlighting the advantages of empowering a single private representative in the Colombian case, however, it is also important to note that one crucial element has been that the PCC has abstained from pursuing rents for its members, partly because of the character of the members and that of the staff they appointed. But it is conceivable that the nature of the Colombian PCC could evolve into a traditional rent-seeking lobby, and that similar private institutions in other contexts might not be as benevolent as the PCC has been. In that sense, there must be limits to the doors that institutionalized public-private collaboration open to private representatives. One possibility is to limit participation to the design of horizontal policies and policies aimed at addressing government failures, where the space for rent-seeking is much more limited. Another is to favor institutionalized channels for public-private collaboration over direct channels in order to ensure that policy requests go through the filter of organized debate. For instance, direct meetings with the president or with cabinet members should only be permitted when they occur within arenas specifically designed for public-private collaboration. The case studies suggest that the umbrella institutions, such as the National Competitiveness System and the PTP, have played the role of institutionalized channels, providing an environment for public-private interactions that has been healthier than the traditional lobby that was historically quite effective in Colombia (Eslava and Meléndez, 2009; Meléndez and Perry, 2010).

2. ***Public sector counterparts should be empowered and clearly defined.*** Many of the examples of collaborative success examined in this chapter involved private representatives interacting with public officials at the highest levels (such as the president of the PCC interacting with ministers on the Executive Committee of the National Competitiveness System). At the same time, some of the failures involved difficulties for the private side in reaching a high-stature public officer responsible for a given subject (for example, the lack of a direct head in charge of transportation logistics). Moreover, improving the standing of the PTP public managers has also improved the performance of the program in terms of implementing actions contemplated in the business plans. These facts suggest that how fruitful public-private collaboration is depends on the stature of the public-sector counterparts being sufficiently high that they either have decision-making power themselves or are able to bring private sector concerns and requests to those who have decision-making power. A minimum level of effectiveness in translating requests into policies is evidently necessary for institutionalized public-private collaboration—as opposed to traditional lobbying—to become the main channel for interaction. This will largely depend on the quality of the public sector counterpart through the institutional channel, associated, in turn, with its reach within the government.

   Less obviously, but perhaps even more importantly, sufficient hierarchy on the public side is necessary to filter private sector initiatives that aim to extract rents for the sector at the expense of other sectors or to protect against unnecessary government interventions. This helps to ensure that the result of the public-private collaboration is both welfare-enhancing and effective. The public sector counterpart should also be empowered in the sense of being well trained to filter requests and take positions on conflicting matters. The difficulties during the development stage of the palm and palm oil business plan might have been more easily solved had the public sector counterpart held a long-term vision about the desired future for the sector and the types of policies consistent with or against it.

A lesson from the case studies is that any public-private collaboration process will benefit from well-trained public counterparts who thoroughly understand the economic rationale for government intervention, and are able to identify the convenience of pushing for the elimination of or changes to particular regulations or policies that introduce unnecessary distortions. Governments should adopt guidelines to help public officials evaluate the need for and quality of different government interventions, and perform appropriate cost-benefit analyses in the spirit of those adopted by OECD countries, such as the Regulatory Impact Assessment, which is used in the United Kingdom to filter regulation and other policy interventions.

3. ***A private counterpart should be well organized and technically sound.*** In many of the cases examined, a well-organized private counterpart was critical to effective public-private collaboration. This was true with the PCC's role in the National Competitiveness System, and with specific business associations in the productive transformation programs for cosmetics and business process outsourcing and offshoring. The standing and capacity of the private counterpart was frequently endogenous to both the actions of the government and the context of public-private collaboration; the strength of the PCC was a byproduct of its designated role regarding productive development policies; the Contact Centers Association was strengthened thanks to the PTP; and the ANDI's BPO&O Chamber emerged as a result of the same program. Explicit government-led efforts to organize the private sector have been common in Colombia's history, and have yielded strong business representation that, many argue, historically was reflected in sound economic policies (e.g., the ANDI and the Coffee Growers Federation). The quality of the private sector's counterparts to the government in collaborative enterprises, therefore, should not be taken as a given by the government. Attempts to strengthen private

sector representation must be undertaken carefully in order to balance the potentially conflicting goals of keeping representation sufficiently concentrated to be effective, yet sufficiently representative of a wide range of interests to minimize benefits to specific sectors at the expense of the common interest. In Colombia, having private interests organized around horizontal goals such as competitiveness, and empowering those interests for mainly horizontal purposes or for identifying and solving government failures, has also proven beneficial. Limiting the reach of collaboration to these dimensions can also help replicate the benevolent character that private representation by the PCC has had in Colombia as a result of historical circumstances. This is another lesson of broader application.

4. ***Do not discard value chain approaches (as opposed to focusing only on a production segment).*** While it may prove difficult to reach agreement on policy paths when conversation coincides with vertically related segments of a value chain that may have conflicting interests, as in the case of the palm and palm oil PTP, public-private collaboration inclusive of the whole value chain has proven useful in dealing with those conflicting interests. When supporting a particular development path for a sector, such as choosing to promote biodiesel over specialty fats, having all stakeholders at the table may facilitate an appropriate assessment of the costs and benefits of each decision. Still, it is important to highlight that the discussion with potentially conflicting interests within a value chain can lead to a dead end if it is not framed by sufficiently effective institutions, including those that guarantee sufficient stature on the public side of the collaboration. The palm and palm oil PTP, for example, did not show any signs of progress until the Productive Transformation Program itself was reformed, the standing of its staff members was increased, and the program itself became the government's channel of choice for day-to-day interaction with some segments of the private sector.
5. ***It is important to provide institutional channels to voice private sector requests (not necessarily within a framework of selection as a world-class sector).*** In the PTP case studies, nine out of 10 private sector policy requests placed through the institutional channels that provided for public-private collaboration were associated either with

the elimination of government interventions that distort the marketplace and harm productive development, the reducing of red tape, or the need to press for government action on issues pending in the government's agenda. In this setting, a main goal for public-private collaboration was to address government failures. When this is the case, choosing world-class sectors for special policy treatment may not be the correct way to frame this approach to productive development policies. This is not because organized public-private collaboration is not useful, but rather because it should not be limited to sectors that have shown particular growth dynamics justifying special attention, if this is what world-class sectors are meant to be. It may be that the less dynamic sectors have been held back by poor government interventions or lack of action from the government on identified issues. Sectors that have identified areas in which government failures are costly, or sectors that wish to submit government interventions and regulations affecting them to a rigorous cost-benefit analysis, should be able to approach the government and enter into a process of public-private collaboration aimed at redesigning the interventions necessary for their productive development.

Appendix 3.1 List of Interviews

Approximately 20 interviews were conducted for this chapter with different actors involved in the National Competitiveness System, the Productive Transformation Program (PTP), and the Private Council for Competitiveness (PCC). Interviews conducted for previous projects were also helpful in shaping this document. The following is the list of people who were interviewed:

- Current and past presidents and deputy directors of the PCC
- Founding members of the PCC
- Heads and unit directors at business associations
- Unit directors at the National Planning Department
- Public and private managers of the sectors reviewed in the PTP
- General manager of the PCC
- Presidential advisors in themes related to competitiveness

4

Sugar Cane, Software and Fashion: Public-Private Collaboration in Argentina

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THE DESIGN AND IMPLEMENTATION OF PRODUCTIVE DEVELOPMENT POLICIES POSE CHALLENGES FOR POLICYMAKERS, ESPECIALLY IN EMERGING ECONOMIES. Although pervasive market and coordination failures pave the way for policy intervention, the instruments adopted have often been less successful than expected. This is because policymakers generally lack important pieces of information and do not have access to rigorous evaluations of current and previous programs, and because public sector capacity is frequently weak. Moreover, there are often coordination problems between different agencies or levels of government. The emergence of rent-seeking and free-riding behaviors, agency captures, and corruption also explains the negative outcomes. The lack of resilience of public policies in light of frequent staff changes in the public sector and cyclical fiscal crises also hinders the effectiveness of productive development policies.

Public-private collaboration (PPC) schemes may help to alleviate some of the factors that lead to problems in the design, implementation, and monitoring of productive development policies insofar as they may facilitate information exchange and coordination among the various agents involved, address some government failures, generate more transparency, and contribute to the resilience of those policies. PPC may range from informal consultations with the private sector to that sector's full involvement in the policy design, execution, and monitoring stages, including schemes such as the participation of the private sector in advisory and supervisory bodies, technological and productive alliances, deliberation councils, and other arrangements.

In recent decades, Argentina has implemented a large and varied number of productive development policies in the context of different economic regimes. After the dismantling of the import-substitution regime, productive development policies became less significant, and during the 1990s they were mostly aimed at solving market failures under a horizontal approach. Following the economic crisis of 2001, productive development policies regained their relevance (in an international scenario that was friendlier to the adoption of such policies). New horizontal instruments were created, resources allocated to existing ones often increased, and some new sectoral and targeted policies were launched.

In spite of a sort of renaissance of productive development policies, PPC schemes are still not very common, as noted by Baruj, Kosacoff, and Ramos (2009). These authors point out that the weak interaction between the public and private sectors is to some extent the result of the instability of institutions and policies, as well as of authorities and public agents. This discourages the development of linkages and networks and erodes mutual confidence and consensus, because all agents assume that once policymakers leave their posts, the policy framework will return to where it began. Moreover, these relationships often depend on personal contact, and there are no formal or institutional channels to develop them properly. Public agencies tend to act in an isolated fashion and are often reluctant to engage with the private sector, especially because of the risk of being captured by private interests. Finally, private sector organizations often lack the technical and professional staff to promote and implement any kind of PPC, and business associations are often more prepared to lobby the government than to cooperate in order to design, implement, and monitor productive development policies.

In recent years, however, several cooperative initiatives have emerged. In addition to the cases analyzed in this research, some sort of PPC is included in the small and medium-sized enterprise (SME) policies of the City of Buenos Aires, the clusters program sponsored by the Undersecretary of Industry, some initiatives of the National Agency for Science and Technology Promotion (*Agencia National de Promoción Cientifica y*

Tecnológica – ANPCyT), the wine industry in Mendoza, and the rice sector in Concepción (Sánchez, Rozemberg, and Butler, 2011), among others.[1] The Competitiveness Forums launched in 2003 by the Secretary of Industry are another example of a PPC. Nine chains were selected, and all of the agents involved (from the public and private sectors and academia) were called on to debate the main competitiveness problems affecting each chain and develop strategic plans to address them. These were meant to be forums for the exchange of information and a tool for coordinating actions among all the different actors related to a production chain. However, the software and information services sector was the only case in which a strategic plan was effectively designed and concrete actions proposed (Gutman, López, and Ubfal, 2006).

Devlin and Moguillansky (2009) and Schneider (2010) provide analyses of PPC cases, highlighting the successes and failures and distilling lessons aimed at improving the efficacy of these arrangements. From the discussion and evidence gathered in those papers, the following factors emerge as conditions favoring the success of PPC:

- Strong support of government leaders
- Stability over time
- Limited number of participants in the deliberation and governing bodies
- Representation of all the relevant parties involved
- Existence of a professional and meritocratic civil service
- Competent technical staff
- Effective representation of business
- Adequate frequency and duration of interactions
- Appropriate monitoring routines.

Notwithstanding these lessons, it is not easy to develop metrics that can measure the impact of the PPC. As stated by Schneider (2010), a possible metric would be whether the council promotes the desired policy outcome in greater quantity and quality than would be expected without

[1] Devlin and Moguillansky (2009) discuss the cases of Fundación ExportAr and Prosperar, the dissolved National Investment Agency, two initiatives that involve PPC mechanisms.

public-private cooperation. However, it is difficult to establish the appropriate counterfactual for the baseline, and it is also difficult to separate the impact of the PPC from that of the policy itself. Another possible metric is the contribution of business-government cooperation to the quality of policies and policymaking. This is also somewhat problematic, as it is difficult to measure the quality of policymaking through objective indicators. Given these drawbacks, it is not surprising that there are few evaluations of the impact of PPC.

In spite of the difficulty of establishing adequate metrics, a cost-benefit approach may be useful to understand the impact of PPC. Participating in these arrangements implies costs in the form of time spent in meetings. The government may incur costs associated with ceding part of its decision-making authority, and the private sector may divulge information that it would prefer to keep secret. Only if the benefits associated with participation in PPC (e.g., solving specific problems faced by the various stakeholders) outweigh these costs will there be incentives for agents to participate in them. However, benefits could accrue through rent-seeking, which points to the need to establish institutional arrangements that minimize the scope for such behavior.

This chapter aims to contribute to the debate on the role of PPC in productive development policies through a detailed analysis of four case studies in Argentina.[2] The case studies include a brief account of the sector or activity to which the productive development policy is applied, a description of the policy, and a characterization of the PPC mechanisms involved. The case studies also present analysis aimed at generating knowledge about a number of issues, including the following:

- What are the conditions that may favor or deter the emergence of PPC mechanisms?
- What incentives and monitoring mechanisms are present in the productive development policies studied?

[2] There are a few available studies on the subject in Argentina. Bisang, Anlló, and Campi (2009) analyze private-public networks in the agriculture sector. Lengyel and Bottino (2010) study the emergence of partnerships in the agricultural machinery and biotechnology industries. McDermott and Corredoira (2010) discuss the case of the wine industry in Mendoza.

- What is the degree of involvement and authority of the public and private sectors?
- What are the characteristics of the public agencies involved (e.g., flexibility, bureaucratic quality, isolated high-level areas, stability of key public servants, etc.)?
- What are the characteristics of the private partners (e.g., legitimacy, existence of prior consensus on relevant policy issues, technical capabilities, etc.)?
- Has the PPC contributed to the improvement of the quality and outcomes of productive development policies? If so, how? If not, why not?
- Has the PPC generated other positive effects beyond those originally envisaged? Has it, for example, become a platform for identifying new challenges and opportunities?
- What is the cost-benefit balance of participating in PPC as perceived by public and private sector participants?
- Did rent-seeking and free-riding behaviors emerge? If not, what mechanisms were employed to prevent them?
- How is PPC expected to evolve in the near future?

The methodology employed includes analysis of data from secondary sources (official statistics, surveys, websites, publications, etc.) and interviews with the key agents involved in each case. The aim was to collect information to address the following questions:

- What were the problems faced before PPC was launched?
- What factors led to the establishment of PPC?
- Was PPC directly associated with the productive development policy, or did it emerge during the policy's implementation?
- What were the institutional arrangements chosen, and why? What types of issues are discussed in the context of PPC?
- How did the public sector reorganize in order to adapt to PPC?
- Does PPC help the government gain access to valuable information from the private sector?
- Has PPC led to the emergence of permanent public-private networks that may transcend the original objective of the collaborative effort?
- What actions were taken, if any, to improve the resilience of PPC?

The evidence gathered from the case studies will bring out common features that may lead to the success (or failure) of PPC, as well as idiosyncratic features related to the objectives, actors, or specific arrangements adopted in each case. The result of this analysis is presented in the final section, along with lessons learned that may be applied to other sectors and regions in order to increase the effectiveness of PPC schemes

Empleartec: Human Capital for the Software and Information Services Sector

The Problem

Argentina has become a significant player in the software and information services (SIS) sector within the region. According to the International Monetary Fund (IMF), Argentina was the major Latin American exporter of SIS in 2010. After the 2001–2002 crisis, the SIS sector gained momentum, helped initially by the devaluation of the peso, which fostered exports, and then by the economic recovery, which led to rapid growth in the domestic market. Annual revenues grew from US$830 million to US$3 billion between 2003 and 2011, while exports rose from US$170 million to US$790 million, and employment increased from 19,000 to 64,000, according to data from the Software & IT Services Chamber of Commerce (*Cámara de Empresas de Software y Servicios Informáticos* – CESSI). According to the Ministry of Labor, Employment, and Social Security (MTEySS), between 1998 and 2011, the SIS sector had the highest employment growth rate in Argentina's economy.

The sector's vibrant performance was reinforced by some specific productive development policies. In 2003, the Ministry of Economy created the SIS Competitiveness Forum with the aim of initiating a debate on the policies needed to improve competitiveness in the sector. The forum led to the 2004–2014 Strategic Plan for Software and Information Services, which identified challenges and opportunities and defined concrete actions to be carried out. Officials from the national, provincial, and municipal governments, as well as representatives from the private sector and academia (Gutman, López, and Ubfal, 2006), participated in the forum. Subsequently, in 2004, two laws promoting the SIS sector were passed. Law No. 25.856 established software production as an industrial activity subject to possible tax exemptions, favorable credit terms, and other concessions. Law No. 25.922 granted tax benefits to SIS companies and created a Software Industry Promotion Fund *(Fondo Fiduciario de Promoción de la Industria del Software* – FONSOFT) aimed at financing R&D expenditure in SMEs, universities, and research centers. Furthermore, many Argentine provinces are offering their own tax benefits to SIS companies wishing to invest in their territories (e.g., the city of Buenos Aires, Córdoba, Buenos Aires, Santa Fe, and Tucumán).

All studies dealing with export competitiveness and investment attraction in the SIS industry highlight the fact that access to skilled human resources is a key factor in this sector (Doh, Bunyaratavej, and Hahn, 2008; Meyer, 2007; Nyahoho, 2010) not only from the point of view of knowledge, but has also because it has a major impact on costs.[3]

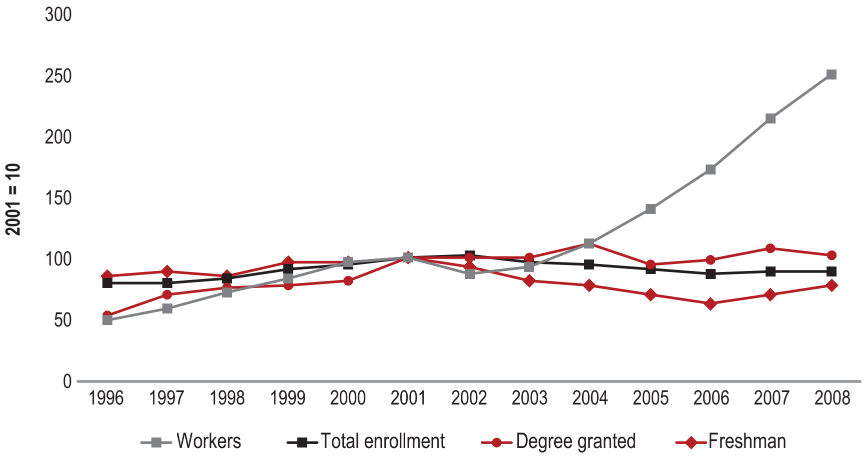
Although Argentina's educational system has been, to date, a source of competitive advantage in the SIS sector, increasing labor demand derived from the rapid growth of the sector has led to fierce competition for scarce human resources. In fact, there is broad consensus that the most significant obstacle to further growth in the SIS sector is labor supply restrictions, which result in skilled labor shortages and wage pressures (OPSSI, 2010).

OPSSI (2010) estimates that in the past 13 years, the number of new students enrolled in graduate and postgraduate programs in information technology (IT) has been stable at an average of 22,500 entrants. Since only some 15 percent of new entrants graduate, there are only about 3,000 new IT professionals annually. In turn, employment in this sector has increased at a rate of 6,000 jobs per year in recent years (Figure 4.1). This gap is even wider given the fact that approximately 50 percent of graduates do not work in software and computer service firms, but rather in other sectors, the government, or other institutions, or are self-employed.

The lagging supply of IT workers is due mostly to the lack of interest in the field on the part of young people. Although this is a problem in many Western countries, there could also be specific factors at stake in

[3] Direct and indirect labor costs amount to more than 70 percent of total costs in the SIS sector in Argentina (OPSSI, 2012).

Figure 4.1 **Employment in the Software and Information Services Sector, and Total Enrollment, Graduates, and Freshmen in IT-related Degrees, 1996–2008**



Sources: Observatory of Employment and Entrepreneurial Development/Ministry of Labor, Employment, and Social Security; and the Secretary of University Policy.

Argentina. López and Ramos (2008) point to flaws in secondary education, such as poor performance in mathematics and science in Argentine schools, as measured by Program for International Students Assessments (PISA) test scores. This may deter students from entering into IT-related careers. Another factor, according to these authors, may be imperfect information about labor market conditions, which leads to a flawed perception about the growing demand for IT professionals.

The Program

To try to solve the labor force bottleneck, the government and the private sector have been taking actions to provide training and study opportunities in the IT sector (López, Ramos, and Torre, 2010). These policies are often launched and managed in public-private cooperation schemes that are to some extent a legacy of the intense interaction between the government and the private sector in the Competitiveness Forum, the development of the Strategic Plan for the sector, and the enactment of laws to foster development of the industry.

The key private actor in this cooperation is CESSI, which was created in 1990. Today, CESSI brings together more than 350 companies and institutions representing 80 percent of revenues and accounting for more than 85 percent of employment in the sector. Twenty-five regional and provincial organizations representing the software sector in their jurisdictions are also affiliated with CESSI and another 400 firms are indirectly associated with it.

At the end of 2005, CESSI and the Ministry of Education, Science and Technology launched the *InverTI en vos* ("Invest in Yourself") program to promote employment and educational opportunities in IT-related fields among high school students. Scholarships programs were also launched. The *Becas Bicentenario* program grants scholarships to students wishing to enter into priority fields, including many IT-related ones. Another program is the National Program for Graduate Studies in ICT (*Programa Nacional de Becas para Carreras de Grado en Área TICS* – PNBTIC), which grants scholarships to students in IT-related fields of study.

Between 2004 and 2006, there were two relatively large training programs in operation: the +Mas Plan sponsored by Microsoft, co-funded with the MTEySS, and jointly organized with CESSI; and the Entertech Plan sponsored by Oracle and Sun, with the participation of MTEySS and CESSI. More than 3,500 people were trained in these programs. A second version of the Entertech Plan launched in 2008 trained 1,500 people. In 2007 the *InverTI en Vos* program trained 800 people. Oracle, CESSI, and the MTEySS managed the program. Some provinces also took action to promote IT-related studies. There are no evaluations of the impact of these programs. Although some of them may have helped alleviate the scarcity of qualified human resources, the above analysis suggests that they failed to significantly improve the labor supply shortage for this industry.

Case Presentation

The most ambitious training initiative adopted in the IT sector in Argentina's history is the scholarship plan initially known as Control F/A, and currently called Empleartec. This initiative is managed by the MTEySS through its program called Continuous Training (*Formación Continua*) in conjunction with CESSI and some leading private firms (Cisco, Microsoft, Oracle, IBM, Red Hat, and local firms such as Calipso, Globant, Snoop, and G&L Group).

The MTEySS, with the support of the World Bank and the United Nations Development Programme, launched *Formación Continua* in 2007. The MTEySS cofinances the program. Control F/A is one of the four largest programs of the 40 such initiatives currently managed by the MTEySS. These programs are mainly aimed at young people who have difficulty finding employment or who are unemployed, but they are open to anyone over 18. In fact, as unemployment rates have been falling, the content of the *Formación Continua* program has gradually changed, and now focuses more on upgrading job skills rather than entry into the labor market.

The launch of the Control F/A program was a natural follow-on to the previous collaborative experiences between CESSI, the MTEySS, and some private SIS firms. The first stage of the program included CESSI and five large SIS firms (Microsoft, Oracle, Sun, Cisco and IBM.)[4] Other firms, universities, and software poles and clusters were subsequently incorporated. Today, in addition to the abovementioned local and foreign firms, 16 poles and clusters and 14 universities and other educational organizations are involved in the program.

When the Control F/A program began, its purpose was to train human resources in some specific areas defined by the five original sponsoring firms. The training was mostly on the proprietary technologies of those firms and made use of teaching materials already available through the Control + F scholarships.[5] Later, at the request of the MTEySS, the scope of the courses was expanded to include more technologies, including free and open-source programs and applications, and the Control+A scholarships were created to provide basic training in IT, specifically digital alphabetization.

Currently, free training courses covering 40 different technological areas and levels are offered in the city of Buenos Aires, the Greater

[4] According to those interviewed for this research, this is the first case in which these giant IT firms worked together in a training program (although they work individually on similar training plans with governments in other countries).

[5] The courses offered under this modality provide technical and functional training in areas such as computer programming, databases and operating systems administration, software development for mobile applications, video games, web page design, software project management, implementation of enterprise resource planning, software testing, and others.

Buenos Aires area, and another 21 cities in 14 provinces. The courses are funded by the MTEySS. Most are 80 hours long, and official certificates are delivered to students who pass them. Until 2013, the MTEySS had provided approximately US$7 million to run the program. Since its launching in mid-2012, the program has trained some 21,000 people. As part of the program, 43 institutions received 12 sets of state-of-the-art hardware equipment to install or improve computer labs where training courses are offered. A more recently launched stage of the program (which was renamed Empleartec in 2012) aimed to train 30,000 people between 2012 and 2014. Besides including new thematic areas and placing more emphasis on digital alphabetization,[6] this new phase trained teachers and professors in the use of IT and promoted the use of IT technology in the fields and courses that grant teaching degrees in Argentina. It also established linkages with other IT-related public programs and will gradually align the contents of the courses with the human capital requirements identified in other private-public partnerships in this sector (e.g., the Ministry of Industry's 2020 Strategic Industrial Plan).

The Empleartec Program has five phases. The first includes basic planning based on analysis of the demand for skills and the available supply of courses and knowledge in different areas. CESSI invites its members and other partners to take part in the program, and a more detailed supply-demand analysis is made to determine the courses, the locations where they can be given, and the institutions able to teach them. A plan is then presented to the MTEySS. Once the proposal is approved, a framework protocol is signed between the MTEySS and CESSI and specific agreements are signed with firms and educational institutions. Advertising campaigns are then launched and beneficiaries are selected.

CESSI selects the beneficiaries and then checks them with the universities, clusters, poles, and other educational organizations (referred to as implementers or *efectores* in the program's terminology), as well as with the sponsoring firms, based on the parameters previously defined with the MTEySS. Students who complete the courses receive an official certification issued by the MTEySS and are entered into a database accessible

[6] Ultimately, digital alphabetization contributes to expanding the market for IT firms.

online to businesses needing to hire personnel trained in the areas covered by the program. The ministry's Network of Employment Offices also helps graduates find jobs and proposes prospective students for jobs. Students evaluate the quality of the courses and educational institutions and provide feedback to CESSI.

The MTEySS and CESSI jointly define goals every six months, and disbursement of funds is subject to accomplishment of those goals. The MTEySS verifies the actual delivery of the educational services and monitors the evolution of the program through a follow-up system in which its regional employment offices also take part.

The division of labor within the program is as follows:

- CESSI designs the program and presents it to the MTEySS; coordinates the design and implementation of courses jointly with the firms, institutions, and universities participating in the program; administers funds received from MTEySS; and monitors program performance and outcomes.
- Sponsoring firms identify the areas where knowledge and demand-supply gaps exist; determine the institutions that will give the training courses and when and where they are to be given; and ensures the quality of the courses and the teaching (in most cases, defining the course content and providing the teaching materials, while in others this is responsibility of the educational organizations).
- Educational organizations and clusters teach the training courses and provide the infrastructure and logistics. Instructors are paid by the hour, and the program pays the implementers for the use of their facilities.

As the most representative SIS sector business association, CESSI operates as coordinator of the program on behalf of the private sector and serves as the interface with the MTEySS. Beyond financing the program, the ministry's role is mainly oversight. That is, it ensures that program design and aims are aligned with its own policy objectives, supervises program implementation, helps disseminate employment opportunities among those trained, and incorporates trainees in databases where employers can look for prospective employees.

Although the original target audience of the *Formación Continua* program was young people who could not find employment, in practice, it was clear from the start that the Control + F Scholarships were aimed at students who had at least completed high school, including those who already had work experience in the sector or who were employed in the IT field. According to some of those interviewed for this study, the quality of the courses in general seems to have been improving. Basic IT courses are also given, as well as courses that allow students to enter the labor market relatively rapidly by mastering certain technologies.

There was a learning process during implementation of the plan. The composition, background, and interests of the students were not known a priori, so the firms and implementers had to adjust the nature and content of the courses to meet the needs of the target audience. According to some of those interviewed, this process helped improve the courses and better define their audience.

An adaptation and learning process also occurred within the organizations involved in the program. The MTEySS had to adapt to work with a sector that employs people with higher educational levels on average than those of its other sectoral partners. Thus, at the beginning of the program, there was some reluctance in certain areas of the ministry to get involved, especially in the regional offices. CESSI, the SIS firms, and the universities also underwent an adaptation process aimed at including in their training plans people with employment problems and/or with poor educational backgrounds.

Other lessons emerged during the evolution of the program that are now reflected in new commitments and aims included in the program's new phase. The MTEySS wants firms to adapt their manuals to make them more effective and pedagogical,[7] and also wants to improve its monitoring of teachers' skills. It has even incorporated a curriculum expert in the program. The MTEySS has also asked CESSI to make a technological adaptation of a software program that helps blind people use computers and has installed a new lab aimed at running 3D simulation programs

[7] The international firms use the same manuals employed in other parts of the world where they organize similar courses.

that will be used in the training programs of other sectors. Officials from MTEySS indicated that around 65 percent of the students trained under the Control +F program found employment or increased their wages after completing the courses. Although the program trained people not working in the SIS sector or who were unemployed and improved the capacity of people already acquainted with IT technologies, there is no single measure of the success of the program. In any case, when one compares the number of people trained (and the number projected in the new phase) with the total number of people employed in the sector, the program has the potential to have a major impact on the SIS labor market. The renewal and expansion of the program is a sign that both the private and public sectors have a favorable view of its outcomes.

Case Analysis

Trust and Previous Relationships

The existence of prior linkages among all of the agents involved facilitated the creation and implementation of this program. Moreover, the need for trained personnel had been extensively discussed in many arenas, including the Sectoral Competitiveness Forum, and was identified as the main obstacle for progress in the SIS sector in Argentina. All of the agents that participated in launching the program had already been involved in training plans that were their direct precursors. This generated a valuable learning process about the supply and demand side of the training market in this sector.

Profile of Private Sector Representatives

CESSI is a relatively young business association, and the profile of its members and directors is different from that of the average Argentine business association insofar as they are mostly academics who work in a sector in which technical change is rapid and the need to be aware of global business trends is more pressing than for the average Argentine firm. This could help explain why CESSI has been so active in launching initiatives to address the challenges faced by the sector (i.e., lack of skilled personnel, improving access to finance and foreign markets, incrementing R&D activities, etc.). Today, CESSI is widely acknowledged as representing the interests of the SIS sector, a status it earned through its actions and initiatives.

The MTEySS officials interviewed for this study stated that CESSI was the most dynamic business association among all those with which they had worked on sectoral training programs.[8]

Incentive Scheme

The main incentive for the private sector is the prospect of training human resources, a need felt by firms of all sizes and segments within the SIS industry. Costs are low and are mainly borne by CESSI, which assigns staff to manage the program, and by private firms, which also assign staff and provide course content at little or no cost. Firms participating in the program have no monetary incentive to do so, although in some cases the courses teach technologies developed and sold by them (hence contributing to expanding their markets). Universities and clusters receive funding for their teachers and state-of-the-art equipment, which allows them to consolidate institutionally.

Governance, Management, and Operation

The private sector has broad involvement and ample authority both at the design and implementation stages. CESSI, jointly with sponsoring firms, defines course objectives and content and invites universities and clusters to participate. The rationale behind the division of labor is that the private sector knows what skills are needed (which often change rapidly as a result of technical progress), and the institutions design high-quality courses and provide materials and content based on their technical knowledge. The government has access to information that otherwise would be very costly to gather. The MTEySS has access to funds that are not available to the private sector, can set up proper monitoring mechanisms, and has a wide network of agencies that can help disseminate the program and foster the insertion of trained personnel into the formal labor market. Universities and other implementing agencies have contacts with potential students and with the instructors.

[8] According to MTEySS officials, in the industrial sectors, trade unions (which do not exist in the SIS sector) are often more interested than employers' associations in promoting training activities.

Capture, Rent-Seeking, and Free-Riding

Although the program includes courses that train people in proprietary technologies created and/or owned by sponsoring firms, the fact that the program is open to participation by all private firms reduces the risk that it will be captured by a small group of firms that could use it to reinforce the use of their proprietary technologies at the expense of other firms. Even some open-source technologies, such as Linux, are part of the program. Likewise, although it would appear that large firms would benefit most from this program, since they are the largest labor demanders, the alleviation of the labor supply bottleneck favors all kinds of firms because it reduces wage pressures and staff turnover. Moreover, some sponsoring firms, such as Oracle, Microsoft, and Red Hat, are seldom interested in recruiting people trained under this program for their Argentine affiliates. Their major incentive is to train human resources who can use their technologies. That is, they are more interested in expanding their market share than expanding their work force in Argentina. In summary, although the SIS sector is largely heterogeneous in terms of firm size, specialization, strategies, and objectives, the concern about the lack of trained human resources is broadly shared, which lends legitimacy to this type of program. Thus, rent-seeking and free-riding do not appear to be associated with this program.

Resilience

This PPC experience has been ongoing for many years and was ongoing in 2014. This is a testament to the resilience of the program, even in the presence of big changes in Argentina's labor market. This resilience has been strengthened by the legitimacy and capabilities of the private actors involved, as well as by the continuity of senior management in the MTEySS and the creation of a specialized section within the ministry managed by a professional structure that deals exclusively with this kind of program.

Learning

A learning process has taken place during the evolution of the program that has to do not only with adaptation by the public and private sectors, but also with the emergence of new elements included in the new phase of the plan. These new elements aim to improve the alignment of the program's activities with the training needs of the local markets, as well as generate externalities that could benefit other sectors or disadvantaged groups among the population.

Fashion Design

In the fashion industry, the international competitiveness of differentiated products largely hinges on their design features, as these features enable the incorporation of value added and contribute to attaining better positioning in high-end segments of the international market. Thus, product design plays a crucial role in the fashion industry. Over the past decade, some firms in Argentina's garment industry have gradually introduced design management as a systematic activity at firms, driving remarkable transformations in their business practices. At the same time, apparel consumers in Argentina have started to recognize original design. These recent shifts buttress a potential for export growth that was not present a decade ago.

This case study describes the PPC between the National Industrial Technology Institute's Textile Research and Development Center (INTI Textiles) and the Pro-Tejer Foundation to promote fashion design. This collaboration includes a study entitled the "Argentine Design Map," a program called Street Design Circuits, and the Signature Fashion National Design Survey.

Argentina's Fashion Design Phenomenon

The Argentine fashion design phenomenon started in the 1990s and consolidated in the 2000s. At present, undergraduate design programs—graphic, fashion, and textile design—rank among the top 10 public university programs, with the largest enrollment in the area around Buenos Aires (MECyT, 2005). In the 2000s, design increasingly became a key competitive factor in the apparel industry. Business startups launched by some 20 fashion designers with a university degree and the efforts made by large garment marketers (brands) raised design awareness among Argentine consumers.

Argentine designers entered the country's traditional clothing market with their own brands in 2001 (Saulquin, 2006). These designers offer high-value-added products on a small scale and are known as "signature fashion designers." Initially, their products were sold at multi-brand stores located in Buenos Aires' commercial hubs, such as the trendy Palermo neighborhood. Some have grown sufficiently large to have their own stores in leading shopping malls. According to the Signature Fashion National Design Survey (Marino, Mon, and Marré, 2011), 200 firms manufacture signature design garments in Argentina. Ninety percent of them have annual sales below US$400,000, while 30 percent export their clothes, primarily to Latin America, Italy, and Spain. For 5 percent of them, exports account for 80 percent of their output.

A large number of Argentine fashion brands have established themselves in the local market. Increasingly, brands view design as a key strategic component of their business and change their organizational, marketing, and production practices to incorporate design management as a systematic activity. Brands have professionalized their design capabilities. Some have added designers to their payroll to help them develop their brand image. Others have also introduced original design in the styles they offer. Some brands have allied themselves with signature designers to create original designs for specific product lines. A feature that sets Argentina's fashion market apart is the number of local brands. While in other Latin American countries familiar consumer brands are largely international, in Argentina most renowned brands are domestic (Saulquin, 2008).

Consumers' greater appreciation for original design and the growing design professionalization of local brands have propelled the international dissemination of Argentina's fashion industry. National brands have successfully expanded across Latin America, opening stores and building regional franchises. In turn, signature designers have ventured into the U.S. and Japanese markets, selling their garments at specialty design stores. More Argentine brands and signature designers now participate in international fashion shows. These transformations have led to a new three-category segmentation of the market—mass market, brands, and signature designers—depending on the degree of originality and sophistication of the product designs. While common in developed countries, this categorization is rare in Latin America, where apparel markets are only divided into two segments: mass market and brands.

Firms competing in Argentina's mass market segment typically copy or adapt styles designed and marketed in developed countries, leveraging their Southern Hemisphere location to follow trend-setting countries counter-seasonally.

Argentina's garment exports have recorded steady growth since 2000. Totaling US$87 million in 2010, these exports were primarily shipped to South America. The volume of garment imports is considerably larger, reaching US$328 million in 2010. China, Peru, and Brazil are the leading sources of imports. In 2005, Argentina's government established a nonautomatic import license scheme to protect the domestic industry. This protectionist policy became substantially more stringent in the second half of 2011.

Case Description

Pro-Tejer

Pro-Tejer is a nongovernmental organization created to provide a political forum for the defense of Argentina's textile and apparel industry. It stands out among traditional business associations because it promotes a comprehensive view of the textile value chain.[9] It was founded in 2003 by a 38-member board. Aldo Karagozian, the owner of TN&Platex[10] and Pro-Tejer's chairman since its inception to 2007, organized the founders. They came from companies all along the textile value chain and from a variety of organizations—including universities, a research institute (INTI Textiles), and a labor union—related to the sector. Pro-Tejer's founding board intended to build an advocacy platform to represent and promote the interests of the local textile and fashion industry after its value chain became fragmented in the 1990s. Pro-Tejer soon became the industry's leading representative, championing policies that enhance the sector's competitiveness and, in particular, lobbying for trade protection. While the organization encompasses the entire industry, not all subsectors are equally represented or view it as representing their interests. In particular, thread mills weigh more heavily and wield considerably more power than

[9] The textile value chain encompasses fiber producers, thread mills, fabric manufacturers, garment manufacturers, designers, brands, and supply vendors.
[10] TN&Platex is Argentina's largest cotton fabric producer and exporter.

designers and brands. Pro-Tejer is managed by an executive director, who currently relies on two outside advisors and a staff with professionals in economics, business administration, and communications.

Promoting design in the textile and apparel industry was one of Karagozian's main goals. Pro-Tejer's initial leadership viewed design as an essential driver for the industry's development and international competitiveness, and thus sought to build initiatives with public sector agencies, private firms, and universities. The organization's key move to foster design was its collaboration with INTI Textiles. In Pro-Tejer's early years, a few founders who primarily represented thread mills and fabric manufacturers established the organization's policies. This did not hinder efforts to promote fashion design at first, but later it curtailed the continuity of these efforts, as these initiatives did not bring any financial gains to these two subsectors.

INTI Textiles

INTI is the nation's foremost industrial technology public research institute. It was created in 1957 as an independent institute to conduct industrial technology-applied research and outreach programs to enhance Argentina's industrial competitiveness. One of INTI's centers, INTI Textiles, promotes textile and apparel industry development, serving also as a technological benchmark for the industry. Since its inception in 1967, INTI Textiles has provided a number of services, including lab tests and training for textile and apparel manufacturing technologies, that effectively transfer knowledge and technology to firms, building trust-based relationships among individuals serving at both ends. Approximately 70 percent of INTI Textiles' funding comes from its own services, while the remaining 30 percent comes from INTI's budget. Labor relations at INTI are characterized by long-standing job stability. In fact, INTI Textiles' director and deputy director have served in those positions for over 20 years.

In 1997, INTI Textiles formulated a long-term strategy based on the promotion of fashion design, despite some resistance from within INTI itself. In pursuit of this strategy, INTI Textiles gradually introduced specific services for garment manufacturers, designers, and brands, refocusing its traditional operations. In 2001, it created a Trends Observatory that reports on international fashion and trends, researches Argentina's fashion design identity, disseminates Argentine signature designers' work in the domestic market, and trains apparel manufacturers, designers, and brands. Since 2007, the Trends Observatory has also conducted research on Argentina's fashion design identity. To this end, it surveys emerging trends in Argentina and crafts the Argentine Design Map. This map identifies fashion "signature" designs across the nation, their designers, and the productive processes used to manufacture garments. INTI Textiles has become remarkably well known as an expert in fashion design among industry players.

INTI's organizational structure provides a great deal of autonomy to its various research and development centers. INTI Textiles is a mixed organization, with private firms joining by paying a monthly fee. By 2011, it had 182 associates. Industry representatives, who are part of an executive committee of 12 members, share decisions on the center's planning and follow-up activities. They represent three industry chambers, one business association, and eight large and medium-sized companies. Private sector engagement favors information exchanges that shed light on the sector's needs.

Public-Private Collaboration

Since 2005 INTI Textiles and Pro-Tejer have come together on a number of collaborative initiatives to develop Argentina's textile and apparel industry. This study focuses on those initiatives specifically oriented to promote design: the Street Design Circuits program, conducted from 2007 to 2011, and the Signature Fashion National Design Survey, carried out since 2010. A related initiative is the aforementioned Argentine Design Map, begun in 2007 and still under way.

The most important collaborative endeavor between INTI Textiles and Pro-Tejer was the *Street Design Circuits* program, intended to advance their common goal of positioning Argentina as a fashion design hub. The organizations' shared vision came in the wake of the Argentine Design Map, which identified signature designs featuring originality, innovation, and a unique identity, and the creators of those designs. The Street Design Circuits program was created to disseminate this phenomenon and educate the general public on fashion design, raising awareness about the value it adds to national products. To these ends, the program organized one-day tours around urban design circuits. Circuit layouts were mapped to showcase the fashion design offerings found in stores located in specific areas.[11] After the program's inception in 2007, 22 such events were carried out, with 95 percent of them organized in 2007–2010 and the last one taking place in 2011.

The idea for the program surfaced in a day-long brainstorming session held by members of both institutions to come up with plans for joint efforts to support and boost the visibility of Argentina's fledgling local identity fashion design. The program's scheme and name were crafted at that meeting.

Each institution took up specific roles and brought distinct resources to the PPC. INTI Textiles contributed its knowledge of local designers. Pro-Tejer provided funding to support specific activities, such as staffing events, providing the logistics needed to approach designers to invite them to join the program, and contacting local media to advertise the program.

From their inception the tours were funded with contributions from several sources. The ongoing program required funds ranging from US$10,000 to US$20,000. Pro-Tejer provided a large share of the funding. The resources required to organize the program in every city came from partnerships with local institutions. The funding scheme initially designed by both INTI Textiles and Pro-Tejer depended on contributions from companies and other organizations that would serve as sponsors, but this scheme failed to prove fruitful. Only TN&Platex, managed by Karagozian, provided financial support for all program editions, and only seven other textile companies occasionally supported the program financially. As a result, the program founders resorted to agreements with local institutions in the cities where the program was carried out to help them cover event expenses. Pro-Tejer ceased to fund the program in late 2010. The program's first edition took place in Palermo, a Buenos Aires neighborhood boasting a large designer density, with the city's Ministry of Culture as a strategic partner. This government agency provided financial support for all the events conducted in the city. The only program event conducted in 2011 took place in Salta with the support of that province's local government.

[11] INTI Textiles currently records 20 design circuits in Argentina.

Overall, the goals of the program were accomplished. These goals included disseminating signature designers' work, legitimizing the value of original design work in the eyes of the consumer, and raising awareness about the magnitude of this sector in Argentina. Notably, the program managed to successfully and broadly disseminate Argentine fashion design in the local market, fostering a consumer culture that appreciates Argentina's original design, building networks that bring signature fashion designers together, putting the design phenomenon on the public agenda, and promoting Argentine fashion design internationally.

While it is impossible to quantify the extent to which the program influenced the development of a consumer culture that values design, there is evidence to suggest that its impact was substantial. First, several signature designers have come together on a number of joint initiatives. Second, signature designers and brands have started forging alliances to develop specific product lines. These partnerships enable brands to reposition their corporate images, explicitly associating themselves with design and originality in consumers' minds. In turn, these alliances help signature designers disseminate their work to broader audiences, benefiting from press coverage that is usually unavailable to them. Third, some signature designers with long track records have begun to serve as advisors on collection development and brand image for domestic brands. Fourth, signature designers have grown closer to thread mills, which have started to cater to their smaller-scale needs.

Networks of signature designers have been created as a result of this program. As designers from several cities were able to showcase their work, they came together to organize business and productive ventures. While the creation of these networks was not a specific program goal, INTI Textiles and Pro-Tejer supported designers' spontaneous initiatives and designed projects to enhance them. One of the most important of these events in terms of duration, organization, and resource requirements is *Las cosas del quehacer.* In 2010, the Trends Observatory started this project to provide a forum for signature design in Argentina, inviting signature designers from the provinces to discuss the country's fashion design. Starting in 2011, the Street Design Circuits program lost momentum within the INTI Textiles-Pro-Tejer PPC, while *Las cosas del quehacer* has grown into a new PPC, albeit without Pro-Tejer's financial support.

Inserting Argentina's design phenomenon into the public agenda has led to the creation of programs intended to incorporate design into manufacturing companies' operations at the national, provincial, and municipal levels. In addition, public agencies have increased their interaction. An initiative that engages a number of public and private organizations is the Argentine Design Map runway during Buenos Aires Fashion Week. In 2012, two such events were held, featuring eight signature designers from Argentine provinces. INTI Textiles served as runway show curator, organizing participating firms' presentations with the support of many other agencies.

As a result of the successful management and execution of the Argentine Design Map and Street Design Circuits program, INTI Textiles and Pro-Tejer chose to move forward on their collaboration, embarking on the *Signature Fashion National Design Survey.* The purpose of this survey is to create a tool to quantify and characterize the emerging fashion design phenomenon. The first survey was conducted in 2010 and was used as the basis for a study entitled "Signature Fashion Design in Argentina." This study includes an assessment of signature fashion production and an economic impact analysis. The survey was revised and conducted again in 2011. While in 2010 the sample included 150 designers, a year later this number had increased to 200.

The idea for this initiative came from the interaction of an INTI Textiles member and a Pro-Tejer official who had worked on the Street Design Circuits program and had decided to enroll together in a graduate program in international culture and communication management. For the final paper in one of their courses, they chose to work together on Argentina's signature fashion design phenomenon, specifically addressing the lack of quantitative information on it.

Both INTI and Pro-Tejer support the Signature Fashion National Design Survey with additional contributions. INTI Textiles has provided its signature fashion designers' database and a dedicated team of Trends Observatory members. Pro-Tejer supplies institutional support and helps with dissemination. The goal of this program—to produce metrics that characterize and quantify the activity of signature fashion designers—has been accomplished. The dissemination of survey findings and their vast recognition among relevant public agencies have been among the most outstanding outcomes achieved by this public-private collaboration. This has favored the visibility and institutionalization of the fashion design industry in the public sector.

Case Analysis

Incentive Scheme

In addition to Aldo Karagozian's idealistic interest in promoting design in Argentina's textile and apparel industry, a key incentive for his proactive involvement in this PPC—as both Pro-Tejer's founder and first chair—was the potential benefits it might bring to Pro-Tejer's positioning in the eyes of the public. Promoting design through specific actions such as the Argentine Design Map, the Street Design Circuits program, and the Signature Fashion National Design Survey strengthened Pro-Tejer's public image. This endeavor differed from the traditional protectionist lobbying efforts with which business associations in the textile industry had been associated in the past, as it highlighted the benefits of integrating the textile chain. One factor that fueled Pro-Tejer's initial commitment to promote design was the recognition awarded by foreign specialists to Argentine design during the foundation's early institutional missions abroad. Eventually, Pro-Tejer's lobbying for protectionist policies legitimized more protective policies afforded by Argentina's national government to the manufacturing sector. As a result, Pro-Tejer lost interest in supporting the Street Design Circuits program and stopped funding the program. But it continued to collaborate with INTI Textiles in promoting design with initiatives such as the Argentine Design Map and the Signature Fashion National Design Survey, as well as sponsoring the Buenos Aires Fashion Week's runway show.

In addition, Pro-Tejer's officials might have envisioned that the development of a strong and internationally recognized local fashion industry, and the ability to sell its products in foreign markets, would imply greater demand for their companies' products. However, this potential may have ceased to encourage them when, eventually, signature fashion designers' business ventures proved of limited volume.

INTI Textiles' incentives to engage in this PPC revolved around the fact that this collaboration largely fit with its long-term strategy to promote fashion design in Argentina. This strategy was set in motion in 1997 by INTI Textiles' leadership, despite the opposition of some of INTI's top officials and other R&D centers. The fact that INTI Textiles' leaders made this strategic decision and stuck to it despite initial reluctance is likely explained by their job stability and professionalism, the partial autonomy of this public institution from short-term political swings, and its trust-based relationships with private sector officials who turn to it for technological advice.

The PPC with Pro-Tejer to promote fashion design provided an opportunity for INTI Textiles to rise as a nationwide authority in fashion design. The initiatives carried out with Pro-Tejer awarded INTI Textiles greater visibility and recognition within its parent company, INTI, as well as among other public agencies and Argentina's designer community. It also strengthened INTI Textiles' autonomy from its parent organization's leadership. Its newfound recognition among public agencies and fashion designers enabled INTI Textiles to broaden its Trends Observatory services and enhance its self-sustainability.

Relationships

Prior interpersonal relationships between INTI Textiles and Pro-Tejer members proved instrumental for the PPC. The people who initiated the collaboration had already established a personal connection, forged as a result of the technical advice provided by INTI Textiles to TN&Platex over the years. Their personal relationships were based on mutual trust and respect. INTI Textiles officials had also built similar ties with other Pro-Tejer founders. An example that illustrates these ties is their relationship with Susana Saulquin, an Argentine expert on fashion sociology who participated in the creation and early management of the University of Buenos Aires' Textile and Fashion Design Program. Saulquin, also a founding member at Pro-Tejer, provided advice at the time to INTI Textiles. Hence, a first hypothesis to explain the creation of a favorable forum for the surge of ideas may point to the existence of previous inter-personal, trust-based relationships among the members of these institutions. These bonds supported a fast decision-making process that facilitated the design and execution of shared initiatives. A mutual knowledge of how the people involved in the PPC worked enabled participants to confidently assign specific roles to execute these initiatives.

By 2002, Saulquin had noticed an emerging Argentine fashion trend-setting phenomenon (Saulquin, 2006). This view was shared by Karagozian and Patricia Marino, the head of INTI Textiles, who from their respective positions promoted local design with a number of efforts intended to link manufacturers and designers to drive the creation of products with a unique identity. The participation of Karagozian, Marino, and Saulquin in the early commissions set up at Pro-Tejer to work on potential strategies led to the identification of design as the key to enhancing the international competitiveness of Argentina's apparel industry.

The initiatives launched as part of this PPC are characterized by symmetric engagement of both the private and public sectors in their vision, design, and execution. The leadership at INTI Textiles and Pro-Tejer shared a common view about the relevance of Argentina's design phenomenon and the need to make it more visible, coming together to design a research study on Argentina's design identity, the Street Design Circuits program, and the Signature Fashion National Design Survey. While both the research study and the survey were always co-managed after their creation, the Street Design Circuits was managed jointly only in its early years (2007–2010). INTI Textiles alone oversaw its last edition in 2011.

Monitoring Mechanisms

These PPC initiatives lack any formal monitoring mechanisms to evaluate outcomes and impact. The backbone of trust and respect that supports the relationships between managers at the two institutions made this collaboration possible, despite the absence of formal monitoring mechanisms. Within each institution, however, standard monitoring procedures control the actions of employees. At Pro-Tejer, for example, after each Street Design Circuits event, the staff involved in its co-management reported to the board, accounting for all expenses.

Public and Private Sector Features

INTI Textiles' ability to plan and execute this PPC appears to be largely attributed to its top officials' stability and professionalism. The organization's head and vice-head have made a professional career as sector specialists within the parent company, INTI, and have a strong sense of belonging to the institution. Thus, they enjoy the respect of the professional staff in an organization with a culture that places a high value on technical expertise. In addition, INTI Textiles' directors appear to be endowed with uncommon leadership abilities as well as outstanding strategic vision and motivation. In fact, their success in accomplishing their unit's strategic goals has recently been rewarded with appointments to higher managerial positions at INTI, heading the Marketing and Development Departments, respectively.

Pro-Tejer's management officials also displayed salient personal features that might help explain their willingness to engage in this PPC and their ability to lead their organization in support of this collaboration. In particular, both Pro-Tejer's chairman and its executive director at the time this PPC was built demonstrated conviction and motivation in fostering the professionalization of design in Argentina's textile and apparel industry. The executive director also had a professional stature that is rare in Argentine business associations. He served as the Deputy Minister of Production for the Province of Buenos Aires' and, more recently, as National Under-Secretary of Foreign Trade. His assistant was recently appointed to manage the Buenos Aires Metropolitan Design Center's Fashion Office. The question remains what drives the committed dedication of capable and motivated people in specific public areas and private organizations.

Funding

Funding was the primary hurdle for the continuity of some of these PPC initiatives. Early on in this collaboration, both organizations shared an interest in promoting design. However, the importance of this goal for each of them changed over time. INTI Textiles remained unwavering in its commitment to all three ventures—Argentine Design Map, Street Design Circuits, and the Signature Fashion National Design Survey—while Pro-Tejer lost interest in the Street Design Circuits program, shifting its financial support to other initiatives of interest to its members. As a result, there were changes in the budget granted to the program that eventually led to its interruption. INTI Textiles and Pro-Tejer did not receive any additional funding from INTI or any other public agency. Neither did they build a stable funding scheme that would have enabled the program to continue.

Learning

As a result of this PPC, Pro-Tejer and INTI Textiles learned how to design, execute, manage and assess programs shared and orchestrated with other public and private organizations to tackle fashion design challenges. The Argentine Design Map and Street Design Circuits programs enabled INTI Textiles to identify specific areas for potential interventions to promote design and brands and educate consumers and designers. This experience also helped to professionalize the Trends Observatory team, training its members to curate, design, and manage projects. Finally, this PPC brought new opportunities and alternatives to gather information on production issues and on local market consumer traits. As a result, the ability of INTI Textiles to analyze this industry is enriched, as it can complement the information it collects from its traditional sources.

Free-riding and Rent-seeking Behaviors

The Argentine Design Map, Street Design Circuits, and Signature Fashion National Design Survey initiatives do not feature any grants or mechanisms that may affect market prices. As a result, instances of rent-seeking are less likely to arise. In fact, no such instances have been found. However, a free-riding issue is present in the case of Pro-Tejer that is common in most business associations. While PPC costs are only footed by participants, its benefits trickle down to all industry players. In the case of the Street Design Circuits program, an additional free-riding problem emerges: designers and brands—supposedly the primary beneficiaries of this initiative—are not grouped in any organization that represents them, and most of them do not recognize Pro-Tejer as their advocate. Designers and brands drew benefits from this program without taking part in its organization or contributing any funding. It comes as no surprise, then, that Pro-Tejer eventually decided to discontinue its financial support of the program.

Networking and Public-Private Collaboration Schemes: The Experience of Sugar Cane in Tucumán

Public-private collaboration in the sugar cane industry in Tucumán was focused on tackling a wide range of diseases and other problems that affected sugar cane yields. The poor performance in the primary stage had negative consequences on the entire network devoted to producing sugar, pulp, and paper and bio-fuels. The strategy chosen was to develop new disease-free varieties, reproduce them using modern techniques, and disseminate them through commercial channels in order to enable farmers to replace the old crops and increase yields. To achieve these results, significant technological and economic requirements had to be met, which led to the need to establish PPC.

Sugar Cane Production

Currently, sugar cane production is based on tailor-made hybrid plants suitable for specific climate and soil conditions. Other factors such as bacteria and fungi, among others, affect crop yields. Many live inside the original plant and only disappear if the new seedling is free of such diseases. As a result, local capacity to cope with these conditions is a key competitive factor.

Sugar crop production through conventional processes (using seedlings) allows an average of five harvests; hence, a plant replacement is needed every five or six years. To access the seedlings, farmers have two options: (1) develop their own hybrid varieties, and produce seed and seedlings; or (2) buy those products from a vivarium (specific companies devoted to producing or reproducing new hybrid seedlings). Producing seedlings by crossing varieties of sugar cane is a complex process. Its control and development require possessing a wide range of varieties and germplasms, equipment, and large storage areas, such as plant nurseries. In addition, skilled personnel (geneticists, breeders, and experts in field work) are also needed. Modern biotechnology tools, such as molecular markers, are used to shorten the innovation process. Additionally, genetically modified sugar cane varieties resistant to selected herbicides and/or tolerant of some insects are being developed.

The production of new seedlings is thus a high-technology activity subject to economies of scale that requires long development times (around a decade) and has low chances of success. One new variety demands almost 100,000 initial cross-fertilization events. Different goals—higher sucrose content, more robust roots to support bigger plants, or specific resistance to some diseases—trigger the development of new hybrid varieties, but they are always related to the objective of increasing productivity.

In Argentina, producers ranging from small farmers to those that integrate primary production with industrial facilities purchase seedlings from vivariums to carry out the production process. Industrial facilities obtain sugar or anhydrous alcohol; the main scrap from the first crushing process (bagasse) is usually used to make paper, and today, anhydrous alcohol is frequently converted into bio-ethanol. Other sugar waste materials are used as raw material for several industries. As a result, a dense network arises that depends on the primary stage (sugar cane crop). This network currently faces strong local and international demand pressures, in view of the emergence of the biofuels industry.

The production of sugar cane in Argentina reaches almost 20 million tons yearly and covers around 330,000 hectares. Domestic sugar production exceeded 1.9 million tons in 2010. More than 75 percent was targeted to the domestic market.

The province of Tucumán is the largest sugar cane producer in Argentina, with 75 percent of the national area devoted to this crop, over two-thirds of sugar cane production, 15 of the 25 crushing mill facilities, and over 90 percent of sugar cane farmers. Sugar cane production is crucial for Tucumán's economy, contributing almost 33 percent of the province's GDP. This has historically been both a strength and a weakness for the province. The main problem is that a small economy with a highly concentrated productive structure is highly dependent on the international price fluctuation of its main staple. As a result, boom-and-bust cycles emerge with high social, political, and economic costs.

The Public-Private Collaboration Scheme: Design and Case Analysis

The Problem

Historically, the sugar industry in Tucumán has been affected by serious competitiveness problems. Before the PPC was established, productivity levels were 30 percent lower than the international average. The concern for productivity further increased with the emergence of new significant demand sources for sugar cane, such as bioethanol, and increasing competition for land from other crops such as berries, lemon, sorghum, maize, and soybean. Several chronic diseases adversely affected productivity. The problem was further aggravated by the persistence of inefficient producers with outdated technology and the failure to eliminate bad agricultural practices, such as burning what was left over from yearly crops, which increased soil erosion and spread ash in surrounding urban areas.

As a result, the network suffered a typical negative externality, which affected the "sugar cane club" based in Tucumán.

The lack of raw materials to service new and modern industrial facilities was an obstacle to catching up with modern technologies that could put them to better use. Today, the industrial sector works with a more complex production function, and there is a stronger imperative to match the quantity and quality of raw material flows with the rational use of installed capacity (production coordination problem).

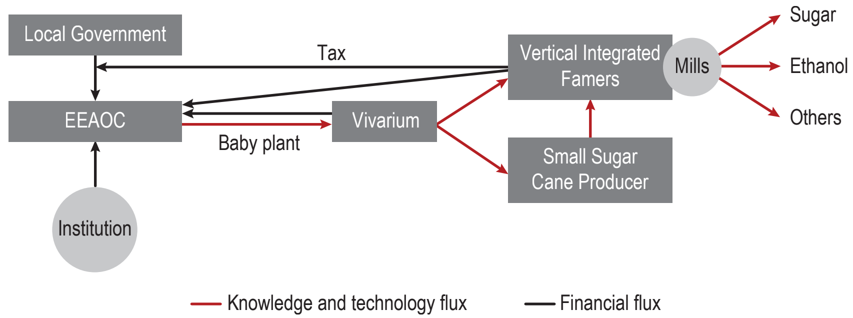
But even when stakeholders know what the problems are and what technical solutions could solve them, individual actions are not the effective way to deal with them. Farmers and industrial producers have neither the scale needed to develop new disease-free varieties nor the technical capacity and skilled human resources to tackle complex scientific problems. Additionally, the long time period involved in innovation processes whose probability of success is low and highly uncertain, in a context where intellectual property rights cannot always be guaranteed (appropriation problem), make it difficult to achieve pure market solutions.

Goals of Public-Private Collaboration

The goal of PPC was to increase the productivity of the sugar cane crop in Tucumán by developing and disseminating new technologies and seed varieties and solving other problems affecting the network. The outline of the strategy to reach these goals involved developing new hybrid varieties adapted to local conditions, multiplying them to obtain seedlings under well-designed scientific protocols and appropriate agricultural procedures, and distributing them to farmers to replace the existing plants.

The private sector undertook the new venture in close collaboration with a small group of well-trained researchers in modern biotechnology who worked in a local R&D institution. The program was implemented with the participation of all institutions and stakeholders in the sugar cane network: the Obispo Colombres Agriculture Experimental Station (EEAOC), local government, and private companies. There was no master or strategic plan, but rather a series of specific projects with clear objectives. The roles of the different actors is illustrated in Figure 4.2.

Figure 4.2 **Sugar Cane Network in Tucumán**



Source: Prepared by the authors.
Note: EEAOC = Obispo Colombres Agriculture Experimental Station.

Public Sector

The provincial public sector is concerned with the sugar cane network, as this activity is one of the main engines of the local economy and its fluctuations often have a severe social impact. In addition, the provincial government has fiscal constraints and relatively few skilled personnel. Therefore, the Ministry of Production found the PPC to be a powerful public policy tool. Simultaneously, a specific tax on sugar cane producers (farmers and industrial companies) to support EEAOC activities has existed since the creation of the institution, and the tax rate was recently increased.

The EEAOC is a long-standing R&D institution created in 1909 to solve technological problems related to local crops and agribusiness activities. It is a self-governing institution directed by a chairman and supported by a private board composed of local companies involved in sugar and citrus fruit production that use the EEAOC's services and pay the abovementioned tax, and a technical team. CEOs of the main sugar-producing companies are part of the EEAOC's board and they are deeply involved in its day-to-day affairs.

Board members serve on an ad honorem basis, which facilitates a commercial and technical approach to the decision-making process. Administrative practices, which are commonly used in the private sector, are normally employed in the management of EEAOC affairs (i.e., resource allocation by project, results monitoring plus process monitoring, annual reports, etc.). The board establishes the goals of R&D activities, developing long-term plans, and monitors operational and financial plans in weekly meetings. The governance scheme includes a technical director who is elected by vote and has four assistants for agricultural research and technology, industrial research and technology, special disciplines, and administration and services.

The EEAOC is financed by contributions from the provincial agribusiness sector through a tax set at 0.03 percent of the first sales of sugar cane in Tucumán. The tax is collected directly by the institution, which reports monthly to the provincial government. The provincial government has also supported the institution at different times with contributions for infrastructure and operational needs. Other funds come from agreements with the productive sector, subsidies for national and international competitive projects, and fees charged for the institution's own productive and technical services. The most recent budget shows that around 90 percent of income is derived from taxation and the remainder from other sources. The total budget in 2010 was approximately US$12 million.

The EEAOC has some 430 people on its payroll. The institution is intensive in highly skilled personnel: 201 staff members are university professionals (including technicians, interns, and support staff); 14 have master's degrees; 18 are Ph.Ds; four are in specialized fields; and 37 are currently enrolled in post-graduate studies. The EEAOC fosters these and other educational and training activities and encourages all nonprofessionals to complete their secondary studies.

The organizational structure has a matrix framework, which is the result of several years of operation and reshaping. This structure enabled the new research team (focused on modern biotechnology) to integrate easily into the old research groups.

Private Sector – Vivarium Companies

Vivarium companies, or nurseries, are devoted to the production, distribution, and sale of seeds (or seedlings) of sugar cane and other species. They are small and medium-sized companies that dominate the technology of maintaining and transplanting plants and providing advice on agriculture procedures. In Tucumán, there are 20 such companies. They have commercial relationships with over 5,000 sugar cane producers and are also connected to public R&D institutes, which supply them with seeds and technologies. The EEAOC provides seedlings to vivariums at subsidized prices.

These companies are committed to selling only to producers located in Tucumán, but sometimes their sales areas go beyond the provincial boundaries. Operating under commercial rules—better quality, more sales, more profit—they spread the new technology embodied in new varieties of sugar cane plants.

Crushing Mills, Energy, and Pulp and Paper Companies

In Argentina, there are about 25 sugar mills that transform sugar cane cuts into various products. Whereas in Salta and Jujuy the manufacturing process is integrated (the mills control the whole production process), the Tucumán model consists of a network in which mills are fed by small farmers. Independent farmers produce about 65 percent of the sugar cane. The contractual relationship between farmers and mills consists of a base price and additional percentages based on quality.

There are 15 mills that manufacture sugar cane in Tucuman, four of which account for over 70 percent of total production. These four companies produce sugar, pulp and paper, energy, and anhydrous alcohol. Recently, they started to set up large bio-ethanol facilities to cope with increasing demand.

The PPC Experience

The PPC process started in 2000, when the EEAOC board suggested the need for a plan aimed at improving sugar cane productivity. At that time, yields in the province of Tucumán were about 45 tons per hectare, significantly lower than world averages, and were even below those recorded in other Argentine provinces.

Until the early 2000s, conventional plant breeding developed sugar plant varieties. Since then, the EEAOC has been hiring professionals trained in biotechnology who have obtained doctoral and postdoctoral degrees abroad. These scientists came back to Argentina in the mid-1990s as part of a scientist repatriation program, and they had experience in designing biotechnology applications in crops such as strawberries.

While the EEAOC board had initially proposed purchasing a gene resistant to certain diseases and introducing it into the varieties that it already possessed, the technicians suggested a different approach based on developing new disease-free varieties. This was the approach chosen. The process was supported by the managers of the EEAOC, the biotechnology team, and the private board, or Steering Committee. Weekly EEAOC board and staff meetings were held. Considering the EEAOC's budget constraints, additional requests for funding were granted by private contributions or by the provincial Ministry of Production. There was broad consensus among producers, EEAOC technicians, political authorities, and other members of the cane sugar network on the objectives. The strategy, developed through the PPC process, included five steps:

1. Develop new hybrid varieties well adapted to local conditions
2. Employ crop seedlings using modern biotechnology techniques under the strict control of the EEAOC
3. Transfer subsidized seedlings to the preexisting commercial network
4. Enlarge the research program to develop new varieties of transgenic sugar cane plants in order to establish a platform for future development in sugar and other crops
5. Replace infected plants with the new ones.

The PPC was based on a specific division of labor. Producers would contribute to the development of the program through a specific local tax, collected and allocated by the EEAOC under the supervision of a public-private board. Actions would be taken according to a well-designed technical program with a clear commercial target. The results (subsidized seedlings) would be disseminated using the preexisting commercial network. Farmers would replace old varieties with the new ones following the five-year cycle and increase their yields. Hence, the PPC is based on technical action (generation and diffusion of new technologies) by the EEAOC and the creation of incentives for the private sector designed to increase productivity and profits.

During the process, the EEAOC had several ways to detect the needs and requirements of current and potential users. These included suggestions and requests from members of the board; procedures and studies undertaken by the technical committees; customer surveys that revealed their problems and needs; consultations and interaction with the provincial and national governments; requirements of sugar mills; suggestions received from the productive sectors; and meetings and workshops attended by advisers, consultants, and leading producers.

PPC Performance

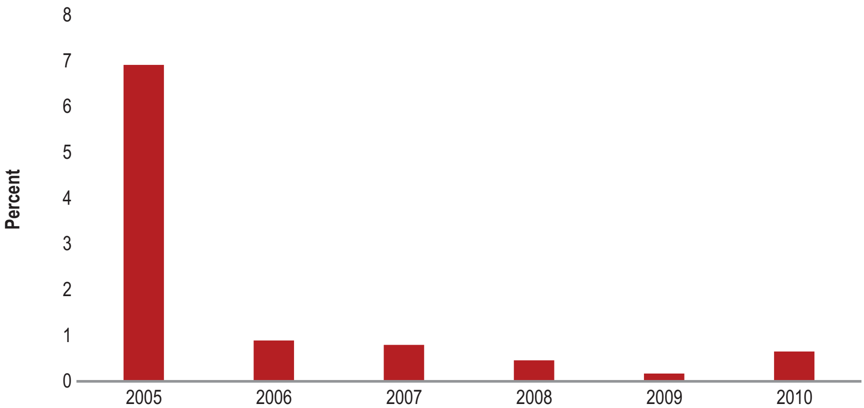
A decade after the network was established, over 60 percent of the old varieties had been replaced with new ones. The first impact was a drop in reported episodes of diseases. Reports by the EEAOC show an 80 percent decline in the incidence of ratoon stunting disease (RSD), which led to major cost reductions (Figure 4.3).

In addition, sugar cane production in Tucuman passed 1.1 million tons per year in 2010 compared to an annual average of 800,000 tons from 2000 to 2005. Finally, yields increased over 3 percent yearly, representing an increase from 52 tons per hectare between 2000 and 2005 to 65 tons between 2006 and 2010 (Figure 4.4). As a result, local productivity is reported to be 7.8 percent above the global average.

According to the EEAOC (2012), other achievements of the PPC include:

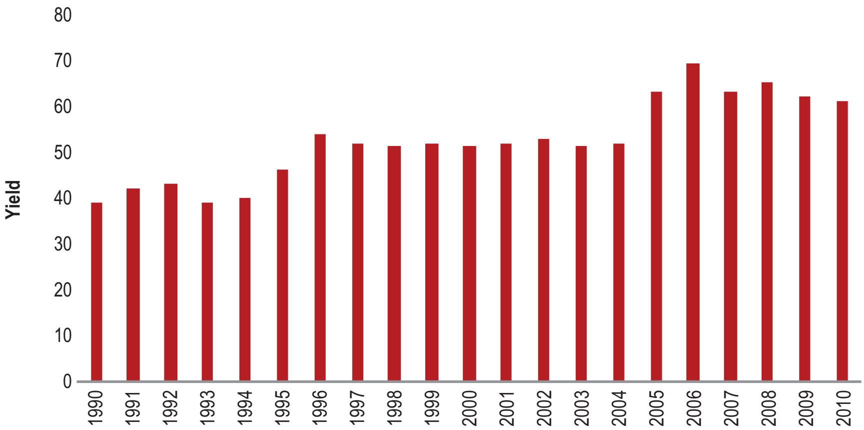
- The recent release and registration in the National Seed Registry (*Instituto Nacional de Semillas* – INASE) of four new varieties that present outstanding production characteristics
- Agronomic studies aimed at improving sugar cane yields

Figure 4.3 Incidence of Ratoon Stunting Disease in the Total Crop in Tucuman Province, 2005–2010
(Percentage of infected hectares)



Source: Castagnaro (2011).

Figure 4.4 **Total Sugar Cane Yield in Tucuman Province, 1990–2010**
(Tons per hectare)



Source: Castagnaro (2011).

- Generation of recommendation tables regarding the contribution of nitrogen and phosphorus fertilization and the widespread use of liquid fertilizers and bio fertilizers
- The use of satellite images to estimate the acreage and production of raw material in the pre-harvest stage
- The development of a technique for harvesting sugar cane without burning in order to promote a more environmentally friendly production system
- Engineering design of bagasse drying equipment in pneumatic conveying
- Development and registration systems for different purposes: balance calculation mass and energy of an evaporation and heating system, mass balance calculation schemes applied to sugar cooking, and optimization of the sequencing of the work of cooking pans
- Creation and enhancement of different labs equipped with the latest instruments and well-trained teams.[12]

[12] One of these labs has been chosen by PepsiCo for sugar analysis for all of Latin America.

Additionally, those involved in the PPC have begun working on other crops, using a similar model. The projects are designed to handle several genes (resistant to herbicides and/or tolerant to insects) to be introduced into well-performing local varieties of sugar cane. Other projects are dealing with soybean and maize using the same technique, considering that some key genetic patents were due to expire in 2014. Additionally, the sugar cane experience revealed the necessity to set up a technological company under EEAOC control to capture the ongoing benefits and to handle the commercialization of new biotechnological events.

Conclusions and Lessons

The problem that triggered the productive development policy was the low average yield of sugar cane. This was related to the presence of diseases that generated negative externalities affecting the entire network. The development of new varieties required significant amounts of funding, had high technical thresholds, and implied long innovation processes under conditions of uncertainty. This situation induced the key actors in the network to cooperate.

Private and public institutions engaged in a PPC process that was not based on a conventional strategic plan. The engagement of personnel and the mutual trust among them were basic conditions in such a process. Managers who had a broad view of the business knew what was happening in international markets and were aware of the importance of a scientific approach to tackle production problems. R&D institutions had sound knowledge of genetics and biotechnology and were aware of the need for a commercial approach to the problems within the sugar cane network.

The heart of the strategy was to work together toward a common and overarching goal to which specific goals were added. The components were private companies (especially larger ones), the provincial Ministry of Production, and the EEAOC. The strategy had three key elements: (1) concurrent interests of public and private organizations; (2) solutions that had to be found in new technological developments, and (3) the PPC incorporating the preexisting institutional and productive network in order to bridge scientific discoveries and innovation.

The previously accumulated skills available at the EEAOC were combined with modern biotechnology, which led to the need to restructure the organizational framework. An open-mind perspective included company managers' willingness to address issues related to nonprice competitiveness factors. Finally, the private sector's capabilities and approach enabled easy communication with the public sector engaged in R&D activities.

Regarding incentives, the private sector presence in the EEAOC's management was crucial to ensuring the appropriate allocation of specific funds. Incentives for private companies producing sugar cane are associated with productivity and profits. Vivariums profit from the benefits associated with selling disease-resistant varieties. For the public sector, the program became a powerful policy tool, since the success of the program could reduce the cyclical social and political problems originating in the sugar cane network. Also from the EEAOC perspective, PPC partially solves budget constraints and reinforces its social role through the sale of new varieties and other services nationally and internationally. PPC is based on strong pressures from private operators involved in monitoring expenditures, the progress of the projects, and strict independence in the development of technical activities. The private monitoring model is more relevant with respect to results than process. Finally, the PPC experience prompted the EEAOC and other stakeholders to develop and launch a biotechnological platform (with capacity to handle its own varieties and genes) applied not only to sugar cane but also to other relevant crops, such as soybeans and maize.

Buenos Aires Emprende: A Public-Private Collaboration Scheme that Fosters Entrepreneurship

There is growing consensus that entrepreneurial activity can strongly contribute to diversifying an economy, creating employment, promoting social mobility, and opening up new opportunities for professional success and the emergence of innovation. In recent years, the number of people willing, interested, and able to create new businesses has risen sharply. In this context, the creation of new firms and the strengthening of young companies are core issues on the policy agenda. Argentina, and particularly the city of Buenos Aires, are emblematic of this trend.

Although nascent entrepreneurship could be a way to improve productivity and employment, new firms face great difficulties in becoming established and surviving. Informational asymmetries and uncertainty give rise to market failures or inefficiencies that require measures to stimulate information exchange and facilitate the recognition of opportunities (Bartelsman, Scarpetta, and Schivardi, 2003; Boadway and Trenblay, 2003; Hwang and Powell, 2005; Kantis et al., 2011; Naudé, 2010). Moreover, apart from the attitude of the entrepreneur and the perception of opportunities, the emergence of new firms depends on many factors, including macroeconomic stability, the regulatory framework, access to information, financial support, and opportunity costs vis-à-vis expected returns from other activities. In addition, the social assessment of the entrepreneur, attitudes toward risk, the presence of role models, the availability of education, the culture, and the existence of an ecosystem able to support entrepreneurs are factors that have an impact on the emergence of the vocation to undertake new businesses (Kantis and Federico, 2007). Conceptually, entrepreneurship involves a wide variety of institutions, from educational systems to financial markets, including sociological considerations, family ties, cultural background, macroeconomic institutions, and regulatory frameworks (Baumol, 1990; Boettke and Coyne, 2003).

Public sector intervention can help solve many of the shortcomings of the entrepreneurial system and expand the base of entrepreneurs by eliminating barriers to entry. Having said that, controversy abounds concerning how entrepreneurship should be promoted (Hwang and Powell, 2005).[13] This section analyzes a productive development policy launched by the Undersecretary of Economic Development of the City of Buenos Aires aimed at fostering entrepreneurial activity. The program, called *Buenos Aires Emprende* (BAE), constitutes an interesting case of institutional innovation that includes a public-private collaboration scheme to enhance the entrepreneurial ecosystem.

[13] The existence of multiple factors affecting entrepreneurship has policy implications. For instance, with respect to the behavioral issues related to entrepreneurship, its promotion might require a national program of social awareness to foster such behaviors as motivation and the propensity to take risks, and probably should be focused on the educational system. With respect to financial matters, the best policies would most likely be those aimed at breaking the vicious circle of lack of capital, savings and investment through the infusion of venture capital to stimulate business startups (Hwang and Powell, 2005).

According to international standards, Argentina has a relatively high entrepreneurial activity rate. The social view of entrepreneurship has evolved positively in the last 10 years (Endeavor-Prosperar, 2009) and entrepreneurial activity has increased notably, first in the 1990s with the emergence of IT companies and then in the last decade due to the emerging opportunities created by the devaluation of the currency and economic growth. As a consequence, the country has experienced unprecedented growth of entrepreneurial activity that has caught the attention of policymakers, academics, and entrepreneurs (Kantis, Federico, and Riva, 2005). In this context, there is a wide variety of programs aimed at fostering entrepreneurship both at the national and provincial levels. Not surprisingly, there is also some degree of duplication of effort and the consequent misallocation of resources.

The City of Buenos Aires has considerable potential to promote entrepreneurial activity due to the existence of an educated and skilled labor force, appropriate physical and communication infrastructure, a big and sophisticated market, the availability of services, and an international reputation and a growing network of incumbent institutions (nongovernmental organizations, private and public universities, local governments, incubators, etc.) dedicated to entrepreneurship. Moreover, the interest of policymakers in promoting entrepreneurship in the city has accompanied this trend and, contrary to old policies that mainly targeted vulnerable groups and "entrepreneurs by necessity," the new ones are focused on rapid growth startups, innovative firms, and knowledge-intensive projects.

Until 2000, there was no clear strategy to foster entrepreneurship in Buenos Aires. The most relevant initiatives were PROMIPYME, oriented toward providing technical support and micro credits to low-income entrepreneurs, and PRUEVE, which aimed to promote entrepreneurship among secondary students. In 2000, the new government fostered the launch of more entrepreneurial policies by creating the Metropolitan Center for Design and the first incubator of technology-based firms, BAITEC. Remarkably, the programs were not discontinued with the change in government in 2007. On the contrary, most entrepreneurial initiatives were deepened and new programs were created. To date, this unusual situation has strongly favored the learning process among the public agents and institutions involved.

The Program

Characteristics of PPC

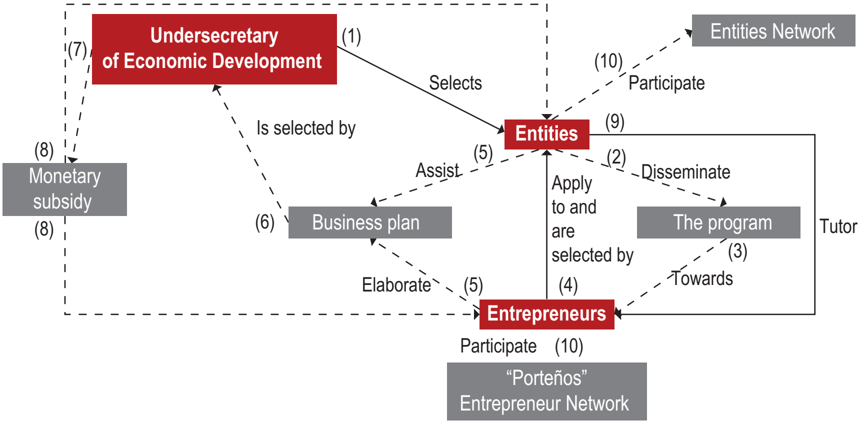
Buenos Aires Emprende was launched in 2008 as part of a set of policies to foster entrepreneurship. The institutional innovation departed from past efforts where pro-entrepreneurial productive development policies suffered from information failures that led to a limited scope of interventions and the underutilization of budgetary funds. In other words, public agencies had serious difficulties capturing potential beneficiaries, entrepreneurs lacked information about the existence of support programs, and nongovernmental organizations had scant capacity to recruit and assist entrepreneurs due to the shortage of funds, human resources, and capacity. As expected, interactions and networks were also limited.

The underlying idea of the new institutional arrangement is that PPC can improve the efficiency and efficacy of policies, promote the development of networks and linkages, and foster the emergence of new institutions and strengthen existing ones. The objectives of the program are to multiply the scope and impact of public policies to improve capacity and processes within the public sector and promote better utilization of financial and human resources. To achieve these goals, the initiative draws on the idea of intermediation or outsourcing of public policies to private sector sponsoring institutions, which are expected to mediate between the government and the entrepreneurs. Of particular note, however, is the program's innovations in terms of its execution, insofar as it aims to generate a denser network of information, cooperation, and linkages between agents in the city's entrepreneurial ecosystem.

The group of sponsoring institutions is comprised of a variety of NGOs—public and private universities, professional associations, and non-profit organizations dedicated to business and entrepreneurial affairs—with varying degrees of experience and capabilities (Figure 4.5). They are expected to promote the program among potential beneficiaries, help entrepreneurs develop their business plans by providing technical support, and present, together with the entrepreneurs, the projects to be evaluated by public authorities.

The Undersecretary of Economic Development is responsible for the evaluation and selection of the projects to be sponsored. Once the projects have been selected, both the entrepreneurs and the entities supporting

Figure 4.5 The Buenos Aires Emprende Program



Source: Prepared by the authors.

them receive a monetary subsidy to tutor the entrepreneur for one year and to support a portion of the startup activities. Both project execution and performance of the entity are closely monitored by the public agency, and periodic detailed reports are required. Finally, the entities must participate in two institutions: the Network of Entrepreneurs of Buenos Aires (*Red de Emprendedores Porteños*) and the Network of Supporting Entrepreneurship Entities (*Red de Entidades de Apoyo a Emprendedores*).

Main Results of PPC[14]

To a large extent, the BAE has been successful in meeting its initial goals. Since its creation, both the number of sponsoring entities involved and the projects presented and subsidized have steadily grown. Sponsoring entities seem to have made progress in their performance. Most of them said that they experienced a process of "learning by doing," which resulted in faster and more effective technical assistance to entrepreneurs. Nevertheless, sponsoring institutions pointed out some negative aspects of the program, specifically regarding administrative and bureaucratic issues. The Undersecretary of Economic Development was willing

[14] The analysis of this case is based on evidence gathered during 2012–2013. More recently the program has been completely transformed as new authorities were appointed at the Undersecretary of Economic Development.

to review these questions and has made some changes to take the views of the entities into account.

The existence of a formal opportunity for interaction between public agencies and sponsoring institutions has facilitated the exchange of information, evaluation of entities, and, where necessary, review of some issues involved in the productive development policy. Moreover, the public sector has been able to extract information from the entities supporting the entrepreneurs as well as from other stakeholders about the nature, objectives, needs, and potential of the startups. Hence, the program has helped strengthen not only the capacity of the sponsoring entities but also those of the public sector.

According to an econometric study based on a survey of BAE beneficiaries, the program had a positive impact on the survival of the projects as well as sales growth. Moreover, those projects that participated in BAE appear to have a better administrative structure and greater access to markets than those that did not. Finally, public agents that were interviewed for this study said that the innovative institutional arrangement of BAE functioned appropriately and that the program fulfilled its main objectives to a great extent. However, the implementation of the program presupposed a dramatic change in the way the public sector conceives and delivers policies. As expected, this required a process of adaptation and institutional learning.

One notable issue is that there has been a permanent effort by the Undersecretary of Economic Development to create opportunities for supervision and evaluation of the policy and the sponsoring entities. Over the years, this evaluation has evolved from a simple quantitative approach to a more complex process.

Probably the poorest results of the program are related to the scant development of linkages between the sponsoring entities, and the lack of formalization of entrepreneurial activities within their institutional structures. The consequence is suboptimal development of formal institutions able to enrich the entrepreneurial ecosystem and, especially, to support entrepreneurial activity once the public program ends. In this sense, only a few sponsoring institutions routinely followed up on projects following BAE intervention, and, in general, this occurred only with the most promising or successful ones.

Regarding networks, in some cases what remained was competition more than cooperation, especially in the recruitment of projects. This problem arose because there was some free-riding in the call for projects.

Case Analysis

This section will evaluate whether PPC developed under the Buenos Aires Emprende program contributes to the solution of the problems inherent in entrepreneurial activity, and will draw some lessons from the findings that could be translated into policy recommendations. Of particular interest is the institutional strengthening objective and the relationships that emerged between the government, beneficiaries, and intermediary organizations as a result of this initiative.

With respect to its design, BAE was seen as an innovative way to address some important failures, such as the lack of information about public policies aimed at fostering entrepreneurship, the weak dissemination and limited scope of those policies, the limited development of the institutional environment, insufficient knowledge on the part of the public sector about the characteristics and requirements of entrepreneurs, the lack of spillovers, and the lack of linkages and networks. All of these problems were extensively discussed by public agencies and the entrepreneurial ecosystem, and some consensus was achieved. In this context, the productive development policy incorporated a sort of PPC with the aim of strengthening not only entrepreneurial activity but also the incumbent institutions themselves. Private and public interests appeared to be aligned, although only a fraction of the entities currently participating in the program were involved in the meetings held prior to the design of the productive development policy.

Buenos Aires Emprende is an interesting productive development policy initiative based on an innovative institutional arrangement that constitutes a landmark in pro-entrepreneurial policies in Argentina. Contrary to the other cases analyzed in this study, it is a horizontal policy. Despite this horizontal nature, which tends to dilute the negotiating power of the private sector, PPC was successfully implemented thanks to broad consensus about the problems that needed to be addressed and the needs of the entrepreneurial ecosystem. It appears that this last point was the cohesive element that replaced the usual sectoral agreements found in vertical productive development policies.

Structure and Management

The establishment of an institutional framework of this kind required a detailed design process to take into account some critical issues, such as the types of entities chosen by the government to participate in the program (the selection process), their degree of involvement, and the types of activities those entities were expected to carry out. Other relevant issues were the design of specific norms to govern interaction between the actors, the incentives and regulations to be developed to encourage participation in the program and avoid undesirable behavior (rent-seeking), and the roles and responsibilities of each participant. This process was, to a great extent, facilitated by the fact that the productive development policy was a formal program with a legal framework that allowed the public agency involved to make the necessary changes without delay. Hence, one lesson that emerges from this case is that it is important to develop policies within an appropriate legal and administrative framework. Informal arrangements tend to generate obstacles and unnecessary delays in the implementation of policies.

In addition, the program demanded changes both in the established practices of the public sector and in the organization of human resources. These changes were not automatic and, in order to launch them, the program underwent a drastic overhaul of organizational routines. New administrative procedures were designed that involved the creation of new circuits of information, the training of personnel, and the assignment of new responsibilities.

Under the new arrangement, the private sector is involved in implementing the policy, providing advice and assistance to entrepreneurs, and expanding the potential base of beneficiaries by promoting the program among diverse audiences. However, this involvement does not mean that the government has ceded its authority to make relevant decisions. On the contrary, while the Undersecretary of Economic Development delegated the recruitment and selection of potential beneficiaries and the implementation of some actions, such as training, it retains final decision-making authority.

Incentives

Incentives are at the core of this productive development policy. It appears that the right alignment of interests between the public and private sectors is largely responsible for the success of the policy. In this sense, the program was attractive to all parties involved: the public sector, the sponsoring institutions, and entrepreneurs. Consequently, all were committed to the initiative from the outset.

The incentives for each party were clear:

- The productive development policy allowed sponsoring institutions to gain experience, acquire capabilities, and improve the skills of their personnel. Moreover, the economic support was, in some cases, the sponsoring entity's main source of income.
- The entrepreneurs received funding to support the initial stages of the startup and, more importantly, technical and managerial advice to develop their projects. Once chosen, entrepreneurs received technical support (mentoring) for one year.
- The public sector broadened the scope of its policies and expanded its base of potential beneficiaries. At the same time, it met arguably the most important objective to strengthen institutional capacity and the entrepreneurial ecosystem.

With respect to the need to alleviate or minimize possible failures and opportunistic behavior, the incentive scheme was carefully designed. During this process, detailed regulations and specific safeguards were introduced to prevent the policy arrangement from becoming a mechanism for rent-seeking. The program includes sanctions for nonfulfillment of obligations and a specific scheme of payments to stimulate virtuous behavior and give both entities and beneficiaries the right signals—that is, to stimulate the search for feasible and economically viable projects, training of entrepreneurs, and the exit of those with good ideas but inadequate business plans.

Funding

The financing scheme of the program is rather simple. The budget and the funding are entirely in the hands of the public sector. Intermediary institutions are expected to contribute in kind with human resources, infrastructure, and intangible assets such as contacts, access to markets, networking, and access to financing. As a counterpart, entities receive a nonrefundable subsidy depending on the projects approved and mentored. Finally, entrepreneurs contribute more than half of the total amount of the project, monetarily and in kind. In our interviews, entities recognized that monetary incentives are aligned with their interests, though some of them mentioned that the amount of the subsidy is too low to pay for all the services that they are expected to provide.

Financial constraints could be a problem for small sponsoring institutions or for those that depend heavily on BAE to finance their activities. There are notable differences in the financial structures of the institutions. These differences, combined with a loss of funding in real terms due to inflation, could lead to the exit of those institutions—presumably the more productive ones—that are more likely to find alternative sources of funding.

Main Features of the Public Sector

To a great extent, the success of this PPC can be attributed to the characteristics of the public agency in charge. The management of the Undersecretary of Economic Development has some particular features that constitute more the exception than the rule within public administration. First, the agency appeared to be committed to the productive development policy and to be very receptive to making the necessary changes in policy when necessary. This did not lend itself to capture of the public sector by private agents. On the contrary, PPC showed a high degree of interaction and consensus-building, although all relevant decisions remained under the control of the public authority.

Secondly, the bureaucracy associated with this productive development policy was minimal compared to other government programs and agencies. This was due in part to the fact that the program had a legal framework from the beginning that granted the decision-making authority to the public sector agency involved. Finally, the productive development policy evolved in a context of political stability and low uncertainty. This situation reinforced commitments and fostered closer relationships between the public and private sectors.

Learning

As mentioned, sponsoring institutions exhibit great heterogeneity in their specialization, sectoral expertise, and capacity, as well as in the relevance of the productive development policy as a source of income. To some extent, these differences seem to be reflected in the uneven quality of projects submitted and in the quality of the assistance and training provided, but further research is needed on this topic.

Perhaps the weakest side of the PPC is the difficulty in strengthening the networks and linkages within the ecosystem. Although some measures were taken to solve this problem, the institutions interviewed indicated that cooperation is still more of a desire than a reality.

To conclude, we believe that the methodology adopted by this PPC could be applied at other levels. Presently, the Undersecretary of Economic Development is using the same institutional arrangement in other productive development policies, such as the Entrepreneurship Development Program and BAITEC, as well as in other policies aimed at strengthening small and medium-sized enterprises.

Institutional Success Factors

Six institutional success factors have been identified:

1. The right alignment of interests and appropriate incentives: The PPC seems to be a win-win arrangement. This reinforces the commitment of all parties involved.
2. Rules and flexibility: The rules of the productive development policy were clearly established from the beginning of the program, and they are transparent and explicit. The public agency had the necessary instruments to implement the productive development policy, and the bureaucratic procedures were reduced to a minimum.
3. Previous relationships: The existence of prior linkages between the public sector and the sponsoring institutions provided opportunities for interaction, exchanges of information, and brainstorming, which greatly facilitated the process.
4. Monitoring and evaluation: The productive development policy (and the PPC) is continually monitored and objectively evaluated. This procedure is certainly unusual in the public sector and constitutes an added value of the productive development policy. Moreover, these evaluations tend to increase competence and virtuous behavior among entities.
5. Funding scheme: Simple and transparent.

6. Characteristics of the public sector: The public agency involved demonstrated great commitment to the productive development policy. The existence of a skilled labor force within the public sector was also an important factor. A cluster of skilled public sector agents and policymakers interacted effectively with the private sector, which was a crucial success factor for PPC.

Public-Private Collaboration in Argentina: The Main Lessons

This chapter has discussed four cases of public-private collaboration in the design and implementation of productive development policies: software, the fashion industry, sugar cane, and entrepreneurship. Table 4.1 summarizes the main features of the cases analyzed.

The existence of a PPC scheme in the productive development policy cases analyzed here is somewhat of an oddity in Argentina. Furthermore, these PPC schemes have worked fairly well, which is even more exceptional in an environment that generally is not very favorable to such partnerships. Most of these cases have been rather immune to political influence and have even survived changes in governments (e.g., the entrepreneurship case), yet another curiosity in the productive development policy realm in Argentina.

The Impact of Productive Development Policies and the Contribution of PPC

To some extent, all of the cases analyzed here have met their objectives, and the PPC mechanism seems to have helped them do so, although no adequate counterfactual exists to rigorously prove this statement. Nonetheless, only three cases—sugar cane, software, and entrepreneurship (although in this latter case the structure of the program is completely different than the original one)—remain active. The fashion PPC appears to have lost its momentum.

The impact of the productive development policy for sugar cane can include technological advances, increases in productivity and yields, quality assurance, and a lower incidence of diseases. The entrepreneurship PPC also had good results, especially strengthening of the entrepreneurial ecosystem, development of new capabilities within sponsoring institutions,

Table 4.1 Main Features of the Cases of Public-Private Collaboration Analyzed

		Software	Fashion	Entrepreneurship	Sugar Cane
Market Failures	Spillovers			X	X
	Information failures	X	X	X	
Type of productive development policies	Vertical	X	X		X
	Horizontal			X	
Use of…	Subsidies			X	
	Cooperation	X	X		X
Based on…	Natural resources				X
	Design and innovative capabilites	X	X		
Cooperation with…	National technological institutes		X		
	Provincial technological institutes				X
	National government	X			
	Local government			X	X
Productive development policies	"In the large"				
	"In the small"	X	X	X	X
Public-private collaboration aimed at …	Design, implementation, and execution of specific activities or programs	X	X	X	
	Designing and monitoring sectoral policies				
	Establishment of permanent public-private networks				X

Source: Prepared by the authors.

and improved survival rates of startups. Empleartec trained workers in the IT fields in highest demand, and the impact of this policy in terms of capacity-building and expansion of the skilled labor force has been important for firms and for the IT industry as a whole. Finally, the impact of the fashion industry PPC can be assessed in terms of the promotion of a culture of consumption that values original design and thus fosters the design industry in the local market, the positioning of the design phenomenon on the public agenda, promotion of Argentine apparel design globally, and the creation of networks that bring signature fashion designers together. It appears that smaller productive development policies are better at matching specific market failures with the proper policy responses.

How have public-private collaboration schemes helped advance the goals of productive development policies? First, they have helped the public sector gain access to information available in the private sector that otherwise would have been costly or impossible to obtain (all cases). Second, they have improved the diffusion of productive development policies among potential beneficiaries, improving their outreach (entrepreneurship, fashion, software) and a better use of public funds. Third, they have generated networking mechanisms to coordinate actions and plans and exchange information among the different parties involved, and to take advantage of the division of labor and specialization (all cases). Fourth, they have promoted transparency through open private-public discussions, reducing the scope for free-riding and rent-seeking behaviors (entrepreneurship, software). Finally, they have strengthened resilience in productive development policies and, in cases where problems emerged, the existence of PPC has helped create alternative collaboration mechanisms (fashion). All of this leads us to believe that the participation of the private sector in productive development policies was crucial to making them work. Moreover, the existence of the PPC schemes strengthened institutional and technical capacity in both the private and public sectors.

Emergence and Effectiveness of Public-Private Collaboration Schemes

How did the PPC schemes emerge, and why did they work? First, there was an alignment of interests and objectives of all parties concerned. In most cases, from the outset, both the public and private sectors considered cooperation an effective way to design and/or implement the respective policies. This consensus was further reinforced during the launching and implementation of the productive development policy.

Second, there was consensus around the main problems affecting each sector. These included talent and human resource shortages in the case of the software industry; weakness of the entrepreneurial ecosystem; existence of diseases and biologic constraints in the sugar cane case; and the need to foster the incorporation of design in the apparel industry. There was also consensus on the way to manage those problems. It is important to highlight, in this regard, that consensus emerged on these issues in spite of the heterogeneity of size, interests, objectives, capabilities, and market orientation of firms operating in the sectors analyzed. This consensus helped generate, in the more stable cases, cohesion in the private sector in favor of the productive development policy and public-private cooperation. This also helped avoid wasting time and resources, and leveraged the commitment of public sector authorities.

Third, with regard to the leadership of the program, although the four cases show strong interaction between public and private sectors, in some of them the public sector had a greater presence in the conception and implementation of the productive development policy (entrepreneurship), while in others the private sector was the champion of the policy (software). Sugar cane and fashion could be considered as mixed cases in this sense. In all cases, the role of leadership has been key for the success of the policy. This role may be assumed by a public organization with a qualified and committed bureaucracy, by dynamic business associations, and/or by individual pioneers.

Fourth, the existence of previous relationships and mutual trust between the public sector and private agents, together with the existence of skilled people (or groups) acting as conveners, played an important role in the success of PPC.

Fifth, all relevant private-sector actors were involved in the PPC schemes through acknowledged representatives of private sector interests, such as large sugar cane producers and business associations. This gave legitimacy to the productive development policies and contributed to their success because the private agents involved not only had the appropriate skills but also had access to information not available to the public sector.

Sixth, in most of the cases, some kind of networking scheme was in place. In the sugar cane case, it involved the EEAOC, the provincial government, the sugar cane producers, and the vivariums. In entrepreneurship, there was the local government, the potential entrepreneurs, and the sponsoring institutions, with their own respective networks of mentors and consultants. In Empleartec, the national government, the sector's business association, sponsoring firms, universities, and clusters were involved in the program. In the fashion industry, cooperation took place not only between INTI Textiles and Pro-Tejer, but also involved provincial and local institutions that provided financial and operational support to the program. PPC also helped foster networking among signature designers. This networking generated a division of labor in which each part of the network performed tasks for which it was specifically endowed, creating win-win situations for all the agents involved.

Seventh, in most (but not all) cases the participation of private actors was a quite open and transparent process, favoring accountability, and reducing room for speculative or collusive behaviors.

Eighth, in most of the cases studied the public sector had a particular profile fairly far from the traditional bureaucratic stereotype. In effect, the public sector had a high degree of commitment to the productive development policy, a professional staff and technical skills (especially in the case of sugar cane), and established routines, metrics, and practices to monitor the performance and evolution of the policy.[15] The private sector representatives were also often different from the traditional actors. In this regard, the business associations that participated in the software and fashion PPC were relatively young and well-staffed from a technical point of view.

Finally, and more tentatively, certain factors that in some cases may have favored the emergence and development of PPC were the relatively loose institutional structure of the collaboration and the often spontaneous ways in which the PPC emerged. In other words, the absence of large "master plans" and large formal committees (and the fact that the productive development policies analyzed were, in general, managed by mid-level personnel within the public sector) may have facilitated cooperation in several of the cases.

[15] This does not mean that the public agencies involved in the productive development policies were necessarily the most appropriate from the point of view of the scope of their responsibilities and attributes, but rather that they were perhaps the most active or receptive to collaboration with the private sector.

What Factors Account for the Differences in the Stability of PPC?

While most of the PPC analyzed here continues to exist, PPC in the fashion industry lost intensity. It is important to examine the factors that could explain the lower sustainability of this case.

First, the textile and apparel value chain is comprised of very heterogeneous firms in terms of size, market orientation, and other characteristics. There were the large fabric producers that originally backed the productive development policy, but whose main interest was in obtaining trade protection against foreign competitors given their low degree of competitiveness. There were also a number of small firms focusing on design that were potential clients for the fabric producers and that were, at the same time, a source of high-value-added exports. This second group had almost no relevance within the industry in terms of revenue generation.

This heterogeneity did not prevent the achievement of consensus within the productive development policy. However, it became relevant when the context in which the productive development policy was applied changed. Indeed, the establishment of the protectionist measures that the private sector had been pursuing, and the poorer-than-expected performance of design and fashion exports, contributed to eroding the interest of the private sector in the PPC. To some extent, this proves that the PPC was a secondary objective for the private sector and not a central goal of the promoting institution (Pro-Tejer). This may have occurred because of the limited scope and relevance of the signature design sector within the apparel industry.

Second, in the three more stable cases, the bulk of the financing of the productive development policy was in the hands of the public sector. In sugar cane, the funding of the EEAOC came from a provincial tax on sugar cane activity and some other marginal fiscal sources. The cost of the technology transfer from EEAOC to the producers was borne by the public agency in the form of subsidies to farmers. In entrepreneurship, the public sector supported the productive development policy through subsidies, and the private sector contributed mainly with human resources and some infrastructure. Finally, in Empleartec, the scholarships were entirely financed by the Ministry of Labor, though the companies contributed with academic and technological advice and, in some cases, teaching hours. The case where the private sector financed the productive development policy (fashion) was partially dismantled when the sponsoring institution lost interest in the outcomes of the policy. However, although the fact that the public sector was the main funder of the productive development policy may have contributed to its stability, it also made the policy dependent on fiscal constraints and/or changes in administration.

Involvement of the Public and Private Sectors, Co-governance, and Monitoring

Although there was not complete co-governance in all of the cases studied, three of them had some degree of co-governance (or strong private-public interaction) that deserves particular attention: entrepreneurship, Empleartec (software), and sugar cane. In the entrepreneurship case, the public sector delegated the execution of part of the policy to the private sector (sponsoring institutions), without forfeiting its rights and duties. The public sector in this case was essentially outsourcing, with the interesting particularity that private, independent organizations benefited by enhancing their capacity and networks. In the case of Empleartec, there was a clear and explicit collaborative effort between the public and private sectors to achieve the objectives of the productive development policy and carry out co-governance in the decision-making process on issues such as the types of courses to be offered and the target audiences. Finally, in sugar cane, the EEAOC had a board made up of representatives of the public and private sectors, which defined its main goals and policies and monitored execution of the productive development policy. In all of these cases, there were formal agreements and contracts defining the duties and responsibilities of the organizations involved.

The fashion case, on the contrary, had no formal co-governance mechanism in place, although the private sector had the same share of control over the *Por la Calle* ("On the Street") Program as the public sector. There are no formal agreements like those in the other cases.

The level of involvement of the private sector in the productive development policy is another relevant issue. In the Empleartec case, in addition to deciding jointly with the public sector the general orientation of the program and the areas where the courses would be offered, the private sector defined the curricula and course contents, as well as teaching materials and venues. In the sugar cane case, the private sector had an active role in day-to-day activities as well as in the strategic management of the EEAOC. In the fashion industry, the private sector not only financed but also jointly designed and implemented the *Por la Calle* Program with INTI Textiles. In the entrepreneurship case, the role of the private sector was less prominent, since the sponsoring institutions only promoted the program, proposed candidates for the subsidies, and granted technical assistance to the projects selected. The fact that the private sector appears to have been more heavily involved in the more stable cases of productive development policies or in participating in a kind of formal co-governance mechanism does not mean that the public sector ceded its authority. Moreover, although in some cases the private sector initiated the productive development policy, in all cases the policies adopted were in line with previously and autonomously defined objectives and interests of the public sector.

Finally, in theory, to be successful, PPC schemes require some degree of monitoring and evaluation of their main variables, including performance, attainment of established objectives and agreements, use of resources, and the emergence of free-riding and rent-seeking behaviors. However, only the entrepreneurship case had explicit metrics to measure the performance of the policy and mechanisms established to evaluate the results of the public-private interaction.[16] This is not surprising, given that public policies are not evaluated very frequently in Argentina. However, this does not mean that the other more stable programs had no monitoring mechanisms at all. Their continuity was the result of more formal or informal evaluations that suggested that the respective policies were successful in terms of attaining their original objectives. There are examples of (low-cost) learning and policy changes thanks to those mechanisms. In the software program, for example, the government pushed for the inclusion of courses related not only to the technological areas in which the large sponsoring firms operate but also to the needs of small and medium-sized enterprises, and to reduce the digital gap through courses on basic IT principles. This means that a "learning by monitoring" process took place in some of the cases.

[16] We could say that, at least in some cases, the public sector "imported" management techniques originally devised by the private sector.

Some Shared Shortcomings and Spillovers

Apart from their differing degrees of success and stability, the cases studied have some common shortcomings:

1. Difficulties coordinating with other public agencies: In most of the cases, the problems of productive development policies involve a number of different issues, and the public sector officials involved do not always have the authority to solve them. This may occur because the agencies are local and not only lack the authority to decide on national issues but also are unable to coordinate actions with the national agencies (e.g., entrepreneurship, sugar cane). In other cases, this occurs because although the public agency has a national scope, the sectoral policy is decided at a higher level, reducing the influence of the productive development policy and its attractiveness for the private sector (e.g., apparel). In the case of software, the new phase of the program aims to establish contacts with other agencies that are in charge of the sectoral policy, but the success of this aim has yet to be seen.
2. Although the analysis in this chapter suggests that PPC may be helpful in implementing productive development policies, most of the cases were exposed to instability and uncertainty about their future development. Such uncertainty has characterized public policies in Argentina in recent decades. No mechanisms aimed at making the PPC permanent have been put in place beyond the fact that in all of them, private constituencies have emerged that may lobby for their continuity. However, in some cases, the programs may end because their objectives have been met. In the entrepreneurship case, for example, it is expected that the entrepreneurial ecosystem may reach at some point in time a sufficient degree of maturity to generate access to credits for new ventures.[17]

[17] To some extent, this might be the case of the *Por la Calle* Program, since the idea that design capabilities exist in the city of Buenos Aires has already been established. A new program was launched, without private funding, aimed at promoting the same concept in other regions of Argentina.

Some positive spillovers have also emerged that transcend the original aims of the productive development policies. These include the following:

1. Some PPC has given rise to the creation of formal or informal opportunities for the exchange of information and discussion of other issues relevant to their respective sectors. This, in turn, may lead to new policy initiatives. Cases in point are fashion (with the National Design Survey), and software and sugar cane (where new technological developments and an ongoing technical platform were launched as a consequence of PPC).
2. The programs have created externalities for the organizations involved. For instance, the universities and software clusters that teach the Empleartec courses gain in terms of reputation, legitimacy, and institutional strengthening. The same occurred in the sugar cane case with the EEAOC, and in the fashion design case with INTI Textiles. This occurred with the entrepreneurship productive development policy as well, but in that case it was a policy objective. In the case of entrepreneurship, there were spillovers for all institutions dedicated to the promotion of new entrepreneurs, as well as for the very few organizations granting credits to startups, since the program led to an increase in the volume of new projects. In the case of EEAOC, an important externality was the adoption of a new technological platform to be used to develop innovations in other crops.

5

Collaboration in Clusters and Technology Consortia: The Case of Chile

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THIS CHAPTER PROVIDES AN IN-DEPTH ANALYSIS OF PUBLIC-PRIVATE COLLABORATION (PPC) ON CHILEAN PRODUCTIVE DEVELOPMENT POLICIES THROUGH FIVE case studies under two specific policies: the Technology Consortia Program and the National Cluster Policy. The analysis is based on a set of more than 30 semi-structured, in-depth interviews with more than 50 hours of recorded conversations, and complemented by official documentation on the workings of each of the instruments and particular cases.

The chapter starts by analyzing the current mapping of PPC in the Chilean productive development policy web through a historical narrative that shows how PPCs co-evolved with innovative institutions, policies, and instruments. The next section looks at the cluster policy and provides an in-depth analysis of the Special Interest Tourism Cluster, the Global Services Cluster, and the Aquaculture Cluster. The chapter then presents an analysis of the Technology Consortia Program and describes the cases of the CTI-Salud Consortium and the Fruit Consortia. Given the significant differences in the nature of the PPC in each policy, lessons are provided at the end of each section, and the chapter concludes by putting forth a number of lessons that emerge from the case analysis.

Overview of Productive Development Policies and Public-Private Collaboration

Currently, the degree of public-private collaboration in productive development policies in Chile is quite low. The reason for this is that the government plays only a subsidiary, arms-length role in most such policies. It is important to highlight this in order to understand the productive development policies analyzed later in this chapter. The prevailing rationale is the outcome of a policy pendulum that has swung from a heavily interventionist state during the period from 1940–1973 to an extremely orthodox paradigm from 1973–1990,[1] which was inherited and has only been mildly modified by democratic governments since then. The period from 1990–2010 saw a gradual shift toward more intense productive development policies. However, this shift was curtailed during Sebastian Piñera's right-wing government from 2010 to 2014.

The current institutions and instruments of productive development policies are thus a product of the work of democratic governments, which in 1990 inherited some underfunded and severely weakened institutions for these purposes. Moreover, their connection to the private sector was minimal, given the relatively widespread fear of a return to an interventionist state model. This is a reflection of the private sector's distrust of the public sector and the arms-length role played by the government. It also stems from a view that the private sector's main goal is to obtain or expand rents. This mutual distrust led to the lack of a culture of PPC in Chile. This way of thinking about policymaking was slow to change, partly due to the fear of the effects of direct intervention and vertical policies from a substantial segment of the new governing coalition. At the end of the first decade of the 2000s, a still-significant part of the center-left government—not to mention the right-wing opposition and most of the private sector—remained skeptical of the idea of vertical policies.[2]

[1] During the government of Augusto Pinochet, most productive development policies became horizontal. There were, however, important exceptions, such as the creation of Fundación Chile in 1976, which played a key role as a technological antenna and transfer institution. There were also some vertical policies during this period, such as the explicit support provided to the wood and pulp industry

[2] Interview with Carlos Alvarez.

Given the above-described political constraints and views, democratic governments designed productive development policies initially as horizontal instruments to foster productive technological innovation. The National Fund for Technological and Productive Development (*Fondo Nacional de Desarrollo Tecnológico y Productivo* – FONTEC) and the Fund to Promote Scientific and Technological Development (*Fondo de Fomento al Desarrollo Científico y Tecnológico* – FONDEF) created cofinancing instruments at the beginning of the 1990s, with the support of the IDB.[3] The relationship with the private sector under these instruments was almost exclusively organized around calls for proposals, evaluation, and the allocation of subsidies to cofinance projects. Initially, the government did not even seek projects, implementing instead a fully demand-driven subsidy scheme, where demand had to emerge spontaneously.[4] In order to align incentives with the private sector, these subsidy instruments were designed as matching grants, where firms had to contribute their own resources to the projects for which they were receiving funding from the government.

Other PPCs include the committees and councils of Chile's Productive Development Corporation (*Corporación de Fomento de la Producción* – CORFO). CORFO has created councils for each of the instruments it launches, and one for the overall institution. The councils are in charge of approving or rejecting instruments, approving or rejecting policy changes, and assuring coherence with the overall strategic goals of CORFO. The private sector is always represented in these councils, which lend validity to what CORFO does and assures the corporation that it is not diverging from the needs of the private sector. It has also been important to build mutual trust between the public and private sectors. The fact that the composition has been diverse and dominated

[3] FONTEC and FONDEF were created in 1991. The goal of FONTEC (run by Chile's Productive Development Corporation – CORFO) was to promote and cofinance the execution of technology innovation projects and associated technology transfers carried out by entities that produced goods and services. FONDEF (run by Chile's National Commission for Scientific and Technological Research – CONICYT) targeted universities and research institutes as beneficiaries to co-invest with the private sector in projects with a high socioeconomic impact and with the goal of creating technology firms (Benavente, Crespi, and Mafioli, 2007; Bravo, 2012).
[4] Interview with Carlos Alvarez.

by public sector representatives has made it difficult for the councils to be captured by the private sector.[5]

Another noteworthy PPC in Chile is CORFO's Investment Attraction Policy. This policy is important because it marked the first time that a vertical productive development policy was implemented after 1990. CORFO was allowed to shift its policy action from supporting existing firms to seeking and attracting investment from new firms not present in the country. Using this new policy tool, CORFO launched the High-Tech Investment Attraction Program in the first half of the 2000s aimed at the offshoring and IT services sector.[6] The program and the public-private relationship consisted mainly of CORFO contacting foreign firms, inviting them to invest in Chile, and offering incentives to do so, including solving some coordination issues with related industries.

Public-private collaboration was again expanded when CORFO began promoting productive clusters at a regional level: the Integrated Territorial Programs (*Programas Territoriales Integrados* – PTI). The program organized several mini-clusters through multi-annual support programs to enhance productivity and competitiveness.[7] A council formed to manage the cluster and the requirements had significant private participation.

Moving to a macro setting, between 2003 and 2006, innovation as a policy topic and innovation strategy in particular was recognized and fostered. A royalty law in the mining sector was passed that required receipts to be used in innovation programs under an Innovation for Competitiveness Fund (*Fondo de Innovación para la Competitividad* – FIC). Approval of the FIC was concurrent with the launching of a National Council for Innovation and Competitiveness (*Consejo Nacional de Innovación para la*

[5] The selection of private sector members is done by CORFO and is generally not political. Also, the large amount of work these councils require (they meet every two weeks) serves as a test as to whether the intentions of members lie beyond interest in rent-seeking.

[6] The policy goal was to take advantage of the expansion of new information and communication technologies where the country had some location, infrastructure, and human capital advantages within the region, and to develop a fast-growth new exporting sector. See Castillo (2008) for details.

[7] CORFO sought productive opportunities in different regions of the country (the selection of sectors included analysis by independent international consultants). Usually, these sectors were concentrated in certain geographic areas.

Competitividad – CNIC), which was the most important institutional innovation in 30 years. The CNIC is an independent advisory body to the president whose goals are to develop a long-term innovation strategy for Chile, propose how to spend the funds coming from the mining royalties, and issue guidelines on how to spend all the public money devoted to science and technology, consistent with the strategy. Even though it had less power than initially proposed, the CNIC transformed innovation policy during the second half of the 2000s. It has given order and macro guidelines to the different agencies, becoming the source of new ideas for policies and the place where agencies and ideas interact from a strategic perspective.

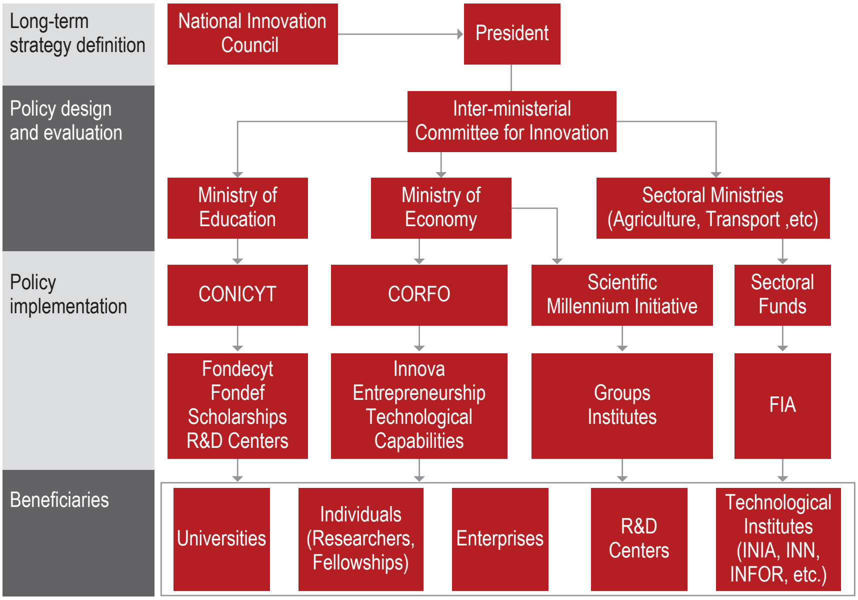
Since its inception, the CNIC has had private sector representatives from the Confederation of Production and Commerce (*Confederación para la Producción y el Comercio* – CPC), Chile's most powerful business association. Individual innovators and entrepreneurs have also joined and played an active role in approving policies rather than in actually designing them, something the authorities have been careful to separate from private influence, even though they could have participated in the design process as members of the CNIC.[8]

The CNIC officially emphasized the importance of selectivity and launched the National Cluster Policy. It also participated actively in the regional cluster program. Together with the CNIC, an Inter-ministerial Committee on Innovation was created that was supposed to have a decision-making role in innovation policy and coordinating agencies. Figure 5.1 outlines the Chilean National Innovation System.

In addition, during the administration of Michelle Bachelet (2006–2010), regional public-private collaboration roundtables were created to enhance sectoral competitiveness, channeling part of the resources collected from the mining royalty. These included the Regional Productive Development Agencies (*Agencias Regionales de Desarrollo Productivo* – ARDP) organized by CORFO. They are important for this analysis because they involved intense public-private collaboration and because these clusters, their institutional workings, and the workings of their PPCs shed light on

[8] An exception to this passive role was the president of the CPC, who actively participated in the design of policies to enhance human capital, particularly technical education (José Miguel Benavente interview).

Figure 5.1 **National Innovation Public System**



what happened later in the national clusters. It also shows that there were several coinciding (as well as conflicting) policies that had similar goals in a very short period of time.

Additionally, during this active period, international institutions granted three loans to promote innovation by companies that was linked to science and basic research, and to enhance the quality of applied university research. The World Bank granted a loan to the Milenio Scientific Initiative (located within the Ministry of National Planning – MIDEPLAN);[9] the IDB granted a loan to CORFO for the Chile Innovation Program; and the World Bank granted a loan to the Chilean Commission for Scientific and Technological Research (*Comisión Nacional de Investigación Científica y Tecnológica* – CONICYT) for the Bicentennial Science and Technology Program (*Programa Bicentenario de Ciencia y Tecnología* – PBCT). This latter initiative created the Consortia Program, analyzed in detail below,

[9] MIDEPLAN is in charge of part of social policy and social evaluation of projects within the public sector.

where PPC will be examined in two specific cases: CTI-Salud and the Fruit Consortia.

National Cluster Policy[10]

The National Cluster Policy was a vertical policy whose goal was to promote the growth and competitiveness of high-potential sectors by solving coordination bottlenecks and specific market failures. This was to be done through the coordinated action of the public sector—using its full productive development policy portfolio—with the private sector. The actions of the public sector could include new policies and instruments. Removing bottlenecks would unleash increases in efficiency, productivity, and competitiveness. The policy would be implemented through an agenda emanating from public-private collaboration roundtables, which were the essential policymaking mechanism. At these roundtables, intense and productive PPC was supposed to occur.

Despite the name of the policy, its goal was not necessarily to work with, enhance, or create clusters *à la* Porter. Actually most of the clusters identified did not meet Porter's definition of a "geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities" (Porter, 2008). In this case, a "cluster" was simply an economic sector defined more or less arbitrarily. Sectors were selected based on the recommendations of an independent expert, the Boston Consulting Group (BCG). Commissioned by the CNIC, BCG analyzed eight sectors, identifying gaps and unmet needs in order to develop their potential. The studies were then presented to and discussed by the CNIC, and five clusters were selected for funding and support. Two of them were in new or emerging sectors: global services and special-interest tourism. Three were in industries with comparative advantages: mining, the agriculture/food industry, and aquaculture.

The policy emerged from the CNIC, which approved directives based on the idea and the importance of selectivity within an innovation

[10] Based on interviews with José Miguel Benavente, Carlos Alvarez, Hugo Lavados, Alejandro Ferreiro, Claudia Marró, Conrad Von Igel, and Cristobal Undurraga, plus several documents, mostly from CNIC.

strategy.[11] The CNIC did not participate in the actual execution of the policy, however. It was delivered to the government for implementation without a single guideline. The CNIC thus had indirect responsibility for the outcome of the policy due to lack of leadership, involvement, follow-up, and evaluation.

Moreover, the period when this policy was enacted was one of active policy design and one during which significant funding was provided for innovation, thanks primarily to the FIC. However, the FIC generated the need to spend additional resources. In hindsight, this was not done in the most efficient way, since there was also considerable overlap in the new policies being enacted. In particular, national and regional clusters were created in a very short period of time and with a sense of urgency, with little planning, methodology, oversight, or evaluation. The CNIC and the Inter-ministerial Committee did not fulfill their policy oversight role.

Politically, the Ministry of Trade and Industry became responsible for implementing the cluster policy as head of the Inter-ministerial Committee for Innovation (Figure 5.1). However, after a short period of time and due to a mix of political realism and lobbying, leadership of each cluster was assigned to a different ministry. CORFO took over Global Services. The Ministry of Agriculture took charge of the Food Cluster. Aquaculture and Special Interest Tourism remained under the Ministry of Industry and Trade, and Mining went to the Ministry of Mining. The corresponding minister (or the head of CORFO) became the head of each individual cluster. The head then appointed a (remunerated) executive secretary, who organized the roundtables and led the whole process. CORFO coordinated the policy and allocated the resources. It also created a specific department to provide methodological, financial, and operational support to each cluster roundtable. CORFO was the only government agency that had the institutional flexibility to organize public autonomous roundtables with a budget and executive capacity in short periods of time.

The policy was inaugurated at the end of 2007. The initial work involved the selection of roundtable members and an executive secretary, and the preparation of initial preliminary agendas. After this was done, each cluster

[11] The Cluster Policy was officially incorporated into the Innovation Strategy in the second volume of the White Book of Innovation (CNIC, 2008). However, the idea of selectivity and vertical policies was initially resisted given the fear that they could likely be captured by the sectors that stood to benefit.

was officially launched. The launch dates ranged from November 2007 (Global Services) to November 2008 (Aquaculture). The original plan for the first stage was that during the first quarter of 2008, the roundtables would validate the agendas. During 2008 and 2009 the executive secretaries would implement the strategic agendas, developing short-, medium-, and long-term goals, creating a portfolio of projects, and leveraging political and financial resources from public sector agencies and the private sector.

Initially, very little money was allocated to clusters. The resources devoted to them depended on their demands and necessities. The resources initially provided were for management and for "club goods" such as studies and seminars (as they were for regional clusters). Nevertheless, the public sector in some cases ended up allocating significant sums of money through instruments.

The policy did not have much time to produce results. The governing coalition lost the December 2009 elections, and the new right-wing coalition discontinued the policy in the sense that large-scale public-private roundtables ceased to meet.[12] Thus, most of the policy outcomes that usually take significantly more than one or two years to materialize, particularly in areas related to innovation and coordination, will not be realized or measured.

Special-Interest Tourism Cluster[13]

The focus on tourism can almost be considered a strategic bet because, while the sector existed before the cluster policy, it was very underdeveloped, and lacked competitiveness. This sector would not be considered a cluster according to Porter's definition. There are, however, some linkages, albeit weak ones, between the different industries, such as lodging, restaurants, transportation, and national and international travel agencies. The cluster does have some geographic proximity but it is undeveloped, and one does not observe the agglomeration economies, coordination

[12] Interviews with current high-level CORFO managers indicated that, very recently, some public-private roundtables have been revived (mostly demand-driven) in what are called *Programas de Innovación*. However, these roundtables appear to be very small and have a much narrower focus and potential impact, since none of the key industry representatives and businesspeople interviewed for this study mentioned them as relevant or as a continuation of what was done in the Cluster Policy.

[13] Based on interviews with Hugo Lavados, Alejandro Ferreiro, Pablo Retamal, Claudia Marró, Isabel Zúñiga, Javiera Morales, Pablo Szmulewicz, and Lorena Arriagada.

loops, and positive externalities present in the more developed clusters. Moreover, each geographic area has a different type of tourism. Each region has its own characteristics, level of development, and needs.

Nevertheless, BCG positioned the special-interest tourism sector as one with high potential and with an important role for public-private coordination as a way to solve some of the problems of the sector. Indeed, most of the actions proposed required public-private coordination: promotion, local capacity and human capital, territorial and institutional organization, and increasing sector associations (Boston Consulting Group, 2007).

Context: Industry, Public Sector, and General Economic Issues

In order to understand the outcomes produced by the Tourism Cluster roundtable, it is necessary to look at the context of previous public-private relationships in this sector. Relevant public-private collaboration in the tourism sector dates to 2000, when a newly appointed head of Chile's National Tourism Service (*Servicio Nacional de Turisimo* – SERNATUR)—the public tourism agency that administratively falls under the Ministry of Trade and Industry—held meetings with a large number of private sector representatives, out of which came a document containing a list of critical initiatives. Business associations had an important role in this interaction, and they reported that Chile had a national tourism policy at that time. It is in this apparently positive context that the Cluster Policy was launched. Thus, this new roundtable had the challenge of generating additionality. It would seem logical to take this joint work as a starting point and expand it in the roundtable.

A second contextual issue was a series of other initiatives under way or being launched that decreased the relevance, importance, and novelty of the roundtable, both from a public sector and private sector perspective. Three initiatives deserve particular mention. First, at the time the roundtable started, the Ministry of Trade and Industry sent a tourism bill to Congress designed to reform the public agencies responsible for tourism and raise the profile of tourism within the ministry by creating an Undersecretary of Tourism, which meant that the sector would have resources allocated to it. Second, before the agenda was launched, regional cluster policies (known as ARDPs) were already under way. There were three sectors per region to be prioritized in each of the 15 regions of the country, and in each region tourism was one of them. Thus, the challenge was how to integrate regional interests into a national vision. Third, since 2005, the IDB had been supporting SERNATUR in the design of a new policy agenda, which would culminate in 2009 with a loan that was supposed to finance this agenda.[14] According to a SERNATUR interviewee, even though some of the policies were actually incorporated in the cluster agenda, they were in competition with one another and with the cluster agenda itself.

A third important issue is the fact that Hugo Lavados replaced Alejandro Ferreiro (the acting minister) in January 2008. Ferreiro was regarded by most of the interviewees as a technically savvy minister who took great interest in the sector and in the Cluster Policy. Lavados, on the contrary, was a much more politically oriented minister, focusing his time and effort on the ministry's congressional initiatives.[15] Considering he was the president of the cluster roundtable, this had an important impact. Finally, the subprime crisis hit the country during the second half of 2008, redirecting energy and resources away from these productive development policies.

Setup, Launch, and Composition

The public-private cluster roundtable was set up within the Ministry of Trade and Industry and was presided over by the minister, who chose the participants. The private sector had no role in choosing the members of the roundtable. The public-sector participants were chosen based on their connections with the tourism sector.[16] The cluster coordinating unit at CORFO also participated in the meetings as an observer. The private sector participant was chosen from among business association leaders and important representative entrepreneurs. An academic was also chosen to participate.

[14] According to a public sector interviewee from SERNATUR, a central part of that agenda was developing a new tourism offering, and a relevant aspect of it was actually defining an agenda for special-interest tourism.

[15] Besides the tourism bill there were also bills on aquaculture regulation, a reform of the institutions in charge of competition and anti-trust, and a small and medium-size enterprise statute that was being discussed (interview with Hugo Lavados).

[16] The entities included were the Ministry of Trade and Industry (minister and vice minister), CORFO (director of the CORFO program for special-interest tourism), CONAMA (national environmental agency), Ministry of Public Works, Ministry of Agriculture (but never participated), Ministry of Fiscal Assets, CONAF (agency in charge of managing public national parks), and ProChile (the export promotion agency).

The presence of individual entrepreneurs was criticized by business associations, which felt that they should have represented the private sector in such a body.[17] Adding to the criticism from associations, public sector interviewees indicated that some of those chosen to represent the private sector were not the best choices, mostly due to their lack of knowledge about how to work in public-private forums.

The cluster was to hire an executive secretary, and for that a professional manager was hired using headhunters and recommendations from the private sector. On paper, this was the most professional appointment process for choosing a director among all the clusters analyzed, since it was the only one chosen by an outside party based on technical and sectoral expertise and without political influence.

Before the cluster began operating, there were meetings between public sector actors to prepare an initial agenda for the cluster. However, it is not clear how effective these public-public coordination efforts were, as most interviewees spoke about conflicting agendas within the public sector as one of the main explanations of this cluster's failure. The cluster was constituted in June 2008, but was not officially launched until July 2008, the month when the executive secretary was hired and began formally working in the cluster. Thus, he did not participate in setting the initial agenda. The final more or less agreed-upon agenda that was developed with the private sector was aimed at identifying gaps in a number of areas relevant to the sector. Gaps were identified in human capital (insufficient knowledge and use of English), connectivity, sustainable management, international promotion, domestic development, and quality standards for services, and projects were set up in these areas. Working groups were to be set up in these areas to perform more in-depth work, with both public and private sector participation (Cluster de Turismo de Intereses Especiales, 2009a and 2009b).

Operation of the Roundtable and Public-Private Collaboration

Three issues marked the fate of this agenda: power struggles over the agenda between the various public institutions at the table, agency

[17] Only some of the tourism-related business associations participated in the roundtable.

problems for the executive secretary, and lack of leadership on the part of the heads of the roundtables. These issues were government-driven; consequently, private participation and interest dwindled quickly. Thus, there is not much of a story to tell about public-private collaboration. Nevertheless, relevant lessons can be learned about the necessary conditions for roundtables to function and for fruitful PPC to happen.

According to most of the public sector representatives interviewed, there were disagreements within the public sector with respect to what topics to advance with the private sector. They point to unproductive discussions being mostly held between public sector agents who were pushing particular agendas. In particular, CORFO and SERNATUR clashed over the agenda. Even within the ministry there were conflicting sectoral agendas between the minister and the undersecretary, both of whom participated in the roundtable.

A comparison with the Aquaculture and Global Services Cluster shows a clear contrast. In both of those clusters, a tentative agenda was proposed and agreed to by the public sector from the outset, and most of the private-public work was directed toward giving specific content to it. Unlike tourism, however, in the case of the Aquaculture and Global Services Cluster no time was wasted on defining the original criteria under which the roundtable was supposed to work.

The executive secretary of the Tourism Cluster was very competent in terms of analytical capacity, but not in terms of leadership, political ties, or conflict resolution. He tried to obtain support from some of the participants and to validate himself and his role, but he was not able to resolve conflicts, forge a common public sector viewpoint, or establish productive conversations with the private sector in order to push a common powerful competitiveness agenda. According to all those interviewed, he did not do a good job as executive secretary.[18] In contrast, the executive secretaries of the other clusters analyzed were previously well known and validated by both industry and government participants.

[18] Only one interviewee did not offer a negative opinion. In his view, the executive secretary did not have enough time to show what he was trying to do.

The Tourism Cluster met only three times during the executive secretary's term between January and May 2009.[19] From interviews and an analysis of the minutes, a picture emerged about the problems of the work in these meetings. First, the public sector agents proposed most of the discussions. The agenda seemed to be imposed by CORFO, despite the work that had been going on previously between SERNATUR and part of the private sector. This discouraged private sector participants, such as the Chilean Association of Tour Operators (*Asociación Chilena de Empresas de Turismo* – ACHET), which had previously coordinated with SERNATUR. However, the agenda discussed did involve some of the private sector participants.[20] Second, according to most interviewees, the private sector's participation was not very decisive, since there was no continuity in attendance or in the participants. Some of those interviewed from the public sector side claim that private actors did not have much to propose and lacked (with the exception of ACHET) a national and public policy perspective.

In view of these problems, many private sector interviewees felt that the cluster was "just another roundtable," despite having a much broader and longer-term perspective than any of the other roundtables. The generality of the issues discussed, together with weak work on specific subcommittees, plus the evident clashes and lack of common objectives within the public sector, made the roundtable seem like a waste of time for private actors. Not surprisingly, the Tourism Cluster roundtable was considered a failure by most of those interviewed and most of the documents analyzed. There were almost no results from the roundtable, and meetings stopped a year after it was officially launched.[21]

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[19] The executive secretary was fired by the minister in mid-2009 and was replaced by his new chief of staff (who kept his job as chief of staff). According to most interviewees, the minister basically destroyed the roundtable by unilaterally naming a politically close ally who, while having experience in the sector, considered the cluster to be low on his list of priorities.

[20] The particular areas of interest of the private sector were quality standards, promotion (both domestic and international), and the strengthening of SERNATUR. The private sector proposals were in the areas of infrastructure, the professional fields to be implemented in universities, and standardization of quality, given the heterogeneity in the sector.

[21] According to most of the interviewees, the only area with a positive outcome was the creation of an English language training program for tourism. Some interviewees even noted, however, that this program was not a product of the roundtable but rather a CORFO program already under way that was adapted and used for tourism.

Global Services Cluster[22]

The Global Services Cluster is possibly the most successful case among the sectors chosen by the CNIC. Interestingly, it is the most long-term of all the clusters, since it has been promoting a sector that was in its infancy when the cluster began. "Global services" refers to the production and export of tradable, knowledge-intensive sectors, such as call centers, business process outsourcing, knowledge process outsourcing, business processing and analysis, and engineering services. India, with its call centers and software programmers, is the paramount sector example. Offshoring is not only a new sector in Chile, but in the world, and was born relatively recently due to the confluence of a series of factors, including the possibility of outsourcing knowledge processes, pressure on firms to reduce costs after the dot-com crisis, and the trend toward trade liberalization.

In Chile, public-private collaboration in this sector did not begin with this policy. It can be traced to public and private efforts to boost the competitiveness of these types of services, starting at the beginning of the 2000s. From the public sector side, the Global Services Cluster can be seen as an expansion of the High-technology Investment Attraction Program (*Programa de Atracción de Inversiones de Alta Tecnología* - PAI). An important part of this plan involved the inclusion of private Chilean firms. Although the sector was underdeveloped and internationally not competitive, it had some important firms, particularly in the ITC sector.

Initial Setup and Public Sector Coordination

When deciding where to locate the cluster within the government, it was clear that it had to be hosted within CORFO, since it represented an expansion of CORFO's investment attraction program. The Ministry of Trade and Industry accepted this proposal, and thus CORFO's Executive Vice President Carlos Alvarez presided over the cluster and Mario Castillo, PAI director at the time, became its leader. Castillo had been working on the program for seven years and had forged the links with the private sector that were later exploited in the cluster.

[22] Based on interviews with Carlos Alvarez, Mario Castillo, Claudia Marró, Raul Rivera, Raul Ciudad, and Mohit Srivastava.

The Global Services Cluster had the particularity of being directed from inside CORFO, which provided it with a source of funds and policy maneuver over and above that of the other clusters. For example, the executive secretary, being a CORFO manager, spoke regularly with all the other managers, and in this way could actually influence CORFO's mechanisms and obtain the necessary flexibility and support for the cluster's initiatives. This was a privileged position compared to that of other managers. Finally, the fact that both the president and the executive secretary were part of the same institution also presented advantages in terms of coordination.

The actual configuration of the roundtable was defined by the public sector, without formally consulting the private sector. Both CORFO and the Ministry of Economy designated the members. They sought out the representatives who had participated with CORFO in the formulation of the PAI policy. Moreover, according to one of those interviewed, members were chosen with the additional requirement of being allies of CORFO, meaning that they had benefited from CORFO's previous programs (such as PAI), or they had something to gain by being on the roundtable. According to a private sector representative, the private sector members did not have a problem with this, as the composition of the roundtable matched their preferences and they had confidence in the head of the cluster. This was apparently the only cluster that had this level of continuity of public and private sector work and a relationship between them.

This cluster was the first to be launched, in November 2007. It included representatives from international companies, such as Oracle and Evalueserve; business associations, such as Foro Innovación, the Chilean Information Technology Association (*Asociación Chilena de Empresas Tecnológicas de Información* – ACTI), and the Chilean-American Chamber of Commerce; an engineering association; academia, including the dean of a prestigious engineering faculty and the director of a technical institute; and the public sector, including representatives from CORFO, the Ministry of Education, and ProChile.[23]

[23] Other related sectors joined the roundtable later, including the film and architecture industries.

Public-Private Interaction

Based on a prior BCG assessment and previous work with the private sector, the president and CEO identified a group of key areas to work on, which were proposed to the roundtable as a whole. Once approved, working groups were created to address and generate specific proposals on each issue.[24] The cluster met monthly and the subcommittees met biweekly, depending on the committee. The agenda of each subcommittee was presented for approval to the general council and, if approved, the public sector representatives would make sure that instruments were created or funds allocated to address the problem.

The private sector played an active role in all of these discussions and deliberations. Private sector members also proposed previously unaddressed issues that were then frequently incorporated into the agendas. For example, ACTI proposed internationalizing Chilean firms in new markets as a way to expand production and create new demand for Chilean services and foreign investment in Chile. This proposal was incorporated into the cluster's agenda, and CORFO launched an instrument to promote it. ACTI also pushed to raise the profile of the Chilean brand as a relevant issue for the industry. Another issue identified through PPC was that data security was an important constraint preventing the attraction of new investment to the sector, since there was no regulatory legislation. This enabled the cluster to push for the enactment of a bill to address that problem. That draft law is currently being discussed in Congress.

An interesting example of actual interaction was the work done by the human capital subcommittee, presided over by the dean of the School of Engineering of the Universidad Católica, with the participation of representatives from business associations, domestic and international firms, and CORFO. The group came up with three outcomes: expansion of English language training programs and scholarships, a study of job profiles in the industry, and a proposal to reduce the length of the engineering program in university curricula. These outcomes emerged after a contentious discussion. According to interviewees who participated in the group

[24] The working groups that were formed were on the topics of the regulatory framework, human capital, promotion, and domestic industry development, each headed by a different institution (government, university, Foro Innovación, and ACTI, respectively).

discussions, any member could contribute to the discussion, but the government usually had the last word and made the final decisions, which were binding. Sometimes this was positive, according to one private sector member interviewed, such as in the case of the mechanisms underlying the expansion of English training for the industry. But in others, it was negative, as in the case of the job profiles. The private sector members of the subcommittee heavily criticized Fundación Chile, the institution that was chosen to do the study, the methodology, and the outcome, because agreements and diverging viewpoints were ignored by the government.

Analysis and Impact for the Private Sector

Another area where there was no agreement was on the potential for capture. The public sector stressed that the sector was almost nonexistent, with domestic firms being relatively underdeveloped. The private sector, however, maintained that there were capture attempts, which became evident during the work of the domestic sector development subcommittee. There are two important issues related to this. First, against the capture argument, the ACTI domestic sector representative had a broad public sector vision much more oriented toward long-term development and public objectives rather than representing the sector's attempts to obtain public funding.[25] Another important factor was that most of the other firms represented at the roundtable were either potential beneficiaries of some of the mechanisms, or had already benefited from subsidies granted as part of the investment attraction program.[26]

This made those firms immediate allies of the government. The question is whether this can be considered capture. Substantial resources were invested in the mechanisms and programs that came out of the cluster. According to Cluster de Servicios Globales (2010), US$14.2 million was

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[25] For example, although one goal pursued by the roundtable was to bring foreign competition into the country, ACTI and the domestic sector representatives supported this proposal despite the fact it could hurt the industry in the short run.

[26] For example, the domestic IT sector received benefits through subsidies provided under the guise of supporting economically backward regions in order to be in compliance with WTO rules, since some subsidies were given to foreign companies to establish themselves in Chile. Moreover, ACTI had a seat at one of CORFO's Innova Councils that assigned "normal" horizontal subsidies, so it had other ways of obtaining subsidies (whether seeking rents or not).

spent on studies and new mechanisms by each subcommittee. However, according to most interviewees, this effort was timid.

The private sector representatives also complained that not enough was being done in some areas, and that in others the government took actions without much consultation, which then resulted in failure (e.g., the job profiles). There were also complaints about the methodology, which many considered cumbersome. At the same time, there was recognition that the private sector was wrong on some issues, and that in general the public sector's actions were positive and not driven by capture but instead oriented toward social objectives and executed appropriately.

Some groups were more successful than others, but former public and private sector participants characterized the outcome of the process as clearly positive. Without exception, participants believe that the cluster generated significant additionality to what was being done before its creation and what could have occurred in the same period if it had not existed. Firms were attracted, and there were demonstration effects and global positioning of the country in the sector. Policy instruments to solve bottlenecks and promote the sector were created (e.g., English language scholarships and tax benefits), and bureaucratic constraints were lifted (e.g., fast-track visas for executives from India). The main objective of the cluster—to increase exports from US$200 million in 2006 to US$1 billion in 2010—was measured and achieved.[27]

When asked about the practical benefits that accrued to them and to the industry as a whole, private sector representatives highlight the fact that positioning the country abroad in the sector brought demand and FDI to the country that would not have come otherwise. This increased GDP and generated spillovers in terms of human capital and capacity that had not been sufficiently present in the country. The cluster was a great substitute for a powerful and public-good-oriented business association for global services in Chile, which did not exist. The cluster allowed the industry to coordinate and establish a productive dialogue and an understanding with the government and academia in order to enhance competitiveness and develop human capital in the medium term.

[27] An independent consulting firm was hired to perform the measurement annually, and the goal was surpassed. This, however, does not prove causality of the intervention.

Political Cycle and the Policy during the Piñera Period (2010–2014)

Sebastian Piñera's government ended the public-private roundtables that were the heart of the entire cluster program. This occurred despite attempts from private sector members, such as ACTI, to continue them, and initial nominal support of the sector by the new CORFO administration. Meetings were nevertheless stopped. The result was that public-private collaboration disappeared.[28] Most private sector representatives point out that the cluster needed more time to implement many of the measures agreed upon in the agenda and for the effects to mature.

Aquaculture Cluster[29]

The Infectious Salmon Anemia Virus Crisis

To analyze the development of the Aquaculture Cluster, it is necessary first to understand the history and importance of the Chilean salmon farming industry, which is the main player within the sector, and the severe sanitary crisis it was facing when the cluster policy was enacted.

Along with mining, the aquaculture sector, and the salmon industry in particular, is the only real cluster à *la* Porter in Chile. The industry has strong linkages with the animal feed industry, medical labs (for vaccination), services (for logistics and quality control), and the machinery and metal-mechanic industry, among others, and it has been expanding to test new species.

The salmon industry is a young industry that began in the late 1970s. In a few decades, production rose from negligible levels to more than US$2 billion by 2008, placing Chile in competition with Norway as the world's largest salmon exporter (DIRECON, 2009; Pizarro, and Moreno, 2012). The government played a key role in the birth of the industry, mainly through Fundación Chile, which, with support from foreign academics

[28] Current government documents indicate that this public-private council is still operating, but the facts and interviews do not seem to bear this out. A private sector representative noted that the president had promised to re-establish an opportunity for public-private dialogue, but this has yet to occur.

[29] Based on interviews with Hugo Lavados, Alejandro Ferreiro, Carlos Alvarez, Claudia Marró, Felipe Sandoval, Bernabé Santelices, Juan José Soto, Monica Ríos, Luis Pichott, Jorge Katz, Carlos Vial, and Domingo Jimenez.

and the Japanese International Cooperation Agency, acquired the necessary technologies and shaped the organization of production.

While Chile rivaled Norway in volume of production, there were important differences between the two production systems.[30] Regulation was very weak—Chilean businessmen praised the idea of self-regulation and pushed for it—and there was little collective action. Both of these factors were fundamental in ensuring biosecurity and sustainability in a sector that depends on a common resource. These issues contributed to a dramatic sanitary crisis from 2007–2009 due to the outbreak and spread of the infectious salmon anemia (ISA) virus. The consequence was a reduction over just a few years in the production of Atlantic salmon, the most heavily produced variety, from close to 400,000 tons to 100,000 tons (Garate, 2011). The impact was felt in the 2009 and 2010 production volumes.

The social impact on the producing regions, the economy of which revolved around this sector, was enormous. An estimated 25,000 jobs were lost, constituting around half the direct and indirect jobs associated with the sector (Alvial et al., 2012).

When the magnitude of the crisis made the problem unmanageable, the private sector went to the government to ask for regulation and help. To deal with this situation, the Ministry of Trade and Industry postponed the creation of the cluster and centered all of its efforts on confronting the salmon crisis. Thus, in April 2008, the Ministry of Trade and Industry formed what it called the "Salmon Roundtable."

The Salmon Roundtable

The Salmon Roundtable was a public sector deliberative body directed by the Minister of Economy, Hugo Lavados. The Executive Secretary, Felipe Sandoval, was a former Undersecretary of Fishing and a savvy negotiator.[31] The goal of the roundtable was to analyze the situation in the

[30] For example, Chilean growing centers are very close to each other and there were significantly higher levels of fish overcrowding and antibiotic use, as well as a lower use of proper vaccinations.

[31] Other members of the group included Juan José Soto (advisor to the minister), Luis Pichott (Fundación Chile expert), Bernabé Santelices (academic), Edith Saa, and Jessica Fuentes (from SERNAPESCA). Many of them later participated in the Aquaculture Cluster roundtable.

industry and present proposals to restructure the sector, solve its short-term crisis, and contribute to its long-term sustainability. The private sector was not formally in the roundtable, but it was present in two ways: first, there were experts sitting at the table who had previous experience in the private sector; and second, the roundtable asked the private sector for information and negotiated proposals with it outside of the roundtable itself to ensure that those proposals would be acceptable to the sector and thus have a greater chance of being approved by Congress. The roundtable's proposals included important regulatory changes, commission of a study to define parameters and indicators to determine carrying capacity, and strengthening of monitoring institutions (Katz, Lizuka, and Muñoz, 2011). The main outcome of the roundtable was a bill sent to Congress in 2008 that was approved in March 2010, days before the newly elected right-wing government took office.

While these events were occurring, aquaculture was selected by the CNIC as one of the sectors to be prioritized under the new innovation policy. The Aquaculture Cluster roundtable was established in September 2008, right after the Salmon Roundtable had sent a bill to Congress. Given the preponderance of salmon in aquaculture, and the serious crisis situation, the "salmon problem" had a central role in this cluster. In fact, the cluster was the forum where some of the discussions of the Salmon Roundtable continued. But the cluster was a fundamentally different initiative in two respects: it focused on long-term problems of the sector, and it was not restricted to salmon. Sandoval was appointed Executive Secretary of the cluster, taking advantage of his expertise and the knowledge and outcomes built during the work of the Salmon Roundtable.

Organization and Description of the Cluster

As with other cluster roundtables, the decision of the members was made without consulting the private sector. According to public sector representatives interviewed, the members of the cluster were proposed by Sandoval, the Executive Secretary, and Juan José Soto, an advisor to the minister, and approved by the minister. Members from the public sector included most of the members of the Salmon Roundtable. However the cluster roundtable was significantly larger, with representatives nominated from other public services (CORFO, CONICYT, CONAMA, and regional governments), academia (from different regions of the country), and the private sector, some of whom were counterparts of the Salmon Roundtable and well known as industry leaders or firm owners with a broad view of the sector's problems. Since the roundtable's mandate transcended salmon, representatives of emerging aquaculture industries (e.g., salmon upstream industries and producers of mussels, oysters, algae, and scallops) as well as environmental organizations, such as the World Wildlife Federation, were also included.

The initial idea of the cluster was to strengthen linkages and develop private research and development capacity in aquaculture in order to advance the complexity and diversity of production. A key issue analyzed was the development of harvestable species of fish, mollusks, and other seafood in order to use the know-how and logistics already developed for salmon. The salmon crisis also pushed the roundtable to think about longer-term institutional reform and regulation (mostly for salmon), in addition to what was being discussed in Congress. The ISA crisis weakened the dedication of the cluster, as it siphoned financial and particularly political resources away from it. On the positive side, the formation of the Salmon Roundtable created consensus and trust among public officials and some technical experts at the center of the cluster.

Given the large size of the cluster roundtable, work was divided into five areas. Subcommittees made up of cluster members (and in some cases people outside the cluster) were formed to analyze bottlenecks in the sector in specific areas and to come up with solutions. The five areas were human capital, research and development, infrastructure, institutions and the regulatory framework, and the supply chain.

As with the Tourism Cluster, the roundtable was presided over by the Minister of Trade and Industry. However, unlike tourism, the minister was present and fully engaged. Additionally, the executive secretary was well known in the industry and had excellent relations within the public sector. Several of those interviewed described him as a master of conflict resolution. This situation provided a different context for work of the cluster when compared to tourism. The selection of public sector participants was in many cases instrumental to Sandoval's goals and way of working, since he influenced the nominations. Not surprisingly, the remaining public institutions participating in the cluster worked with the proposed agenda from the beginning. A consulting firm was hired to manage the cluster, guide the discussions, and register agreements.[32]

Public-Private Collaboration within the Cluster

Most of those interviewed concurred that the private sector representatives actively participated in all meetings and were interested in putting forth proposals (although some public sector representatives interviewed criticized the interests of the apparently less prepared smaller sector representatives). In general, their participation and work were regarded as public-spirited and not guided by special interests. Still, the size of the roundtable and the variety of participants rendered its capture by special interests unlikely. One public sector representative interviewed even noted that private sector representatives not only spent a significant amount of time in the numerous meetings, but even purchased their own plane tickets to attend the meetings, since there were no funds for transportation. They rarely missed a meeting. The section that follows details the workings of one of the subcommittees.

Institutions and Regulation Subcommittee of Chile's Aquaculture Cluster

The work done by the subcommittee in charge of regulation and institutions was exemplary. Its goal was to propose institutional reforms to expand research and development in aquaculture. The group was aware that the cluster and its proposals were sensitive to the political cycle and thus might not survive a change in government due to the lack of an appropriate institutional framework. For this reason it invited a conservative economist and think tank member to be part of the group. In this way, the agreed-upon outcome would be in theory accepted and incorporated into the policies of the new government, no matter which coalition won. The group hired an executive secretary to guide the discussions and organize the results. Consequently, the group had a goal of arriving at clear outcomes before March 2010, because after that it was perceived that anything could happen.

[32] There are mixed opinions on the (large) amount of money spent on this consultancy firm, which included family members and friends of the executive secretary. Some interviewees considered its work a waste of money, while others valued it as important.

As with other subcommittees in the Aquaculture Cluster, the subcommittee's working methodology was based on workshops. Once the key set of topics was agreed upon, the group organized seminars with experts from different fields to develop proposals to improve existing institutions. From the information presented, members debated and decided on the best policy path to propose, given the current context. According to those interviewed who participated in the group, the subcommittee worked efficiently with a firm focus on generating realistic proposals that would bring about real changes.

As in other cases, the decisions were reached by consensus rather than voting. There were some issues that generated heated debates. One area of strong disagreement was the goal and financing scheme of the Fisheries Promotion Institute (*Instituto de Fomento Pesquero*), a public research institute that had little influence but which was supposed to have a larger role in research in the future. After the discussion, the points of agreement were written up and sent to the general cluster for approval. Unlike some areas of the Global Services Cluster, decisions in the subcommittee were not influenced by previous public sector decisions. This made the work more open and fluid between all participants.

The final document generated by the group was presented and approved by the general Aquaculture Cluster, to be put into effect through specific actions. This particular group also shared its policy proposals with the campaigns of both incumbent and opposition candidates in the hope that they would be incorporated regardless of who won the election.

Cluster Outcomes and Analysis

When asked about the achievement and outcomes of the cluster, most of those interviewed mention the outcomes of the Salmon Roundtable, indicating that what came out of the cluster itself was not very significant. The private sector representatives have a similar opinion, despite not being formally a part of the Salmon Roundtable (but clearly having participated in more informal discussions and the work done in Congress). Some of those interviewed affirmed that the discussions were tedious and unproductive, centering on long-term issues when there were huge short-term issues needing immediate action (most of them outside the scope of the cluster). Others, however, insisted that the roundtable produced interesting results, although few were implemented.

Some of those interviewed were critical of the failure to establish a methodology for the cluster's deliberations. Criticisms ranged from the selection of participants to the way that work and meetings were conducted, and how the money was spent (mostly on studies, some of which were questionable because of their redundancy, and on a consulting firm that not everybody considered to be good). No better alternatives were proposed, but the fact that there was no thought of doing so was a concern.

Political Cycle

As with the other clusters, with the change in government between Michelle Bachelet and Sebastian Piñera, this cluster stopped working as a public-private roundtable. Moreover, it seems that the efforts to make the results of the cluster endure would not have been successful had not one of the cluster participants, Monica Ríos, continued working in the Ministry of Trade and Industry after the change in government. Some of the issues, particularly from the subcommittee described above, were recently incorporated into new policies. However, there are no mechanisms in place to ensure the evolution and sustainability of policies previously put in place.

Lessons of Public-Private Collaboration from the Cluster Policy

Unfortunately, the Cluster Policy had too little time to show any of the results it might have obtained, since it existed for only two years. After the change of government, the public-private roundtables were dismantled or simply discontinued. Unlike the consortia policy, there is no indication that these PPC forums will be reinstated in the near future.

The success of a cluster can be measured by the amount of joint work done in terms of fruitful strategic dialogue and agenda-setting, how effectively a common agenda is set, and how well that agenda is implemented. From a public sector perspective, a virtuous agenda-setting process is important because it reveals where the constraints were for specific sectors and where instruments and policies (or simply public or private coordination) to solve those bottlenecks are lacking. In general, regardless of the existence or lack of measurable outcomes, one clear positive result of the work of clusters is a byproduct of private-public interaction: a better understanding of the thought processes, interests, and constraints of the other sector, and the building of trust in order to improve the workings of the sector.

Despite the short time that they had to develop policy outcomes, the three clusters analyzed here left some useful lessons for the future organization of public-private initiatives for competitiveness, particularly because they had different outcomes with some common, unvarying features. These lessons are presented as a group of "do's" and "don'ts" that can be extracted from the three cases.

The Do's

- *Choose empowered and motivating leadership:* This is critical to mobilize the rest of the public sector (public-public coordination) and to motivate private sector participation and work. The person chosen to lead a PPC effort must have the respect and validation of both sides of the process. Inclusive leadership, technical capacity, and particularly validation from the public and private sectors based on previous relationships are necessary conditions. The person must have the political and technical capacity to mediate among multiple public agencies and coordinate with the private sector. The Tourism Cluster differed from the Global Services and Aquaculture Clusters, for example, because the executive secretary was hired based on objective technical skills and knowledge of the sector, although he lacked knowledge and trust from public and private sector stakeholders at the roundtable and had to invest time in fruitless trust-building, making the PPC unmanageable. The nomination should therefore be "political" as long as it fulfills these requirements. In the particular case of Chilean clusters, the role of the CEO is crucial, as the person must be able to adhere to an agenda and make it function. However, for this role to work, the support of the president of the cluster is also essential.
- *Build on established public-private coordination efforts:* Effectively building on previous PPC seems to accelerate productive work, since trust and personal knowledge are already in place. The importance of previous trust-building was highlighted by all parties in the Global Services Cluster as a positive prerequisite. On the contrary, it appears

that ignoring the previous work done by part of the industry and SERNATUR alienated the private sector from the Tourism Cluster. However, building on previous efforts also increases the risk of capture due to previous PPC. It is at the same time worrying to realize that success was partly possible because there was a previous history and initiatives were already in place, casting some doubts on whether the cluster policy had a causal effect or whether it simply continued a previous trend that cannot be differenced out.

- *Have carrots on the roundtable:* To attract private sector participation in the roundtable, there must be something to be gained from participating. This could be resources for incentives or new programs, but it could also be the urgency of a problem to be solved and the importance of being present in order to affect the outcome.
- *Private participation in defining the agenda is very important:* Defining the agenda is important because the private sector not only needs to validate it, but also to have participated in its development, since its goal is precisely to solve private sector bottlenecks and challenges. Conflicts in the Global Services Cluster and criticism from the private sector mostly emerged because public agendas or decisions were imposed. By contrast, in the Aquaculture Cluster, the institutions subcommittee reached consensus, and productive proposals emerged in part because of a decision-making methodology that was not characterized by unilateral decision-making by the public sector. The experience of these clusters shows the importance of not imposing unilateral agendas, as doing so discourages private sector interest in participating.

The Don'ts

- *Do not use the roundtable for public-public coordination and discussions.* Using the cluster time as a battlefield for conceptual ideas or political power simply undermines all interest from the private sector to participate, since private sector participants feel their time is being wasted. Having a unified and coordinated public sector centers the discussions on private sector concerns and relevant bottlenecks, making the PPC relevant and productive. The contrast between the Global Services and Tourism Clusters illustrates this point.

- *Do not have parallel, competing initiatives.* The case of the Tourism Cluster, and to a lesser extent Aquaculture, shows that when other, more relevant forums of private interest are in place parallel to an initiative such as a cluster, interest in a given PPC dwindles. In the Tourism Cluster, a parallel tourism bill, and in Aquaculture, the Salmon Roundtable (although not a full substitute for the cluster), are examples of this.
- *Do not send alternates.* Sending alternates is a first signal of dwindling interest in both the public and private sectors. It also slows the flow of information and the advances in agendas, since they then have to be validated by the absent leader.

Other Important Issues

- Large PPC roundtables, used mostly to discuss general issues and approve the work of specific subcommittees, seem to be a necessary (if tedious) condition for clusters to work in Chile. Although there is no counterfactual, it is clear that large roundtables enabled a variety of interests to be represented, which reduced the chances of capture by a specific group. A wide spectrum of participation also more broadly validates the decisions made across an industry. However, its very nature and size can slow down work and outcomes significantly.
- For this reason, a good methodology oriented toward generating a proposal-driven agenda was acknowledged to be important in generating useful outcomes. In the Chilean clusters analyzed, besides hiring in some cases a consulting firm to guide the process, there was no thought given to the methodology that should be used in the general and specific roundtables.[33] This could be due to the lack of structure and consideration afforded to the Cluster Policy in general since its conception at the CNIC. Also, the fact that there was no thought

[33] The only partial exception was the Global Services Cluster, where roundtable members were appointed with the idea of getting public sector allies on board. It was explicitly recognized that the logic was to have people who had already benefited from the cluster or would potentially benefit. This aligns incentives, but can also be thought of as a type of capture. It might be a good way to elicit active private sector participation.

about how to evaluate the outcome of the clusters' work also worked against developing a methodology. In any case, there was little variation in the methodologies used that could shed light on which mechanisms were more effective. And, in all cases, the methodology was one of the issues most criticized.

- The election of participants for the roundtable does not seem to require private sector participation for it to be valid or for the work to be fruitful. Both good and bad outcomes were observed, irrespective of private sector representatives being chosen by the public sector roundtable leaders in all cases. Nevertheless, the representatives have to be well chosen. Public and private sector representatives indeed need to be representative in the sense that they are recognized as leaders among their peers.

Technology Consortia Program[34]

The main goal of the Technology Consortia was to develop new firms with the capacity to develop cutting-edge applied research. It sought to pool innovation efforts of different firms and at the same time increase their collaboration with universities. The outcomes were to be relevant to the productive sector to which the consortium belonged in terms of providing new insights (positive externalities and demonstration effects) that could enhance the competitiveness of the sector (Busco, Retamal, and Rodriguez, 2008; CNIC, 2007).[35]

The program was embedded within the Bicentennial Program on Science and Technology (PBCT), a World Bank initiative hosted by CONICYT that provided technical assistance and a loan to the government (which provided counterpart funds) to fund different policies designed by the program.[36] The PBCT received support from World Bank experts

[34] The description of the program is based on interviews with José Miguel Benavente, Andrés Benavides, Fernando Lefort, Isabel Reveco, and Isabel Meneses.

[35] The policy had additional goals, such as improving the links between domestic and global research and business communities (CONICYT, 2004), academic goals (such as providing research possibilities for Ph.D. dissertations and generating study programs) and patents (according to interviewees from government and consortia).

[36] See PBCT (2003) for details.

for the design of the Consortia Program and looked to the Australian experience for inspiration. However, unlike the Australian consortia policy, which provided funds for a period of 10 years for each consortium, the Chilean policy only considered a period of five years of cofinancing for each project.

Even though CONICYT was in charge of the program, from its beginnings participants realized that an essential part of program management and goals had to do with firm action. Thus, they fully incorporated CORFO as a convening and evaluating institution.[37] Since some of the projects were specific to agriculture, the Foundation for Agrarian Innovation (FIA), the innovation promotion program within the Ministry of Agriculture, was also invited to be part of the process. These three agencies issued a call for proposals in 2004. This joint initiative was a rather unique experience in the Chilean public sector, which is used to compartmentalizing policies within specific agencies. The applications were received in the three agencies, each of which would usually (though not always) end up being the corresponding counterpart of the applicants.

There were three rounds of bids for projects, in 2004, 2005, and 2009. The three institutions made the first two bids. However, in the second call for proposals, even though it was a joint call, the specifics for each call were different for each institution.[38] The third call was a thematic bid, on biofuels, launched and managed exclusively by CORFO. In the first bid, nine consortia were selected for funding. In the second bid, 10 additional groups were selected.

Application Requirements and Selection

To apply, a group of at least three firms and some research institutions had to come together and submit a research program (rather than a single research project) to any of the three agencies. This program had to be undertaken by creating a new firm. This new firm had to have the participating institutions as partners and undertake the research and innovation.

[37] Some interviewees gave an alternative view regarding the inclusion of CORFO: CORFO might have exerted political pressure to be included, since firm innovation was its purview.

[38] For example, the FIA issued its call with a more specific focus on the agriculture sector.

The government was to provide up to US$5 million, an amount that the consortium partners had to match (part of it in cash and part in kind). The money would be rolled over in a period of five years, after yearly evaluations by international experts.

The decision to award a grant to a consortium was made jointly by the three agencies, based on the opinion of international evaluators. Having international evaluators reduced the risk of capture from the applicants because it provided an independent appraisal of the potential of each group. The evaluation panel was coordinated by CONICYT. After selection, each consortium was assigned to a particular agency, according to the agencies' preferences, for the actual funding and monitoring. Once a project was assigned to one public agency, that institution exclusively handled project management. Thus CONICYT handled only the consortia that it agreed to host.

Most of the applications selected were in sectors that had revealed comparative advantage, but a few of them were in new sectors. This had been previously discussed and was an implicit objective of the team in charge of the program, even though at that time Chile's innovation policy was mostly horizontal.[39]

Evolution of the Program

From its inception, the program involved two important changes. The first was the cancellation of the second part of the World Bank loan by the Chilean government, after the new government decided not to continue with the second stage of the project. Despite this drastic change in the policy horizon, the program continued regularly with the planned five-year first phase. Second, starting in 2006 the control of the Consortia Program was transferred to CORFO because CONICYT decided to focus exclusively on basic research and assign only those programs that had a productive component to CORFO, the institution with the most expertise and specialization in firm innovation. The calls for new consortia became CORFO's responsibility. CORFO tried to fashion the program along the Finnish model, linked to clusters or other initiatives. However, the new

[39] The policy was launched before the CNIC established and launched the National Cluster Policy.

calls (after the biofuels bid of 2009) involved fewer resources (CORFO contributed with at most US$1.2 million) and had a much narrower focus. It no longer required joining academia and industry together and only required a technological institute, and fewer total participants.

Private Involvement in Design and Public-Private Interaction during Implementation

The private sector was not involved in the design of the mechanism. The program was designed by CONICYT with assistance from the World Bank, using the Australian experience as a model. However, after feedback provided by the consortia, the program was modified to provide funds to applicants at the initial stages of the process.[40] This was an important change, and a consequence of public-private interaction in implementation of the program.

During implementation, there were two periods of public-private interaction. First, in the period following the awarding of funds to a consortium and before the contract was signed, there were negotiations between the consortium participants during which the rules of operation inside the new firm were established. This agreement had to be communicated and accepted by the public agency in charge of the consortium, which required active information and flexible participation from the public agency. Second, over the five years that the project was implemented, there were yearly evaluations and other types of contacts between the consortium and the public agencies.

CTI Salud Consortium[41]

CTI Salud can be considered an "in the large" component[42] of the Consortia Policy because it operated in an undeveloped sector in Chile:

[40] An important source of collective feedback was a seminar organized in May 2007 to evaluate progress, problems, and suggestions for improvement from each consortium. See Yammal (2008) for an analysis of that seminar.

[41] Based on interviews with Ivan Mimica, Manuel Gidekel, Andrés Benavides, Isabel Reveco, and Isabel Meneses.

[42] Hausmann, Rodrik, and Velasco (2008) distinguish between industrial policy "in the small," involving the elimination of bottlenecks and provision of public inputs for existing sectors, and industrial policy "in the large," involving strategic bets on new activities.

advanced health research and biotechnology. It is a consortium that originated in the academic community. The idea came from a researcher at Universidad de la Frontera. To apply for consortia funds, he brought together firms and researchers from different universities to study gene therapies for gastrointestinal cancer, which is highly prevalent in Chile, particularly among indigenous populations in the region where the university is located. CONICYT was the public counterpart entity of the consortium. It played a role in its initial setup, as the executive director of PBCT helped it find a CEO and also participated in the project's implementation phase.

In 2005, after the joint committee between CORFO, CONICYT, and the FIA had selected the full proposal from CTI, the CEO led the negotiations between the participants to establish CTI as a corporation and set up an internal property and incentive structure that would allow the consortium to achieve its goals. From a government perspective, the CEO had complete flexibility to do this, since CONICYT had established no requirements other than a minimum number of firms and universities to participate in the project. Firms were reluctant to contribute with money to a black box (as the CEO called it) because they had no control of what would happen inside the consortium, so the CEO designed a structure based on spinoffs.[43] CTI would receive the government's contribution to conduct basic research, but the firm's contributions would not go to CTI, but rather to one or more spinoffs designed to group together firms and research groups associated with specific research lines. CTI in turn would monitor the spinoffs, where researchers, professionals, and investors could also participate. Without this configuration, some of those interviewed felt that it would have been much more difficult to have firms on board with funding, allocate responsibilities and resources, and generate incentives for research teams.

In terms of the institutions participating in the consortium, CTI Salud was a "value chain" consortium, that is, one in which each participating

[43] These were not spinoffs in the usual meaning of the word. They did not spin out of CTI, but were considered from the beginning as a way to make CTI as a whole work better. However, they could potentially spin off from CTI if the products developed were commercially successful.

institution played different roles along the research and development chain, in contrast with a "sector-based consortium."[44] Its health- related products required different stages of clinical trials (in vitro, with animals, and with humans) to reach the commercial stage. All of these steps involved money and different technological capabilities. Chile does not have a well-functioning venture capital market, making it difficult to fund basic research or create market-ready products for which it is feasible to find investors. The Consortia Program and its startup funding were useful in the first phase, when developing a patentable idea, but not beyond that. Everything was made more difficult by the fact that the bio-medicine sector did not exist in Chile. Thus, several stages of the process required foreign partners, which some researchers saw as a threat.

Over the years, CTI has worked in three areas of research: the identification of tumor markers for diagnosis, prognosis, and treatment of gastrointestinal cancer; the development of cancer therapies based on genetic vaccines; and phytotherapies (the use of vegetable substances for health purposes). There have been seven spinoffs, two patent applications for prevention, one for diagnosis, four for gene therapy for gastric cancer (*Diario Financiero*, 2011)—one of which was recently granted—and one in Maqui research.[45] The five-year funding period ended recently, but the consortium still had some resources left for operation. The consortium needs to obtain new funding to complete many of its research projects and is currently looking to obtain funds with the patents already granted. There are some patents generated both in cancer research and in Maqui, apparently with the potential to generate resources.

[44] The final setup of the consortium, at the time the contract was signed and funding started (2006), included three universities (Austral, Concepción, and La Frontera); two international research alliances (the Weizmann and Leloir Institutes in Israel and Argentina, respectively); a local cancer treatment institution (Fundación López Pérez); and three firms (Indena, an Italian company that works on phytotherapies and cancer research; Farmindustria, a Chilean pharmaceutical firm; and Southern Technology, an ICT company).

[45] Two spinoffs can be highlighted. Maqui New Life has international purchase orders for around US$2 million (Mimica, 2011; and interview with Ivan Mimica), and Bioterapéutica expects to sell a gene-therapy-based colon cancer vaccine in three years (*Diario Financiero,* 2011).

Public-Private Interaction

CONICYT's interaction with CTI can be divided into two periods: first, the negotiation period to form the corporation, and then the five-year execution of the project. According to a public official, CTI was a particularly easy consortium in its first stage. It did not require help from CONICYT, and in fact it was one of the first to sign the contract and begin operations. Having an experienced businessman leading the initial negotiation process seems to have made a big difference.[46] In addition, during the execution of the project, there were several instances of interaction, including yearly evaluations, applications for other funding lines, and informal contacts. The only formal interaction was the yearly evaluation. To proceed with yearly partial money transfers from the government, a technical report was sent every year to international evaluators. This report was reviewed by the agency together with the evaluators, who then discussed their comments with the consortium before approving the next payment. Additionally, the consortium issued periodic financial and expenditure reports. According to the agents in charge of CTI and the written evaluations, the consortium had very good technical and financial evaluations.

In addition, it appears that the PBCT team at CONICYT acted as a facilitator for the bureaucratic processes required to make the project run smoothly from the government side, and particularly to allow for institutional and funding allocation changes that were very common in CTI and other consortia, given the uncertain and volatile nature of the innovation being carried out. Closely related to the above, another moment of interaction of the consortium with public agencies was when it applied for other funding lines for particular projects, in addition to the consortium grants. The CONICYT executive was important in this process, not in influencing the results of the applications, but in providing CTI with all the necessary documentation to help it prove additionality.

[46] According to Busco, Retamal, and Rodriguez (2008, 55), in the case of CTI "the CEO is actually empowered with the firm's vision and projects the development practices of new business, informing the board. The organizational structure is well defined, there are interesting international links and the consortium is actively thinking in achieving commercial products in the medium and long run. In other words, the CEO is successfully accomplishing his role of visualizing the future of the firm."

Other opportunities for interaction were the frequent visits from CTI's leaders to the CONICYT agent in charge of the consortium. These visits were purely CTI's initiative to report on progress and plans and possibly lay the groundwork to ask for authorization for changes in the operational plans.

With respect to the change of government and the continuity of the policy, there were complaints about the lack of an overarching government policy, as opposed to a short-term government policy. The continuous turnover of officials in charge of the program and in charge of relationships with the consortia, which was particularly severe when the new administration took office, weakened the government's capacity and the depth of interaction with the consortia.

Changes within the Consortium and Government Reaction

At some point during the initial stage of the consortium, a new research line was added to its objectives: phytotherapics research, through CTI's Maqui New Life project. This line started gaining ground inside CTI, at the expense of the original cancer-related research. This was raised as an issue in the yearly international evaluations, but CONICYT gave CTI flexibility and accepted these changes.

As the consortia funding was only for five years, apparently the strategy followed by CTI was to focus resources on those projects that could provide returns first. But, as expected, this was not in the interest of cancer researchers and thus generated increasing conflict between the researchers and management.[47] CTI partly overcame the lack of funding with other public instruments and international investors. However, the five-year period was not long enough, and unless additional funding can be secured for the next period, some of the research will be stopped in the middle of the process.[48]

[47] Actually, CTI's CEO left the consortium in mid-2011 to head one of its spinoffs (Maqui New Life), together with a former PBCT official who had moved to CTI some time before to work on technological transfer. There is currently a legal battle between them for the patents related to Maqui generated during the period.

[48] An example of this is that evaluators in the final stages of the project were worried about the little amount of money remaining given the horizon of the research lines. Shifting toward more short-run potential results was thus consistent with this concern. See CONICYT (2010) for details.

Summing Up

Besides public funding for basic research and bringing firms and researchers together, the flexibility of the program managers was the main feature of the public-private relationship that seems to actually be relevant to the operation and results of CTI. Flexibility might have been especially important in the beginning, when the objectives were broadened from cancer to health, including nutraceuticals, or phytotherapies. Without this change, the consortium might have had difficulties finding the private partners it needed after some of the initial ones exited, and Maqui New Life, the most successful spinoff to date, might not exist. However, it is important to stress that the design of the incentive structure, as well as most of the negotiations to leverage resources and scale up research to marketable products, occurred largely independently of the public sector, and were led by an experienced and well-connected manager. Our assessment is that public-private interaction was important but not key for the outcome, while having a competent CEO to set up and lead the consortium was crucial.

Fruit Consortium[49]

Sectoral Context

Chile exports more than 75 different fruit species to more than 100 countries, with total exports amounting to over US$5 billion.[50] Fruits are the main subsector within the food exporting industry. The sector is organized around two main business associations. Fruit producers, including many small firms and also large producers, are organized in the Federation of Chilean Fruit Producers (*Federación de Productores de Fruta en Chile* – FEDEFRUTA).[51] Huge packing firms that purchase fruit from farmers do most of the exporting and are grouped under the Chilean Exporters Association (*Asociación de Exportadores* – ASOEX), the most powerful association in the sector. ASOEX has a research-related sister association, the Foundation for Fruit Development (*Fundación para el Desarrollo de la Fruta* – FDF). There is a high degree of antagonism between these

[49] Analysis based on interviews with Jaime Kong, Rodrigo Cruzat, and Isabel Reveco.

[50] According to Central Bank figures.

[51] There is also an association of *Viveristas*, or firms that produce fruit plants, that is close to FEDEFRUTA.

two groups, since they have to share the income from fruit exports. This antagonism is relevant to the development of this case. There is also significant research capacity in this area in several research universities, as well as through the Agricultural Research Institute (*Instituto Nacional de Investigación Agricola* – INIA).

Intellectual Property Issues

Until the mid-1980s, Chile produced and exported varieties that were in the public domain. However, following the Biological Convention on Diversity in 1982, people realized that there was a business opportunity in the exploitation and generation of new genetic resources, as new varieties could be legally protected with intellectual property rights. Today, the key agricultural inputs are plant varieties. The privatizing dynamic of genetics has generated a new way of competing in the export market in Chile. Not having their own varieties implies that exporters and producers must pay royalties to the foreign owners of fruit varieties.[52] Another issue has to do with the cycle of generating a new variety. The most relevant issue is timing, since it takes at least 10 years to have a commercially profitable new variety for a given fruit.

History of the Consortium[53]

A few years ago, the fruit industry became aware of the need to improve quality, novelty, and country image to compete with countries that got better prices for fruit than Chile. Most fruit development was based on genetics but came from foreign programs, which were not developed and designed for the agricultural and weather conditions of Chile. The country did not have genetic programs tailored to geographic conditions, other than those prepared by public institutions.

In response to these issues, the fruit industry represented by ASOEX and FDF decided to invest in a research and development program in

[52] For instance, New Zealand accused Chile of taking the kiwi and blueberry market from it, which led to the development of new varieties that are prohibited from being grown in Chile.

[53] A significant part of the information in this section is taken from the webpage of the Fruit Consortium at http://www.consorciodelafruta.cl/historia.php.

genetic improvement, biotechnology, and genomics that would allow it to expand local scientific capacity and develop new products using these technologies. The first publicly supported initiative was the *Iniciativa Genoma Chile,* also known as the Genoma I project, under a FONDEF grant. Several universities participated in it.[54]

Formation of the Consortium and Emerging Problems

Midway through the Genoma I research project, the fruit sector participated in the first call for proposals under the Consortia Program in 2004. There were two separate applications, one sent to FIA and the other to CONICYT. The most important research institutions applying in each consortium were doing common research together in Genoma I. The government accepted and awarded funds to both consortia, separately. This is very unusual, since funds were limited and there was no ex ante reason to fund two consortia in the same sector and doing the same type of research. This immediately raises two questions. Why did the private sector divide its efforts and put funds and research capacity into two consortia? And why did the public sector fund two consortia in the same area? Both of these questions will be addressed below in the context of the existence, or lack, of PPC.

Intellectual Property Disputes and Business Issues

In the view of the private sector, the main reason why two applications to form consortia were submitted has its origin in intellectual property rights disputes and differences under the Genoma I project. The project had no clarity about who owned what percentage of the intellectual property, particularly since there were no successful commercial outputs. There were thus diverging views between ASOEX and FDF, which held that research institutions had no property rights to what had been done up to that point, and the research institutes, which claimed part of these rights. Those interviewed claimed that there were significant problems

[54] The Universidad de Chile, Universidad Técnico Federico Santa María (UTFSM), and the INIA participated. In 2007, a second stage of the Iniciativa Genoma began. The same institutions were involved in this stage, plus the Universidad Andrés Bello and Catholic University (PUC).

between the business associations and their specific roles in the dissemination and commercialization of intellectual property outputs.[55]

Under these circumstances there were no grounds for reaching an agreement, as the positions were diametrically opposed. Cooperation between the associations and the research institutes broke down. A first group comprised mostly of the research institutes from Genoma allied itself with FEDEFRUTA. The other group consisted of ASOEX and PUC. The final break between the two groups led to two different applications being submitted to the program. The former, under the name of Biofrutales, applied to CONICYT, and the latter, under the name of Consorcio de la Fruta, applied to FIA.

Political Economy Issues

From the public sector side, an important aspect that could have influenced the allocation of resources to the two projects might have been the sectoral interests of the agencies. The agency with the smallest amount of funds might have had only a few noncompetitive applicants, but because the agency still had to allocate its funds, some of these noncompetitive applicants could have obtained funding. If the three agencies had made decisions together it might have diminished this risk, but the lack of centralized provision of government funds for these purposes might have given power to the agencies to administer their own funds and eventually influenced the final outcome of the call for proposals under the consortia program. There are signs that this might have happened in FIA.

After two separate consortia were applied for, both national and international evaluators suggested that the two consortia be merged into one. Hence, the profiles were approved conditioned on the fusion into a single consortium. The Minister of Agriculture, who was the political head of FIA and had close relations with both ASOEX and the fruit producers, got personally involved and requested the fusion into a single consortium as a condition to allocate any public funds, and assumed a direct and

[55] According to one of our interviewees, while ASOEX and Catholic University and their partners were more prone to sell their intellectual property to anyone, Fedefruta, INIA, and the Universidad de Chile apparently were more prone to license this property to national producers of nurseries and fruits.

leading role in the negotiation between the parties. This was an interesting initial public-private (imposed) interaction on the setup of the consortium—an interaction that occurred in other consortia, but was stronger here than elsewhere given the direct involvement of the higher authority.

Why were two consortia funded? Partly because of political economy issues, an agreement was never reached and, worse, each consortium received public financing anyway. During the period available to reach a unified structure, a new government (under the same coalition) took office, including a new minister of agriculture and a new director of FIA, neither of whom had any personal connection to the agreement. Moreover, according to one interviewee, the head of FIA had an incentive to show short-term results.[56] Consequently, FIA granted the funds to the Fruit Consortium without the merger requirement, while CONICYT and the other applicants were still trying to make FIA negotiate. This left the government without any real bargaining power. Thus, out of considerations of fairness, CONICYT had to assume FIA's mistakes and hence also granted funds to Biofrutales.

Consortium Operations and PPC

Several of those interviewed clearly identify at least two stages in the relationship between the public agencies and the consortia. In the formation stage, the agencies collaborated closely with the consortia, helping them hire managers and set up a working structure in some cases. Moreover, both agencies showed flexibility on successive reformulations of the projects. This could have proved problematic. On the one hand, allowing for substantial changes poses a moral hazard incentive by making strong commitments while applying for the funds (and thus beating out other applicants) and then withdrawing such commitments due to their being unfeasible or for other reasons. On the other hand, once the funds were allocated, it might have been a good practice to allow such reformulation and adjustments, as the consortia were based on applied science and research results were not preordained. Thus, no clear and obvious prescription emerges in this regard.

The agencies also helped the consortia with the bureaucratic monitoring tasks imposed on the manager of the consortia by the

[56] The interviewee reported significant pressure from the industry as well.

public agency. In general, they showed an important degree of flexibility mostly oriented toward fulfillment of the administrative requirements, rather than toward punishing the failure to satisfy some formal administrative aspect. However, CONICYT and FIA have shown different standards for carrying out the administrative requirements. These different standards mostly related to FIA, which in the view of one interviewee lowered the completion standards during a change in management, suggesting that FIA could have been subject to pressures by the private sector involved in the consortium. The veracity of this claim is difficult to evaluate. However, we considered this particular interviewee to be a reliable source.

The teams in the public agencies seem to have had two major deficits when monitoring the consortia. The first was a lack of knowledge about intellectual property rights and their negotiation and implementation, as previously explained. The second was how to deal with high turnover of personnel within the public agencies. The transfer of formal and informal information seems to have been discretional and without formal mechanisms of keeping and transferring records, procedures, and expertise related to the supervision of the consortia. The lack of transfer of information and managerial practices is a frequent complaint on the part of new public servants.

Appraisal of the Consortia Program from a Private-Private and Public-Private Collaboration Perspective

The Technology Consortia Program centers its action much more on private-private collaboration than on public-private collaboration. The public-private cooperation conducted under this program can be instrumental in generating productive cooperation between universities and firms. Consortia proposals triggered private-private collaboration that would not have existed otherwise, according to all those interviewed.[57]

[57] All interviewees stress that most of the applied research, patents, and potential business opportunities would not have happened without a program like this and its public funding. This obviously does not prove causality, but the fact that these firm-university alliances were not present previously for most cases suggests that some additionality existed. Moreover, the fact that the current government launched a 2.0 version suggests that the program was effective.

Thus, this section starts with an assessment of the program in terms of its contribution to private-private collaboration.

In light of the cases analyzed through interviews and documents, the most important necessary conditions for the successful implementation and outcome of the program mainly involve an intellectual property and incentive structure that fosters coordination and motivation toward results. This in turn requires a hired manager, from the outset, with the appropriate skills. The government's role is as a facilitator and provider of expertise. However, it seems that the public sector was never able to build enough skilled human capital to help with the private-private intellectual property negotiations, incentives, and structure. Most of the consortia interviewees agreed that this was a clear weakness on the part of the public sector that was never fully resolved. Starting in the 2009 bid, a consortium manager was allowed to be hired at the beginning of the process, but unfortunately only after the program as a whole had already significantly changed. Thus, there should have been more public-private collaboration during the initial setup of consortia.

The role of facilitating the work of the consortium extends to implementation of the program, where flexibility and formal and informal interaction are very important. Helping the consortia is one side of the task, but monitoring and oversight is the other. It can be inferred from the cases analyzed that it is difficult to keep both at a high standard. The more government officials try to help and get involved in the results of the consortium, the higher the chances of better work, lower transaction costs, and bureaucracy. But, there is a lower probability of exerting tougher control when needed, as suggested by some interviewees.

The risk of capture of public officials is inherent in instances of public-private interaction and collaboration. They may feel responsible (or have related pecuniary or nonpecuniary rewards for success) for the project and help beyond what their job responsibilities require. Public officials also have incentives to move to the private sector (higher pay and job flexibility vis-à-vis the public sector). Finally, there is the risk of direct capture through corruption. This could induce inappropriate behavior and attempts to influence the allocation of public funds toward the consortia, including toward an eventual second stage.

We did not identify explicit cases of direct capture in the two consortia analyzed. However, it is also true that there was not a single consortium (at least in the first two calls) that was cancelled or did not receive a payment from the government. This could reflect a very good selection process. But it could also reflect insufficient monitoring by public officials.

Public Sector Learning from Public-Private Collaboration

An important issue related to the design of the program and how it conditions the relationship between private agents and the public sector is having an appropriate program duration, for which international experience can bring important insights. In hindsight, financing only five years of a large-scale, long-term, multi-party coordination initiative was insufficient for achieving outcomes in many cases, and altered the incentives within the consortium toward short-run results. This in turn stresses the relationship between academia and management, making it even more difficult to sustain an already difficult-to-manage relationship. The conflict that unraveled in CTI could have been partially due to this.

A final political economy issue had to do with having three very different institutions in the program. Such an arrangement might work as long as there is full coordination and transparency between them. But this is very difficult to sustain given different visions and focus and ways of working, as well as the negative effect of the political cycle in maintaining the key policymakers in the right positions. Thus, it can be positive but it is also particularly challenging. Agencies can and should transfer good practices and share identified problems between them to improve the program, and they should have clear common procedures.

In addition, having institutions with different human and financial resources dedicated to the program generated important inefficiencies in three aspects. First, the fact that each institution got specific resources to manage a certain number of consortia might have incentivized approval of some consortia that were in the sectoral interests of each institution. Second, having three possible ways of pushing for approval of a consortium might have increased the effectiveness of lobbying. Finally, it was difficult to maintain the quality and the vision originally proposed by PBCT when other institutions managed the program with very different work methods and orientations. Thus, overall, the net effect of having three institutions managing the program was at best ambiguous.

Conclusions

The first and most significant conclusion that emerges from the five cases analyzed is the importance of having institutions that allow the government to learn from the implementation of new policies in order to improve them over time. The capacity to learn from the right decisions as well as from mistakes depends critically on specific public servants in charge of the policies and their staying on to build, or more exactly *become*, a corporate memory of the policy. Consequently, policies are dependent on the political cycle. Such institutionality for learning simply does not exist in Chile and has rarely even been considered, at least for innovation policies. This is particularly worrisome.

This situation was evident in both the Consortia Policy and the Clusters Policy. In the Consortia Policy, the turnover of public servants and the change in government, even under the same coalition, progressively weakened the policy and its original goal, as there was no knowledge repository in PBCT or CONICYT. In the case of the Cluster Policy, apparently its closure was not accompanied by any evaluations and thus an opportunity to learn what worked and what did not was lost. Even though CORFO centralized the policy, there is no information on any thought process about, for example, the best way to choose members of a public-private roundtable, the best work methodologies, or actual outcomes.

One way to generate institutionality is through evaluation mechanisms that can show the achievements and weaknesses of the policy and the mechanisms that are key for successful outcomes. This allows weaknesses to be corrected and makes it harder to eliminate the programs for political reasons. Ideally, this evaluation process should be independent of the government in power, and could be done internally or externally. In Chile, such an evaluation mechanism does not exist in productive development policies with relevant levels of PPC. The budget office is the only institution today that actually conducts regular evaluations of policies around the government, and even this process lacks an institutional perspective.

A second conclusion in the five cases analyzed is that the possibility of capture is higher the more intense and informal the PPC. Clusters represent a more intense PPC than the consortia. They are, however, a double-edged sword: while they have a greater chance of profound and diverse outcomes because of the trust and joint work that has developed between the public and private sector, this also increases the chances of capture. These chances are constrained when this PPC space is formal and multiparty, and where methodologies for decision-making can be guided by external parties.[58] The consortia analyzed represent cases of less intense formal PPC, but where informal PPC (for example, in the negotiations to grant one or two consortia) gave hints of important chances of capture. Thus, having formal venues for PPC, such as roundtables, seems very important.

A third conclusion is related to private-private interaction and the role of PPC, and the trade-off between flexibility and capture. When one analyzes the Consortia Policy in a historical context of other demand-driven instruments of different complexity, it is possible to conclude that the more complex the private-private interaction is within a productive development policy, the more important it is to have more direct and intense PPC, in the sense that it should provide flexibility and a disposition to help the private-private interaction happen. This is particularly true when the private counterparts come from different domains, such as business and academia. However, flexibility increases the chances of corruption or capture, so it should be accompanied by stronger monitoring mechanisms to oversee expenditures. The alternative is to allow flexibility but in formal open settings, such as cluster roundtables, where diversity and transparency in discussions limit opportunities for rent-seeking. The consortia experience also shows that when there is little knowledge on the public sector side about how to elicit private-private collaboration, an exploratory forum can be developed in order to learn how to solve coordination issues and reduce transaction costs. However, the experience of establishing the Fruit Consortia shows that when flexibility implies informal interaction, the chances of exerting political influence are significantly greater.

[58] The lack of solid institutional mechanisms for those methodologies to work also made them particularly sensitive to the people who were actually on the roundtable. In those cases, choosing the right public and private sector counterparts is important.

A fourth conclusion is that work on productive development policies in new sectors actually seemed smoother than in competitive or existing sectors, where the issue became not how developed the policies were, but how important vested interests were. It is interesting that the most productive cluster roundtable was precisely the one that represents the most "in the large" marginal case, apparently the riskiest bet of all. In consortia something similar could be seen, since in CTI Salud (a clear case of industrial policy "in the large") the issues revolved around the consortium and its work methods. In the case of the Fruit Consortia, a lot of time and resources were lost due to political pressures from powerful business and academic interests.

Last but not least, a caveat. The lessons derived from this analysis have to take into account the Chilean "policy culture" context in order to extrapolate lessons that could be applied elsewhere. Chilean productive development policies (and policies in general) have been designed for the last 30 years with an eye toward avoiding capture and consequently with a clear arms-length logic of the state in general and government support in particular (and thus with little tradition of PPC in its policies). This implies that productive development policies have an institutional firewall against capture that, on the one hand, might limit the productivity of PPC, since this obsession might limit many initiatives, but on the other, may make it more likely that PPC will achieve outcomes that generate social benefits. In other settings, it is possible that similar setups might be more easily prone to capture or corruption and, if not captured, might work more smoothly than in the Chilean context.

Appendix 5.1. Websites Consulted

www.corfo.cl
www.conicyt.cl
www.ctisalud.cl
www.fia.gob.cl
www.biofrutales.cl
www.consorciodelafruta.cl
www.cnic.cl

6

Cattle Traceability, Biotechnology, and Other Stories of Collaboration in Uruguay

Carlos Bianchi, Macarena González, Lucía Pittaluga, **and** ***Andrés Rius***

The productive development policies implemented in Uruguay in recent years have provided fertile ground for research. Many of these policies have achieved results that can be analyzed within the scope of their respective histories and institutional settings.

This chapter takes as its starting point a study by Hausmann, Rodrik, and Rodriguez-Clare (2005) that provides an overview of the Uruguayan productive development policy system around 2004. The authors were seeking to identify new growth opportunities in Uruguay. At the time, the Uruguayan economy was recovering from the financial crisis of 2002 that disrupted the banking system and caused a major economic slump. Still, the authors found that the recovery of macroeconomic balance, the achievement of more competitive real exchange rates, and a political system and institutions that had earned credibility and trust under fire were the underpinnings for numerous real investment opportunities that had ample growth potential. Despite this positive finding, the authors detected important shortcomings in several policies that were hindering growth. The country's industrial promotion legislation remained neutral in the signals given to investors and created incentives for activities with few demonstration effects or other positive externalities. In the authors' view, this constituted a major drawback for what two of the authors had previously described as "self-discovery" and growth (Hausmann and

Rodrik, 2002). The 2005 study also emphasized that the main problem with Uruguay's approach to vertical policies was that they were the product of historical circumstances (for example, with agriculture), and that the National Innovation System (NIS) was weak.

Since 2005, Uruguay's productive development policy system has been significantly revamped. The new government implemented institutional innovations that modified the scale and scope of support for the transformation of the country's economic structures.[1] The administration that took office in March 2010 continued this approach and went more deeply into the productive development policy priorities defined in the preceding five years.

Since 2005, the government has implemented substantial modifications to the institutional setting that have supported productive development, including by creating new actors. For example, it created two strategic organizations: the Unit for the Support of the Private Sector (*Unidad de Apoyo al Sector Privado* – UNASEP)[2] at the Ministry of the Economy and Finance (MEF) and the National Agency for Research and Innovation (*Agencia Nacional de Investigación e Innovación* – ANII). It modernized other organizations, such as the Uruguay XXI Institute, which gradually became a full-fledged trade and investment promotion agency.

Barrios, Gandelman, and Michelin (2010) reviewed and assessed six productive development policies implemented in Uruguay between 2005 and 2009. They recognized that there had been an important change in the government's commitment to more active policies than in the past. Nevertheless, the lack of funding in some cases put this achievement at risk, and no new institutionalized learning mechanism was installed in its place. They also found that coordination problems existed between complementary policies, and that private sector participation in the design, selection, and implementation of productive policies was uneven. Finally, they discovered that some public actions were too interventionist and possibly exposed to risk of failure.

[1] The government in office since 2005 came from the first coalition of left-of-center parties that controls the executive in Uruguay today.

[2] UNASEP was designed to be a one-stop window for those applying for tax benefits under the investment promotion regime.

The objective of this chapter is to delve further into the institutional arrangement of productive development policies implemented in Uruguay in recent years. Productive development policies are defined as policies that aim to increase the productivity of firms in specific sectors or clusters, and/or that improve the likelihood for the emergence and growth of new competitive firms in industries previously not present in the country's structure.[3] The focus is on public-private collaboration (PPC) intentionally directed toward promoting cooperation between the government and the private sector to design, implement, and/or assess productive development policies.[4] The authors of this chapter inquired about institutional arrangements that maximize the benefits of productive development policy results and minimize rent-seeking behavior or the capture of government. In other words, we wanted to know how the PPCs selected for study balanced these two apparently conflicting goals. Some PPCs managed these matters better than others. A history of private-public collaboration at the sectoral level was a key factor in understanding the different results. The imposition of foreign regulations to export-intensive sectors is another factor that reduces the imbalance. Additionally, the degree of sophistication of the PPC and the lower risk of one-sidedness depend on the capacity of public and private actors. Finally, the authors found that the PPC design that most likely has better results has to be consistent with the kind of good—public, club, or private—that the productive development policy is providing.

The next section describes the three productive development policies that harbor the five selected PPC case studies. The institutional settings of the agriculture policy, the sectoral councils implemented by the industrial policy, and the cluster promotion policy are analyzed. The chapter then examines the beef traceability system, two sectoral councils, shipbuilding and biotechnology, and two clusters, blueberry and tourism in Colonia. The scope for PPC and the outcomes of these policy experiments are highlighted in the analytical section after each case study. The final section of the chapter lays out the lessons learned from these five

[3] Call for Research Proposals (2011), Public-Private Collaboration for Productive Development Policies (RG – T1861), Inter-American Development Bank (IDB).
[4] Ibid.

case studies in terms of the institutional settings of PPC for productive development policies.

Three Productive Development Policies

The relationship between public and private actors has always been important in Uruguayan policy. While PPC in productive development policies—especially in agriculture—existed before 2005, the focus of cooperation was significantly different in the last two administrations.

The first policy examined is that of the Ministry of Agriculture and Fishing (MGAP), which carries agricultural policy forward. The MGAP strategy aims to enhance agriculture and agroindustry competitiveness to achieve sustainable development with social inclusion. Public policies designed to pursue these strategic objectives go beyond MGAP and require coordination within government structures and collaboration with the private sector. This first section of the chapter describes the institutional settings of the agriculture policy in order to explain the policy context in which beef traceability was adopted.

The Ministry of Industry, Energy, and Mining (MIEM) carries out industrial policy, which includes the sectoral councils. These are opportunities for public-private collaboration between government, business leaders, and workers directed toward preparing and implementing sector-specific industrial plans. The sectoral councils are relatively new, but different modalities of PPC were already in place in most of the sectors they promoted. The institutional functioning of the sectoral council is examined here in order to understand the policy context in which the two cases—biotech and shipbuilding—are integrated.

Uruguay initiated a cluster promotion policy in 2005 with two simultaneous programs: the Clusters and Productive Chain Support Program (*Programa de Apoyo a la Competitividad de Clusters y Cadenas Productivas* – PACC), and the Small and Medium Enterprise Competitiveness and Export Promotion Support Program (*Programa de Apoyo a la Competitividad y Promoción de Exportaciones de la Pequeña y Mediana Empresa* – PACPYMES). The Office of Planning and Budget (OPP) implemented the first with the support of the Inter-American Development Bank (IDB), while the second was implemented by the MIEM, with support from the European Union (EU). These programs aimed to create collaboration between important public and private actors in clusters and to cofinance competitiveness-enhancing activities. This chapter will describe the PACC institutions that harbored the two cluster cases: blueberries and tourism in Colonia.

Agriculture Policy: Public-Private Institutional Setting

Since 2005, the institutional setting for agriculture policy has been transformed into a more coordinated and efficient system. The system is composed of the central structure of the MGAP, its various programs and projects, and the expanded agricultural institutions, including an autonomous entity and six nonstate public entities specialized in different sectors (beef, dairy, wine, and seeds) or functions (defined as research and extension). The first institute was built in 1947 and the last in 2007. These seven institutes have private sector participation through business associations on their boards of directors. The expanded agricultural institutions are the expression of PPC in agriculture policy (Arboleya, 2007).

The institutes are legal instruments that organize, manage, and finance sectoral public policies. The founding laws of these policies always include clauses providing a specific funding source. Some institutes are mandatory advisors of the executive branch, explicitly or implicitly, but no institute is responsible for designing policy.

There is great diversity in the composition of the boards of directors of these institutes. For some, the state has a majority of votes, in others it is the private sector, and in others the votes are balanced, but the president of the board, appointed by the executive branch, has an extra vote if a decision is tied. Based on the experience of some of the well-functioning institutes, this last mechanism provides a safeguard against capture by the private sector. Other arrangements include veto powers, or double voting, given to the state-appointed head of the board. Another mechanism to avoid dominance of narrow interests consists of including in the governing bodies more than one type of actor from the value chain, such as cattle producers versus beef processors, winemakers versus vine growers, or seed producers versus seed traders and/or seed users. With respect to the beef traceability system, the board of directors of the beef institute (*Instituto Nacional de la Carne* – INAC) was a fertile space where divergent interests from the two central actors of the beef value chain were negotiated.

Since 2005, and especially after 2007, the government has reformed the expanded agricultural institutions to align them more closely with its policy strategy. The creation of a new institute and the reorganization of some of the older ones, reflecting lessons learned from their evolution, are proof that the last two administrations view these institutions, with the adjustments described above, as a powerful tool for productive development policies based on PPC.

In terms of PPC, however, the government is also proposing to go beyond the co-governance model of the expanded agriculture institutions and build inter-institutional innovation networks. The MGAP's innovation policy guidelines for the current administration claim that the agriculture innovation policies will be executed by public-private networks (Paolino, 2010). Until now, such new institutional architecture to organize PPC for agriculture policy was far from being fully deployed. Some of those interviewed for this chapter mentioned the lack of critical capabilities for getting involved in such sophisticated collaboration. Nevertheless, the example of an embryonic public-private inter-institutional network based on the beef traceability platform may be a signal that a more sophisticated PPC might loom in the future.

In sum, the institutional framework upon which beef traceability policy was designed and implemented rests on a long-standing culture of PPC for productive development policies in the agriculture sector. This will be essential to assure the success of beef traceability.

Industrial Policy: Sectoral Councils

Although sectoral councils are new in Uruguay, they have existed for several years in other countries (Devlin, 2012). In Uruguay, sectoral councils are public-private deliberative bodies where representatives from government, business, academia, and trade unions participate with the goal of designing and implementing industry-level growth strategies. These strategies are laid out in sectoral plans, which include a long-term vision, medium- and short-term objectives and goals, and an action plan, with a timeframe up to 2020 containing a detailed list of tools and indicators to measure the results of the plan's implementation.

The first round of industrial sectoral councils launched in 2011 included the automotive, shipbuilding, wood and forestry, biotech, pharmaceutical, and textiles-apparel sectors.[5] Two of the case studies in this chapter examine activities carried out to meet two crucial objectives of the Biotech Plan, which are the biotech promotion law and the registration process for biotech products, and the efforts to reinvigorate the naval equipment industry by creating demand. One critical aspect that affects the possibility of achieving the plans' goals concerns financial support. One of the strengths of the newly developed strategic plans, in comparison with past experience, is that every action intended to achieve a specific goal is associated with an estimation of its financial requirements, and has identified a source for its financial support.

In terms of their modus operandi, the MIEM officials involved divided up into technical teams, each devoted to coordinating different sectoral councils. They report to the MIEM under various types of term contracts, but they do not enjoy the benefits of assured tenure that regular civil servants enjoy. One of the future challenges for the government is to find a way to retain the existing professional staff by encouraging professional growth and making a public sector career attractive. Today, there is competent technical staff to assure progress for the councils' work, so the risk pointed out by Schneider (2010) of "cheap talk"—that is, of meetings that lack value for the participants or that have little impact on policy and performance due to lack of competent staff to follow up the council—is relatively low. The sustainability of the working teams, however, is not assured for the future.

The labor movement in Uruguay is organized under a single national federation, the Workers' Inter-Syndicate Plenary – National Workers Convention (*Plenario Intersindical de Trabajadores – Convención Nacional de Trabajadores* – PIT-CNT). Despite some normal infighting and uneven unionization rates by industry, the federation is perceived as the legitimate

[5] The first round's plans, except for textiles-apparel, are available at http://gp.gub.uy/es/node/639 and http://gp.gub.uy/es/node/640 (last accessed on 04/01/2013). The second round of sectoral councils, launched in 2012, included construction, chemicals, the metallurgical industry, and design. The third round, launched in 2013, included audiovisual, renewable energy, ICT, and nanotechnology.

representative of firm- and industry-level organizations. Depending on the scope of sectoral council activities, representatives of industry-wide unions have participated since the beginning. Such participation is an added responsibility for professional union leaders. The law protects labor activism, and senior leaders are allowed indeterminate leave as long as they are re-elected to representation roles.

The private sector is mainly involved in sectoral councils through industry-level business chambers or associations, but individual firms can participate on their own behalf if they want to. Like labor unions, member contributions finance these business organizations, and they exhibit varying degrees of organizational effectiveness or sophistication in their agendas. The differences among sectoral councils in the organization of the private sector account for some of the councils' achievements and failures. There are sectoral councils where private sector involvement occurs through traditional industry-level business associations.[6] These cases, such as the automotive or textiles sectors, typically correspond to sectors with a long tradition of collective action. There are other cases in which participation occurs through more recently created and less experienced—but sometimes more modern—leadership, like biotechnology or shipbuilding.

In some sectors, private actors participate through associations that are supposedly represented by senior leaders. But according to some private sector actors, the associations are actually entrenched organizations that do not effectively convey the sector's needs and future challenges. There are some organizations with more innovative features, such as Biotechnology Enterprises of Uruguay (*Asociación Uruguaya de Empresas de Biotecnología* – AUDEBIO), in which important sector participants are not represented but which nonetheless have a clear-cut, modern agenda. While that agenda may not represent the entire private sector, it raises issues that are significant to the whole sector, with some degree of legitimacy. Some councils, like shipbuilding, enjoyed the benefits of their previous trajectories as part of a cluster development policy, that is, PACPYMES and then PACC. In that context they developed ad hoc governance mechanisms that at the very least provided legitimacy to

[6] Namely, associations based on lobbying capability to promote private interests.

representatives of the organized segments. These issues will be revisited in the case studies.

The basic principle of the sectoral council is consensus-building (Devlin and Moguillansky, 2009). The public sector has taken the lead in defining and implementing this methodology. In defining the contents of the agenda, however, private sector participation has always been crucial. The provision of relevant information to set credible goals has been the decisive issue in the private sector's participation. Development of the first round of strategic plans was a long negotiation process until consensus was reached. This methodology might be viewed as too slow and it could sometimes lead to imperfect results, but it enhances the plans' legitimacy.

Moreover, sectoral councils lack explicit safeguards against possible coordination failures and preventing capture. Considering that government technical staff members work very closely with the private sector, where they could eventually get a better job, the lack of employment benefits may affect their commitment to look after the interests of the public sector when negotiating with private sector representatives.

Finally, sectoral councils appear vulnerable to the risk of premature abandonment by a new administration that does not understand their purpose, does not value their achievements or strategies, or attaches a lower priority to them. The sectoral council methodology has some original features, but planning industrial development strategies is not new in Uruguay. There were experiences of strategic planning at the sectoral level in the late 1990s, that is, the so-called Competitiveness Agendas, which incoming administrations discontinued. The two cases analyzed later in this chapter will focus on the issues raised above from sectoral councils.

Cluster Promotion Policy in the Industrial, Agricultural, and Services Sectors

The Cluster Promotion Program, created by the IDB and the Uruguayan government in 2006, laid the groundwork for the establishment of PACC. It was based on the identification of a number of productive agglomerations that might be facing problems in improving their competitiveness due to coordination failures and the under-provision of public goods, or club goods, in the areas of market access, technological development, and governance of multi-actor cooperation.

PACC was designed and operated to increase firm competitiveness. This permeated many of its features and the important steps in its evolution. First, Plans to Strengthen Competitiveness were developed for the clusters through a participatory process facilitated by government-hired specialists. This included the identification, mobilization, and selection of agglomerations to be included in the program. The selection of agglomerations was accomplished through an open call for private-public joint initiatives with the endorsement of at least one local government. Second, public-private cofinancing of competitiveness-strengthening actions clearly aligned with Plans to Strengthen Competitiveness was established. Third, the public institutional architecture was reorganized to facilitate integration with private actors. This involved removing bottlenecks and creating or re-creating inter-stakeholder links, with a view to strengthening collective competitiveness.

While similar programs were developed simultaneously in other parts of the Southern Cone, the Uruguay program had three distinctive features that reveal some of its underlying strategies (Rius, 2011). First, the coordination of PACC was placed outside the sectoral ministries in a high-level agency with ministerial status that had a history of managing IDB-supported projects efficiently and effectively. The underlying idea was to facilitate horizontal coordination within the public sector departments and agencies interacting with the private sector in each cluster.

Second, an open call was used to select clusters that would be supported. The program's staff promoted the program more actively among the more promising groupings and encouraged some to apply, but the call was open to any that met the requirements. This conveyed the message that no group had a privileged relationship with the program, and that any group could drop out if it ceased to meet the criteria, as other potential beneficiaries were waiting to be included.

The third distinctive feature was the style of facilitation for development of the participatory competitiveness plans and early organization of the governance structures. In addition to a proactive team of government officials, the external facilitators were individual sector specialists or experts in facilitating participatory strategy-setting, rather than large international consulting companies. This solution—which deviated from the norm in other cluster programs in the region (Pittaluga, 2012)—could have made it easier for the private sector to capture those individuals and push a rent-seeking agenda. However, this resulted in greater ownership of the Plans to Strengthen Competitiveness by the private sector, without the feared capture of the agenda and with a greater private commitment to the plans themselves.

Like similar programs in the region, the strong presence of the private sector in the agenda-setting and management of cluster activities was achieved in the best-performing cases. This included participation of representative firms and groups of firms in the governance of the cluster, the definition of priorities, and the approval of specific activities. It was expected that a cluster governance structure would emerge, with a specific form of coordination and/or integration with mixed and public sector entities or spaces. In the process, the public sector, through the program's coordination unit, was the main facilitator, reflecting a peculiar and innovative approach to the role of public actors in the implementation of productive development policies.

This model on paper has for the most part been the one observed in practice since 2006. Still, this has not precluded small or larger shifts in tactics or higher-level principles and strategies. In particular, the intervention model was gradually improved between 2006 and 2009, a period that saw the rise of 10 (and the fall of three) clusters that had developed governance structures and project achievements. The change of administration on March 1, 2010 brought with it the replacement of the senior tier of program executives, an impasse in the public approval of new activities, and a slow return to more or less normal operation since 2011, reportedly with a narrower focus on competitiveness-enhancing activities not supported by other existing policies and programs. It was not clear if the cluster policies would be maintained after the end date of the IDB-supported project in 2014, but there is no doubt that the cluster methodology introduced by PACC, and also by PACPYMES, is already profoundly integrated into Uruguayan policymaking.

Five Cases of Policy Implementation through Public-Private Collaboration

The three productive development policies described above were implemented through different types of PPC. This section presents five case studies that explain how these PPCs functioned and provide valuable lessons in terms of which institutional settings worked better than others.

Case 1: Beef Traceability

Beef, along with wool, has been one of Uruguay's most traditional exports, although today dairy and agricultural products such as rice, soy, and wheat, as well as forestry-cellulose are also in the top ranks of exports. Still, in 2011 Uruguay was the world's eighth leading exporter of beef (OECD – FAO, 2012) and it was one of the few beef-producing countries that exported most of its production—75 percent in volume.

Implementation of beef traceability was an enormous challenge. First, until that time there had been no country in the world that had implemented a universal tracking system for its entire bovine stock. Second, beef traceability involved coordination of a large number of actors scattered all over the national territory, many of them located in remote rural areas. Finally, it required a cultural change: new technologies had to be introduced in a production system that was steeped in deeply rooted traditions regarding the way things are done. Some actors refer to beef traceability as a revolution in the field of production only comparable to the introduction in rural areas of barbed wire fencing completed at the end of 19th century. The goal of this section is to describe and analyze what PPC was important to successfully implement the beef traceability system.

Emergence and Development of the Beef Traceability System

Beef traceability policy is one of the few examples in Uruguay of a state-level policy that three consecutive administrations have prioritized. It is inextricably linked to the control of foot and mouth disease. Only after the last outbreak in 2001—which reduced the sale price of beef by nearly 40 percent—did government and private actors began to consider the need to implement a suitable information system to regain the confidence of the markets.

The beef traceability system has two subsystems along the value chain: (1) cattle traceability, and (2) black boxes. The former refers to the tracking of data from the farm to the slaughterhouse, while the latter consists of tracing information on beef cuts at the industrial stage to the retail stage. The complete link between the two subsystems allows for the tracing of beef cuts from the retail level to the farm of origin, or from farm to plate.[7] With regard to cattle traceability, Law No. 17,997 of August 2006 provided the legal foundations for the Animal Identification and Registration System (SIRA) under the aegis of the MGAP. This mandatory bovine cattle identification system[8] was not new to the beef value chain. Since 2004, the National Livestock Information System (SNIG) had managed a voluntary individual Traceability Pilot Program in the orbit of the MGAP. Before that, since 1973 there had been a mandatory group identification system—managed by the Livestock Control Office (DICOSE), also under the MGAP—to control the stock and movements of bovines throughout the national territory. Currently, the three units coexist.[9] Cattle traceability allows for following the path of an animal from registration until slaughter, providing information such as date and place of birth, sex, race, physical movements within national borders, and changes of ownership. The introduction of mandatory cattle traceability was gradual. First, cattle born after the second semester of 2006 had to be identified and registered.[10] Five years later, in June 2011, all cattle born and

[7] There are very few publications about beef traceability in Uruguay. MGAP and IICA (2009) contains a complete description of the system, and Barrios, Gandelman, and Michelin (2010) analyze beef traceability using economic analytical tools. Both documents provided background information for the analysis here.

[8] The World Organization for Animal Health defines animal identification as "the combination and linking of the identification and registration of an animal individually, with a unique identifier, or collectively by its epidemiological unit or group, with a unique group identifier;" defines animal traceability as "the ability to follow an animal or group of animals during all stages of life;" and defines an animal identification system as "the inclusion and linking of components such as identification of establishments/owners, the person(s) responsible for the animals, movements and other records with animal identification" (Bowling et al., 2008).

[9] However, today the SIRA is a subsystem of the SNIG, since the latter has a more comprehensive function and is meant to become a first step toward building an overall National System of Agriculture Information.

[10] This forces the ranchers to identify each calf with two ear tags: a visual ear tag placed in the ear of each bovine cattle head, with a printed number to enable the identification of the animal at first sight, and a second ear tag that contains a radiofrequency identification device to store the same number of the visual ear tag. Ranchers are also obligated to send the registration form by courier to the SNIG.

raised in the Uruguayan territory had to be registered in the SIRA. To date, around 2.5 million tags per year have been delivered and correctly placed in the animals' ears, according to the SNIG. The initial goal of black boxes was to enhance the reliability of information related to taxes due from beef processors. The first public proposal to set up electronic scales at processors' plants was made in 1998, when the government discovered significant tax fraud in a slaughterhouse. Consequently, in 2000, the government ordered slaughterhouses to install an Electronic Information System of the Beef Industry (SEIIC), referred to as black boxes. The SEIIC is a system of electronic scales located in each of the seven data control points strategically placed throughout the industrial process.[11] Each scale scans weights and identifying information that connects to a local server and to a national database in the INAC.[12]

Subsequently, the INAC further developed the black box project into a more comprehensive system to allow for more fluid interaction between beef packers and cattle raisers. The goal of the SEIIC was broadened and it also became a part of the traceability system. Since 2004, black box systems have consistently been installed in slaughterhouses.[13] Starting in 2013, the 21 slaughterhouses authorized to export were included in the new program that harmonizes cattle traceability and black boxes.

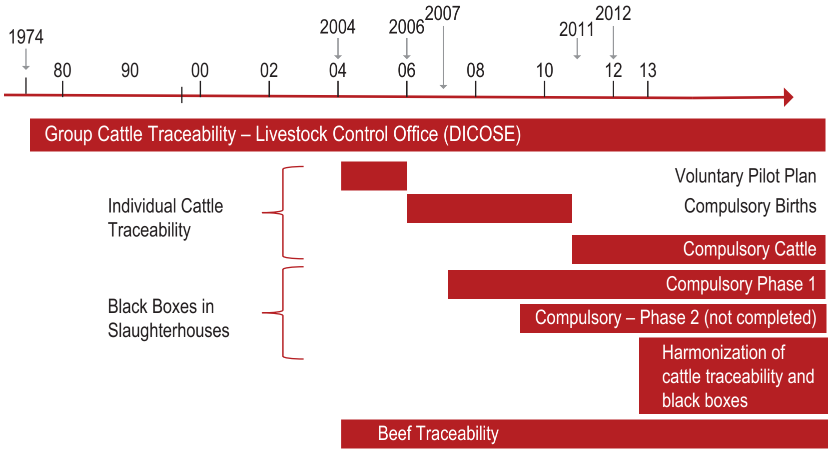
Summing up, the experience accumulated over 30 years from cattle traceability has served as the basis for fruitfully implementing individual voluntary cattle traceability since 2004 and mandatory traceability since 2006. In 2007, black boxes started operating in slaughterhouses, completing the provision of information from the first four scales. The next phase, completing coverage of the industrial process until scale 7, has not yet been accomplished. Finally, since 2013, an overarching system has been in place that is capable of harmonizing information from cattle traceability and black boxes. Figure 6.1 summarizes the milestones of the implementation of the overall beef traceability system.

[11] 1. Live weight 2. Bleeding 3. Dressing 4. Classification 5. Deboning room entry 6. Deboning room packing 7. Dispatch of boxes.

[12] The INAC developed the SEIIC and currently manages it.

[13] Decree No. 364/003 of August 2003 established that the sellers of cattle to slaughterhouses would pay US$1 for every animal processed to fund the black box project.

Figure 6.1 **Evolution of the Traceability System**



Source: Adapted from the Instituto Nacional de la Carne (INAC).

Old and New Public and Private Actors from the Beef Value Chain

The beef traceability system adds new links to vertical and horizontal actors from the beef value chain. The chain involves different actors from the productive sector with vertical and horizontal linkages. It also includes public actors from the MGAP, the expanded agricultural institutions, territorial government agencies, the state courier company, and the state telecommunications company.

The principal private actors—cattle producers, wintering producers, and beef processors—participate through their representative entities that have long-standing and traditional involvement in beef production issues. There are four principal cattle-producing entities: the *Asociación Rural del Uruguay* (ARU), *Federación Rural* (FR), *Cooperativas Agrarias Federadas* (CAF) and the *Comisión Nacional de Fomento Rural* (CNFR). The *Asociación de la Industria Frigorífica del Uruguay* (ADIFU) and the *Cámara de la Industria Frigorífica* (CIF) represent the beef processors. The consignees participate through their representative entity, *Asociación de Consignatarios de Ganado* (ACG), which is a new actor, and veterinarians are associated in the *Sociedad de Medicina Veterinaria* (SMVU). Some of these representative entities participate in the boards of directors from the expanded agricultural institutions related to beef issues (INAC, IPA, and INIA).

In the countryside, traditional local public actors, such as police and regional offices of the MGAP, continue to enforce participation in the system. Cattle producers have a long-standing tradition of being highly regulated and penalized for noncompliance. The foot and mouth outbreaks in the 1990s reinforced the severity of punishment for noncompliance.

A new actor in the value chain is the electronic operator. Operators are individuals or firms registered at the SNIG and certified by it after completing a training course. The operators must have the appropriate training and infrastructure to supply electronic information on livestock movements and transfers of property. They have to be at the ranch and/or at the livestock fair at the precise time when the cattle move because they are responsible for the appropriate data collection, which involves reading the electronic tags by means of a digital scanner. After this, they send this information to the central SNIG database.

Other new private actors in the beef value chain are software and electronics firms. A local private consortium, including SONDA, ICA, and ARTech (the latter is a very successful database software company considered a pioneer of the Uruguayan software sector; see Snoeck and Pittaluga [2012] for more details), designed and implemented the SNIG's traceability database and continues to manage it. The private consortium and the SNIG work very closely together to achieve incremental innovations. In the electronics sector, devices such as digital readers are designed and produced by local firms, although most are imported. The dissemination of digital readers among farmers may boost the emergence of other actors in the services sector. This process is starting from a low baseline, but it is likely to gain speed. Moreover, the INAC, together with a local electronics firm, is working to harmonize cattle traceability and black boxes. These experiences show the huge potential from the traceability system to create externalities in the local high-tech sector.

New relevant actors from the beef processing side are the transnational corporations that are transforming the entire beef value chain. Bittencourt, Carracelas, and Lorenzi (2011) analyzed this recent trend and found that these new actors are promoting greater and more formal coordination between primary and industrial phases; however, they are not strongly horizontally linked with other firms in a potential cluster. Some of these transnationals are looking to access developed-country markets with their own brands. Again, beef traceability provides an enormous opportunity to link retailers to the value chain, and to integrate Uruguay's beef industry with global value chains.

Summing up, the beef traceability system is exerting pressure to create a more complex structure of vertical and horizontal linkages of the beef value chain. To date, these ramifications have not emerged dynamically, but rather, innovations are appearing gradually. Policies to foster them may create the need for renovated PPC.

Alignment with the Traceability Policy

Despite persistent implementation problems, actors from the private sector agree that beef traceability puts Uruguay at the forefront not only of cattle registration and identification, but also in the certification of the quality of exported beef products. This alignment with policy is the result of a long, intense process that started in 2001 when the administration pleaded for installation of individual traceability as a long-term solution to deal with foot and mouth disease outbreaks. With some exceptions, private sector actors from cattle producer associations evolved from their early opposition to the system to its more recent defense.

A declaration by the president of FR to the press in 2002 illustrates the opposition arguments at the time. The declaration expressed doubts that such a sophisticated system could work in a third-world country, and questioned the country's preparedness for such innovation and the priority given to it.[14] Beef processors wanted individual traceability to be mandatory, although they were not ready to recognize its advantages with higher prices to cattle producers. In 2004, the CIF president argued that "there is no basis to think that cattle individually traced can be better priced at present, but it will unquestionably happen when buyers, that is, high-income countries, demand it."[15] In June 2005, however, before the public consultation on the SIRA law, the principal cattle producers and beef processors' associations—ARU, FR, CAF, CIF, and ADIFU—backed mandatory individual traceability. Which factors can explain their alignment behind this position?

[14] El País Digital, September 20, 2002.
[15] El País Digital, February 1, 2004.

The EU requirements were an initial critical factor in explaining this alignment process. In consecutive audits, the EU had observed problematic aspects of the Uruguayan group identification system as run by DICOSE, and pressured the government to take steps toward a system capable of providing greater guarantees. In 2005, the MGAP and INAC signed an agreement with the EU that required Uruguay starting in April 2010 to supply beef toward the Hilton quota from animals individually identified from birth to the slaughterhouse. The deadline was later delayed until July 2011.

In short, the threat of losing market access spurred the sectors in the value chain to join forces. In 2005, beef exports to the EU represented 19 percent of total value (9.6 percent in tons), and in 2011, they represented 30.6 percent (17.9 percent in tons) (Uruguayan Central Bank, undated). The growth observed between 2005 and 2011, however, cannot be explained by traceability because during that period the EU did not enforce it.[16] There may also be reasons internal to the value chain that explain the convergence in favor of mandatory individual traceability. One interviewee suggested that cattle producers and beef processors had interchangeable interests that facilitated a win-win resolution. Beef processors were reluctant to use black boxes, but were required by the government to introduce their use. Meanwhile, cattle producers had great interest in their implementation. On the other side, beef processors had great interest in mandatory cattle traceability because the voluntary traceability system in place was not working.

Until black boxes were installed, beef processors weighed cattle using their own scales. This generated a lack of trust between the two parties, since the weight determines the price paid to the cattle producer.[17]

[16] Except for the Hilton quota and the recent exports of high-quality beef (quota 620/481).

[17] The live weight of the bovine is a parameter to use in a trade agreement by giving a first approximation of the animal that is being offered, based on which the price of the animal can be established. The live weight may be stated at the field and/or at point one of the SEIIC. The carcass weight (*peso canal*) is stated at point four of the SEIIC (former second scale). Most beef processors use the carcass weight to establish the price. However, today beef processors and cattle producers are negotiating within the INAC directorate to change the price-setting system to point three of the SEIIC.

Black boxes allow weighing the animal upon its arrival to the slaughterhouse, and in subsequent process stages, so cattle producers can verify the performance of their animals and have an objective indicator for the price they receive. Therefore, black boxes represent an important tool to reduce information asymmetry between beef processors and cattle producers. This is why cattle ranchers were so much in favor of black boxes. The system implemented works in a precise way, and the black box innovation has made a significant contribution to transparency in the markets by incorporating an independent weighing system.

Regarding the mandatory versus voluntary characteristics of the cattle traceability system, the latter creates a double cattle market, that is, traced versus not traced, which has high associated costs for slaughterhouses due to the necessary adaptation of their processes to the different products, as it is impractical to specialize in just one of them. This is likely the reason that beef processors advocated the mandatory system.

Thus, there were symmetrical interests between the two negotiating parties. Several interviewees asserted that the expanded agricultural institutions of the beef sector provided a useful environment to arrive at a consensus. Since the INAC is the only institute where beef processors' and cattle ranchers' representatives sit on a board with the government, it probably played an important role in that process.[18]

Summing up, private-public alignment on beef traceability was the result of two intertwined factors. One factor, the threat posed by the EU to require individual traceability as of a certain date, was a trigger to seek convergence. Although the threat was never realized, the Uruguayan traceability system was put in place. The other factor—that the private sector accepted the system after intense negotiations between the two central actors of the value chain—became possible because there was an acceptable quid pro quo for both parties. The PPC culture already in place after years of co-governance of the beef-related institutes probably explains the solution that was finally reached, which satisfied the parties from the state and private sectors.

[18] Some of those interviewed asserted that the INAC was not pro-beef traceability from the beginning and needed to be convinced that it was worth the effort.

The Economics of Traceability

So far, except for the high-quality quotas to the EU, no destination market is requiring individual bovine traceability to Uruguay. Yet it is already being required in the domestic bovine market. "I don't buy asterisks," said a wintering cattle producer. By this, he meant that he does not buy animals with a listed problem, codified by an asterisk and a problem number[19] in the traceability system. A particular problem is "*02," which indicates that the animal lost its trace in some phase of its life, making it a nontraced animal that is still registered. According to SNIG data from July 2012, 23 percent of the animals had lost their traceability at some stage of their lives. Given that there are 11.5 million registered animals, that means there were 2.6 million nontraced animals at that time.

Nontraced animals currently circulate in a parallel market. Nevertheless, the SNIG's director complains that "slaughterhouses can export nontraced animals—even to the EU—but brokers won't buy them."[20] In short, even if beef traceability does not yet have economic value in exports,[21] it is already having effects in the domestic bovine market. This is proof of successful implementation of the cattle traceability system.

Why, however, would traceability generate economic value? To answer this question it must be certain that traceability output serves as information. As such, it must be treated as an economic good, albeit a peculiar one. Hobbs (2003) and Hobbs, Kerr, and Yeung (2009) identify three types of information resulting from the traceability system:

1. Reactive ex-post information: Livestock traceability facilitates the tracing back of animals in the event of an outbreak, in which case the traceability system enables ex post cost reduction after a problem has arisen.

[19] There are 24 possible problems listed that relate to the animals' status, electronic devices, and attributes.

[20] The government's concern relates to possible discrimination against poorer producers who probably constitute the majority in the parallel market. One interviewee estimated that price differences between the two markets are from 10 to 20 percent. Several of those interviewed stated that they expect the parallel market to disappear soon.

[21] The only cases where information from cattle traceability is required to sell to the EU is for the Hilton quota and the 620/481 quota. In 2011 and 2012, these exports represented around 8 percent of total beef exports in value.

2. Ex post, or forensic information on a food safety problem: A traceability system can enhance the effectiveness of a tort liability law as an incentive for firms to produce safe food.
3. Ex ante information regarding the credibility of attributes: This refers to invisible characteristics of a product. This third function of a traceability system is pre-purchase quality verification to reduce information costs for consumers.

These three information outputs relate to different outcomes. The first outcome of a bovine traceability system is improved outbreak management. The traceability output is reactive ex post information that is nonrival[22] and nonexcludable.[23] The information provided by the traceability system is a pure public good, and there is a rationale for public sector funding. Uruguayan cattle traceability provides the ex post information to identify, locate, and isolate the source of contamination of a bovine outbreak. It allows a sanitary regulation outcome that has the feature of a public good.[24] Cattle traceability and black box harmonization to complete the entire value chain and get closer to farm-to-plate traceability reinforce the public good feature.[25] Depending on the degree to which information is excludable, the beef traceability system can provide other sorts of goods, such as club goods or private goods, that have different expected outcomes, such as increased market access or product differentiation.

The above is the basic conceptual framework that provides a rationale for the economic-good nature of traceability. For instance, since 2012, for the sale of a very high-quality beef to the EU—quota 620/481—the traceability system has been providing information that certifies the animal's

[22] The use of a specific piece of information from a traceability database (e.g., animal identification and/or movement information) does not preclude its use by someone else.

[23] This means that it is impossible to exclude any individuals from consuming the good or service once provided.

[24] Access to traceability information is restricted, and only the SNIG (as representative of the state) is responsible for privacy and data stewardship. However, SNIG website users can access their own account.

[25] The discussion about the public good nature of the beef traceability system must be considered in the context of spillovers generated by the beef value chain to the rest of society. However, this discussion exceeds the scope of this study.

age and compliance with required confinement in a calving pen in the last 100 days before entering the slaughterhouse. The outcome is increased market access, as Uruguay had not been able to sell its beef to this high-value market previously.[26] At first glance, this outcome seems to be more a club good than a public good, but looking at it in more detail, the information provided is actually an externality of the first outcome, given that the traceability system has already recorded age and animal movements. Thus, it operates as a public good.

Thereafter, the traceability infrastructure is available to producers and/or manufacturers to add information to create club goods or private goods. To date, there has been tentative progress in this last direction. However, there are signs of more disruptive changes. The following sections contain a description and analysis of the PPC processes that were involved from the design to implementation of the beef traceability system as a public good. These sections also contain an analysis of more sophisticated PPC in the creation of a club good based on the beef traceability platform.

Public-Private Collaboration in the Design of the Cattle Traceability System

In September 2005, a public debate document containing a design for the individual system was issued, prepared by officials from the MGAP, INAC, and IPA. An agronomist with a Ph.D. in electronic livestock identification led the team that drafted the document. Besides local meetings with organized communities around the country to discuss the public debate document, representative entities for cattle ranchers, beef processors, services agents, and professionals were consulted. A task force was created to undertake public-private deliberations. The consultative process ended in December, when the MGAP presented a complete draft of the SIRA law to Parliament.

An ad hoc working group of the five main private sector associations representing cattle producers and beef processors presented a document

[26] In February 2012, the first high-quality beef was shipped to the EU. Uruguay is the first Latin American country to access the 20,000 ton nontariff quota, expected to be increased to 48,300 tons in 2013. This group of countries already includes the United States, Canada, Australia, and New Zealand.

containing their positions (ARU et al., 2006). They declared their willingness to go deeper and faster than proposed by the public debate document with respect to mandatory traceability; proposed simplifying the institutional organization of the MGAP; and stated their willingness to study the possibility of substituting the ear tag for the fire-heated brand as the legal instrument of proof of cattle ownership. Anticipating innovation trends, they recommended that identifiers incorporate information about an animal's pedigree, and that selection programs run by breeders' associations or other selection programs enhance quality.

The Parliament took over six months to issue the SIRA law, from December 2005 to August 2006. The main question discussed in Parliament with the private sector was funding of the SIRA. The discussions ended with the government taking on the financing of the traceability system. Public financing of this technological platform makes sense in terms of conventional economic analysis. The health of the country depends on it, and the choice of actors to free-ride on the funding of the public good has large externalities.

Summing up, the private sector was able to protect its private interests, but also collaborate with the government to contribute to the design of a suitable system. The government had competent professional officials who designed an adequate traceability system and followed an effective consultative methodology, which facilitated PPC. These two elements together designed a system that assured the efficient delivery of the sanitary public good.

Public-Private Interaction to Implement the Cattle Traceability System

The SIRA law included creation of the Committee for the Evaluation and Monitoring of the System, where the government and the private sector could discuss the evolution of the system, assess it, and propose changes for its improvement. However, the committee has met only sporadically.

In 2010, the MGAP convened technicians from producer associations involved in establishing the committee. The group had stopped meeting, after meeting regularly for three months, apparently because the MGAP no longer convened meetings. An attempt to revitalize the committee was made in December 2012 when the MGAP launched an interagency task force to detect and correct problems in the SNIG. To date, however, less formal processes have been the main channels of interaction among actors. It is through these channels that the public sector learns how to solve practical problems, often based on valuable information from the private sector.

Private sector interviewees maintained that the main complaints are the growing complexity of the system due to bureaucratic slowness and inefficiencies, and problematic Internet connectivity in the countryside. The public sector asserts that the private sector lacks creative proposals to solve problems and is disinclined to change.

In sum, there is no organized PPC mechanism to enhance the system. Time will tell if the latest attempt to set up a problem-focused task force will prosper. Meanwhile, PPC served to put in place cattle traceability, although the manner in which it evolved did not present opportunities for the actors to innovate.

Public-Private Networks to Innovate within the Traceability System

Some government officials have a clear view of the need to transform policy-related public-private relationships. The government is proposing to develop public-private innovation networks. Certain specific conditions, however, must be met, as underlined by the MGAP's innovation policy guidelines:

> "An agricultural innovation public policy that alters convictions or tries to change ingrained behavior patterns must be based on persuasion of those institutions that perceive change as a potential threat to their current position. Political consensus is needed in the network to the extent that the interdependence goes beyond coordination and cooperation, and involves joint responsibility between organizations, accountability and responsiveness. Autonomous organizations would be willing to commit resources and trust in an emerging network insofar as the government agrees with it and emboldens it." (Paolino, 2010, 261).
>
> To build those networks, the capabilities of each node are crucial. The public sector has to mobilize actors around a common strategic plan and establish coalitions in line with

> the public policy. It also has to resolve power conflicts among actors. Private actors' capabilities are crucial because they are the beneficiaries and/or active participants of the innovation policy (Paolino, 2010).

These new institutional arrangements have not progressed. Some endeavors that are in an early planning stage could, however, spark a new PPC mode. A public-private innovation network is being formed, in which the division of labor is between the MGAP, INAC, INIA, ARU, the National Institute of Biological Research (*Instituto de Investigaciones Biológicas Clemente Estable* – IIBCE), and the Uruguayan Hereford Breeders' Association. The objective is to enhance beef competitiveness through the integrated use of beef traceability data, that is, cattle traceability and black boxes, and genomic tools. The technological convergence will allow the genetic improvement of food conversion efficiency and carcass quality of Hereford cattle. The basic principle is that the most accurate method to learn about the genetic value of an animal is in slaughter. In other words, the animal that goes to slaughter is a source of information on the genetic potential of its parents. In the words of the Uruguayan Hereford Breeders' Association manager:

> "We have to add new database fields in the RFID [radio frequency identification devices] that hang from each animal's ear where information about the animal's kinship is going to be stored. After that, this information reaches the black box system in the slaughterhouse, which is sent to the INAC database. There we retrieve information about the animal's quantity and quality of beef and we match it with its family tree (ancestors, progeny and congeners). With that information, we can apply a superior method of genetic selection from the animal's living relatives to create an elite breeding stock for the Hereford cattle to enter the market" (interview, December 21, 2012).

This network will produce a club good that involves different public and private nodes with complementary functions. The example points out that some public and private actors have critical capabilities to engage in collaboration that utilizes their potential for innovation. This outcome, however, can only be understood by recognizing the evolution of the overall institutional setting of the agriculture sector and the particular development of beef traceability just examined.

Looking ahead, there is enormous room to potentiate beef traceability for innovation. For instance, the presence of transnational groups that are integrating Uruguay's beef industry into global value chains represents an opportunity to find business niches where traced beef cuts are profitable. There are plenty of opportunities to use information from the traceability systems to manage production, or for the emergence of new service firms. To boost those innovations, suitable policies with renovated PPC, like that analyzed above, seem indispensable.

Institutional Design Lessons

The PPCs that ruled the three phases of the beef traceability policy were detailed in the preceding subsections: the actors' convergence around the policy, system design, and system implementation. The "expanded agricultural institutions" for beef (particularly the INAC, but also the IPA and INIA), where public and private actors were on the boards of directors, have been fruitful environments during the three phases. However, in each phase the PPC was of a different type.

During the alignment phase, the government triangulated negotiations between private actors of the different tiers from the vertical value chain to reach a joint position regarding the public decision of mandatory individual traceability. The public-private forum in INAC occupied a pivotal place to make this happen. The institutional background and history of PPC were crucial to aligning private actors with the public decision, as well as the apparently unavoidable EU requirement. The traceability system was co-designed through a creative consultative process, where the private sector proposed innovative ways of designing a suitable traceability system. At the same time, the government had competent professional officials able to present technically sound and consistent proposals. Additionally, the cattle traceability law involved an intense parliamentary discussion with the participation of private and public parties. All these factors together explain the minimization of rent-seeking in the designed system. This kind of PPC was of a modern type because there was a collaborative learning process that ended successfully in the SIRA law that was enacted. Finally, during the implementation phase relationships between private and public actors came back to old-fashioned interactions. Private actors put themselves in a position of making demands and the government responded to them. The government has not yet been able to create an adequate "space" where the various actors involved in the policy implementation can contribute creatively. The result is that traceability-based innovations have been sluggish. Additionally, there is no evaluation and monitoring of the traceability system as the SIRA law foresaw it. The absence of a learning policy "space" of this kind has certainly negatively affected the solutions to problems that have arisen during the implementation process.

An innovation network that is taking shape based on the traceability platform establishes a new form of PPC, however. It confirms that some public and private actors are ready to undertake sophisticated relationships to achieve the private or club goods that the traceability system can provide. This is perhaps a signal of structural change that a well-defined and mature PPC can forge.

In sum, the overall process in terms of institutional configuration—that is, the MGAP's central structure, expanded agricultural institutions, and ad hoc task forces—was capable of delivering a public good. The provision of club goods, or private goods, requires other more sophisticated institutional arrangements. One illustration is a fledgling innovation network based on the traceability platform that establishes a new form of PPC, where there is a division of tasks between private and public actors to produce a club good. Therefore, this case study illustrates quite clearly that the nature of the economic good provided (whether public, club, or private) requires different types of collaborations between private and public actors.

Case 2: Shipbuilding Sectoral Council

The shipbuilding sectoral council was set up as an instrument of industrial policy for the shipbuilding industry. In the sectoral council's plan, a prime objective has been to exploit the dynamism of the regional and national demand for barges and other small ships.[27] Without augmented

[27] Ministry of Industry, Energy, and Mining (2012a, 177).

infrastructure with direct access to the sea, this would be impossible. The construction of an industrial shipbuilding pole near Montevideo's harbor is one of the most crucial steps to achieve the sectoral council's objective. At the same time, the pole's construction has important sunk costs that require a minimal critical mass of shipbuilders that choose to make it their base. The sectoral council, where entrepreneurs, union leaders, and government officials interact, was especially active in creating opportunities for advancing a cluster agenda.This section examines how the sectoral council has functioned in response to an important sales opportunity and its outcomes. It explores the traction of some analytical hypotheses, examining recent negotiations between the government and a private buyer, the private-private suppliers' partnership, bidding, and the construction of three barges for a vast pulp and paper project.

A Supplier Development Program to Boost the Shipbuilding Sector

In May 2011, the Chilean-Finnish-Uruguayan company Montes del Plata (MDP) signed a contract with a group of local shipbuilding firms[28] for the transportation by water of raw materials such as timber to its projected pulp mill in the south of Uruguay. These Uruguayan firms had just finished a long process to become shipbuilders. Since 2006, the cluster promotion programs PACPYMES and PACC had been instrumental in bringing together a number of actors from the ship repair and shipbuilding sectors and had made them partners in designing sectoral policies and setting up an umbrella organization. In 2006 and 2007, support from PACPYMES had allowed members of the cluster to submit joint bids for contracts with another Finnish pulp and paper company called BOTNIA (now UPM) and the state-owned oil and gas company ANCAP, with varied success (Freira, 2012).

This cluster-building process resulted in the establishment in 2010 of a public-private organization known as the Shipbuilding Cluster Association (ACLIN). The encouragement from PACPYMES and PACC was crucial to ACLIN's advancement to become the cluster's governance and representation mechanism. Unlike typical business associations, ACLIN brought

[28] A consortium between Uruguayan firms and a Spanish shipbuilding company, Galictio, was established.

together different actors that were part of or connected to the industry, including shipbuilding firms, shipyards and dockyards, the Navy's workshops and dockyards (i.e., a state-owned-company), vocational education institutions, and the sector's labor union, known as the National Union of Metalworkers (*Unión Nacional de Trabajadores Metalúrgicos y de Ramas Afines* – UNTMRA). ACLIN participates on the sectoral council, along with other actors from the private shipbuilding sector, educational and technological centers, and the government.

One of the key objectives, first for the cluster and then for the sectoral council, was the establishment of a services hub for the industry, or the *Polo Industrial Naval*, which was expected to generate economies of agglomeration. The industry is comprised of small firms that run their own workshops and do small jobs for the transportation companies or are subcontracted by larger firms. To become competitors in the regional or global shipbuilding industry they have to achieve a minimum scale and find partners involved in various other functions besides production. The chance to produce several large barges was viewed as both a challenge and an opportunity for the actors of the incipient sector. It could offer the opportunity to reduce the drain of qualified workers caused by the sector's recent lack of dynamism. In the sectoral council's Shipbuilding Plan, the revitalization of the shipbuilding industry was expected to build on existing human capital, relatively strong private-private cooperation, and improved public-private relationships.

The process that ended with the contract to supply three barges to MDP was a success for the government, since it was largely consistent with the government's goals for the sector. In addition to resulting in a big sale for the sector and the creation of some temporary but valuable jobs, it also allowed the shipbuilding sector to buy the time necessary to prevent a more dramatic loss of qualified workers.

The production orders also allowed the government to showcase a different type of constructive tripartite relationship—that is, labor-firm-government—with the three parties committed to rebuilding an industry. The sharing of business information that is usually unavailable to the government or unions revealed high levels of trust and a willingness to cooperate.

For the government, and probably for the trade union, getting MDP to buy three barges in Uruguay produced by joint Spanish-Uruguayan teams was also an achievement in terms of the transfer of technologies and hands-on training of workers. The latter was more valuable even than the wages earned, since trained workers would be available for future related projects. This was a positive externality that justified public involvement.

The result, however, was not what MDP had in mind. It reveals the complicated trajectory of the shipbuilding industry in its efforts to flourish in Uruguay.[29] MDP received offers from Brazilian, Paraguayan, Polish, Chinese, and Uruguayan firms. According to knowledgeable industry sources, there was a difficult negotiation between the Director of Industry of the MIEM and the MDP, with the Spanish-Uruguayan bidding consortium as a side player. In the negotiations, the MIEM brought the broader investment contract to bear on the result, construing it as a binding agreement to help Uruguayan firms develop their supply capabilities. In the end, the Spanish-Uruguayan consortium revised its costs and reduced the price. The remaining difference with respect to an offer from Paraguay was split between the government and MDP in equal parts. What the company obtained in those negotiations is not entirely clear.[30] Regarding delivery times, the first barge, which was originally to be delivered in May 2012, was not delivered until September and was produced mostly using Spanish workers. At the time of this writing, the second barge, which was due in October, and the third, which was due in January 2013, were expected to be delivered with similar delays. The proportion of Uruguayan workers on the production teams was expected to increase for the second and third barges, but so far there is conflicting evidence on the figures. Whatever the terms of the agreement with MDP, the government seems to have invested significant resources, including political capital, contacts in the relevant market, and financial resources, to force the company to subsidize development of the shipbuilding industry through over-pricing in its purchase of capital assets.

[29] This and the next paragraph are based on interviews with senior industry managers.

[30] Some key informants explain the deal differently, with the government making available as much as US$2 million in technology transfer and workers' re-tooling and training expenses, and/or some of the over-price paid by MDP being returned through the investment promotion regime.

The government's intervention and the resulting agreement amount to protection for the infant industry through subsidies that may have allowed the industry to develop competitive strength in due time, or that merely postponed the decline of the industry for a few years. This raises questions of incentives and institutionalization.

Actors and Representation

The possibility of collaborating with Galictio—the consortium between Uruguayan firms and a Spanish shipbuilding company—was crucial to keeping the construction contract in Uruguay because of the firm's financial capacity and actual manufacturing expertise. The participation of ACLIN in the sectoral council and the history of exposure of Uruguayan firms to international practices by attending industry events were key to establishing the partnership.

While not the only legitimate voice from the nongovernment side, ACLIN is broadly recognized as a cluster governance mechanism. It has had active involvement in moving the sectoral council agenda forward. Its role, however, has been complicated by the industry's configuration. The small and medium-size firms that make up the shipbuilding cluster have not participated through business associations. The traditional business association—the Shipbuilding Industry Chamber, established in 1967—does not participate in the sectoral council, although four of its 10 members are involved in it. Neither does the cluster include the leading private firm, which is Tzakos Naval Industries S.A., a well-established, foreign-owned company that specializes in ship repair.

Moreover, many of the outputs from sectoral council work have the characteristics of a public good or even a club good that all private actors can enjoy without detriment to others, regardless of their participation in the sectoral council. To some extent, the benefits from the training programs that contribute to more skilled labor that anyone willing to pay enough can hire constitutes a club good. This could explain why some established firms follow a wait-and-see strategy, only participating if the new initiative is successful and/or may threaten its market standing. Engaging with the PPC is therefore part of classic industrial strategy decision-making.

The union's role in building the first barge for MDP was seen as constructive, mainly because it ensured labor harmony to help meet the delivery deadline or avoid delays. According to sources interviewed, when the stringent contracts with local suppliers started to be detrimental, subsector leaders considered industrial actions, but they were discouraged by national leaders. The leaders recognized the symbolic value of showing a barge built, at least in part, by local workers that met MDP's standards. Apparently, they succeeded in postponing demands and actions until completion of the first barge. Some sources close to ACLIN report that the workers' response has been more disappointing when unions have been asked to participate in other strategic consultations or planning, as they seemed less prepared and, unless negotiations touch on salary or job issues, less interested.

Infant Industry Arguments and Policies

The opening of the MDP's international tender in 2011 accelerated negotiations to develop a joint bid between Galictio and a group of local firms. It was understood from the beginning that, to compete for the contract, the Spanish-Uruguayan consortium had to reduce production costs. These costs were higher than in Paraguay or Argentina because of a technological gap and, particularly in Paraguay, relative real wages. The MIEM's grand vision for the sector was to manage national and regional demand, with the hope of reaching production levels at which economies of scale would become significant. The government seemed to be aware that, barring that, the industry's future in Uruguay was bleak. That the jump from small shops to major firms is not easy was recognized by a doubling of the gamble, devising plans to employ many of the sector's workers and owners in a new Industria Naval del Estado, S.A., and making the Polo Industrial Naval operational.[31] The experiment that is under way, however, is raising difficult issues about underlying theory and practice.

Galictio had the expertise to produce more efficiently than the local firms, but costs could not be cut enough to become internationally competitive. Two different sources that know the sector well report that Uruguayan firms are mainly weak in the management of production processes and monitoring, adjusting procedures (that is, process optimization

[31] Interview with Sebastián Torres, Director of the Industrial Department of the MIEM.

over time or resource use), commercialization and customer relations, learning, human resource management, and financial accounting.

While some of these weaknesses were previously known (Freira, 2012), others became more evident as work progressed on the MDP's barges. Key interviewees indicated that Galictio was good at process and workshop management, and negotiated with local suppliers based on predesigned contracts that imposed stringent conditions that were hard for some local partners to meet. That led some local firms to walk away from offers to participate in production of the second barge. Some of their employees and some small firm owners signed up for the vacant jobs and got them. The result so far is that it is unclear what will kick-start a local company to partner with Galictio or other firms in the future on a more egalitarian basis.

Moreover, the design of the joint venture assumed that learning by Uruguayan firms or workers was going to happen spontaneously by working together with the Spanish teams. The technology transfer process initiated with the first barge included hands-on training of local workers and the construction of infrastructure. Since October 2011, workers have been trained in advanced welding to meet international standards. It is unclear, however, if the transfer of knowledge and technologies included process management skills and human resource management abilities that could be context-specific and tacit. Other underdeveloped capabilities listed in the previous paragraph are difficult to learn from just watching others do them or from being part of production teams. The neglect of the learning challenge is a technical failure of the industrial policy that was implemented, and it may be related to the fact that most of the public officials involved came from economic rather than management backgrounds.[32]

In sum, it could be said that it is hard to tell as of now whether the child is learning, so to speak, because there are no report cards. Everyone agrees that monitoring joint projects and assessing capacity development is critical to the fine-tuning of these vertical policies. But the imperative

[32] Industry sources point out that there is large business potential for the shipbuilding industry around the Paraná River in Paraguay but that other players have cost and know-how advantages from decades of experience (Paraguay) or have updated technologies and powerful state institutions to support them (Argentina and Brazil).

to run many similar efforts simultaneously—perhaps to avoid being seen as preferring some sectors over others—leaves little time for more refined policy issues.

Other more conventional observations relate to revealed preference and incentives and time inconsistency. Regarding the former, while the heavy-handed negotiations with MDP may in the future become a symbol of timely government intervention to create growth for an incipient industry, it shows workers and investors that the government has a stake in seeing some firms or sectors survive, even at high costs. The incentives part of the question is what will prompt local firms and their foreign partners in favored sectors to enhance their productivity and competitiveness, as long as they can be optimistic that under-performance will probably go unpunished by the government. Within the period of this study, it is not possible to tell if those concerns are justified.

The time inconsistency issue is peculiarly expressed in this context. In the sectoral council industrial policy mechanism, weak institutionalization generates uncertainty about whether policies will remain the same under new administrations. Another type of time inconsistency may be found where the government's preferred policy toward the sector might change with a new election because the new government might have preferences that differ from those of the previous one. In such a case, the private sector may anticipate that the benefits of protection will not last, and then decide to enjoy them better while they are available, without committing too much of its own resources. The sectoral council strategy does not seem to be immune to these risks.

Many sources agree on the dependence of the sectoral council initiative on the technical capacity, determination, and political skills of the director of industry. The same personal commitment exists in his unit's staff, which constitutes one of the strengths of the productive development policies compared to a similar program run from within the existing bureaucratic structure. The sectoral councils are innovative policies implemented through ad hoc structures. They are more flexible, and enable the hiring of younger and better-trained specialists than can be found within regular civil service structures. With an administration that creates and supports them, these structures can be quite effective. The innovative policymaker has the choice between working through the state's old structures, with a greater chance of failing after strenuous efforts, or setting up a nimble and technically solid ad hoc structure. However, institutionalization of the innovative industrial policy mechanism is sacrificed to results when the second option is chosen, giving other actors reason to doubt the policy's continuity beyond the next election.

The type of structural changes envisaged by the administration requires long horizons and patience. Even if protecting the infant Uruguayan shipbuilding sector was reasonable in the 2011 economic context, the baby could be thrown out with the bathwater before its potential can be asserted if weakly institutionalized mechanisms disappear with a change of administration. Some interviewees close to the MIEM hoped that the participatory foundations of the sectoral plans would facilitate their appropriation by the private sector and their shielding from partisan interference. So far, however, there has not been enough time to assess the extent of such appropriation and its strength with respect to other forces that might conspire against it in the future.

Institutional Design Lessons

As argued by Schneider (2010), private-public councils—his term for PPC—come in varied sizes and shapes, and their institutional analysis should focus on what types of councils or PPCs can be empirically linked to which outcomes. He also recommends examining links to policy outcomes, such as competitiveness, export growth, and jobs created, as well as the links of the institutional configuration of councils or PPCs to the quality of policies.

The Shipbuilding Sectoral Council case sheds light on crucial institutional design issues. First, regarding participation of the private sector in PPC, participation does not need to be complete to allow the mechanism to generate operationally meaningful and useful agreements. This is deduced from the success in keeping qualified workers active through the supply contract with MDP, an achievement that required tactical synchronization between segments of the private sector, the government, and unions. At this stage, the story shows that PPC enhanced the quality of policy, but it is too early to know if it also created a viable shipbuilding industry. It shows that a mixed membership organization conceived as the keystone of sectoral governance, such as ACLIN, can play a constructive role and facilitate consensus. Still, it is not entirely clear that this type of organizational structure was crucial to reaching an agreement with MDP, or that it is capable of making that agreement a clear step toward the industry's development.

Second, an innovative policymaker supported by a lean and professional ad hoc structure demonstrates that it is possible to attain some early achievements, but raises doubts about sustainability without institutionalization. Whether the private sector's sense of ownership will be enough to protect the policy from political interference or suppression will only be known when a new administration takes over.

Third, the sectoral councils shed light on the pros and cons of inclusion of trade unions in PPC. The Uruguayan case shows that wage bargaining can be left off the table of industrial policy, and workers may still be able to manage conflicts to support a long-term vision, even if they are less consistently interested or active in other development agendas. Putting job discussions under a long-term lens could help in engaging them. There is some evidence that the workers' national-level leaders see the value of making sacrifices to promote longer-term industrial development, which contradicts other analyses that see unions as shortsighted and obsessed with salaries.

Fourth, the preexisting cluster structures, workers' organizations, and technically strong government teams have not paid enough attention to the design of technology transfer mechanisms for managerial competencies or to the monitoring and evaluation of the experiment to assess the extent of capacity development. If the reasons to support the industry with public funds are to generate a capacity development trajectory and facilitate positive spillovers, these outcomes should be regularly assessed to allow for adjustments. The consensus on the importance of learning in industrial policymaking should legitimize allocation of resources to those all-important tasks.

Finally, the outputs from sectoral council work are public or club goods, which sectoral private actors can enjoy without detriment to others, regardless of their participation in the council. The sectoral councils are open PPCs providing these kinds of goods. This case study illustrates that it is desirable for sector development to establish free access to come and go from the sectoral councils because of the nature of the goods provided by them.

Case 3: Biotech Sectoral Council

In 2010, the Biotech Sectoral Council started working with a number of actors from the private sector, different government agencies, universities, and research and development (R&D) centers. One year later, the Biotech Sector Strategic Plan was launched.[33] The plan has several main objectives, but the emphasis here will be on two objectives that involved the creation of missing sectoral public inputs: the process of developing appropriate legislation for the sector, and the process of registering biotech products.

Actors and Representation

Biotechnology is a cross-cutting sector, so it influences many other activities throughout the productive structure. Private actors related to biotech are not affiliated with a classic sectoral chamber; they all have another sectoral affiliation beyond their activities in the biotech area. This complicates policy targeting and actor coordination.

Private actors participate in the sectoral council through the biotech business association known as AUDEBIO (*Asociación Uruguaya de Biotecnología*). Among its members are private companies and education and research centers. AUDEBIO received a boost under the Life Science Cluster driven by PACPYMES starting in 2005.[34] During that time, an effort was made to develop economic indicators to measure the size and evolution of the sector, which had previously been unknown, making it harder to think about this atypical industry. Additionally, the first participatory assessment was undertaken, and PACPYMES facilitated joining forces and meetings that helped the actors get to know each other.

AUDEBIO started to grow in membership very recently, coincidentally with the blossoming of the sectoral council.[35] Another factor that explains the growing importance of AUDEBIO is the new opportunities that biotech offers to enhance intensive natural-resource-based production, which is the country's main specialization in biotechnology. Along with skilled human capital and updated technological infrastructure, this

[33] Available at: http://gp.gub.uy/es/node/639 (accessed on January 4, 2013).

[34] AUDEBIO was created by a group of firms in 1987, but it did not have a very active presence until 2005.

[35] The sectoral council helped restructure the association with a new agenda.

can explain the new biotech endeavors that are emerging. It is fair to say, however, following Cornick (2011), that more intensive PPC made it possible to accelerate the development of this business association.

While there is a notable absence of important biotech companies in AUDEBIO, members of the association believe that it is a natural growth process and that in the medium term these companies will join. Indeed, it appears that the integration of such companies could strengthen AUDEBIO. In this sense, AUDEBIO has achieved cohesive political action within the group, but has not yet obtained the same results outside the group. Despite the abovementioned absences and its still relatively small number of members, AUDEBIO has become the legitimate representative of the private biotech sector in Uruguay.

Members of AUDEBIO are not grouped around a single market because there are several relevant markets for biotech products and services. This heterogeneity could be either positive or negative, depending on whether it compromises the search for solutions to basic problems that affect the whole industry.

Other relevant actors participating in the Biotech Sectoral Council are R&D institutes, technological parks, public and private universities, the national vocational training university, and other governmental agencies.[36] There is no trade union related to biotech.

The Biotech Promotion Law: A Tool for Productive Policy

A major objective of the Biotech Plan is to create a legal framework to promote the biotech industry. This responds to the need to harmonize the existing regulatory framework, while advancing the main goal of generating an appropriate legal framework within which to promote biotech activities.

The biotech regulatory system involves different governmental institutions that have implemented a multiplicity of uncoordinated regulations that are not appropriate to the specific dynamic of the biotech sector. A comprehensive and coherent regulatory framework for the activities concerned is a pillar for sectoral development.

[36] In the health area, the Ministry of Public Health is the regulatory authority, and so it is also covered in the biotech-related health area. The same applies to cases of animal and agricultural biotech with the MGAP.

A law to promote the biotech industry is being drafted by public and private actors within the sectoral council. This represents an exception internationally, since although different sectoral promotion laws have been developed in other countries, they were established in response to requests, demands, or pressure from private actors. The draft law in this case arises from dialogue between public and private actors that identified the need for a law as one of the main objectives of the plan.

The law will also institutionalize the sectoral council, giving it a formal mandate and funding for its activities. The continuity of the policy tool for this sector is thereby guaranteed. That is, the formalization and funding of the sectoral council becomes a necessary investment if biotech is to be a strategic area. Formalization of the sectoral council may have another consequence: it will provide a formal conduit for sectoral policies. This change implies a new challenge for the institutions related to biotech policies. Arguably, coordinating the agenda so as to avoid bureaucratic capture is one of the main challenges for the sectoral council.

Experiences collected by Devlin (2012) suggest that national strategic policy alliance councils can usually work effectively whether or not they are written into law. In this case, institutionalization of the sectoral council in the biotech law will likely act as a safeguard to assure its permanence as a policy tool unaffected by political turnover.

Registration Process for Biotechnology Products

The process for registering biotechnology products is a critical factor for the development of a biotech industry. Currently, it is a requirement for the consolidation of the area. Biotech products need particular processes to be publicly registered to establish their safety and quality standards and prevent undesired results or accidents with potentially large negative effects. However, the process of establishing such registration systems is not only a technical matter but also part of a policy to correct bureaucratic failures and improve the requirements imposed on firms. The Biotech Plan identified the current regulatory framework as a barrier to the development of biotech activities in Uruguay:

> "Uruguay is lagging behind when it comes to the regulation of biotechnology product data and the provision of appropriate

> human resources for their analysis. Companies (from the [sectoral council]) consider these two factors as a major bottleneck for their integration in the local and international market. They perceive that unfair competition exists in the local market with regard to imported products. These are more easily accepted in the domestic market given the acceptance of their source records by national control authorities." (Ministry of Industry, Energy, and Mining, 2012b, 73)

In this regard, the sectoral council pointed out that problems with existing registration procedures are an obstacle for development of the sector. There are several cases reported by interviewees in which international companies came to Uruguay to carry out R&D stages of a product, but were forced to set up their plants in neighboring countries—mainly Argentina—because the Uruguayan regulatory framework was not amenable to their undertaking product development phases.

The sectoral council participants had an active role in defining and monitoring the agenda on this issue. As for the composition of the sectoral council, the main problem was the lack of representation of some government actors, in particular from the Ministry of Public Health (MSP) and MGAP. The weak involvement of these ministries implied that some fundamental issues could not be worked out within the sectoral council. The absence of representatives from the MSP and MGAP remains a major problem for the sectoral council for at least two reasons. First, some important council objectives cannot be addressed because there are no available government representatives from relevant ministries. Here, an established protocol for registration of biotech products would be an achievement of importance for the biotech sector.

The second reason refers to the legitimacy of the biotech council as a tool for productive development. Sectoral councils are based on horizontal and cross-cutting criteria of public governance. This assumes that there are political objectives that cannot be achieved without the coordinated involvement of several ministries, other government agencies, and private actors. The nonparticipation of representatives of the MSP and MGAP can be viewed as disinterest, as representative of the low priority given to the issues of the biotech council, or as a major problem of horizontal strategic interactions on productive issues whose importance is not recognized by other ministries besides the MIEM.

This problem is more important than those related to institutional failures or capture attempts of the sectoral council tool. It refers to the Uruguayan government's ability to address, in a coordinated manner, issues that require articulation between different ministries. It is impossible to precisely pinpoint the causes. It is likely that the regulatory problems are linked to vested interests within the public administration. There are also problems of inefficiency inherent in an old management structure organized vertically, where cross-cutting areas such as biotech confront barriers.

So far, analysis of the sectoral council shows that it is a tool with great potential. It still faces challenges related to the organization of the Uruguayan state. Beyond these challenges, the sectoral council has worked regularly and has met the goals that it has set.

Institutional Design Lessons

This case analyzed the process of creating two sectoral public (or club) goods through the Biotech Sectoral Council. Creation of biotech legislation can be considered successfully completed, but the process of registering biotech products is incomplete. The analysis pointed out several institutional arguments that possibly explain the two results.

First, the process that led to the drafting of the law was a multi-party process. AUDEBIO was an appropriate forum to address the industry's common technical problems within the sectoral council. Because biotech is a general-purpose technology that depends intensively on R&D, this atypical business association—which cuts across industry, academia, and technological centers—seems appropriate to address the development of a regulation for such a broad sector. Addressing some productive development objectives may require specialized and legitimate inputs to develop legislation and regulation. In some sectors, particularly high-technology sectors, inadequate input may hinder the sector's development and delay it for years. This could be the result of lack of technical expertise, but it could also arise because legislation or regulations might be defined without the related industry's input.

Second, the law, if approved and regulated, will institutionalize the sectoral council, giving it a formal mandate and providing funding to sustain it. Unlike shipbuilding, the Biotech Sectoral Council is designing its institutionalization to assure its survival as a policy tool following a change in government.

Third, the most challenging issue presented by the Biotech Sectoral Council case is the weakness and sometimes lack of public-public coordination. This is even more critical, however, when dealing with cross-cutting sectors such as biotech. Inadequate registration for biotech products in Uruguay constrains the development of a dynamic sector with large opportunities. Sectoral development can only go so far if important ministries lack the commitment to collaborate. However, the problems of a high-tech industry and their indirect effects on specific areas of responsibility may remain low on the list of priorities of some government agencies, such as the MSP, in a relatively unsophisticated government structure.

The institutions created since 2005 were designed to assure public-public coordination, Productive and innovative cabinets, along with sectoral councils, were not sufficient until now to assure an efficient governance model to address policies that promote cross-cutting sectors such as biotech. The challenge is enormous. Cross-sectoral policy questions are growing in importance. More and more productive development policy issues will require coordination of different government agencies and multi-party collaboration. This does not mean that government officials are not aware of it, but rather that concrete results are missing. The registration problems of biotech products are just one illustration.

Case 4: Blueberry Cluster

The Blueberry Cluster consists of a private-sector-initiated Plan to Strengthen Competitiveness in which dynamic entrepreneurs, in collaboration with the PACC and a few other public sector actors, produced club goods to facilitate the sector's progress.

Actors and Representation

The first blueberry plantations in Uruguay date to 1988. Commercial production has increased since the early 2000s. Exports became significant in 2000–2007, with 100 percent of exports destined for European countries. Today, Uruguay ranks among the top 10 blueberry exporters in the world, to a large extent due to the country's latitude, which allows it to take advantage of reversed seasonal patterns compared to North American and European markets.

Large producer-exporters lead the industry, along with a group of small farmers who sell their harvest to exporters. Production is in two geographical areas: the coast of Rio Uruguay and the south of the country. Argentinean investors have been present since 2006, and Chilean companies also have a notable presence, with access to marketing channels and the supply of inputs such as planting and farming technology.

In 2007, 73 producers with a total area of about 600 hectares made up primary production. Production is technical-knowledge-intensive, given the sensitivity of plants to pests and climatic and soil conditions. Together, these parameters mean that blueberries are a primary product that requires substantial inputs of capital and expertise.

Initially, the sector had two producer associations: the Uruguayan Blueberry Chamber (*Cámara Uruguaya del Arándano* – CUDELAR), which was national in scope but dominated by the largest producers, and the National Association of Uruguayan Blueberry Producers (*Asociación Nacional de Productores de Arándanos del Uruguay* – ANPAU), which was mainly composed of producers with smaller planted areas in the south.

The initiative to create an institution to facilitate exports was a longstanding priority for producers before creation of the Blueberry Cluster. This aspiration materialized in 2007 with the creation of the Union of Uruguayan Fruit and Vegetable Producers and Exporters (*Unión de Productores y Exportadores Frutihortícolas del Uruguay* – UPEFRUY). The enthusiastic and broad involvement of the private sector, and its leadership of the program, gave substantial legitimacy to the cluster initiative.

A Cluster Led by the Private Sector

The Blueberry Cluster started operating in the orbit of PACC in the second half of 2006. The mechanism to participate in the program was developed in part by private actors, but mainly by the larger export-oriented producers. PACC did not tell the private sector what to do, but it invited the private sector to indicate what was needed. This required the private sector to be well organized and knowledgeable about what it wanted. Moreover, the Plan to Strengthen Competitiveness was developed in a participatory way, and funding priorities were consistent with it.

Developed in 2007, the Plan to Strengthen Competitiveness identified five strategic objectives for the cluster related to entry into global markets, farming technologies, human resources, institutional strengthening, and a favorable framework for sectoral policies.

The institutions that made up the support group at that time were public entities whose mandate placed them in a position to have some dealing with the fledgling blueberry industry. Upon the creation of the cluster, the MGAP and the municipal governments of subnational units represented the public sector where plantations were located. The municipalities, however, did not play a significant role in helping build the institutions to develop the blueberry sector, and neither did the MGAP, at least at the start of the process. The MGAP did not have appropriate institutional frameworks or a tradition of dealing with an incipient, mostly export-oriented cluster like the Blueberry Cluster. What is more, the Honorary Commission of the Citrus Plan, a long-standing institution, had been shut down, and the institutional framework supporting the farmer sector has not seemed to be responsive to the requirements of a dynamic export-oriented fruit sector.

The Creation of an Essential Export-supporting Club Good

The main initiative the Blueberry Cluster directed through PACC was the creation of an institutional infrastructure to meet sanitary requirements imposed by the United States for access to its market. From the beginning, this initiative took precedence, as it was clearly aligned with strategic objectives and had particular economic significance for producers. From the origin of the country's blueberry plantations, this was viewed as a necessary step to achieve the desired levels of profitability. It was also a test of the maturity of the conglomerate in terms of its capacity to overcome the challenges associated with access to the most demanding markets. The initiative itself crystallized the shared vision among private entrepreneurs of a new sector whose viability and growth was directly dependent on export performance. Private actors, especially exporting companies, were aware of the regulatory challenge: the U.S. Department of Agriculture required that a single organization representing the private sector engage in the health certification process, a role assigned to UPEFRUY. Creating and sustaining that process, which is a club good, involved non-negligible costs, considering the export levels at the time.

Managed by the private sector and engaged in international representation of the cluster, UPEFRUY assumed representation of the conglomerate in relation to the cluster development program and the policy. In this role, and in the rapid acceptance of it by the private sector, UPEFRUY showed itself to be focused on its core mandate, staying away from business disputes among members or other issues outside its specific scope of action. In 2007, the cluster governance created under PACC guidelines was built on institutions with exclusive private sector representation and the involvement of major members of existing business associations. Therefore, it was viewed as legitimate among private sector actors.

The main contribution from the MGAP came from the General Directorate of Agricultural Services (DGSA), which deals with sanitary regulations and is the national phytosanitary protection organization for international agreements in this area. Collaboration between the DGSA and the cluster was functional to the established goals. In 2010, a project was approved that provided resources to strengthen cooperation between the DGSA, UPEFRUY, and the U.S. Animal and Plant Health Inspection Service (APHIS) as a way of monitoring the most significant pest—the fruit fly—ensuring its control and managing sanitary certification in the country's departure airport.

Access to the U.S. market demands keeping fruit fly problems under control, and this in turn requires private investments in plant treatment as well as in monitoring the presence of the pest throughout the country. Regarding the latter, the DGSA has no physical presence in the country, which leads to the need to devise a mixed monitoring system in which producers themselves are involved. In addition, the DGSA must certify compliance with the health requirements of the merchandise exported to the United States. Although the sector lacked extensive experience in collaborating with the DGSA, interviewees reported a good relationship that was not affected by the more distant political representation of the MGAP in the cluster. The DGSA even sought training to provide services to the sector, which demonstrated the public actor's responsiveness and professionalism.

Institutional Design Lessons

The blueberry case offers some lessons with respect to institutional design. First, even if the involvement of the public sector was relatively modest and its contribution to the trajectory of the cluster limited, the public sector did not block the private sector's initiative. The private sector was strong, well organized, and had a small number of associations that were representative of it. The private actors showed signs of dynamism and commitment, took the initiative, and were supported by both the program and the public sector to participate in the design and implementation of policy responses to the problems identified in the cluster.

Second, from the public sector, active cooperation from the DGSA was required and was efficient, although the involvement of public actors showed little dynamism compared to that of the private sector.

Third, agencies from the National Innovation System, such as the National Agricultural Research Institute (*Instituto Nacional de Investigación Agropecuaria* – INIA) and the Technological Laboratory of Uruguay (*Laboratorio Tecnológico del Uruguay* – LATU), could have played a more significant role, but they instead acted as followers of the private sector. The weak integration with public sector technical and research agencies is noteworthy. Although the INIA had conducted research even before the launch of PACC in collaboration with private companies, technicians and entrepreneurs consulted observed that even in 2011 the conglomerate was based on a technological package imported from Argentina and not totally adapted to Uruguayan conditions. The country still lacks a long-term research program articulated at a high level between the public and private sectors. The frequent complaint of producers is that the agriculture research system lacks room for emerging crops directed toward dynamic markets.

In sum, besides the divergence between the private and public sectors on priorities and resource allocation for publicly funded research, the case highlights some tensions that can arise in incipient sectors not used to interacting with research institutes. A more frequent dialogue between the private sector and research institutes would be desirable. There is, however, no endogenous sectoral innovation strategy, which is a shortcoming of the Plan to Strengthen Competitiveness for the blueberry industry.

Case 5: Tourism Cluster in Colonia del Sacramento

The Tourism Cluster in Colonia del Sacramento is an example of a proactive local government initiating PPC and successfully convening a heterogeneous set of private sector actors that needed to be coordinated in any sector development strategy. From the perspective of the quality of policy, getting those actors to set up and support a lasting governance mechanism was a positive outcome (Schneider, 2010). The paragraphs below examine the trajectory followed by the cluster.

Creating Institutions among Heterogeneous Actors: A Government-led Experience

The port of Colonia del Sacramento, the base for ferries shuttling passengers to and from Buenos Aires, Argentina, is the entry point for tourists coming into Uruguay. Moreover, the city and the departments are worthy destinations in their own right. The area has many assets to affirm its leading role in the country's tourism services landscape.

When PACC decided to include Colonia's tourism among its supported clusters, the department was undergoing a gradual but deep transformation, and it had an acceptable but not impressive quantity and quality of services. As in other parts of the country, the traditional family hotel was giving way to new facilities run by international hotel chains.

As a tourist destination with a long history, Colonia had a complex institutional landscape that posed a challenge for any new competitiveness-enhancing initiative. The Colonia Tourism Corporation was tasked with channeling demands from a variety of local tourism organizations, but it was not unanimously considered a legitimate voice for the whole sector.

One of the distinctive features of cluster-building was that the approach to PACC was originally promoted by the local government agency known *as Intendencia Municipal de Colonia* (IMC). In 2006, IMC appointed a young, well-trained sector specialist to head the Tourism Bureau. Her hiring broke with political norms, putting a person in a significant job who possessed the necessary motivation and skills, all of which were crucial for the cluster-building process.

The private sector initially acted as a follower of the local public initiative. Despite some previous experiences in trying to achieve coordinated action to address shared problems, the private sector was divided and lacked a common vision because it was organized in subsector associations that were mainly lobbying groups.

The diversity of relevant actors and the heterogeneity of the management, marketing, and certain other skills of the actors were a distinctive feature of this conglomerate. The number of different organizations and agencies relevant to the cluster was striking, and showed the complex challenges for coordinated collective action and policymaking.

The IMC's leadership and support for the initiative were crucial. However, it was not just the initial support required to break a noncooperative equilibrium that mattered. The IMC also led efforts to encourage participation of the least organized and inadequately represented segments, such as handicrafts shops and small rural tourism operators. This made its job harder, but it contributed to a potentially farther-reaching impact. Among the actors that were already better organized, the Gastronomy Chamber warrants special attention. The cluster sometimes had difficult relations with this important local player. The interviews suggested that there were problems surrounding representation within the subsector, and that preexisting personal differences permeated the interactions.

The IMC director saw the contribution of the technical staff from the PACC Coordinating Unit as positive. She highlighted their effective implementation of the program, pushing the locals to set ambitious but realistic targets and keeping the focus on initiatives that enhanced competitiveness. Among other contributions, the director achieved solidarity and gained support, which was helpful to convey a notion of the objectives and rationale of the cluster tool, and to consolidate specific collaboration around concrete initiatives such as the brand-development initiative and the facilitation of coordination with other public actors, such as the Ministry of Tourism and Sports (MINTURD). In brief, this appears to be a case of a successful, publicly initiated PPC for policies for productive development that was partly built on functional public-public collaboration, especially in convening and supporting the network-building effort.

The cluster governance structure initially had the standard PACC configuration, but evolved quickly toward an original, locally grown model. In addition to a cluster management group, a tourism roundtable was set up with participation of other IMC units and the MINTURD. This constituted the local version of the support groups referred to in the

PACC methodology. Through its committed, skilled, and politically adept officials, the IMC was able to achieve PPC that enhanced the quality of policies and generated enough trust and interest to develop the PPC initiatives, regardless of their initial limited impact.

Use of Consensus Strategy Documents

As directed by PACC policies, the cluster's Plan to Strengthen Competitiveness was developed in a participatory manner in 2007 based on a detailed study of the cluster's situation at the time. The plan identified nine strategic pillars for the cluster: institutional strengthening of the cluster, territorial and sectoral planning, improvement of tourism infrastructure, creation of a business network, vocational education, quality and tourism brand of Colonia, promotion and marketing of Colonia as a tourist destination, and increased integration of the information and communication technology (ICT) in the sector.

In late 2007, the cluster created the Colonia Tourism Association (ATC), a joint governance/management entity to coordinate private-private and public-private collaboration. The ATC is a joint initiative of the organizations of the private sector, the IMC Tourism Bureau, and the MINTURD. A steering committee leads it, and it sets longer-term strategies and makes executive decisions on most issues.

The ATC's establishment and its relative stability, highlighted by several actors, is considered the Tourism Cluster's achievement. It required handling a delicate balance between being too close to the public sector, such as the IMC, and becoming spokespersons for the private sector. When conflicts erupted between political authorities and segments of the private sector, the strategic plan provided constant guidance and support, as its consensual foundations aligned demands and pressures with the original objectives and priorities. The legitimacy of the ATC seems solid.

The initiative to develop a tourism brand for Colonia is valued not only for its product, but also for the process of collective decision-making it has involved. In the development phase of the strategic plan, the initiative generated a consensus. Developing the initiative in constant communication with private actors generated a sense of ownership that the parties valued as an achievement of the cluster as a whole. The tangible character of the branding product initiative, and its suitability for the early stages of PPC when other projects with diffuse benefits may have been harder to sell to reluctant partners, may be among the reasons explaining the active and constructive involvement of the private sector. In brief, in the trajectory of the cluster, the initiative seems to have contributed to raising levels of trust among actors, spreading a sense of ownership and accomplishment, adding legitimacy to the strategic plan, and adding valuable actual results that were necessary for the marketing and communication strategy of the cluster.

Two milestones in the plans may have served as the foundation to help the cluster achieve its objectives: (1) rapid evolution from the standard institutional model of PACC to local governance centered on the ATC, and (2) some episodes of conflict from which the ATC and the cluster as a whole seem to have emerged strengthened. In this context, the case suggests that consensus strategies for achieving greater cluster competitiveness can serve multiple purposes. A first purpose is the more straightforward one of identifying priorities for policy changes, joint public and private action, and the resolution of coordination failures. In this vein, competitiveness plans serve as a navigational tool for PPC participants. A second purpose relates to the benefits that flow from the participatory process involved in developing the plans. Private-public dialogue not only enhances the information base on which policies or private strategies are made, it also may help develop a sense of ownership of jointly developed strategies.

This case illustrates a third function that the plans serve. When turnover of critical staff is high, and when conflicts emerge that challenge PPC-generated policies, the participatory competitiveness social contracts among those involved remind them that what they agreed upon was the most appropriate course of action. Without foreclosing change and adaptation, the plans remind partners that new initiatives, or departures from old ones, require a new consensus.

The use of financing mechanisms that were envisaged by PACC policy is revealing in terms of the focus of this PPC and its results. When the nonrefundable contribution from PACC and the private sector's contribution are added together, it can be seen that most of the resources have gone to structuring projects, or to those projects with nonappropriable benefits for all members of the cluster, largely related to cluster governance. The cluster's investments have been small compared to, for example, the almost US$1 million allocated by the Blueberry Cluster. It has not approved any closed projects, revealing difficulties in developing other initiatives and multi-actor collaboration beyond the basic supply of club goods. This suggests that the PPC's main success has been in building trust and generating a multi-stakeholder forum where various parts of the tourism value chain can work together to address growth-related issues. The actual effects on competitiveness, based on the allocation of funding and effort, appear to be very modest to date.

Institutional Design Lessons

The case of tourism in Colonia offers lessons for institutional design. First, PACC's admissions procedure requiring joint private and public endorsement opened the door to an unlikely but successful example of a government-led cluster-building initiative. The heterogeneity of the private sector in a small-to-medium-scale international tourism destination was not an obstacle for the institutionalization of governance mechanisms, with substantial PACC facilitation assistance and adept local public leadership.

Second, the evidence from this case suggests that technical capacity supplemented with relative political autonomy creates conditions for tangible achievements even in complex contexts. The possibility of attaining quick results helped this—for example, the branding exercise—and thereby generated interest and commitment that encouraged the private sector's involvement. The development of trust and a sense of shared goals are valuable in themselves, but they do not trigger demands for more ambitious, pro-growth collaboration.

Third, consensus strategies in the form of the cluster's strategic plans can serve other purposes besides listing policy and collective action priorities. Such strategies can generate ownership of the initiatives resulting from the participatory planning process. More importantly, they can become convenient reminders of foundational agreements, or social contracts, to stay the course when there is high public and private personnel turnover.

Lessons Learned

The Uruguayan government, or at least the MGAP and MIEM, has had a clear position on PPC for productive development policy, and it has created policies with that position in mind. However, a closer look at the way the government is carrying out those policies, as was done in this study, shows that the results are generally rather disappointing. There is a type of inertia on the part of the government that implies not moving from a status quo relationship with the private sector and between different public agencies, even when many officials and authorities agree that changes are necessary. The paragraphs below lay out seven policy lessons derived from the five cases studied.

Private Sector Capacity: Unproductive Rent-Seeking versus Contributing to Productive Activities

Cluster promotion in both shipbuilding and biotech is without a doubt what allowed the private sector to get organized and interact with the government in a new way, that is, by contributing to productive activities through sectoral councils. The cluster promotion initiatives were also effective in the blueberry and tourism PACC cases in transforming government-business relationships. These programs generated trust between public and private sector participants and allowed for the accumulation of knowledge, mostly tacit and originating from practical experience.

In slightly different ways, sectoral councils, like clusters, have made significant contributions to the institutionalization of representation in the private sector. This is necessary and desirable for sustaining PPC and can be achieved without full participation, or with the exclusion of some large participants. On the other hand, while a more cohesive business sector may be a more powerful performer, it may also demand forms of protection or subsidization that could harm other sectors or consumers or stifle innovation. The risk of capture of the PPC mechanisms by a rent-seeking private sector is a recurrent theme in the literature. While PACC erected a barrier to capture by putting competitiveness at the center of its requirements and by being flexible in its choice of which private sector actors to involve, the sectoral councils were more exposed to those risks by supporting industries, like shipbuilding, that had more uncertain competitiveness prospects.

The blueberry case is one in which the private sector made the right moves to achieve a successful PPC. It did so despite a weak public sector. Government capture is a real danger due to the strength of the private compared to the public sector entities. The conclusion reached regarding the avoidance of capture revolves around the sort of public sector that is functional to productive development policies and at the same time avoids private rent-seeking. Here, the analysis finds that the enabling model of intervention of PACC has these qualities. Even though there are no explicit safeguards against possible coordination failures or capture, this is not perceived to be a risk due to the government's enabling philosophy. Institutionalizing critical criteria, such as tying public support to clear competitiveness-enhancing investments, may be necessary as these PPCs evolve to minimize the risk of capture when the founders are no longer involved.

From the shipbuilding and biotech cases, the lesson learned was that if the private sector organizes itself in some innovative way, the government is responsive and can adopt new methods of collaboration. The sectoral councils are institutional settings that allow and potentiate these new relationships. However, sectoral councils can also be based on more traditional relationships that are more inclined to rent-seeking, such as in the apparel-textile or automotive sectors, which were not studied here. Sectoral councils do not have explicit safeguards against possible coordination failures or capture. According to the information collected to date, the actors involved do not perceive this as a problem. This does not mean that this risk does not exist. Government-hired professionals involved in the councils see it as a possible problem, but one that so far has not appeared. The risk may be greater in other industries.

In the case of beef traceability, the institutional setting minimized rent-seeking from different groups in the value chain with divergent interests. The threat of foreign regulation, or technical and sanitary requirements imposed by the main foreign buyers, was another principal factor that explains why private sector organizations aligned with each other and with the domestic regulatory authority. Finally, the innovation network in construction proves that when critical capabilities within the government and the private sector are available, it is possible to establish more sophisticated relationships where productive rent-seeking prevails.

Public Sector Capacity: Administrative versus Political

In Uruguay, the lack of public sector capacity has constrained the implementation of new forms of productive development policies. This means that when an institution has no capacity to properly fulfill its function, and the prospects of reversing that situation do not look favorable, institutional opportunities are created that overlap with existing ones. Policy innovation presents the policymaker with a dilemma. Capacity can be created outside of the existing bureaucratic structure that will be more agile, responsive, and dynamic than conventional policies. But that capacity is likely to disappear with the next change in political leadership, sometimes even with a new administration of the same political party. Alternatively, a change in the modus operandi of old but entrenched bureaucracies can be attempted, which will make the innovation process an uphill battle. The latter requires political capacity, and if efforts to break with old institutions are taken without adequate capacity, there is a risk that the old structures and the power resources will block the new policy. In the first option, the policymaker assumes some inefficiency in the duplication of structures, but has the advantage of avoiding potential obstruction derived from political weaknesses.

In the case of beef traceability, a mid-way resolution of the innovative policymaker's dilemma was implemented. New capacity was created inside the existing bureaucratic structure, but with no attempt to change or improve the modus operandi of the preexisting mechanisms. The new institutions were added side-by-side with the old ones. The result was co-existence of the old system (fire-heated branding and paper records) with the new electronic system managed by different departments of the same ministry.

The experience of the Shipbuilding Sectoral Council to date sheds light on essential issues relating to public sector capacity and its role in the success of PPC for productive development policies. Technical sophistication and commitment are essential for the new types of collaborative public policies. The major roles played by the MIEM team and the director of industry demonstrate the value of deep technical understanding of the policy challenges, as well as the capacity to pull one's weight in sometimes difficult negotiations. The director's ability to recruit committed young professionals, and their subsequent technical contributions and energy, account for a good part of the council's achievements.

The Tourism Cluster case reveals other features of the capacity of the Uruguayan state. It is a successful case where the public sector was initially the leader of the collaboration. The creation of the mixed public-private institution (ATC) with autonomous management assured protection against capture. Additionally, cluster governance retained the capacity to act as the corporate memory of policy, allowing for the continuity of initiatives despite changes in the main players.

Public-Public Coordination Failures

The cases analyzed show that productive development policies are weak if they depend on public-public coordination because of the lack of effective coordination and governance across different state agencies. This issue is central for the councils and to a lesser extent for PACC. Beef traceability is encapsulated in the MGAP and its expanded agricultural institutions, which is a strength of this productive development policy because public-public coordination is facilitated. It is also a limitation, however, when beef traceability is thought of as a basis to build a new competitive advantage based on a value-chain approach. In this case, it is essential that innovation networks remain the foundation of public-private collaboration and public-public coordination beyond the agricultural arena.

One of the main shortcomings in the biotech sector is the failure of public-public coordination, which has blocked the successful registration of biotech products, upon which the development of the sector depends. This kind of problem is particularly relevant for cross-sector technologies like biotech, but it is relevant to any productive area that requires cross-cutting regulation. Emphasis on public-public coordination must be an essential issue in the design, implementation, and assessment of productive development policies. The five cases studied here show the difficulties of this kind of coordination.

Labor Union Capacity: Wage Bargaining Dialogue versus Long-term Vision

The labor union's role in the construction of the first barge in the shipbuilding case was constructive, mainly because it ensured labor harmony to help the consortium meet delivery deadlines. The sectoral councils with workers' participation also changed the logic of private-private relations, turning it into a more regular dialogue on longer-term issues, not just on short-term wages and working conditions. Some sources report, however, that the response of workers was more disappointing when unions were asked to participate in other strategic consultations or planning, as they seemed less prepared and—unless those consultations touched on salaries or jobs—less interested.

Time Horizons

In the five cases studied, time horizons for public-private interaction ranged from medium to long term. For beef traceability, there is a long-standing PPC tradition in agriculture policy. In the manufacturing sector, there are fewer precedents, but the precise and systematic work of cluster promotion programs can operate as a catch-up mechanism. A related issue is that policy continuity is a basic condition for attaining long-term objectives. There has been continuity since 2005 because the same political party has governed, but when parties change, this has not been the norm. Thus, the legal institutionalization of the sectoral council that is the objective in biotech is an interesting pathway to assure continuity in policy tools.

Policy Learning Spaces

Monitoring and assessment of productive policies, even if the policy design normally includes them, is totally absent in the productive development policies studied here. In all the cases, the absence of opportunities for learning was highlighted in order to be able to replicate successes or correct missteps.

The shipbuilding industry case illustrates well the effects of the lack of systematic opportunities for learning. There is no mechanism in place to learn from the technology transfer involved in the Spanish-Uruguayan joint venture. Moreover, absent such a mechanism, it will be anyone's guess whether the productivity gains achieved, and the associated managerial learning, can sustain the industry's competitiveness in the future. Given the resources invested, it would seem essential to have adequate learning strategies in place.

Concerning the infant industry protection and the truncated technological transfer, this process must be further documented in order to systematically understand what was invested by the state, and what learning took place. Without the appropriate policy assessment tools, the state will never learn from its good and bad experiences. The lack of management capacity at the level of the shipbuilding workshop plant managers and the neglect of learning in policy design must be better documented to fully understand the policy's developmental effects.

The Nature of Public-Private Collaboration

The nature of public-private collaboration depends on the different types of economic goods provided by productive policies for development. This last lesson is more a hypothesis to guide further research. The five cases reported how, through PPC, productive development policies have provided public and club goods. The nature of the goods provided has required different types of collaboration between actors.

In beef traceability, the productive development policy delivered a sanitary public good through PPC. This involved some innovative capacity to design the system, but it aimed to solve current problems of implementation. There is no organized mechanism involving PPC to enhance the system. This is reasonable to the extent that no private actor would individually benefit from the system's improvements because they are public goods. What is more, until now, there are few coordination mechanisms between private actors apart from the traditional representative entities. Where innovation is concerned and the possibility of rent appropriation appears, however, more sophisticated relationships seem to be looming on the horizon. The division of labor between private and public actors in the innovation network studied here is a good illustration of that.

In biotech, a group of entrepreneurs from AUDEBIO is playing a leading role, together with the government, in drafting the basic regulation of public goods for sector development. This could be because this regulation is considered more a club good than a public good, or because high-tech entrepreneurs may be more prone to contribute to productive activities. Currently, biotech is as insignificant to the economy overall as beef is significant.

The tourism and blueberry cases show that the cluster promotion program with its enabling state philosophy is useful to create club goods or specific institutions to regulate or organize the sector. When private actors mature, they are able to create more appropriable collective goods. In the blueberry case, however, the lack of adapted local innovation may be because there is still no clarity about the club goods that merit other PPC, such as the innovation network in the beef traceability case.

Appendix 6.1 Interviews

Beef Traceability	Sectoral Councils	Cluster Program
• Marianela Gonzalez, SNIG (MGAP) director • Carlos Paolino, OPYPA (MGAP) director • Daniel De Mattos, Sociedad de Criadores de Hereford, manager • Ely Navajas, INIA researcher • Daniel Garin, former advisor and former vice minister (MGAP). • Edgardo Vitale, DGSA (MGAP), official • Gonzalo Gonzalez, former MGAP minister (2001–2004) • Martín Buxedas, former OPYPA (MGAP) director • Pablo Caputi, INAC market unit director • Guzmán Tellechea, Asociación Rural del Uruguay • Luis Bianco, Cooperativas Agrarias Federadas • Pablo Gallinal, wintering producer • Juan Fonseca, cattle consignee • Juan Peyrou, cattle producer • Alejandro Hourcade, Frigorífico Canelones, manager • Carlos Mermot, PROMESUR consultant	• Adrián Miguez, Shipbuilding Sectoral Council coordinator • Carolina Da Silva, Biotech Sectoral Council coordinator • Danny Freira, Board of Directors of the Asociación Cluster Industria Naval del UruguaySebastián Torres, director, Nacional de Industrias, MIEM • Ricardo Brunner, logistics manager, Montes del Plata	• Mariana Sienra, PACC coordinator • Adrián Béndelman, PACC-OPP • Andrea Schunk, tourism director, Intendencia Municipal de Colonia • Carlos Cammaroti, former president Hotel Chamber, ATC president, Colonia • Martín Cuadrado, cluster facilitator

Appendix 6.2 Stenographic Records from Parliament Sessions

Livestock, Agriculture, and Fisheries Senate Commission	Livestock, Agriculture, and Fisheries House of Representatives Commission
• December 21, 2005: Daniel Garin and Edgardo Vitale, advisors to the MGAP • March 16, 2006: Rodrigo Herrero and Eduardo Hughes (FR); Fernando Mattos (ARU); Luis Bianco (CAF); Jorge Barrios (ADIFU); Daniel Belerati (CIF) April 27, 2006: Minister of the MGAP and advisors (Ernesto Agazzi, Edgardo Vitale and Daniel Garín) • May 4, 2006: No invitations; session with the six senators from the commission	• December 14, 2005: Rodrigo Herrero and Eduardo Hughes (FR); Fernando Mattos (ARU); Luis Bianco (CAF); Jorge Barrios (ADIFI); Daniel Belerati (CIF) • July 4, 2006: Minister of the MGAP (Ernesto Agazzi) and advisors (Edgardo Vitale, Daniel Garín) • April 6, 2010: Minister of the MGAP (Tabaré Aguerre) and Vice Minister (Daniel Garín) • July 12, 2012: Minister of the MGAP (Tabaré Aguerre), Vice Minister (Enzo Benech), and advisors (María Nela González and others)

Note: For further information go to http://sip.parlamento.gub.uy.

The International Experience: Toward Good Governance of the Public-Private Alliance Councils that Support Industrial Policies in Latin America

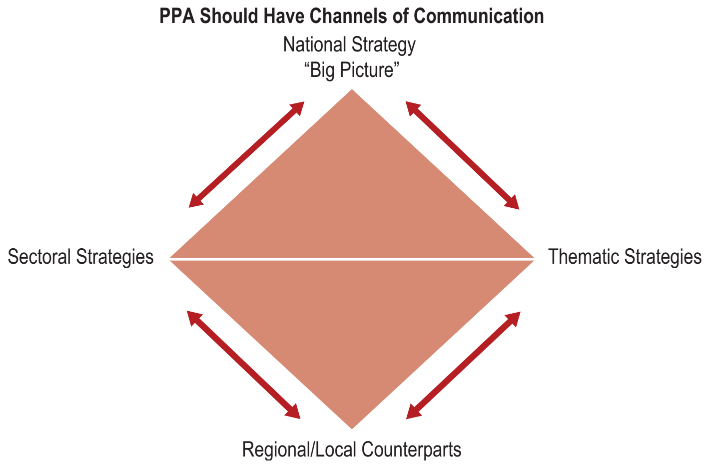
Robert Devlin

7

INDUSTRIAL POLICIES ARE EXPECTED TO MITIGATE BINDING CONSTRAINTS TO AN INCREASE IN PRODUCTIVITY, ECONOMIC TRANSFORMATION, AND SUSTAINABLE economic growth. These policies aim not only to enhance the productivity and competitiveness of existing industries, but also to directly and indirectly build more innovative local commercial and technological capability for economic growth and diversification at a pace and quality beyond that of autonomous market forces. Industrial policies also have been extended in relation to sunset industry shutdowns. In effect, when these policies are pragmatically aligned with markets, they are considered as "enablers" rather than as a substitute for market forces (Menon, 2010). Historically, industrial policies have contributed to the success of most countries catching up with richer countries (Chang, 1994; Devlin and Moguillansky, 2011; Lin and Monga, 2010).

Contemporary literature relating to industrial policies has emphasized the importance of public-private dialogue relating to economic policy as a way to develop and implement these policies (Evans, 1995; Devlin and Moguillansky, 2011; Karo and Kattel, undated; Rodrik, 2004; Wade, 2004). Such alliances supporting problem-solving dialogue constitute a more effective way to promote knowledge and understanding among market players to develop industrial policies than if governments alone were to select the policies and related initiatives.

Figure 7.1 Channels of Communication for Public-Private Strategic Policy Alliances



Source: Prepared by the author.
Note: PPA = public-private strategic policy alliance.

With regard to the strategies required for economic transformation and development, public-private dialogue can operate at various levels and at varying times.[1] One level is when the mechanisms are in place to support relatively broad national development objectives for economic transformation and development (Figure 7.1). Another level is when there is support for national strategies for specific sectors or cross-cutting thematic objectives, such as innovation. Dialogues also can take place at the regional, departmental, or municipal level.

Figure 7.1 illustrates the different levels of public-private dialogue, which should have available channels of communication that can enable a degree of coordination and synergy among them. Public-private dialogue can be established for short, medium, or long periods of time, or a combination thereof. This chapter will explore dialogues that are formally structured national councils (that is, a public-private strategic policy alliance – PPA), with a focus on strategic issues in relation to a country's economy as a whole and/or the mid-level strategies of Figure 7.1.

[1] It is important to note that public-private dialogues are not limited to economic transformation strategies, as they are also frequently used to influence government to adopt a specific economic reform. See, for example, Herzberg (2004).

A PPA can be analyzed from the perspectives of governance and impact. A holistic view would require an analysis of both aspects. This chapter, however, will only focus on the first: governance. The effects of PPAs are inherently difficult to evaluate (NESF, 1997; Schneider, 2010; USAID, 2003): to evaluate them, indicators are needed to measure the baseline, as well as the outcomes as they affect the national economy. In addition, an effective counterfactual would need to be developed. Hence, the evaluation of the impact would require a separate methodology and research agenda, going beyond the scope and resources available for this chapter. Evaluations are, in any event, valuable and can be done. There is sufficient evidence that PPAs can be effective at the national, regional, and local levels to contribute to the strategies that support economic growth and development.[2] Moreover, good governance is a necessary precondition for effective impact. Ensuring that governance is effective, therefore, will substantially contribute to the impact of PPAs.

To draw out principles of effective governance of public-private strategic policy councils, this chapter will examine the experience of a number of countries, especially the Czech Republic, Finland, and Ireland, that have relied on public-private economic policy councils for some time. The case of New Zealand—where a council was established to help the government introduce industrial policies—will also be examined.[3] The chapter will then look at why PPAs are important, explore their origins, examine their characteristics, and provide an analysis of the principles of

[2] See Baccaro and Simoni (2004) for different aspects of the effects of the Irish Alliance. Devlin and Moguillansky (2011) also examine how the Irish Alliance was central to the country's short- and medium/long-term strategy for adjusting to the economic crisis of the late 1980s. Fraile (2010) examines the impact of a number of tripartite alliance councils in developing countries to find positive contributions toward consolidating economic reforms and protecting social welfare. The World Bank (2011) examines the benefits of alliances in the Mediterranean countries, while Herzberg (2004) does the same for Bosnia and Herzegovina. See Griffiths and Zammuto (2005) for an analysis of how meat industries have evolved under four market governance systems: pure market, state governance, corporate governance of markets, and joint public-private governance, with the conclusion that the latter performed best.

[3] The cases relate to the first quarter of 2012. Hence, they are only examples and do not necessarily reflect current arrangements in place. Indeed, major reforms have been undertaken in the Czech Republic and New Zealand. For the Czech Republic, see http://www.vyzkum.cz/FrontClanek.aspx?idsekce=535919 (accessed January 8, 2016).

good governance based on the international experience. The final section puts forth the chapter's conclusions.

The Rationale for a Public-Private Alliance

Economic catch-up by a poor country toward a new technological frontier to increase productivity and economic growth can be facilitated by access to knowledge and capital. This is especially significant in lesser-developed countries that have experienced a substantial migration from subsistence farming to higher-productivity activities in the manufacturing and services industries in urban areas (Lewis, 1955). Achieving middle-income status, however, comes with its problems. Hence, more sophisticated industrial policy strategies to benefit from the advantages of catch-up should be in place to avoid being caught in the so-called "middle-income trap," which affects much of Latin America.[4]

The challenges to fully exploit the opportunities for gaining ground are many and varied.[5] To succeed, industrial policy must coherently develop, over political cycles, the medium- and long-term strategies to directly and effectively tackle challenges and constraints at the macro, meso, and micro levels.

During the interwar years and the early decades following WWII, the "mixed" economies of Europe that successfully developed their economies had strong state intervention in terms of policy strategy and direction. Similarly, less successful countries, as in the case of some countries in

[4] Some argue that the middle-income trap is conceptually and empirically flawed (Im and Rosenblatt, 2013).

[5] The challenges can be broadly categorized as weak market signals across sectors that retard economies of scale, innovation, and upgrading; incomplete markets in labor, finance, and technology; infrastructure barriers; information, coordination, and network failures; problems of appropriation of returns on innovation; weak public policy and administrative capacity that create "government failures"; and status quo bias, uncertainty, and unexpected external shocks. Some proponents of industrial policy go beyond the "market failure" justification for state interventions, which is based on a static neoclassical market framework (Bator, 1957). Other justifications include considerations of obstacles to learning and capability-building that can involve political, institutional, historical, cultural, and psychological barriers to undertaking new and upgraded economic activities. To compare and contrast this broader approach, see Peres and Primi (2009).

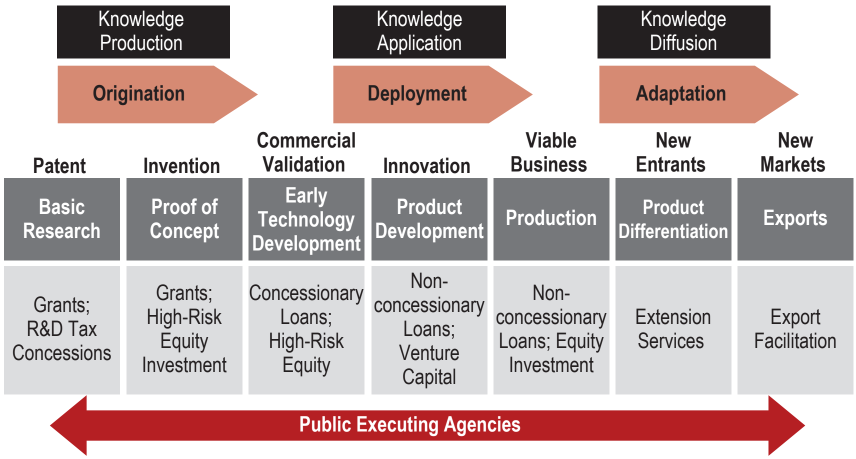
Latin America, experienced an era of state-led industrialization (Ocampo, 2006).[6] Governance of the market was hierarchical, with political systems and state bureaucracies exercising their authority through state enterprises and/or formal and informal directives aimed at the private sector to varying extents (Karo and Kettel, undated; Wade, 2004).

Today there are more opportunities, but the world is a more complex place for poor countries to catch up to richer ones. Globalization has taken hold, the liberalization of national and international markets has been far-reaching, and privatization has diminished direct state intervention in productive activities. The private sector is now, undisputedly, the engine for growth. Technological change and world competition are intensifying, globalization is creating world integration, and manufacturing and services are increasingly driven by global production chains, world networks, and domestic market-based industrial clusters. Innovation continues to increase, and the dissemination of knowledge is increasingly network-based on a global scale (Sabel, 2009). The policy space for state action is now bound by World Trade Organization (WTO) regulations with some ambiguous measures that require identification and navigation. Hence, today more than ever, all views are partial in assessing market developments (Devlin and Moguillansky, 2013; Radosevic, 2009; Sabel, 2009).

Governments must develop strategies to navigate this complex world economy and identify the constraints that hamper domestic growth. They need to design and implement public instruments and programs at the micro level that will incentivize private sector transformation and improve areas where markets may not be efficiently performing. As an example, Figure 7.2 illustrates the many areas that governments should support in terms of national innovation. Governments must ensure that there are no gaps in the various phases of innovation where a public-support program may be required to supplement market forces, and they must design the program in a way that it relates to the specific contextual framework of

[6] Latin America and East Asia, however, experienced the state presence and its interaction with the private sector in a different way. In the terminology of Evans (1995), regarding the relationship of the state with private markets, the Latin American state leaned more toward being a "demiurge" while, in East Asia, the state leaned more toward serving as a "midwife" for the development of new capabilities in the domestic private sector.

Figure 7.2 Public Support for National Innovation: Mind the Gap



Source: Prepared by the author.

firms within a country's heterogeneous productive structure.[7] This may require information to which governments do not necessarily have access in order to effectively develop and implement industrial policies or undertake associated interventions in national markets.

In a globalized world economy, firms have substantial information about their markets, business opportunities, and the constraints they face, including failures of government. However, employers often suffer from myopia and short-term perspectives, status quo bias cum risk aversion, coordination problems, and the like. While governments may not have access to better market information, they do have the advantage of being able to assess aggregate phenomena and propose strategic direction to facilitate investment and coordination, provide public goods to incentivize the private sector, and, of course, oversee social welfare.

Ultimately, governments are, as Hausmann and Rodrik (2006) point out, "doomed to choose" among the different policy options to support the private sector in exploiting market opportunities. The concept of government

[7] Phases are presented in a traditional lineal model, but in actual successful innovation systems the relationship is more often a circular flow in which the phases and components continuously interact with each other with feedback loops. See Dugan and Gabriel (2013).

and business working together in a collaborative way through a PPA is viewed as a way to contribute to the development of more intelligent strategies and effective public programs. A PPA enables more effective market-based productivity transformation compared to the government and each sector or firm addressing the challenges individually (and in a context of mutual distrust, as has occurred in Latin America). In other words, the whole can be greater than the sum of the parts in joint governance of the market.[8]

As Rodrik (2004) points out, the essence of modern industrial policy is not the policy outcome as such. Rather, it entails establishing a viable social process and institutional framework that will permit voluntary collaboration between government and business without the public sector being captured by special interests. Evans (1995) framed this relationship as the achievement of a delicate balance that permits the "embedded autonomy" of the state.[9] Other stakeholders may be able to contribute valuable insight and information, depending on the issues. Labor unions have relevant knowledge of the workplace, including in terms of wages and labor regulations that can affect enterprise and productivity. Academic institutions, on the other hand, have the technical expertise to apply some checks and balances to public-private dialogue. In addition, some organized social groups can, de facto, veto the allocation of public resources; hence bringing them into the dialogue can enhance public understanding of strategies, policies, and programs. Moreover, with globalization, developing countries are increasingly being governed by democratic principles, creating a demand for more civil participation and transparency in policy processes, as well as more public accountability for the policies that are implemented.[10] Latin America is no exception.

In recent years, Latin America has begun to implement new industrial policies that differ from those that were in place during the era of state-led

[8] Some analysts, such as Porter (2007), have traditionally argued that competitiveness and upgrading is the exclusive domain of corporate governance: business management, not nations, creates competitive advantage. This has been effectively critiqued (Machinea, 2007). More recently, however, Porter, too, alludes to the fact that a national strategy may make better sense (Porter, 2008).

[9] One also must avoid appropriation of the private sector by the state.

[10] In a broader framework, some have referred to this approach as the new emerging "public governance" paradigm (Bovaird, 2004).

industrialization (Devlin and Moguillansky, 2010, 2011, and 2013; Fernandez-Arias, 2010). An indication of this is the emergence of PPA councils in many countries in the region. These are designed to support industrial policies, but they have exposed serious governance flaws of one type or another, according to Devlin and Moguillansky (2013). A review of the governance of PPAs in countries that have had longer experience with them will provide Latin America with more insight into governance structures for such alliances.

It is important to note that PPAs for productive transformation do not only relate to the building of new capabilities in the private sector. The agents of government must become a credible and competent technical partner to the private sector if the latter is to commit the time and resources for serious collaboration. In setting its goals, the public sector should be capable of developing its national objectives coherently. It should follow through in implementing policy and effective support programs. All too often in Latin America, ministries and executing agencies that have an alliance with the private sector (e.g., those that oversee areas such as planning, industry, investment attraction, innovation, science and technology, and education) are the weakest in terms of manpower, management, and/or resources. Therefore, as part of an alliance agenda, there is a need for capability-building in the areas of human resources and finance in the public sector that relates directly to productive sector activities. This will enable government to effectively assume its role in the joint governance of the market (Devlin and Moguillansky, 2013). Without these capabilities, the private sector will likely ignore government initiatives, unless it sees an opportunity for rent-seeking.

The Corporatist Origins of Alliances

Some contemporary schools of economic thought have been somewhat skeptical of PPAs.[11] There is distaste for corporatist overtones, and a belief

[11] Doubts relating to the facilitation of private sector coordination go back to Adam Smith's *The Wealth of Nations* published in 1776. To quote Smith, "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or on some contrivance to raise prices....But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies, much less to render them necessary."

that self-interest can lead to attempts at collective action that degenerate into favors for special interest groups (Buchanan and Tullock, 1962).[12]

PPA councils originate from the corporatist structures that existed in Europe during the vulnerable interwar period, when efforts were made to minimize conflict between business, labor, and government. Some of these tripartite alliances had overtones of authoritarianism and special privilege for the groups represented, to the exclusion of others (Doctor, 2007). However, in the post-war era, "democratic or neo-corporatism" came to characterize collaboration between business, government, and labor, with some significant characteristics (Katzenstein, 1985).

First, there was the general notion of "partnership" that placed group interest into the broader notion of "public" interest. In other words, a sense of compromise was ingrained. Second, democratic corporatist structures relied on a centrally organized group representation of business and labor, or what Katzenstein called "peak" associations. The third characteristic was the continuous bargaining and coordination of diverging group interests. Wage pacts typically were an important part of such alliances in Europe; for example, they were a key element of the Swedish public-private alliance until 1983 (Alexopoulos and Cohen, undated), a component of the Irish Partnership between 1987 and 2008, and existed in Finland from the late 1960s until 2008. A fourth characteristic was technical expertise to provide credible analyses and data for setting the ground rules for bargaining and other issues to ensure a more rational and fact-based dialogue.

These aspects continue, in part, to characterize many of today's alliances.[13] However, depending on the country and its objectives, they can be less concentrated in terms of participation, less based on formal social "representation," and less exclusively oriented to bargaining. Moreover,

[12] This same doubt is expressed in so-called "new public management," which has been influential since the 1980s (Bovaird, 2004; Christensen and Laegreid, 2001) and now is being challenged by the emergence of "public governance" thinking, mentioned in Footnote 10.

[13] Successful cases in post-war East Asia supported industrial policies in forms of corporatism that were significantly different from Europe. They typically were a more closed relationship, limited to government and business collaboration, more authoritarian and fully "directed" by professional public bureaucracies, and more reliant on informal networks and communication.

many countries give more attention to methods that attempt to minimize the risk of state capture by special interests.

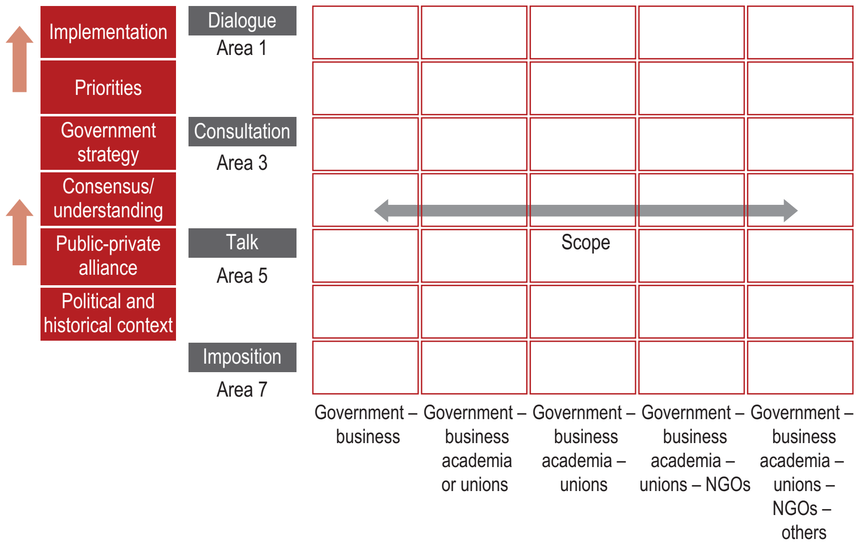
A modern PPA may have an advisory and consultative role with the aim of channeling information or interchanging points of view for policy development. However, the creation of a formal social partnership where there is broad national agreement on a strategy—and basic parameters for achieving it that involve rights and obligations—continues to be a goal in other cases. The latter type of alliance is a more complex one because—as Brinkerhoff and Brinkerhoff (2011) point out—it must integrate a sense of mutual interdependence among stakeholders with their individual organizational identity, as well as blend politics with technical expertise. The features of a social partnership are jointly determined goals, consensus-based decision-making, horizontal structures and processes, trust, synergetic interaction, and shared accountability. This is an obviously more ambitious mix than the former type of alliance, which, while not bereft of some of these characteristics, is more limited to the transmission of information and perspectives on policy direction.

The Playing Field of Modern Public-Private Strategic Alliances

In terms of a framework for PPAs, Figure 7.3 shows a playing field at the national level to support strategic policymaking. The far left column of boxes highlights the fact that alliances emerge from a path that is dependent on national politics (as well as cultural and historical factors); hence, there is no a priori formula regarding their structure. At the same time, the public-private alliance is established with the aim of achieving or promoting public understanding of strategic policy issues, or to reach public consensus for a strategy. It is government's role to govern, so government therefore must decide on the ultimate framework of policies for a development strategy and establish the priorities and the programs necessary to implement it.

The vertical rows of Figure 7.3 show the types of participation in the alliance. It can be a public-private alliance relating only to business, or it can incorporate a combination of institutional stakeholders, typically related to labor, academia, nongovernmental organizations and, perhaps, political parties.

Figure 7.3 The Playing Field for Public-Private Alliances



Source: Prepared by the author based on Devlin and Moguillansky (2011).

The horizontal rows represent the nature of discourse within the PPA over a nondiscrete continuum. Area 1 illustrates an alliance that aims at dialogue and consensus regarding decisions. Area 3 is an alliance where government consults alliance members about its policies, but makes no pretense of establishing a consensus. The main objective is to gather opinions as inputs for a decision on a strategy and its implementation. However, the consultation can contribute—directly or indirectly—to at least an understanding by stakeholders of a government's intentions. Another type of alliance, Area 5, is one that simply promotes conversation ("getting to know you") among parties that previously had little or no structured form for interaction. Finally, Area 7 is a purely bureaucratic and hierarchical alliance, where the government imposes a strategy on the stakeholders with which it works.[14]

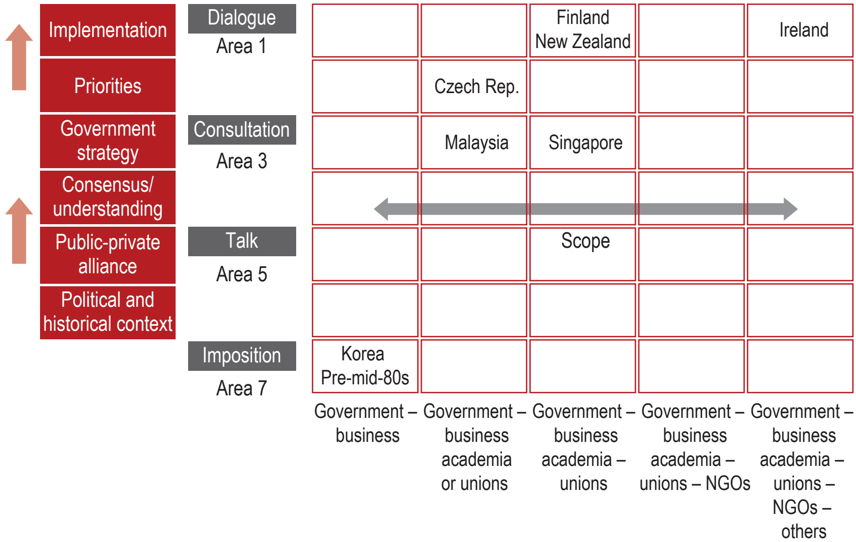
Figure 7.4 illustrates the position of players on the playing field by including selected alliances in particular countries, some of which are described below.

[14] Note that vertical access is stylized, and day-to-day alliances may reflect discourse in any of the areas of Figure 7.3. However, only one of the areas will dominate and characterize the alliance discourse.

- Ireland's National Economic and Social Council (NESC), established in 1973, has had the broadest participation, incorporating not only NGOs as a representative group but also—most recently—an environmental pillar of representation.[15] For most of its existence, the council has aimed toward consensus to advise government on development issues and its medium-to-long-term strategy.
- Since the 1990s, Finland's industrial policy has had an overriding focus on technology and innovation, so much so that this has ceased to be a mid-level thematic issue and has become a complete development strategy. Preparing the guidelines for government support programs and the funding of basic and applied science and technology, as well as innovation, was the responsibility of the Science and Technology Policy Council (STPC), with the participation of government, the private sector, labor, and academia. Like the NESC in Ireland, the STPC operated through dialogue and consensus. The Research and Innovation Council replaced the STPC in 2008.
- The Czech Republic has a tripartite council for economic and social agreement comprised of representatives of government, business, and the labor market. It provides advice on government policy and development strategy and is a consultative forum for new laws. From its origins in 1990, it was more a forum for discussion (Area 5) for groups whose interests had little interaction—or were opposed to one another—during the communist and early post-communist era.[16] In its current capacity, the council straddles Areas 1 and 3 of Figure 7.4, given that deliberations do not always lead to public consensus and disagreements tend to spill into the public domain.
- In New Zealand, there was until recently the Growth and Innovation Advisory Board (GIAB). Established in 2002, it included government, business, labor, and academia. It is placed in Area 1 of Figure 7.4, since it sought consensus on its recommendations.

[15] The NESC started out as a tripartite business (including farmers), labor, and government forum, but representation has expanded over time. By the 2000s, the NESC had added NGOs to its representation and, more recently, has included an environmental pillar.
[16] Its name at that time was the Council of Social Agreement.

Figure 7.4 Players on the Playing Field for Public-Private Alliances



Source: Prepared by the author based on Devlin and Moguillansky (2011).

- Singapore and Malaysia are placed in Area 3 of Figure 7.4. Both countries hold in-depth consultations with the private sector about development strategies, without necessarily intending to gain consensus. In Singapore, until recently, the Economic Development Board was the main "brain" of the country's development strategy.[17] It received advice from a board of directors composed of the private sector, the labor union (which is a quasi-government entity), and academia. Malaysia's Economic Planning Unit collaborates with government, enterprise, and academia in the preparation and implementation of its National Plans.
- Before its democratization in the 1980s, Korea had a hierarchical alliance between government and business, where the public bureaucracy, led by the Economic Planning Board and supported by government-sponsored research agencies, "informed" the large

[17] In the 2000s, leadership was transferred to a new agency, the National Research Foundation (NRF), advised by the Research, Innovation and Enterprise Council. The alliance membership was made up of government, business, and academia.

Cheabols of its strategy. It had a "carrot and stick" approach to ensure that the five-year National Plans would be implemented by the private sector. By the mid-1980s, with the advance of industrialization and the emergence of a democracy, economic liberalization led to national planning being abandoned. Korea's strategic policy leadership shifted to the Ministry of Finance and Economy and the Ministry of Science and Technology, where advice and coordination is provided to the government by the National Science and Technology Council, a more contemporary alliance evolving towards Area 1 in Figure 7.4. The *Chaebols* now act independently of government, but do so in the framework of Evan's (1995) "husbandry," whereby the public sector supports these firms when they face an exceptional challenge.

It should be noted that some of the alliances incorporate multinational firms that are hosted by a country. This occurs, indirectly, in the Czech Republic and Ireland through membership of multinational firms in the associations representing the private sector in their respective councils. In Singapore, the Economic Development Board (EDB) includes the CEOs of the local subsidiaries of multinational firms. Moreover, the government of Singapore has organized a permanent international advisory panel made up of the CEOs of major multinational firms. It has also established other advisory councils comprised of distinguished international scientists in order to create a global network of contacts for strategic intelligence and the transfer of knowledge (Kumar and Saddique, 2010).

Types of Alliances

Alliances at the national level can be structured as permanent councils, ad hoc forums for time-sensitive issues, or informal networks. In practice, such platforms for discourse can and do coexist, although one, or a combination of them, can be the dominant form of public-private collaboration on policy issues. The time an alliance is in place can vary: structured forums and informal networks remain for the medium to long term, while ad hoc forums, although time bound, can eventually evolve into more permanent structures. In the Czech Republic, Finland, and Ireland, the dominant form of a public-private alliance is a permanent council. In New Zealand, the dominant vehicle is a hybrid of structured and ad hoc forums and informal networking. In Singapore, the alliance is made up of permanent forums and informal networking. Finally, in Malaysia, alliances are comprised of ad hoc forums and informal networking.

Governance of Public-Private Strategic Alliance Councils

As mentioned earlier, good governance of an alliance should contribute to effective strategic economic policymaking and its impact. There are three key characteristics of such governance:

1. The intangible and tangible aspects of governance are equally important—both must work in tandem to be effective;
2. There are trade-offs in effective governance, where a delicate balance has to be struck; and
3. While national alliances must essentially be sui generis, the experience of countries can support development of relative principles. In this regard, reference will be made to the experiences of the Czech Republic, Finland, Ireland, New Zealand, and on occasion other countries.

Among the most important intangible factors is that with *political leadership and a commitment by government,* an alliance council can be effective. The opposite is thus also true: a government's lack of commitment and leadership can weaken a council. An example is New Zealand, where the Labour Government, over its three consecutive terms from 1999 to 2008, progressively lost political interest in the Growth and Innovation Advisory Board. As a result, the board's influence weakened commensurately.[18] Leadership can be difficult to exercise, in particular when a coalition government is broad and politically diverse, as was the case in Finland

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[18] It is not completely clear why this is so, but some have attributed it to the government not getting all the engagement it had hoped for from the business community in support of its economic transformation program, which would have been a big shift from the neo-liberal policy framework that had governed markets since the mid-1980s (interview with Nigel Haworth).

during the late 2000s. The government of the Czech Republic, for a short period in 1997, lost interest in the country's Council of Economic and Social Agreement (RHSD CR), given the president's erratic political commitment to the tripartite forum. Government interest in an alliance council can also be affected during political cycles, when it may be viewed as a tool of the opposition, as happened also in the case of New Zealand when the conservatives came into power in 2008. In lieu of being reorganized, the GIAB was closed down. Hence, for an alliance council to remain as an entity and an effective tool through political cycles, its raison d'être should span across the political spectrum. That will more likely occur if it does not appear to be an exclusive political tool of the incumbent government. In essence, councils should be councils of state and not councils of government.

Clarity of purpose is another important intangible. When an alliance council is established, participants and the public at large should be clear about what the council is supposed to achieve. Purposes that would be counterproductive are if the government's underlying motive is to use the council for short-term political "window dressing," or to manipulate and influence the council and its members to its own political advantage.

A government should clarify the degree to which it wants an alliance council to be the primary channel of communication for stakeholders vis-à-vis the more traditional bilateral consultations and lobbying by social groups and firms. Otherwise, the legitimacy of the council and its relevance as an interface with government officials could be eroded.

The balancing of trade-offs, another intangible, relates to the lack of a set formula for council governance. Indeed, there are many trade-offs that will need to be managed with good judgment.

Culture is a fourth factor that can influence the nature of governance; that is, cultural norms can influence good governance. For instance, Finland's Science and Technology Policy Council has no procedures for financial disclosure or measures relating to conflicts of interest of council participants. A mutual understanding exists among council members that allows them to know when it is appropriate to recuse themselves.[19]

[19] Members of the STPC were surprised when they were questioned about the safeguards relating to conflicts of interest.

The small size of Finland and its relatively high standard of transparency enable such a practice. Meanwhile, some countries have a culture of strong distrust between social groups. Governance, therefore, requires the necessary structure and procedures to promote social cohesion and common purpose.

Backdrops will also have an influence on the nature of good governance. For instance, the nature of effective governance will be influenced by whether the council is addressing long-term or time-sensitive challenges, or facing economic crises or major political and/or economic transitions.

With regard to the tangible aspects of good governance, the successful outcomes of a PPA will be largely dependent on its structure. This will include the principal mandate, budget, representativeness of participants with respect to goals, procedures, technical support, and types of discourse that will be encouraged, among other factors. Achieving the appropriate institutional design should be considered an exercise of discovery that will involve trial and error in an idiosyncratic environment. Hence, local adaptations and redesigns are part of the good governance equation (NESF, 1997). A review of several tangible governance issues, drawn from the sample countries, will be discussed in the following subsections.

Establishing Objectives

When establishing a PPA council, statutory regulations should be clear, with objectives that are realistic and relevant. Box 7.1 summarizes the council statutes of the sample countries.

A common element of Box 7.1 is that the PPAs' most important mandate is to provide advice to the government. The specificity of the mandate depends on the councils' agreements on agendas and work programs. As mentioned earlier, it is government that must govern in the public interest and, hence, only it should have the final decision on policy and its specific structure. Formal partnerships, nevertheless, do generate agreement(s) with rights and obligations. For example, Ireland's Tripartite Partnership wage pacts have been set within the strategic framework of parallel agreements, emerging out of the National Economic and Social Council, that contain recommendations for economic policy on such issues as taxes, social safety networks, and support of industrialization and diversification.

Box 7.1: Statutory Regulations of Selected Public-Private Policy Councils

Czech Republic

Council for Economic and Social Agreement (RHSD CR)

The RHSD CR is an advisory and bargaining forum that "shall be a joint voluntary negotiating and initiative body of trade unions, employers, and the Government of the Czech Republic for tripartite negotiations aimed at reaching an agreement on essential issues of economic and social development. The RHSD CR shall enable maintaining, through a mutually respected form of dialogue, social peace as a basic precondition of positive development of the economy and the living standards of citizens" (RHSD CR, 1997).

The council's remit for negotiations is in the major economic and social areas of the nation and can involve short- as well as long-term perspectives on:

- Economic policy
- Labor law relations, collective bargaining, and employment
- Social issues
- Wages, salaries
- Public services and public administration
- Labor safety
- Human resource development
- Integration into the European Union

Research and Development Council (RDC)

The RDC's mandate is to advise the government on the National Research and Development Plan, the accompanying programs and subprograms, and the annual total public expenditure and distribution among ministries and universities/research centers (Czech Republic Parliamentary Act 130, 2002).[1]

Finland

Research and Innovation Council (RIC) (former Science and Technology Policy Council)

The RIC advises the government and its ministries on "important matters relating to the targeting, follow-up, evaluation and coordination of research, technology and innovation policy. The council shall assist the government and its ministries in matters within the purview of the council" (Finland Ministerial Decree 1043, 2008). These matters are:

(*continued on next page*)

Box 7.1 (*continued*)

- Follow national and international developments in research, technology, and innovation
- Evaluate the state and the developments within the sphere of its authority
- Address major matters relating to the development of science, technology, and innovation policy, including the related human resources, and prepare proposals and plans concerning these for the government
- Address matters relating to the development and allocation of public research and innovation funding on a preparatory basis for the government
- Coordinate government activities in the field of science, technology, and innovation policy
- Execute other tasks assigned to it by the government.

Ireland

National Economic and Social Council (NESC)

The original mandate of the NESC, as agreed upon by the participating interest groups, was as follows: "The main task of the National Economic and Social Council shall be to provide a forum for the discussion of the principles relating to the efficient development of the national economy and the achievement of social justice, and to advise the government[2] on their application." The council is to concern itself with, inter alia, the following (NESF, 1997):

- Realization of the highest possible levels of employment at adequate levels of compensation
- Attainment of the highest sustainable rate of economic growth
- Fair and equitable distribution of income and wealth of the nation
- Reasonable price stability and long-term equilibrium in the balance of payments
- Balanced development of all regions in the country
- Social implications of economic growth, including the need to protect the environment

The reports, prepared by the NESC, are to be transmitted to the government for its comments, and a published version, in turn, is sent to Parliament. The procedures of the council are self-regulated (NESC, 2011b).

(*continued on next page*)

Box 7.1 (*continued*)

The statutory function was restated in a 2006 National Economic and Social Development Office Act as follows: "The functions of the council shall be to analyze and advise the Taoiseach [prime minister in Gaelic] on strategic issues relating to the efficient development of the economy and the achievement of social justice and the development of a strategic framework for the conduct of relations and the negotiation of agreements between the government and the social partners."

During 1987–2008, the NESC's triennial report and recommendations for the economy and industrial and social policy also framed the context for the three-year, centralized labor-business wage bargains that were brokered by the Ministry of Finance in the name of the Irish alliance, or Social Partnership.[3] During the 2008–2009 economic crisis, unions pulled out of the partnership.

National Competitiveness Council (NCC)

The NCC is an independent body established by the prime minister to provide advice on competitiveness issues facing the economy and advance recommendations on policy. The NCC was an outgrowth of Partnership 2000 (Department of the Taoiseach, 1996). More specifically, the main obligations of the NCC are to:

- Prepare an annual report for the prime minister on competitiveness policy with a focus on the challenges of the business sector over the medium term and respond to them
- Prepare an annual report benchmarking Ireland's competitiveness (NCC of Ireland, 1997)

New Zealand

Growth and Innovation Advisory Board (GIAB)

The GIAB was stablished by the prime minister "to provide high-level, independent strategic advice to the prime minister and ministers on growth and innovation issues."[4] The mandate was to:

- Provide high-level strategic advice on the overall shape, direction, and priorities of the government's growth strategy and its various themes
- Provide strategic advice on particular issues, such as how to promote sustainable business

(*continued on next page*)

Box 7.1 (*continued*)

- Act as a catalyst for effecting change, for example by using the persuasive power of members to bring disparate interests together to address particular issues
- Serve as a mechanism for integrating perspectives and building consensus on growth and innovation issues.

The GIAB's mandate was designed to develop guidelines, rather than detailed policy advice.[5]

Source: This box was prepared by the author based on official information and interviews.

[1] The council was recently reformed and renamed the Research, Development and Innovation Council.

[2] The interlocutor to transmit advice was originally the Minister of Finance. Between 1977 and 1980 it was the Minister of Planning. Since 1980, it has been the Office of the Prime Minister.

[3] The Partnership contributed to labor peace, at least until the early 2000s, and promoted wage restraint (Baccaro and Simoni, 2004). Wage negotiations were outside the NESC, but the council's consensus principles guided the tripartite discussions.

[4] The original source was the website of the Ministry of Business, Innovation and Employment at www.med.govt.nz/templates/page_40405.aspx. But the GIAB page was closed subsequent to termination of the board.

[5] Ibid.

However, councils usually are not involved in the day-to-day business of individual stakeholders, who often have their own channels of communication with government. When a council enters into the specifics of policy, it can complicate agreements and may increase the risk of conflicts of interest and rent-seeking, which could erode trust. Moreover, it could lead to collusion with government. Consequently, in terms of governance, it is recommended that the advice of PPAs be only specific to the principles, guidelines, directions, and selected options for policy, framing them into a common understanding among stakeholders. Having said that, council recommendations should avoid ambiguity and, therefore, be operationally and politically relevant. This is a trade-off that must be balanced in governance of the council.

Most of the sample countries tend to strike this balance, with the exception of the Czech Republic, where the two councils enter policy specifics. The RHSD CR is a tripartite bargaining table on day-to-day policy issues and future strategy. For its part, the Czech Research and Development Council (RDC) de facto manages R&D plans, policy, programs, and budgets. The

RDC's work is primarily to advise the government on its national plan and the programs for R&D, as well as the annual budget. However, its advice is rather compelling in terms of national plan content and budget allocations.[20] As mentioned earlier, the Czech tripartite RHSD CR receives the government's proposed laws for comment before they are sent to Parliament.[21] It also debates government policies in areas such as taxes, infrastructure spending, labor relations (except wages, which are negotiated outside the council), and regulatory frameworks. While the council deliberates on long-term issues of national vision and competitiveness, its recent focus has been mostly on fleshing out tripartite positions on short-term policy issues/laws and providing feedback to the government.

Finland's Research and Innovation Council (RIC) (the former STPC), similar to the Czech Republic's RDC, provides advice relating to science, technology, and innovation. In the case of the former STPC, every three years, it submitted a strategy proposal or guidelines for research and innovation, and it recommended the relevant budget allocation. The strength of the budget recommendation was typically strong. However, that outcome relied primarily on the prestige of council members and the political engagement of the Minister of Finance rather than on any rule as such. Executing agencies, such as the Academy of Finland and Tekes (the Finnish funding agency for innovation), traditionally were expected to (and typically did) strictly adhere to the triannual guidelines of the STPC in their annual work programs (Devlin and Moguillansky, 2011).[22] Ireland's NESC submits at least one major report every three years recommending medium- and long-term economic and social policy direction to the prime minister.[23] As mentioned previously, this has established

[20] In its new reformed role as the Research, Development and Innovation Council, the council is more powerful and a quasi-ministry for support of science, technology and innovation.

[21] There is a similar procedure for councils in the Republic of Kazakhstan.

[22] But they are free to determine how to meet the guideline objectives. At the time of this writing, it was unclear as to the degree to which the new RIC would mirror the procedures of the STPC.

[23] Its credibility rose sharply in 1987 based on its recommendations that included short-term adjustments in the face of fiscal and balance of payments crises, coupled with messages pointing to the need for medium-long term industrial policy (NESC, 1981).

a backdrop for parallel triannual tripartite wage settlements that have been a major component in the Irish Partnership. The current government has expressed a desire to have the NESC focus more on short-term issues, perhaps as a reflection of the urgency for crisis management (NESC, 2011a). Some members of the Irish Partnership, however, do not wish to lose the medium- or long-term focus on policy matters.[24] Ireland's National Competitiveness Council (NCC) advises the prime minister on Ireland's competitiveness. Its major output is the annual Competitiveness Scorecard, which "redlines" the danger areas in the Irish economy.[25] Finally, New Zealand's GIAB provided advice at high levels of government relating to the issues in its mandate. Outputs were informal (briefing memos, private press briefings, contacts with senior officials) and reports were issued on a formal basis on topics such as sector performance, innovation, workplace reform, and infrastructure development. These outputs tended to focus on the big picture rather than on policy details.

In terms of objectives, an additional two points should be raised. First, the traditional corporatist objective of minimizing social conflict still underpins most of these alliances. The interest in social peace is explicit in the statutes of the Czech RHSD CR (see Box 7.1). Many in Ireland believe that the Social Partnership has been an influence in maintaining labor peace. Moreover, some have expressed the belief that stakeholder participation and a sense of ownership in the NESC has contributed to limiting wide dissatisfaction about the effects of the current crisis to the voting booth. In any event, social peace is a legitimate political goal of any nation's development strategy.

All the PPAs mentioned emerged in response to some kind of crisis, or were empowered by one. While the NESC was created in the 1970s, it was empowered by its recommendations for adjustment and the introduction of industrial policies in the face of the severe fiscal and balance of payments problems of the late 1980s. The Irish Social Partnership emerged as a consequence. Finland's STPC was empowered by a housing finance crisis arising in the early 1990s, as a result of an episode of

[24] From interviews with stakeholders in the NESC.

[25] For example, see NCC of Ireland (2011).

financial liberalization, and the fall of the Soviet Union, a major economic partner. The Czech RHSD CR materialized out of the fall of communism and the accompanying severe labor conflicts, coupled with an emerging private sector and the need to integrate ex-party members. The New Zealand GIAB arose because of hostile relations between a new Labour Government and the business sector, coupled with lagging productivity and growth for many years. It also was motivated by Labour's political need for engagement with business in order to launch its strategic industrial policy program and have its support for the goals of economic transformation (Haworth, 2008). On the other hand, while the economy's performance was not stellar, it was not in crisis, which may have led to a degree of apathy on the part of the business sector.

The second point relates to the fact that, while one cannot set a rule, focusing on medium- to long-term issues seems to be the natural setting for PPAs. Governments typically need ways in which to escape from routine pressures and focus on strategic longer-term policy. The contextual inputs from stakeholders can be valuable. Short-term policy issues are usually well taken care of by local think tanks and public opinion polling. However, participants in the Czech tripartite RHSD CR, which recently has been primarily a short-term policy bargaining table, find their focus very much in the national interest.[26] In any event, a way in which to balance short- and long-term policy involvement may be to focus on work programs for medium- to long-term policy direction and monitor short-term policy implementation for consistency with the longer-term objectives.

Legal Status

Experience suggests that, in most cases, a PPA can usually operate effectively regardless of whether it is created by a legal entity, a government decree, ministerial orders, memoranda of understanding, or similar instruments. The Czech RHSD CR is based on a voluntary agreement among the tripartite members themselves, while the corresponding council in the neighboring Slovak Republic is written into the Slovak Constitution. Both councils function equally well (Herzberg and Wright, 2005).

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[26] Interviews with council members.

The Czech RDC is an advisory body established by an act of parliament, while Finland's corresponding advisory body, the RIC, is based only on government decree. Although the RDC is similar to the other councils, its recommendations for budget allocations relating to national R&D have been very close to representing a public decision. This, coupled with the fact that members assume state employee status, may explain the need for a legal framework.[27]As mentioned earlier, Finland's ex-STPC and today's RIC were also established as advisory bodies that make recommendations for public expenditures for science, technology, and innovation. While the STPC was very influential in the 1990s and early 2000s in relation to the national budget, its influence depended very much on the prestige of council members and their degree of engagement with the Minister of Finance. In other words, it was not presumed that the RIC's guidelines would necessarily be adopted, as was the case with the Czech Republic's RDC.

For developing countries that still lack a stable political culture, legal status can be a way to ensure that a council survives a hostile government (and maintains its institutional memory) until the election of a more dialogue-friendly one. However, legal status could also make it more difficult to modify or terminate a dysfunctional council—another trade-off. In addition, with legal status there is always the risk that the executive or congress/parliament will feel threatened by what it may interpret as co-government.[28] Finally, when the strategic policy alliance council is a board of directors of a statutory agency, like Singapore's EDB or NRF, it must of course be written into law.

Council Membership

There should be a distinction between representation and governance. In the former, the participant speaks on behalf of a stakeholder group, while

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[27] According to the Czech Republic Parliamentary Act 130 (2002), "The Research and Development Council shall deliver to the Government the final proposal of research and development expenditure to be covered from the state budget, their division and the medium-term outlook of research and development support. After the matter is discussed within the Government, the Ministry of Finance shall include it in compliance with the budgeting rules into the draft act on the state budget."

[28] This has occasionally occurred with Panama's National Dialogue (*Concertación Nacional*) and Peru's National Agreement (*Acuerdo Nacional*).

in the latter, the participant acts independently to oversee an entity, based on an objective and set of procedures. PPA participation is usually of the representative type, although there are arrangements where members can participate as advisors in a personal capacity. PPAs that are formed as a board of directors of a public statutory agency, such as the board of Singapore's EDB and NRF, are an example of governance.[29] A first-order task in the formation of a council of the representative type is the selection of stakeholders as members who are relevant for issues that fall under the mandate of the council and are truly representative of the group. This should help minimize the risk of rent-seeking. Selection of respected technical and academic members with relevant expertise further reduces risks, as they can provide checks and balances for the deliberations of the council. Stakeholder representation can be "tight" or "loose." Box 7.2 describes the types of participation of the example country councils.

Several insights can be drawn from Box 7.2. Representation from centralized associations has the advantage of ensuring institutional technical support for the entity and high member density for representativeness (Donor and Schneider, 2000).[30] On the other hand, the need for mediation and reconciliation, relating to the many interests, may dilute the contextual information provided and weakens the positions. This can be somewhat offset if the votes are weighted, as in the case of the Czech Confederation of Industries, which is represented in the Czech RHSD CR.

A PPA with strong institutional representation is prone to self-interested members and the political ideology of the stakeholder groups, as in the case of the Czech RHSD CR, which, in recent years, has acted as a bargaining forum. Discussion can be very tense and agreement difficult to achieve, unless a prior accord is reached, for example, between the private sector and labor unions. This makes the council a very powerful source of advice for the government that can forge a tripartite agreement.

[29] The board of the EDB has no fiduciary responsibilities and is limited to advice. The public-private boards of the executing agencies in Ireland, such as Enterprise Ireland and the Irish Industrial Development Agency (IDA), do have fiduciary responsibilities.

[30] If associations represent the stakeholder institutions, it is important that those associations be competent. In the past, Spain has provided financial support to its associations to foster credible dialogue with government (Devlin and Moguillansky, 2011).

Box 7.2: Participants in Selected Public-Private Strategic Policy Councils

The "tightest" representation among the examples of councils cited in this chapter is the Czech Council of Economic and Social Agreement (RHSD CR). Nominations are made by the two national business confederations (seven representatives) and the main confederation of trade unions (also seven representatives). Katzenstein (1985) calls these "peak" associations.[1] The government has eight representatives from ministries, and the prime minister is the chairperson. The term of appointment is for four years. The government must accept the nominations submitted by the stakeholders.

With regard to Ireland's National Economic and Social Council (NESC), stakeholders submit nominations for representation of the business sector (four), labor (four), farmers (four), the volunteer sector (NGOs) (four), and the environment sector (four). The prime minister selects from the nominations and names the representatives for a three-year term, with the possibility for renewal. The prime minister also has the discretion to name three to eight academic/technical experts. The chairperson is the general secretary of the prime minister's office. The labor, business, and farmer nominations emerge out of centralized associations.

For Finland's Science and Technology Policy Council (STPC), the Ministry of Education and Culture requested nominations from the Academy of Sciences, Tekes (the Finnish funding agency for innovation), the Finnish Confederation of Industries, trade unions, UNIFI (the association of universities), and the Union of Managers. The minister then selected and appointed the members of the council, ensuring that one member each was appointed from those entities. Total membership cannot exceed 18; the last council had 10 appointed members and eight government members, including the prime minister, acting as chairperson.[2] The appointed members are expected to perform in a personal capacity and not as a representative of a stakeholder group. The term is for the period of the government in power. For Finland's new Research and Innovation Council (RIC), while it had not named its members as of early 2012 (those from the ex-STPC were its de facto members), the new mandate stipulates having fewer quota-based nominations from specific stakeholder organizations, so that more members with specific expertise can be nominated, especially in the field of innovation.[3] The Czech Research and Development Council (RDC) membership depends on nominations that the council chairperson (the prime minster) solicits from specific entities involved in financing R&D from public funds and those institutions involved in R&D, "in particular the Academy of Sciences of the Czech

(*continued on next page*)

Box 7.2 (*continued*)

Republic, the Grant Agency, public universities and colleges, ministerial and other research institutes and institutions supporting development and also representatives of the professional public proposed by natural persons involved in research and development."[4] The chairperson submits the names of 15 candidates to government for approval. Members act in a personal capacity. The term is for four years, nonrenewable.

With regard to the Irish National Competitiveness Council, the Minister of Jobs, Enterprise and Innovation selects, at his or her discretion, the members and the chairperson. The members must come from the centralized employer and union organizations, from among recognized experts of competitiveness, the ministry, and from Forfás (a think tank under the aegis of the ministry). In 2011, the council's composition included business (nine representatives), labor (one), academia (one), a chairperson, one person nonaffiliated, and government (three). Members act in a personal capacity, as opposed to officially representing a specific sector or stakeholder interest. Their term is for four years, with the potential for renewal. The minister consults other ministers and nongovernment sources before making the appointments.

The members of New Zealand's Growth and Innovation Advisory Board (GIAB) were directly invited by the Minister of Economic Development, after having solicited nominations and undertaking prior consultation with the government's cabinet. The advisory board could have up to 21 members. In 2008, the membership numbered 17: unaffiliated business leaders (eight), employer and union organizations (four), independent experts (two), and government agencies (three). The chairperson was from the business sector. The level of representation was at CEO level. However, the selection tended to avoid nominees who were hostile to the policies of government.

Source: Prepared by the author based on official data and interviews.

[1] Four of the seven representatives of business and labor, respectively, are permanent and three can be rotated, according to the issue being discussed.

[2] See www.minedu.fi/OPM/Tiede/tiede-_ja_teknologianeuvosto/?lang=en. More recently, the number of government representatives was increased to 10 to accommodate a broad coalition government.

[3] See http://www.research.fi/en.

[4] See www.vyzkum.cz/PrintClanek.aspx?idsekce=10117&jazyk=CZ.

Moreover, bargaining and a focus on short-term policy issues ensure that council advice is at, or close to, ground level. Regardless of whether there is an agreement, it is believed by the state that the RHSD CR serves as a useful sounding board for policymaking.[31] Institutional representation in the Irish NESC is relatively tight and bargaining is inherent in its deliberations. As will be discussed further, however, bargaining takes place with a strong ethos and the aim to generate mutual understanding. Moreover, the NESC can emit only consensus reports. So while representatives can never fully take off their "team t-shirt," they do sometimes, depending on the issues and context, partially slip out of that t-shirt to accommodate agreements.[32] The council's strong mandate to reach agreement, coupled with its focus on the medium to long term, results in recommendations that are higher over ground level than those of the Czech RHSD CR, but still sufficiently concrete to achieve policy relevance and/or influence (NESF, 1997; O'Donovan, 2010). As mentioned earlier, the current Office of the Prime Minister of Ireland has requested that the NESC concentrate on short-term issues (NESC, 2011a). Regardless of member concerns, if the council were to shift its attention to short-term policy, it would probably have to adjust aspects of its governance to accommodate the new mandate.

PPA councils that have membership acting in a personal capacity should in principal deliberate without a "team t-shirt" on. This has the advantage of potentially releasing unfiltered individual technical and political expertise. The disadvantage is that the advice and agreements may lack broad political support and therefore may go unheeded by the government. This appears to have happened to some degree in the Irish National Competitiveness Council. There also is a higher risk of personal conflicts of interest. In addition, although in this governance framework bipartisanship is expected, remnants of partisanship can still influence policy advice. The Irish NCC and Finnish STPC/RIC have generally managed to avoid the tint of stakeholder or self-interested deliberations.[33] However, that has not been the case with the Czech RDC, which (prior to a major reform) focused more on protecting the existing allocation of public R&D funding for its member constituencies at the expense of

[31] Interview with a senior public sector representative on the council.
[32] The Prime Minister's Office has recently raised the idea of representatives collaborating more informally (NESC, 2011a).
[33] Interviews with council members.

seriously evaluating national plans and programs and more effective budgeting.[34] The quality of council membership is important. Its composition should represent the council's mandate, and the members should be considered competent and be highly respected by the public. Having a local champion for the mandate of the council is another asset (Herzberg and Wright, 2006) and can be extremely helpful in maintaining the cohesion of the council.

As mentioned, the Finnish RIC is planning to reduce its quota-based membership in order to allow for more members with expertise in innovation.[35] Overly politicized members can erode the quality of deliberations. When a prime minister or minister has discretion in accepting stakeholder nominations in representative-based councils, there may be space to carefully negotiate alternative, less disruptive names without necessarily weakening the leadership credentials of the representation. This discretion in accepting nominations is functional only if the political leader leads in the interest of the public good and the mandate and legitimacy of the council (which leads back to the intangible of political leadership and commitment). The irrevocable nomination of labor representation in the Czech RHSD CR has, in the past, resulted in the inclusion of highly politicized members. The current labor representative is politically independent and, according to the private sector members of the council, this has enabled productive discussions.[36] Representation of government ministries should support the PPA's mandate and at the highest level ensure political credibility and relevance in relation to institutional membership. It is no surprise, therefore, that the inclusion of the president or prime minister is a common practice in the sample cases.

[34] Interview with a member of the council. One idea to explore in configuring council membership is to combine formal group representation with the appointment of distinguished people from relevant sectors who act in a personal capacity. Also, staggering the periods of appointment could contribute to the continuity of council work over political cycles.
[35] This can be considered a trade-off. Having nonexperts in innovation on the council—for example a labor union representative—may facilitate political acceptance of budget allocations and grants for innovation, an exotic topic for much of the general public.
[36] Interview with a business sector member of the council and confirmed by an interview with a public sector member.

Regardless, due to a president's or prime minister's heavy responsibilities, experience has shown that some other public sector member of the council must serve as a champion to follow up on the agenda and conclusions. In a multi-stakeholder forum, care is needed to ensure distance is maintained between the lead minister and his or her associated stakeholders to avoid any bias. Bias has been an issue in the Czech RHSD CR, where the Minister of Labor has been the de facto manager of the tripartite council.[37] In addition, ministries that are not directly involved with the council mandate can cause bottlenecks in dialogue, as has occurred in not only the Czech RHSD CR, but also in the Finnish STPC.[38] Strategic policy recommendations that emerge from PPAs need public finance, a major signal of the government's commitment to the council and political will (Schneider, 2015). As such, the membership of the Minister of Finance and his/her serious engagement is an important factor.[39] As was revealed in an independent evaluation of the Finnish national innovation system, the lack of such a council member has detrimentally affected the strength of the STPC over the last few years. The Finnish Minister of Finance did not attend many of the council meetings, thus weakening the relationship between the council's recommendations and budget allocations (Ministry of Employment and the Economy of Finland, 2009).

The role of the chairperson in a PPA is critical to its good governance. The chairperson must have balanced views and be able to mediate differences of opinion and debate, including with government representatives. In councils where the chairperson is not a member of government (e.g., the Irish NCC), the qualities necessary are public prestige, political sensitivity, good knowledge of government, and interpersonal skills. An ineffective chairperson can substantially weaken the work of a council.

What is the role of political parties? Political parties are not often represented in PPAs. Indeed, their presence could be disruptive to

[37] Interview with a council member.
[38] Interviews with council members.
[39] However, Devlin and Moguillansky (2011) suggest that Ministries of Finance not lead councils charged with industrial policy because their competencies are often too narrow vis-à-vis the microeconomic dimensions of medium- and long-term development strategies and related public interventions to induce structural change.

deliberations, since it risks directly reproducing the party-in-power/opposition dynamics of parliament and raises problems of politicization. Parliament is typically the recipient of the wisdom of alliance councils. However, a parliament's receptivity to council reports can be affected by perceptions that the council is a competing forum for airing the views of civil society. In cases where this is the case, the political leadership of the government is essential to clarify the complementarity of the public-private alliance council.

Membership size makes a difference, with larger numbers transmitting extensive contextual knowledge and experience that can be useful for policymaking. However, having a large number of members can hinder constructive dialogue and make it difficult to reach well-grounded agreements that are operationally relevant. Limited representation allows for more in-depth discussion and increases the chance for consensus; however, it can be conducive to restricting the flow of valuable information. The number of civil representatives considered to be optimal for the effectiveness of a council is difficult to establish, given the many factors involved, such as its mandate, agenda, and number and length of meetings.

In the 1970s, Ireland's NESC had three groups of members (business, labor, and farmers) with 10 members each, and a total membership of 47.[40] An evaluation of the council concluded that the size of membership did not prevent the council from meeting its objectives and recommendations (NESC, 2011b). This may have been due to the fact that members came from three respective stakeholder peak associations. With expansion, the NESC now has five stakeholder groups (with only three having an association), as well as independent analysts and government representation, totaling 33 members. Presumably, in-depth discussion and dialogue can prove difficult and the binding consensus for policy recommendations may lead to policy positions that are less well-grounded than those emerging from the NESC's previous membership structure. Indeed, there has been discussion of abandoning the present consensus mandate (NESC, 2011a). The Finnish RIC, on the other hand, has recently increased the maximum number of government representatives from eight to 10

[40] The total of 47 members includes independents and government representatives.

(see Box 7.1) in order to accommodate the interests of the government coalition. As suggested earlier, this expanded government representation could make dialogue more complicated.

The Czech RHSD CR has 23 members from business, labor, and government, and is under no obligation to reach consensus on recommendations. Civil representation at the council comes from major associations. A business sector representative felt that discussions would be more effective with less than seven members each from labor and employers.

In any event, while there is no rule, it would seem that more than 20 members should raise a red flag about size and foster an evaluation of how functional membership is to the goals of the council. One important element is the use of alternates. Some PPAs, such as the NESC, allow members an alternate. The Czech RDC and RHSD CR and the Finnish RIC do not permit an alternate—although in the case of the Czech RDC, if a member cannot attend a meeting, his or her opinion on an issue can be submitted in writing. To the extent that building trust and understanding in an alliance council is an objective, and high-level membership is needed for relevance and political credibility, there is a strong argument that alternates should be discouraged, or at least be alternates of a high level, relevant to the council mandate and with a permanent designation.[41] Finally, in terms of remuneration, the PPAs typically cover travel, lodging, and other council-related administrative costs for individual members. Members of the Czech RDC receive, in addition, a government salary, while members of the New Zealand GIAB received a fee ranging from US$3,000 to US$4,000 per annum. The fee was determined based on the type of work performed and the time that council members dedicated to their assigned tasks.[42]

[41] In one council that permitted alternates, a high-level business representative from the council stated that he always sent someone else in his place. To mitigate this behavior, which unfortunately is quite common, there should be rules and procedures to replace an official representative who is serially absent. Of course, the best way to ensure the presence of the high-level official representative is to create a relevant and important agenda/work program. In any event, the presence of alternates in meetings should be encouraged even when the principal is present in order to promote integration in the group and continuity of discussion.

[42] Allocating time for working groups may involve onerous assignments.

Given that alliance councils usually would want to generate an ethos of national purpose, a practice of paying fees or salaries for that service is a subject that requires serious discussion in terms of the impact on recruitment and commitment. In theory, patriotism, prestige, and media coverage should be sufficient to provide councils with high-level, competent members (Herzberg and Wright, 2005).

Institutional Structure

There are many possible issues involving institutional structure, so only some of the more fundamental ones will be covered here. A secretariat is critical to a well-functioning council. A line ministry or public agency can provide this function, as is the case for the sample countries, except Ireland's NESC, which has a dedicated independent secretariat. All the secretariats perform administrative functions that require highly competent personnel, since proposals and the preparation of agendas, documents, and minutes of meetings for the council are politically delicate assignments that can be influential in terms of dialogue and decision.[43] Secretariats, together with the chairperson, should oversee compliance with the letter and spirit of rules guiding the council's work. As an example, the Irish NCC Secretariat recognizes the need to ensure that council members act in a personal capacity and not as representatives of their firms, sectors, or association, although it has rarely had the occasion to remind members of this.

It also is very important that the council have first-class technical support. This is because putting the facts on the table corrals the subjective opinions and ideology of members, generating space for more real problem-solving and common understanding. The sample country councils have addressed the technical dimension in three basic ways. The first is for the council to form subcommittees and/or technical working groups that are made up of members and/or invited experts who report to the

[43] Not all members in the Czech councils agreed about the independence of a secretariat. Both the RHSD CR and the RDC are structured to have a board with a chairperson and two deputy chairpersons drawn from the council. The board meets frequently between council sessions to follow up discussions, work with technical support groups, and prepare proposals. Tripartite members select the RHSD CR board, while the RDC board is determined through secret ballot.

council's plenary on specific agenda issues. This was done in the Czech Republic and Finland.[44] The second is to have an independent technical secretariat, such as that of Ireland's NESC, that, in addition to attending to administrative matters, also undertakes analysis with in-house staff, consultants and ad hoc working groups as needed. The third way is to use in-house public technical experts to provide support, a practice of the Irish NCC, which receives administrative and technical support from experts seconded from Forfás, a public strategic think tank now located in the Ministry of Jobs, Enterprise and Innovation. New Zealand's GIAB had technical and administrative support from a dedicated unit in the Ministry of Economic Development.[45] A fourth possible way to obtain the technical support needed—not reflected in the samples—is reliance on an independent private think tank or international/regional organization to undertake the analytical work.[46] Relying on the existing capacities in ministries and public agencies for administrative and technical support is cost effective.[47] In the case of the Irish NCC and New Zealand's GIAB, this arrangement worked well. In Finland's RIC, the secretariat function is split between two ministries (Ministry of Education and Ministry of Employment and Education). However, as has sometimes been the case in Finland, ministries can prove to be competitive, which can result in tension and political divisions at the secretariat level.[48] A potential disadvantage is that the government-based secretarial arrangement does not necessarily impart the quality of independence—in the preparation of administrative details and in putting the most useful facts and analysis on the council's table—that is needed to convincingly mediate a debate. The neutrality of government-linked secretariats in the preparation of agendas and minutes has been an issue for the Czech councils.[49] If secretarial

[44] When forming working groups, care should be given to ensuring that the qualifications of members are commensurate with the issues that are dealt with.
[45] Singapore's EDB staff has much technical expertise.
[46] In a developing country, a multilateral organization may provide secretarial services, which can guarantee impartiality, as was the case in the early life of Panama's National Dialogue.
[47] EU members, for instance, can draw technical expertise from the European Commission.
[48] Interview with members of the council.
[49] Interview with members of the council.

support is provided by a ministry it is wise that there be a dedicated staff and budget in order to reduce bureaucratic uncertainty and support continuity of work. The NESC secretariat is independent, with a small staff of approximately 10 that is made up mostly of analysts who have been selected competitively and are contracted as temporary employees of the state. A highly respected, politically independent economist heads the secretariat. The NESC budget—including funds for the fees of outside consultants—was approximately US$1.4 million in 2007 (Devlin and Moguillansky, 2011). The work of the secretariat is generally considered to be of a high quality.

PPAs can benefit from the technical expertise of working groups, although the structures can vary. The Czech RHSD CR has nine permanent committees, with ad hoc working groups formed as needed. Tripartite stakeholders establish the committees, and much of the hard work and debate takes place at this level. Union representatives, in this case, are considered to be exceptionally well prepared.[50] The Czech RDC, on the other hand, has three permanent thematic committees with five to 12 members each for four-year terms. They are appointed by the chairperson and support the work of the council. Members receive a nominal honorarium. There were problems, however, because the financing of the committees' work was limited, the council assigned few tasks, and the work that was transmitted up to the secretariat did not always translate well into recommendations for council members. In New Zealand's case, the ad hoc formation of technical committees, according to the needs of the council, worked reasonably well.[51] One can draw governance lessons from the Irish example in terms of structure and mandate. As stated by Devlin and Moguillansky (2011), the effectiveness of the Irish PPA may have suffered from the ever-increasing number of uncoordinated forums that, to some degree, competed with each other. This created a balkanization of national social dialogue.

For many years, Ireland's NESC was responsible for evaluating and providing recommendations on strategic economic and social issues. However,

[50] Interview with a business sector representative.

[51] Interview with Nigel Haworth.

four additional councils were subsequently established: (1) the National Economic and Social Forum (NESF) (1991) to address longer-term issues, especially in relation to employment and social cohesion, which overlapped with the work of NESC; (2) the National Competitiveness Council (NCC) (1997), in which membership is predominantly business-sector-oriented and is supported by Forfás, the government's international economics think tank (this work also tended to partly overlap with the mandate of NESC); (3) the National Center for Partnership and Performance (NCPP) (2001) to make recommendations on innovation in the work place; and (4) the National Economic and Social Development Office (NESDO) (2006) to coordinate the work of the NESC, NESF and NCPP.

The overlapping mandates of the NESC, NESF, and NCPP were not successfully coordinated by the NESDO, creating dispersed messaging. The NESC lost its business sector influence to the NCC, which had basically exclusive access to the Office of Prime Minister, leaving debate in the NESC to be dominated by unions and NGOs. This was also aggravated by Forfas' assignment as the secretariat for the NCC, which apparently weakened the NESC's access to data on competitiveness and growth. This in turn caused the NESC to increasingly focus on the national social welfare agenda. Meanwhile, the messages of the NCC about lagging competitiveness were not always absorbed well by the prime minister and government, perhaps partly because the NCC recommendations were associated with the sectarian interests of the business community.

This experience led Devlin and Moguillansky (2010 and 2011) to conclude that the Irish alliance may have proved more effective had the NESC been responsible for all stakeholder interests under a single roof, thus having more political impact on government. While the work of the NCC was more of a short-term analytical nature, it may have been more effective in messaging had it been under the umbrella of the NESC. If the work of the NCC had been undertaken by a high-level working commission under the aegis of the NESC with recommendations fed up to the NESC plenary, the messages—even if watered down in stakeholder dialogue—might have had more impact on the full spectrum of participants and more political impact on the government, given the broad political legitimacy on the NESC. Meanwhile, the NESC would have had more checks and balances in terms of the social welfare agenda. In sum, a more integrated dialogue among institutional stakeholders may have convinced the government to address the country's eroding competitiveness, as well as the impending property and banking bubble that developed.[52]

The Irish authorities seem to have partly shared Devlin and Moguillansky's "single roof" hypothesis because the NESF is now integrated into the NESC, and the NCPP is dissolved. The NESC and NESDO share the same director, and Forfás has been fully integrated into its ministry, with the possibility of more effective coordination with the NESC Secretariat.

Finally, the deliberations of national alliance forums can include issues of a regional nature, especially in larger countries where the political system is decentralized. Subcouncils in different regions within a country can be established for representation, although the big challenge would be to ensure that these regional subcouncils have adequate technical capacity and effective channels of communication and articulation with the national council. This is an exceptionally large challenge for developing countries, where there is much heterogeneity between regions and between them and the capital.[53]

Rules and Procedures

While regulations and procedures are important in PPAs, they are no substitutes for strong political commitment by the government. The Czech RDC is an example of having highly detailed formal rules of governance,[54] yet achieving limited results beyond that of parties maneuvering to protect their allocation of public funds for R&D.

It is important that the frequency of PPA meetings be sufficient to develop a relevant agenda and to instill a sense of relevance for the members themselves. The frequency of meetings of the sample of councils appears to follow this principle:

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[52] Questioning the sustainability of the economic boom in the second half of the 2000s was almost considered unpatriotic by ranking government officials. The NCC apparently raised concern about the issue, but was largely ignored.

[53] This has been a serious problem in Colombia (Moguillansky, 2011; Gomez and Mitchell, 2015) and will be a major challenge in Mexico, which has created 32 state-level public-private productivity commissions as counterparts to the new public-private National Productivity Committee.

[54] The site with the rules has been removed from the web.

NESC (Ireland):	Once a month
NCC (Ireland):	Five times a year
RHSD CR (Czech Republic):	Once every two months
RDC (Czech Republic):	Once a month or, at least, once every three months
RIC (Finland):	Five or six times a year
GIAB (New Zealand):	Six times a year

The council working committees and groups meet with greater frequency.[55] The availability of high-level members (including presidents or prime ministers or their representatives) is limited, so plenary meetings are relatively short, as in the cases of the NESC (three hours), NCC (three hours), RHSD CR (two hours), RIC (one and a half hours), and GIAB (three hours). Given the number of members and the issues for deliberation, the time allotted to council meetings may seem rather limited—a particular source of concern to the NESC, which has considered extending its meetings to four hours (NESC, 2011a). The time constraint in other councils, however, is resolved by having pre-meeting discussions and delegating much of the work to the working commissions, executive boards, or informal groups.

Councils are required to make recommendations, and the NESC, NCC, and GIAB, in general, have relied on consensus. The RDC works on the basis of a majority vote, while the RIC seeks consensus, although its chairperson can call for a majority vote, if necessary. The RHSD CR seeks consensus, although post-session press conferences by each of the tripartite members may reveal areas of agreement or disagreement.[56] While consensus is normally the objective of PPAs, depending on the rules in place there is a risk of a consensus vision being "locked in" to the detriment of the flexibility and needed adjustment to strategies for change (Devlin and Moguillansky, 2011). Moreover, the need to reach consensus can lead to self-censorship (limiting the sharing of valuable information) and the

[55] In the case of the Czech councils, the executive boards meet frequently between council sessions.

[56] The press conferences are relatively new. They emerged because the discord in the meetings was systematically leaked to the public anyway.

lowest common denominator, which may not always be policy relevant. The NESC tries to raise the bar of consensus (with some success) with rigorous joint national problem-solving, combining facts with bargaining, consultation, and mutual agreement. The goal is to reframe problems in a way that reveals solutions that members had not been aware of or considered.[57] Nevertheless, in support of government economic strategies, perhaps councils should encourage consensus recommendations, but not force them as an outcome, thereby leaving an opening for diverging opinions that can reveal valuable information for policymaking. The Irish NESC, at the request of the Prime Minister's Office, is considering moving away from the rule of consensus recommendations without discouraging it as a desirable goal (NESC, 2011a). Qualified majority voting is another way to allow dissent while obtaining a quasi-consensus.

The confidentiality of PPA deliberations is necessary to promote frank and honest discussion, while allowing for trade-offs and compromise that lead to agreements. This indeed is the rule in the councils examined here. Minutes can be leaked, however, as happens in the case of the RHSD CR. Hence, the protection of the confidentiality of discussions may be enhanced if minutes do not refer directly to a member. Where there are political pressures for public disclosure of minutes, one solution might be to lag their release (e.g., by three to four months). Meetings also must have a requirement of a quorum (including the presence of the chairman and secretary) with a reasonable time frame for a second call if necessary. Reports by PPAs to public authorities should be timely, and objectives should not be over-ambitious, in order to avoid delays in reporting or diminish the impact of proposals. Timely and relevant advice is especially important when a council has been newly established, so as to elicit public credibility and a sense of relevance for the stakeholder members. An effective information technology infrastructure is essential for the efficient

[57] This is elaborated on in detail in NESF (1997) and Devlin and Moguillansky (2011). A good example of problem-solving and the reframing of an issue was during the fiscal and balance of payments crisis of the late 1980s. A NESC report shifted the public debate from one about debt and taxes to a need to change the Irish style of growth from one based on exports of agriculture to higher-value manufactures, a shift that would require introduction of industrial policy. The logic was that only through higher growth rates would debt sustainability be achieved.

operation of a PPA. It enables membership processing, electronic communication, record keeping, timely decision-making, and accountability.

Other Governance Issues

When establishing a new PPA, the initial agenda should include what is "do-able"—that is, low-hanging fruit—in order to quickly instill a sense of relevance to its intent and the work of its members. In some PPAs, civil society members may favor the special interests of their constituency. Government members, and the council members acting in a personal capacity, may face conflicts of interest and enter into self-seeking lobbying. The disclosure of interests and proper codes of conduct are essential to good governance. Irish government representatives are required to practice good governance in state bodies (Department of Finance of Ireland, 2001). Ireland's NCC recently introduced disclosure requirements for the council's civil society members. In Finland, as previously mentioned, strong cultural norms provide a de facto code of conduct.

Advisory PPAs should have monitoring and evaluation mechanisms in place to determine the degree to which the government is heeding their recommendations (Herzberg and Wright, 2005) and whether intersecting public policies are consistent with their recommended strategy. Implementation and monitoring issues are one of the more difficult challenges of PPAs (NESF, 1997). The PPA also should have mechanisms to evaluate its own performance.

Mechanisms for public outreach can reinforce the strength of an alliance council's recommendations. However, this must be done with care to maintain the credibility of the council's primary role as an advisor to government. To maintain their stature and relevance, PPAs should be adaptable to change in terms of mandate, membership, structure, processes and procedures, and course of direction, in order to keep up with national and international realities. Independent external evaluations are useful, such as that carried out for Finland's national innovation system, which included public support institutions (Ministry of Employment and Economy of Finland, 2009), as well as the one currently under way specifically for the STPC/RIC. The Czech RDC has also undergone a comprehensive evaluation (which led to the major reform noted earlier), while in Ireland an evaluation of the NESC has been undertaken by its secretariat.

Conclusions

Public-private strategic policy alliances have a long history dating to tripartism in the mixed economies of Europe that emerged from the social and economic chaos of war and the Great Depression during the first half of the 20th century. The concept has evolved into a broader dimension of democratic governance with less concentrated social participation, less rigid representational roles, less pure bargaining, and more concern about protection from capture of the state by special interests. Moreover, in the face of a more complex and challenging world economy and democratic politics, PPAs in support of industrial policy have spread to Latin America and other developing regions.

After witnessing the shortcomings of the Washington Consensus, the state has returned to being a proactive agent for structural change, productive transformation, and accelerated economic growth. The central governments of Latin America are, once again, implementing industrial policy after a hiatus during which time the Washington Consensus influenced reforms. However, modern industrial policy thinking stresses that strategies and programs should not be developed in the context of hierarchical state-dominated governance of the market, as occurred in many developing countries up until the 1980s debt crisis. Rather, strategic public policy alliances should serve as a handmaiden for effective strategies and support programs. This is because in the era of globalization and rapid change in markets, all views are more than ever "partial." Hence, working together constructively on the basis of their respective comparative advantages in markets and society, government, business, and other policy-relevant civil society stakeholders can promote the emergence of more informed development strategies and public programs than if each were to go its separate way. In the close collaboration of public and private sectors, capture of the state by special private interests, or capture of the private sector by the government's political interests, is always a real and present danger. However that risk can be minimized by principles of good governance of the council, many of which have been outlined here. The integrity and statesmanship of the political leaders is critical, as are checks and balances in the structure and procedures of the council itself. PPAs are essentially a social process of public and private collaboration, and the design for governance is vital to their outcomes. To be successful, the PPA structure and governance must adjust to the particular characteristics of a society and its economy with specific objectives established. The experience of countries with a history of PPAs has provided an insight into what constitutes good governance.

This chapter has approached the issue of PPAs with an overview of the rationale and framework necessary for their presence, and it has drawn from the experience of several Organization for Economic Cooperation and Development countries to illustrate how they operate. It has examined the intangible dimensions of governance, as well as the need to establish goals, legal status, participation, institutional structure, and processes, among other things.

Finally, PPAs are complex human endeavors, involving the interaction of multiple stakeholders in fluid democratic and political settings. Not surprisingly—as has been observed in the cases examined in this chapter—even in relatively developed democratic societies, PPAs are still far from perfect in terms of governance and outcomes. However, to judge their success or failure in a binary way would be wrong; rather, that judgment should be based on the alternatives available given their objectives. In the face of the challenges brought on by today's globalization, most would conclude that PPAs are, by their very nature, a process of trial and error very much worth developing and improving upon. Indeed, this was one conclusion that emerged frequently from the council participants who were involved in the research for this study.

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It takes two to tango: Strong public-private collaboration is key for discovering and implementing effective productive development policies to bring out the best in existing economic activities and to foster economic transformation. To succeed, policymakers must go beyond armchair pondering and roll up their sleeves in pursuit of smart arrangements with the private sector that make collaboration easy and capture by private interests difficult. The 25 Latin American cases analyzed in this volume show how and why many public and private partners are dancing smoothly while others stumble or follow different drummers. This book is an overture for designing institutions to make public-private interaction a win-win strategy.

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