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The Case of Peru, 1990-2007

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Abstract[1]

This paper assesses the institutional setting and productive impact of selected productive development policies (PDPs), institutions, and programs implemented in Peru during the period 1990-2007. The assessment is based on a simple, basic framework of a series of economic or market failures that may have constrained the transformation of the productive structure, the process of innovation, and the growth of total factor productivity. Evidence indicates that the PDPs and structural reforms implemented in Peru did not significantly alter the productive structure of the Peruvian economy. If the objectives of the PDPs are to transform the productive structure, increase total factor productivity, and enhance innovation, government interventions need to focus directly on the source of market failures and create quality productive changes within the private sector.

JEL Classifications: L50, O25, O40
Keywords: Productivity, Industrial policy, Innovation, Peru

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1. Introduction

Lack of high productivity growth seems to be a common feature of Latin American and Caribbean countries in the post-structural reform period (e.g., Blyde and Fernández-Arias, 2005; Loayza et al., 2004). Recent literature on development, growth, and "industrial policies" or "productive development policies" (PDPs[2]**)** postulates a series of "new[3] elements" such as: i) "information, self discovery, and coordination externalities" (e.g., Hausmann and Rodrik, 2003; Hausmann et al., 2008); ii) institutional settings and government failures (e.g., Rodrik 1993 and 2004); iii) sectoral diversification (e.g., Imbs and Wacziarg, 2003; Rodrik, 2004; Hausmann, 2008); iv) a renewal and non-traditional active role of the government in productive activities (e.g., Smith, 2000); v) complementary aspects beyond those derived from the *"new" market failure approach* such as private sector failure and lack of demand for intangible inputs (e.g., Haque, 2007); and vi) changes in the productive structure that foster competitiveness and cluster development (e.g., Peres, 1997; Melo, 2001; Lall, 2004; Rodríguez-Clare, 2005a,b). All of these elements may be explanations for the low economic performance of total factor productivity in the region and the lack of productive structural transformation in some countries such as Peru.

Using a simple, basic framework that incorporates these new elements into the growth (development or industrial) policy literature, this paper provides an assessment of the institutional setting and productive impact of a sample of selected PDPs implemented in Peru during the period 1990-2007. The paper is divided into seven sections, a list of references, and annex tables. Section 2 describes the economic context in the period in which PDPs were implemented. Section 3 describes the basic framework and the system of PDPs implemented in Peru during the period 1990-2007. Section 4 describes the trade policy in Peru. Section 5 presents the institutional features of a selected sample of PDPs. Section 6 provides an assessment of the productive impact of the selected sample of PDPs. Section 7 summarizes the role of PDPs in the development of clusters in Peru, and the final section, Section 8, offers a set of conclusions and final remarks.

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[2] Broadly defined as policies that may promote overall productivity irrespective of the economic sector or type of activity in which they are applied and that aim to strengthen the productive structure of a particular national economy (Melo and Rodríguez-Clare, 2006).

[3] Rather than calling them "new elements," Shapiro (2007) refers to them as a comeback of the "market failure approach" to industrial policy since the theoretical basis for the "new" industrial policy is the existence of market failures.

2. Economic Context of Productive Development Policies in Peru, 1985-2007

During the last five years, Peru has been among Latin America's best performing economies in terms of per capita GDP growth, low inflation, and a relatively stable exchange rate. However, this renewed growth path, initiated in 1990 with the stabilization programs and structural reforms implemented by the government,[4] in turn has meant in per capita GDP terms (in year 2000 constant dollars) a recovery from its highest level reached in 1975 ($2,298), and only since 2005 has it surpassed that figure. Nevertheless, by 2007, the relative per capita GDP of Peru compared with that of the United States was still lower (i.e., 7 percent) than the per capita GDP reached in 1975 (i.e., 12 percent).

This recovery, however, has been associated, on one hand, with a 17 percent increase in the population living in poverty (on less than US$2 per day) between 1980 and 2004 despite the fact that, in percentage terms, the poverty rate decreased from 43.3 percent in 1980 to 32 percent in 2004 (e.g., Gwartney et al., 2008). On the other hand, growth recovery has not changed the productive structure of the Peruvian economy significantly, nor has it fostered the key sources of competitiveness factors needed for structural productive transformation. This section reports macro evidence of these factors by providing the economic context in which PDPs were implemented in Peru during the period 1990-2007. Section 2.1 describes a set of indicators pointing out the lack of productive structural transformation and the low performance of total factor productivity in the Peruvian economy, and Section 2.2 presents the role of competitiveness factors in explaining Peruvian economic performance during the period.

2.1 Overall Economic Performance of Peru, 1985-2007

The figures in Table 1 summarize the key macroeconomic performance indicators for the period 1985-2007. Following the so-called "lost decade" when per capita GDP decreased by 2.9 percent during the period 1985-1990, stabilization programs and structural reforms implemented since 1990 have been consistently associated with per capita GDP recovery, at moderate rates of 3.7 percent during the period 1991-1995, at a lower rate of 1 percent during the period 1996-2000, and at a relatively high rate, close to 5 percent, during the period 2001-2007.

[4] A summary of these reforms is listed in Table A1.

Consistent with the applied outward-oriented structural reforms in Peru, the higher per capita growth has been accompanied by an increase in the export share out of GDP which, by 2007, duplicated the share seen during the period 1985-1990. In 2007, the export structure, however, was the same as it had been during the previous 60 years, with more than 80 percent of total export value dominated by minerals (61.7 percent in 2007) and agricultural products (7.1 percent in 2007[5]). On the other hand, by the end of 2007, manufacturing and agricultural output shares had maintained their real GDP share levels of the period 1985-1990. Gains in GDP shares had occurred in the construction sector, and to a lesser extent in the fishing sector, and losses had occurred in the rest of the sectors (mainly services).

Growth recovery and the lack of significant changes in the export and domestic output structures (in particular in agriculture and manufacturing) have been associated with an increase in the terms of trade (in particular from mineral products) since 2001, a higher investment rate (in particular, foreign direct investment[6]), and a low performance of total factor productivity. "Solow's residuals" estimations of the rate of growth of total factor productivity (TFP) in Peru, shown in Table 1, suggest that this growth has been rather low over long periods of time, such as 1995-2007 and 1966-2000, and during short periods, such as 2002-2004.

[5] Table A2.
[6] The share of the stock of foreign direct investment in relation to GDP increased from 6.2 percent during the period 1990-1995 to 14.5 percent in 2007 (Table 14).

Table 1. Performance in Peruvian Economy: Average Annual Rates of Real Output Growth, Shares Out of Real GDP, and Sources of Growth, 1985-2007

Indicator	1985-1990	1991-1995	1996-2000	2001-2005	2006-2007
I. Rates of Growth[1]					
GDP	-1.0	5.6	2.5	4.2	8.3
Per Capita GDP	-2.9	3.7	1.0	3.0	7.1
X	-2.1	7.6	8.6	10.2	3.3
GDPnx	-0.7	5.3	1.5	2.9	8.3
Agriculture	-0.4	6.6	6.5	1.6	5.2
Mining	-2.4	6.0	6.7	8.2	2.1
Fishing	11.2	3.0	3.7	3.7	4.6
Manufacturing	0.7	5.5	1.7	5.0	9.2
Construction	2.7	14.7	-0.8	3.7	15.7
Others	0.6	5.5	2.8	4.0	7.9
Primary GDP	2.4	4.6	5.0	4.6	3.7
Non-Primary GDP	0.5	7.3	2.1	4.3	9.9
II. Shares Out of GDP					
GDP	100	100	100	100	100
X	10.5	12.2	14.9	19.3	20.2
GDPnx	89.5	87.8	85.1	80.7	79.8
Agriculture	4.5	4.6	5.3	5.4	5.0
Mining	4.1	4.6	5.0	6.4	6.0
Fishing	0.5	0.6	0.5	0.5	0.5
Manufacturing	16.3	15.7	14.9	15.1	15.5
Construction	3.6	4.9	5.7	4.8	5.4
Others	70.7	53.4	51.4	49.1	57.5
Primary GDP	14.8	16.3	16.9	18.9	17.7
Non-Primary GDP	85.2	83.7	83.1	81.1	82.3
III. Sources of Growth					
	1981-1990	**1991-2001**	**2002-2004**	**2005-2007**	**1995-2007**
Terms of Trade	-0.7	-0.5	11.7	22.6	7.6
TFP	-4.0	1.5	0.0	1.9	0.0
Labor	1.0	1.2	1.1	1.0	1.2
Capital	1.3	1.1	2.6	4.6	3.2
Fixed Investment Rate	16.6	21.2	18.0	20.9	21.2
GDP Growth	-1.6	3.8	4.7	7.4	4.5
		1966-2000			
TFP[1]		0.5			
Technological Change		-0.5			
Technical Change		0.9			

Source: Authors' compilation based on BCRP website (www.bcrp.gob.pe), BCRP (2008), MEF (2004), APEC (2001-2007) and Larraín (2003).. [1] Yoruk (2007).

When capital utilization and human capital adjustment were taken into account (e.g, Loayza et al., 2004), the positive rate of growth of TFP during the period 1991-2000 declined and became negative up to -0.49 percent, reinforcing the stylized fact of the role of investment in the Peruvian economic growth recovery as suggested by a study of the Central Reserve Bank of Peru, BCRP (2008b).[7] A final feature of the change in TFP in the Peruvian economy is in the rate of growth of its components. Thus, Yoruk (2007) finds that most of the positive gains in TFP growth during the period 1966-2000 were due to the technical change component of TFP and that the rate of change in the technological component was negative during this period.

2.2 Competitiveness and Productive Factors in the Peruvian Path Economic Growth Recovery Period, 1990-2007

Two main hypotheses have attempted to explain the Peruvian economic growth recovery. The first is postulated by Hausmann and Klinger (2007) and the second by Loayza et al. (2004) and Moron et al. (2005). Under the first hypothesis, growth collapse in the 1970s and 1980s and recovery in the 1990s and 2000s were caused primarily by external factors (i.e., changes in the terms of trade) and the role of the export sector. The consequences of the sustained macroeconomic stability and structural reforms (Table A1) were not enough to achieve much higher GDP growth rate at higher speed. The lack of export diversification, caused by coordination and information externalities, seems to explain the relative and incomplete economic growth dynamic of the Peruvian economy.

Under the second hypothesis, the growth recovery experienced by Peru and most countries in the Latin American and Caribbean region was largely driven by structural and stabilization reforms that affected the economy's overall productivity positively. Furthermore, upsurges in growth preceded a rise in investment and saving (both national and foreign).

There is no doubt that the Peruvian economic recovery from the lost decade (1980s) has been associated with stabilization policies and market liberalization reforms. Standard indices of competitiveness factors, as well as structural and institution policies, shown in Table 5, shed light on some additional factors that may be associated with the Peruvian growth recovery.

Sustainable macroeconomic stability and trade liberalization were the two indices that had the best performance among the seven indices considered in Table 2. According to the

[7] This study suggests that factor accumulation rather than TFP explains GDP growth during the period 1995-2007.

growth diagnostic framework of Hausmann et al. (2005), both policies have led to a better appropriability of investment activities; reduced domestic price distortions supporting a greater access to the international flow of goods and services, including imported technology; allowed for new foreign investment; and increased the investment returns of economic activities. Thus, these two policies may explain the recovery of investment of 21.2 percent during the period 1991-2001 compared with the rate of investment of 16.7 percent during the period 1985-1990, and it may explain the increase in TFP, according to the conclusions of Moron et al. (2005).[8] In the 2000s, however, the sustainability of these policies no longer has seemed to impose a significant binding constraint on economic growth, and the magnitude of their initial effects on TFP probably has been reduced. In this regard, and according to the conclusions of Moron et al. (2005), the growth of TFP during the period 2005-2007 may be associated with the significant, although transitory, increase in the terms of trade that occurred during that period.

[8] Moron et al. (2005) estimated a rate of 1.5 percent during the period 1990-1995.

Table 2. Competitiveness Indices in Peru, 1985-2007

Competitiveness Factors [a]	1985	1990	1995	2000	2005	2006/07
1. Macroeconomic Stability Index[1]	00.0	12.5	51.3	51.0	58.0	61.7
Share of Fiscal Deficit Out of GDP	3.6	8.7	3.2	3.3	0.3	-2.5
Inflation Rate (%)	158.3	7649.6	10.2	3.7	1.5	2.5
2. Capital and Financial Market Sophistication Index	na	na	na	35	48.3	55.0
Domestic Credit to Private Sector (% of GDP)	15	12	16	26	19	20
Ease of Access to Loan	na	na	na	17.3	31.7	43.3
Interest Rate Spread (lending rate minus deposit rate, %)	380[2]	2335	27	20	23	21
3. Institutions Index	na	na	na	11.8	26.5	38.3
Legal Structure and Security of Property Rights	23.2	30.2	47.6	39.4	43.3	42.7
4. Infrastructure Index				31.7	26.7	38.3
Share of Paved Roads Out of Total Roads (%)	na	9.9	11.4	13.4	14.4[3]	na
5. Market Efficiency Index	na	na	na	na	na	51.7
Freedom to Trade Internationally	61.1	64.0	76.7	75.9	73.1	71.7
Mean Tariff Rate (%)	64.0	36.0	17.6	13.4	9.2	10.2[4]
Non-Trade Barriers	na	na	59.8	67.5	51.9	55.8
6. Human Resources Index[5]	na	77.5	80.0 [6]	82.5	83.0	84.0
Public Spending on Education, Total (% of GDP)	na	2.8	3.2 [6]	2.9	2.4	3.0
Availability of Scientists and Engineers	na	na	na	51.3	46.7	55.0
Brain Drain	na	na	na	na	25.0	na
7. Technology and Innovation Index	na	na	28.5 [6]	45.2	40.8	40.0
Share of R&D Out of GDP (%)	na	na	0.08[7]	0.11	0.10[8]	na
Firms' Innovation Capacity	na	na	na	28.3	26.6[9]	38.3

Source: WEF (2006-2000); World Bank (2008), Gwartney et al. (2006), BCRP (2008), MEF (2004), APEC (2001-200

[a] Unless indicated otherwise, all indices are in scale from 0 (poor performance) to 100 (highest performance).

[1] Sound money chained link index for 1985-1995; and macroeconomic stability index for 2000-2007. [2] Year 1989. [3] Year 2004. [4] Year 2006. [5] Secondary and Primary Net Enrollment. [6] Year 1998. Primary and Secondary Enrollment. [7] Year 1997. [8] Year 2003. [9] 2003-2004. na = not available.

The next two indices (with the highest performance) are capital and financial market sophistication and human resources indices. According to Hausmann et al. (2007), international and domestic finance and human capital have not imposed significant binding constraints and, therefore, have not decreased returns of investment activities or imposed high cost of finance. Their conjecture is based upon the following stylized facts: i) during the past fifteen years, the current account has been narrowing, the debt to GDP has fallen, and the cost of capital has declined. Consequently, access to savings has not been a binding constraint over the past seven years; ii) by 2007, the country was not facing expensive foreign finance due to a high risk of default. The country's debt traded as if it were investment grade and was not far from formally achieving this status, which was, in fact, achieved in 2008. For the Economist Intelligence Unit, the risk score for Peru's sovereign debt is well below other Latin American countries, such as Argentina, Ecuador, Brazil, and Venezuela, and it is second only to Chile and Mexico; and iii) as evidenced by the years of education among Peruvians of different ages, the availability of

education among those entering the workforce increased sharply between 1975 and 2005, in the context of a significant growth collapse. Moreover, it is high internationally.

Three indices had the lowest performance during the period 1990-2007: institutions and infrastructure indices at similar levels and technology and innovation at a lower level. These indices are associated with institutional/government failures, missing public inputs, and market failures due to information externalities/self discovery and coordination externalities, respectively.

Based upon these indices, it is possible to combine both hypotheses mentioned above. Thus, it can be postulated that the Peruvian economic recovery was based upon an improvement in the degree of appropriability in investment returns, access to low-cost finance and imported technology through sustainable macroeconomic stability, trade liberalization, and capital and financial market liberalization. External terms-of-trade shocks also promoted growth recovery from 2000 to 2007. This recovery, however, has not created the conditions for a complete dynamic of growth or the possibility that Peruvian GDP per capita will catch up to the one of developed countries (e.g., the United States). By 2007, Peru's GDP was only 7 percent of that of the United States. Market and government failures, including missing public inputs, may be a major binding constraint with respect to the full realization of economic growth.

From these three factors with the lowest performance, and due to the variability of the infrastructure indices, it is not clear whether the infrastructure factor has had a major constraining role with regard to growth as suggested by Hausmann and Klinger (2007), who ponder this role. They argue: *"infrastructure and coordination failures, are highly related, as it is sector-specific infrastructure that must be coordinated by the government to allow structural transformation to occur, particularly when there is the need to move to products that are farther away in the product space. Given the limited capacity of the government to provide requisite infrastructure and sector-specific public goods, this may have limited the capacity of the economy to achieve structural transformation. In this sense, infrastructure and structural transformation may be constraints reflective of a similar underlying problem"* (p. 41). A stylized fact in favor of this line of reasoning is that productive transformation and a complete dynamic of growth did not occur in the Peruvian economy during the period 1990-2007 despite the fact that the share of government investment in infrastructure increased during the period. After

1999, government investment in infrastructure accounted for more than 50 percent of total government investment (Table 4, below).

According to Hausmann and Klinger (2007), between the infrastructure factor and the concentration of exports in a few products or lack of export diversification, they consider the latter as the major binding constraint hindering a complete dynamic of growth of the Peruvian economy.[9] They postulate that the lack of structural transformation in the sense of a low degree of export (product) diversification is caused by three factors: i) the comparative advantage of Peru in natural resource-intensive products (i.e., firms produce according to their available capabilities and inputs and what they know best; ii) information externalities (i.e., firms cannot produce products that they do not know how to produce and for which there is no availability of inputs); and iii) coordination externalities (i.e., since there is no firm's demand for inputs needed for new products, due to information externalities, then there is no supply of such inputs).

An additional factor regarding the lack of productive structural transformation is the low capacity of domestic firms to innovate under the context of limited inputs. Some disperse evidence may support this hypothesis:

i) Technology indices (such as the technology and innovation index and firms innovation capacity index, in Table 2) below the average during the period 1990-2007.
ii) Relative low degree of investment on R&D (Table 2).
iii) Non-parametric total factor productivity estimations for Latin American countries, which are decomposed in technical efficiency and technological change, indicate that, during the period 1960-2000, the main source of TFP change was gains in technical efficiency rather than gains in technological changes. Thus, TFP growth comes mainly from technological adaptation, which increases efficiency, rather than from innovation, which leads to technological change (e.g., Krüger, 2003; Yoruk, 2007).

[9] To the extent that the principal urban agglomeration in Peru is next to a port, as opposed to the situation in Colombia, Mexico, or South Africa, Hausmann and Klinger (2007) suggest that the required infrastructure for an urban-based manufacturing process should not have been hard to achieve and, consequently, the dominant constraints may have been elsewhere.

Thus, in addition to the market-government-missing input failures approach of the low level of export diversification (e.g., Hausmann and Rodrik, 2003; Hausmann and Klinger, 2007; Klinger and Lederman, 2004, 2006a,b), the literature on the capacity of firms to innovate and the innovation process focus on factors such as firms' size, firms' size distribution, market structure, entrepreneurship, clusters development, and/or geographical factors among many other factors (e.g., Stam, 2008; Alfaro et al., 2008; Crespi, 2004; Feser, 2002). All of these factors may affect the process of innovation, adaptation, and imitation from both on-the-frontier (i.e., new goods for the world) and inside-the-frontier innovations (i.e., emergence of products that are simply new to a particular country's production).

All of these "economic failures" associated with the lack of export diversification and structural productive transformation, as well as the low capacity of firms to innovate, not only may constrain the achievement of a complete dynamic of growth in the Peruvian economy, but also provide the economic basis for government intervention.

Based upon these "economic failures," the next section describes a simple and basic framework within which the set of PDPs implemented by the Peruvian government and their productive impact during the period 1990-2007 can be assessed.

3. A Basic Framework and the System of Productive Development Policies in Peru, 1990-2007

Using the economic failure approach for PDPs, Section 3.1 describes a basic framework showing the interrelationships between the set of government interventions or PDPs,[10] the set of economic failures, and their incidence upon TFP and firms' capacity to innovate. Having this framework in mind, Sections 3.2 and 3.3 describe the system of PDPs in Peru and a select sample of the PDPs analyzed in this paper.

[10] This paper focuses only on the economic rationale for government intervention linked to some kind of market or government failure. Other kinds of rationale (e.g., employment generation, poverty reduction, and development policies) are not considered in this paper.

3.1 PDPs, Productivity, and Technological Innovation: A Basic Framework

Figure 1 shows the possible and potential interrelationships concerning the diversity of "economic failures," PDPs, and the factors that may transform the productive structure of an economy leading to economic growth and development.

The first two groups, "market and government failures," are emphasized by the new industrial or PDP literature (e.g., Melo, 2001; Melo and Rodríguez-Clare, 2006; Rodríguez-Clare, 2005; Rodrik, 2004). Thus, government intervention may be needed to overcome or eliminate market distortions such as: i) productive "new" activities have higher social returns than the private sector; r ii) a set of these activities can be profitable if they are implemented simultaneously; iii) public goods inputs are not supplied or available in the markets; iv) high transaction costs or rent-seeking behavior exists in government institutions and the private sector that may affect the profitability of other economic activities. These failures may reduce the product diversification in the economy (affecting TFP) and investment (affecting both TFP and the innovation and adaption process). In addition, the innovation literature emphasizes the role of imperfect market structures (leading to market and sectoral concentration) in affecting the innovation process (e.g., Crespi, 2004; Cayseele, 1998; Kamien and Schwartz, 1975).[11]

The third set of "economic failures" is linked to the "cluster" development process in the economy. These failures are associated with the exploitation of a geographic space or territorial feature of economic activities. Agglomeration externalities, location or Marshallian externalities, and coordination failures (associated with economies of scale, thick market effects, knowledge spillovers, and other problems of non-excludability) among other kinds of failures have been postulated in the literature as the rationale for government intervention in developing or promoting "clusters" of firms in specific areas (e.g., Rodriguez-Clare, 2005a,b; OECD, 2007). Addressing and exploiting these economic failures may reduce cost and foster innovation (e.g., Feser, 1998a, 1998b and 2002; Audretsch, 1995, 1998, and 2000; Enright, 2003).

The fourth set of potential "economic failures" involves the incidence of the size and distribution of firms, and the generation of entrepreneurship based on technical efficiency and

[11] The relative high degree of sectoral concentration in the export and domestic sectors (Tables A2 and A3 from the Annex Tables) may indicate the importance of imperfect markets in the development process of the Peruvian economy.

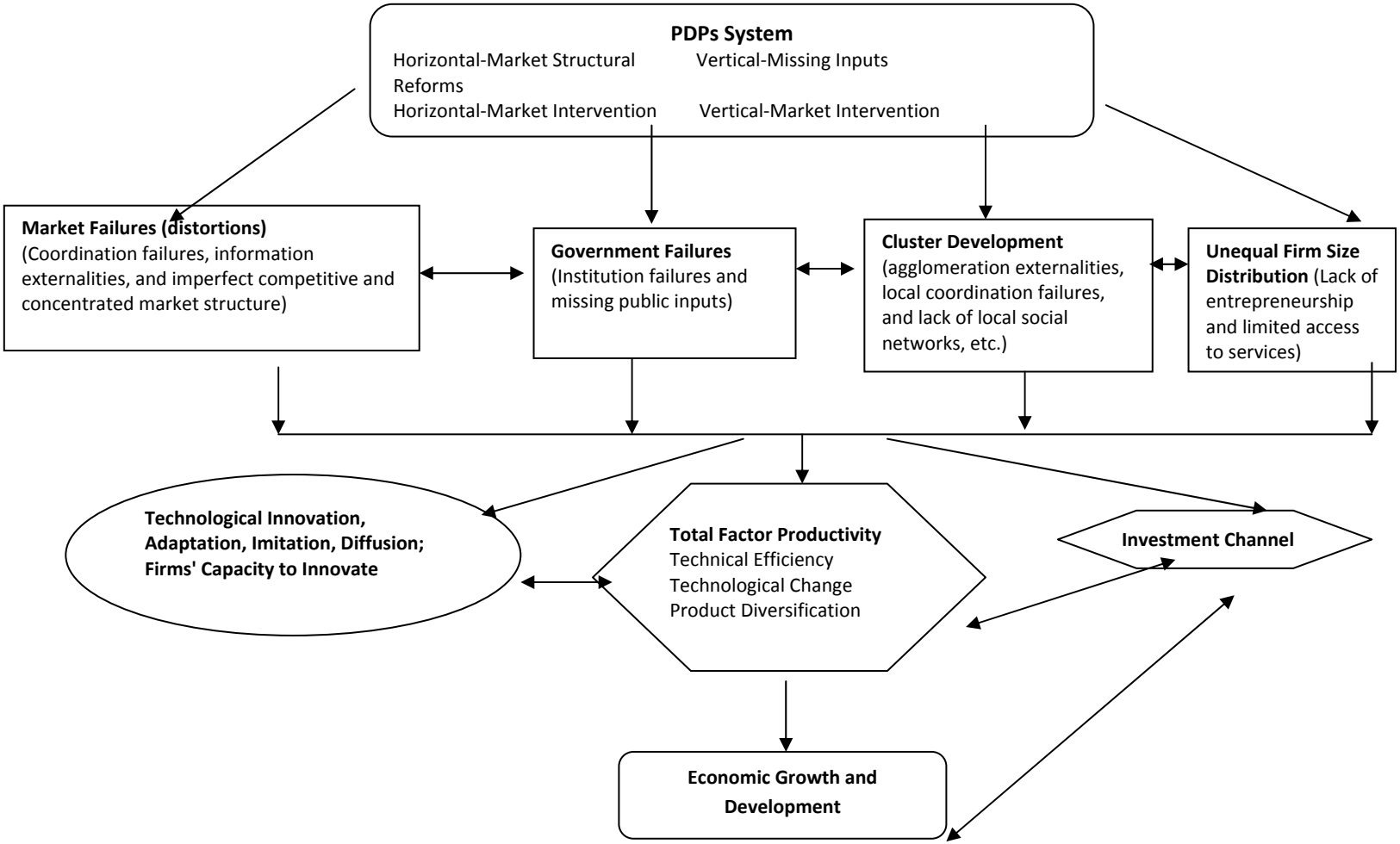
the process of innovation of productive activities.[12] Three branches of the literature address these failures. The first postulates that firm size is associated with TFP (e.g., Pagano and Schivardi, 2000) and that firm size distribution is not independent of firm growth, with financial constraint being a key factor in determining firm size distribution (e.g., Angelini and Generale, 2008; Castany et al., 2005; Cabral and Mata, 2003). Futhermore, firm size distribution may explain differences in per capita income among countries (e.g., Alfaro et al., 2008).

The second branch is related to private sector development (e.g., OECD, 2006; UNIDO, 2004; Storey, 2003) linked to the development of micro and small firms and fostering entrepreneurship. Under this branch, the market-based approach is now emerging as a reaction not only to the shortcomings of direct support to the private sector, but also to the realization that efforts to improve the general investment climate are not sufficient. This approach puts the focus on the supply response, especially in markets of importance for poor people. It aims to identify obstacles to the development of specific sub-markets and to improve the institutional environment of those markets that benefit poor people—directly and indirectly—with special attention to micro, small, and medium-sized enterprises. Lack of access to various kinds of services has been shown to be a critical constraint on the development of enterprises. Improving firms' access to business development services is one of the core instruments for promoting income and employment generation for poor people. The same applies to financial services, where a deepening of markets for such services is an important element in many programs aimed at stimulating pro-poor growth. The lack of access to other productive resources, such as land and technical knowledge, can also be critical constraints.

A third and similar branch of literature focuses on entrepreneurship as a factor of economic growth and innovation emphasizing the role of micro and small enterprises (e.g., Stam, 2008; Audretsch et al., 2006 and 2003; OECD, 2003). In this literature, entrepreneurship connects stock of knowledge and economic knowledge and serves to generate knowledge spillovers.

[12] Tables A4 and A5 show the uneven size distribution of firms in the Peruvian economy, in which more than 85 percent of the total number of firms (formal and informal) are micro firms (employing less than 11 workers); 70 percent of these are engaged in agriculture and fishing (59.6 percent) and manufacturing (6.6 percent) activities. These micro firms account for 64 percent of total employment.

Figure 1. PDPs, Economic Failures, Productivity, and Technological Innovation: Basic Framework



Due to a series of market imperfections (such as limited social and business networks, constraints on access to finance, uncertainty, and low demand, among other factors), a suboptimal social level of entrepreneurial activities is produced, which may require government intervention to foster entrepreneurship.

These four groups of "economic failures" provide the basis for government intervention through the so-called productive development policies.[13] Under this framework, PDPs are needed to address and overcome these failures in order to foster the innovation and technological process, and to promote private investment and firms' capacity to innovate, which may lead to changes in the productive structure, the growth of total factor productivity, and consequently to economic growth and development. These "market-government-geographic-firm size economic failures" could be common in many activities of an economy regardless of the sectors in which they take place; therefore, horizontal policies across sectors are the appropriate set of actions to pursue. Contrarily, these failures can be sector- or geographic-specific, and, therefore, vertical policies are the most suitable set of government interventions. On the other hand, policy measures to address these failures can be implemented through a direct market intervention (e.g., through subsidies or taxes) or through the supply of inputs not provided by the markets. Consequently, PDPs can be classified using these two dimension criteria.[14] Based upon this simple basic framework, this paper will assess the institutional framework, rationality, and productive impact of a selected set of PDPs implemented in Peru during the period 1990-2007.

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[13] In the implementation of PDPs, it is assumed that the gains from interventions are greater than the costs of the interventions.

[14] Three alternative ways of classifying PDPs use the kinds of economic failures (or distortions) that the government wishes to address, the source of demand that originates, or the country's stage of economic development. Melo and Rodríguez-Clare (2006) postulate two demand approaches for PDPs: i) the demand-driven approach (DD), which emphasizes tresponse to the needs of existing sectors in the private economy, with the main aim of raising their international competitiveness (e.g., the demand-driven policies in Colombia have largely revolved around a public-private partnership and dialogue that has resulted in a set of organizational vehicles and instruments (Velasco, 2003), and ii) the strategy-driven approach (SD), which emphasizes clear definitions of the desired medium- and long-term changes in the vector of goods and services produced by the economy and the use of selective vertical policies to promote a small number of industries (e.g., the Brazilian case). The stage of development approach suggested by Rodriguez-Clare's studies (2005, 2005a,b) postulates that LACs should engage in selective interventions aimed at discovering new profitable activities (horizontal policies) and creating innovation clusters (vertical policies) in current sectors that have demonstrated the strongest comparative advantage. In this regard, microeconomic (government and private) interventions need to promote cooperation, coordination, and collective action to improve productivity through clustering and to overcome sector or cluster-specific coordination failures. The studies also suggest that, with regard to innovation, general policies that aim to increase innovation across the board are likely to be inferior to policies that take a more selective approach by trying to induce the development of innovation clusters.

3.2 The System of Productive Development Policies in Peru, 1990-2007

Following the basic framework, Table 3 shows the distribution of the main conceptual PDPs implemented in the Peruvian economy during the period 1990-2007 by quadrants of the two-dimensional matrix. In addition, Table 4 shows the estimated distribution of government investment by types of productive investment through which PDPs may have channeled their market interventions or their supply of missing public inputs. These productive investments are also associated with competitiveness factors and economic failures, which affect the productive structure and productivity.

Table 3. Productive Development Policies in Peru, 1990-2007

(I-HP) Horizontal and Public Input	**(II-VP)-Vertical and Public Input**
Structural Reforms (macroeconomic stabilization programs, liberalization of capital, financial and foreign exchange markets, privatization, etc.) Basic Education Basic Infrastructure Coordination Program	Infrastructure on specific geographic areas Sanitary and Phytosanitary Measures on specific geographic areas
(III-HM) Horizontal and Market "Interventions"	**(IV-VM) Vertical and Market "Interventions"**
Policies on Tariffs and Non-Tariff Barriers and Preferential Trade Arrangements Export Incentives (e.g., drawbacks) Export Promotion Agencies Investment Promotion Agencies Micro-Firms Promotion Agencies Labor Training Programs Innovation Support Programs Environment and Natural Resources Protection and Sustainable Development Financial Trade Facilitation and Credit to Microenterprises and Agriculture Sectors	Export Processing Zones in specific geographic areas

Source: Authors' compilation.

Table 4. Structure of Government Investment by Type of Productive Investment in Peru, 1990-2007

Type of Productive Investment	1990-1995	1996-1998	1999-2000	2001-2005	2006-2007
Institutional	Na	Na	7.8	6.1	9.5
Infrastructure	Na	Na	45.8	50.3	57.9
Human Resources	Na	Na	8.0	8.1	10.9
Technology and Innovation	Na	Na	8.0	6.3	8.4
Others	Na	Na	24.8	24.2	10.6
Annual Average Investment Expenditures (millions of $)	1,486.7	2,592.	1,723.8	1,591.5	2,623.7
Annual Average Share Out of Total Government Expenditure (%)	24.3	25.5	17.9	13.2	13.2
Average Share Out of GDP (%)	3.9	4.5	3.3	2.5	2.6

Source: Authors' compilation based on MEF (2008) and BCRP (2008). Na: not available.

Two results are evident from both tables. First, conceptually, PDPs in the Peruvian economy have been concentrated in sustainable market "liberal reforms" and in horizontal policies on activities rather than sectors. Second, the size of government investment resources transferred to the economy in terms of GDP has been relatively low compared to other Latin American countries[15] and is declining.[16] Further, investment in infrastructure has dominated the government allocation of investment resources, followed by investment in technology and human resources.

Taking into account the concentrated productive structure (Tables A2 and A3) and the dominance of small and micro firms with relative low productivity (Chang, 2007) in the Peruvian economy, a third conclusion is drawn from Table 4. The conclusion is that the low level of government investment in technology and innovation during the period 1999-2007 (around 0.2 percent of GDP) may have implied that the magnitude of the productive impact of PDPs that use these government resources has not been significant, since the amount of investment resources allocated per firm has been rather small. The amount would be insignificant for large firms and insufficient for small and micro firms due to the fact that their small size and low productivity limit the possibility of taking advantage of these resources. On the other hand, and

[15] In 2006, Venezuela was the Latin American country with the highest government investment share of GDP with a figure of 14.1 percent, and Haiti had the lowest figure at 0.9 percent (CEPAL, 2008).
[16] These resources did not include official development assistance or loans from international organizations.

as suggested by Abusada et al. (2008), government concentration on infrastructure investment indicates that PDPs that use these resources may have been created largely by the demand side, in particular, from sub-national governments and private sectors.

Although government resources to foster productivity and structural productive transformation at the macro level seem to be rather slim, a detailed micro assessment will be required in order to estimate the productive impacts of PDPs. In this regard, a specific set of PDPs has been selected to provide such an assessment.

3.3 Selected Sample of PDPs and Beneficiaries

Three major groups of "actors or agents" have participated in, influenced, designed, and/or implemented PDPs in the Peruvian economy, including the sample of selected PDPs analyzed in this paper. The first group is the government at all its levels and in all its branches. The executive branch at the central level of government is the main agent that has shaped, formulated, and implemented most PDPs. The ministries from the central level of government directly associated with the PDPs from the productive sectors for the provision of "public inputs" or capital infrastructure in Peru are:

- Ministry of Agriculture (MINAG)
- Ministry of Production, Industry, and Fishing (PRODUCE)
- Ministry of External Trade and Tourism (MINCETUR)
- Ministry of Energy and Mining (MINEM)
- Ministry of Labor and Employment Promotion (MTPE)
- Ministry of Transportation and Communication (MTC)
- Ministry of Housing, Infrastructure, and Sanitation (VIVIENDA)

Three additional ministries that have coordination roles, providing and supervising financial resources and formulating general policy guidelines are:

- Presidency of Council of Ministries (PCM)
- Ministry of Economy and Finance (MEF)
- Ministry of Environment (created in May 2008)

Most of the production ministries also have decentralized offices throughout the Peruvian territory, and some functions of the ministries are carried out by 25 regional and 1,828 local governments (municipalities).

The second set of actors consists of firms (including major taxpayers[17]) that participate directly or indirectly through associations of private firms such as the National Industry Society (SNI), National Confederation of Private Enterprise Institutions (CONFIEP), (Non-Traditional) Exporters Associations (ADEX), and the Society of External Trade (COMEXPERU[18]). The third group includes associations of micro and small firms, in particular from agricultural and manufacturing sectors, which represent close to 70 percent of the total number of micro firms.[19] The role and participation of these two last groups of actors will be shown throughout the assessment of PDPs.

Eleven PDPs are analyzed in this paper: nine horizontal and two vertical. From the horizontal PDPs, this paper has selected for analysis: i) three agencies from the export, investment, and small scale enterprise (SME) promotion policies; ii) the national council that coordinates and facilitates cooperation among agents and institutions (i.e., CNC or Peru COMPITE); iii) three main protection instruments of trade policy; iv) a specific export incentive policy (i.e., export drawbacks); v) two specific programs from the network of technological support institutions, one for the agricultural sector (i.e., INCAGRO) and another for manufacturing sectors (i.e., network of CITEs); and vi) from the policy on financial services to SMEs, a specific unit of COFIDE (the Financial Corporation for Development), and vii) a cluster development policy. The two vertical PDPs are: the sanitary and phytosanitary measures carried out by SENASA (National Sanitation Service for the Agriculture), which provides sanitation

[17] According to SUNAT (2008), income taxes of about 200,000 of these taxpayers' firms represents 44 percent of total income tax revenue.
[18] This includes mainly traditional product exporters.
[19] Among the most politically active associations are CONVEAGRO (National Convention of the Peruvian Agriculture Sector) and COPEME (Consortium of Private Organizations to Promote the Development of Micro and Small Enterprises).

services and implements regulation measures to improve the productivity of the agricultural sector, and the Production and Export Free Zones,[20] which have been established in specific geographic regions of Peru (e.g., Tacna, Ilo, Paita) and are concentrated in specific manufacturing sectors.

Although the selected "horizontal" policies cover a wide range of sectors, not all sectors of the Peruvian economy are included in the horizontal PDPs. Specifically:

i) Even though trade policy covers all of the sectors of the economy, the reductions in the government's two main instruments (i.e., tariffs, non-tariff barriers), as well as the preferential tariffs from Peruvian preferential trade arrangements, have not been uniform across sectors. This standard PDP is included in order to show the strength of the two groups of private actors in shaping the protection structure of the Peruvian economy.

ii) Export Drawbacks do not cover all sectors of the Peruvian economy. Thus, 270 10-digit tariff headings are not entitled to any duty drawback. These headings include: animal waste material, coffee, fish fats and oils, sugar, food residues, minerals, skins, wool, waste of textile fibers, and jewelry and gold and silver articles.

iii) From the export, investment, and SME promotion policies, PROMPERU (i.e., Commission to Promote Peru, Exports and Tourism), formerly called PROMPEX (National Commission to Promote Exports), is the agency that promotes exports and tourism. PROMPERU focuses only on non-traditional exports, which by 2006 represented around 23 percent of the total export (fob) value. PROINVERSION (i.e., Private Investment Promotion Agency) is the agency that promotes (national and foreign) investment. This agency covers all sectors of the Peruvian economy. MI EMPRESA (formerly called PROMPYME, the Commission for the Promotion of Small and Micro Enterprise) is a program designed to promote small and micro enterprises. MI

[20] Including CETICO (Center of Exports, Transformation, Industry, Trade, and Services).

EMPRESA focuses mainly on non-primary sectors such as manufacturing, construction, trade, and services.

iv) The National Council of Competitiveness (CNC), or PERU COMPITE, is a council attached to PCM in charge of coordinating and facilitating activities from different institutions to promote firms' competitiveness. PERU COMPITE has concentrated its activities on sectors such as the agro-industry export sector, timber, textiles, apparel, fishing, tourism, and crafts.

v) Technological support institutions[21] are mainly concentrated in manufacturing, agriculture, and some specific primary activities (such as fishing and forestry). The two programs or projects analyzed in this paper have been selected as representative of such institutions. One is INCAGRO (Innovation and Competitiveness for the Agriculture Sector, specifically the central office in Lima and the offices in macro regions II and III[22]), and the other is the network of CITEs (Technological Innovation Centers, specifically CITE-MADERA, CITE-CAL, and the central office in Lima[23]). The first program covers the agricultural sector, and the second covers specific manufacturing sectors.

vi) Cluster Development Policy. The scanty programs that deal with cluster development are concentrated in the agro-industry and manufacturing sectors.

vii) Microfinance Institutions[24] are concentrated in sectors in which SMEs undertake activities, in particular agriculture and the agro-industry. From this

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[21] Kuramoto (2008) reports the list of the few Peruvian institutions and programs that promote technological innovation. This includes INIA (the National Institute of Agriculture Innovation), FINCYT (Fund for the Technology, Science, and Innovation), and PROCOM (Integral Projects for Scientific Research, Technological Development, and Innovation to Foster Competitiveness) promoted by CONCYTEC (National Council for Science and Technology).

[22] The INCAGRO program has decentralized offices in eight macro regions of Peru. Macro region II includes the regions of La Libertad, Ancash, and Cajamarca, and III the regions of Ica, Huancavelica, and Ayacucho.

[23] Up to 2008, there were twelve CITEs, four of them public (CITE-MADERA, CITE-CAL (CALZADO), CITE-VID, and the Central Office at PRODUCE) and eight privately funded (CITE Frutas Tropicales, two CITEs Agroindustriales, CITE Metal Mecánico, CITE Logístico, CITE Confecciones, CITE Software, and CITE Textiles de Camélidos).

[24] Kane et al. (2005) and Martín and Rivas (2008) describe the list of private and government financial institutions that provide credits to SMEs. In 2007, these credits represented 9 percent of the total credits of the financial system of Peru.

PDP, one specific program is analyzed: the financial services provided by the Development Unit of COFIDE (Financial Development Corporation) to SMEs. The sectors covered by this program are concentrated in agriculture and the agro-industry.

Table 5 shows the estimated distribution of total public expenditure allocated[25] to the promotion agencies (PROMPERU, PROINVERSION, and PROMPYME[26] or MI EMPRESA), the government institutions that support the two technological innovation programs (INCAGRO, CITEs) and the institution that provides sanitation services (SENASA[27]). In 2007, the estimated total expenditure of these agencies, programs, and institutions represented about 11.3 percent of total government non-infrastructure investment and 0.12 percent of GDP. This share is slightly modified when export drawbacks are included.[28]

[25] Figures are based upon the "modified initial budget" (PIM) of the National System of Public Investment (MEF 2008).

[26] The National Commission for Export Promotion was created on March 29, 1996 (Legislation Decree No. 805). The Investment Promotion Agency was created on July 3,2003 (Supreme Decree No. 095-2003, EF), which was composed by this agency and several investment agencies (such as the National Commission of Private Investment, COPRI, the National Commission of Foreign Investment and Technologies, CONITE, and the Executive Economic Commission of Promotion of Peru, from PROMPERU). The Commission of Promotion of the Small and Micro Firms was created on November 24, 1997 (Supreme Decree No. 059-97-PCM).

[27] The Project on Innovation and Competitiveness for the Agriculture was created on June 28, 2001 (Law No. 27496). The Centers of Technological Innovation was created on May 08, 2000 (Law No. 27496) and the National Sanitary Service for the Agriculture was created on July 12, 2000 (Law No. 27322).

[28] This figure is lower than the figure allocated in countries in the area such as Chile, where the share provided to similar institutions and programs is 0.15 percent. This share includes: subsidies to develop and promote innovation of SMEs (0.08 percent of GDP), subsidies to explore external markets (0.03 percent of GDP), and competitiveness R&D expenditures (0.04 percent of GDP). (Data provided by an IDB reviewer.)

Table 5. Structure of Government Investment (%) and Total Expenditure by Selected PDPs' Programs and Institutions in Peru, 1999-2007

Type of PDP Expenditure	1999-2000	2001-2005	2006-2007
I. Export and Investment and Micro and Small Enterprises Promotion Agencies			
PROMPERU			
Country Image	57.3	46.6	60.8
Export Support Services		5.4	4.1
Marketing	8.8	13.1	19.8
Technology, Innovation Product Development	11.2	3.5	0.0
Administration and Others	22.6	24.4	12.4
Annual Average Total Expenditures (millions of dollars)	13.5	18.1	27.3
Annual Average Investment Expenditures (millions of dollars)	11.1	12.4	23.2
Annual Average Share Out of Total Government Expenditures	0.14	0.15	0.14
Annual Average Share Out of GDP	0.03	0.03	0.03
PROMPYME (MI EMPRESA)			
Market Promotion	56.8	43.6	0.0
Development of MYPES	43.2	10.2	0.0
Market Access	0.0	4.6	27.7
Technology and Innovation	0.0	0.0	0.0
Administration and Others	0.0	31.1	72.3
Annual Average Total Expenditures (millions of dollars)	0.81	1.96	1.41
Annual Average Investment Expenditures (millions of dollars)	0.81	1.5	0.84
Annual Average Share Out of Total Government Expenditures	0.01	0.02	0.01
Annual Average Share Out of GDP	0.002	0.003	0.001
PROINVERSION			
Country Image	0.0	5.8	0.0
Assistance to Investor	0.0	1.8	2.9
Private Investment´s Promotion	60.5	31.6	76.2
Administration and Others	39.5	60.8	21.0
Investment Expenditure Annual Average Share Out of Total Expenditures	60.5	43.3	76.2
Current Expenditure Annual Average Share Out of Total Expenditures	39.5	56.7	23.9
Annual Average Total Expenditures (millions of dollars)	22.7	16.0	44.9
Annual Average Investment Expenditures (millions of dollars)	22.7	15.7	35.4
Annual Average Share Out of Total Government Expenditures	0.24	0.13	0.23
Annual Average Share Out of GDP	0.04	0.06	0.04
II. Technology Support Institutions			
INCAGRO[1]			
Institutional		37.5	19.1
Human Resources		23.3	9.4
Technology and Innovation		39.1	71.6
Annual Average of Investment Expenditures (millions of dollars)		3.6	9.1
Annual Average Share Out of Total Government Investment Expenditures		0.3	0.3
Annual Average Share Out of Total Government Expenditures		0.03	0.05
Annual Average Share Out of GDP		0.01	0.01

Table 5., continued

Type of PDP Expenditure	1999-2000	2001-2005	2006-2007
CITES[2]			
Institutional		29.3	0.0
Infrastructure		1.6	3.8
Technology and Innovation		59.5	64.0
Others		9.5	32.2
Annual Average of Investment Expenditures (millions of dollars)		1.7	1.8
Annual Average of Current Expenditures (millions of dollars)		0.2	0.9
Annual Average of Total Expenditures (millions of dollars)		1.9	2.6
Annual Average of Regional Government Expenditure Share Out of Total Expenditures		3.4[3]	3.8
Annual Average Central Government Expenditure Share Out of Total Expenditures		96.6[3]	96.2
Annual Average Share Out of Total Government Investment Expenditures		0.1	0.1
Annual Average Share Out of Total Government Expenditures		0.02	0.01
Annual Average Share Out of GDP		0.003	0.003
SENASA			
Institutional	24.1	5.4	1.6
Infrastructure	7.7	8.2	0.0
Human Resources	22.2	0.1	0.0
Technology and Innovation	14.9	41.7	36.4
Others	31.1	44.6	62.0
Annual Average of Investment Expenditures (millions of dollars)	13.3	12.6	13.8
Annual Average of Current Expenditures (millions of dollars)	6.0	10.2	22.5
Annual Average of Total Expenditures (millions of dollars)	19.3	22.8	36.4
Annual Average Share Out of Total Government Investment Expenditures	0.8	0.8	0.5
Annual Average Share Out of Total Government Expenditures	0.2	0.2	0.2
Annual Average Share Out of GDP	0.04	0.04	0.04

Source: Authors' compilation based on MEF (2008). [1]INCAGRO was created in 2001. [2]CITE was created in 2000. [3]Period 2004-2005.

Furthermore, for each small and micro firm, the estimated average expenditure received from these entities represented is US$3.2 per month.[29] This figure indicates that, even if these PDP interventions were indeed effective, the magnitude of the effects on TFP that arise from innovation, producer, and export promotion policies, may be rather low.

The assessment of the cluster policy, presented in Section 7, is based upon a description of the few programs that have been implemented during the period 1990-2007. The assessment of the institutional setting and productive impact of the rest of the selected PDP institutions and

[29] In 2007, this amount represented 0.4 percent of the monthly gross domestic product generated for each small and micro firm. In 2003, the European Union agriculture subsidy to farms represented about 31 percent of farm income (OECD, 2004).

programs will be based upon three sources of information. The first source is national and international studies on Peruvian PDPs. The second source is export and import data of the Customs Agency of Peru (ADUANET). The third source is the responses on specific questionnaires[30] applied to top executives of the selected sample of seven PDP institutions and programs and fifteen private firms, which were beneficiaries of these institutions/programs. Three of these fifteen firms received benefits from two or three PDP institutions and programs.

The sample of firms received benefits from all of the selected PDP institutions/programs except from the unit of COFIDE, PROINVERSION, and SENASA. The list of respondents of the sample is shown in Table A9 of the Annex Tables. Table 6 shows some features of the selected sample.

The questionnaire about the PDPs was composed of 37 questions aimed at providing information on six aspects of the PDP institutions and programs. These were: i) PDP identification; ii) basic information on the program or institution; iii) the objectives and date of creation of the institution and program; iv) the institutional setting and the way the institution and program work; v) the performance of the services provided by the institution and program; and vi) the economic impact of the institution and program. Analogously, the 33 questions to firms were aimed at providing information on aspects (i) and (ii) and those of (iv) and (v) from the perspective of the firm.

Regarding the representativeness of the selected government PDP institutions and programs, the three government agencies promoting exports, investment, and SMEs and the coordination agency are the most representative of the Peruvian PDP system implementing the government Export Strategic Plan (PENX, 2003) and the promotion of exports, investment, and SMEs. Other government institutions/programs may affect exports and investment only indirectly. The other two PDP components of the Peruvian export policy are export drawbacks and the establishment of Production and Free Zones

In addition, MI EMPRESA (formerly PROMPYME) is a key program of the Peruvian SME policy. Villarán (2007) describes the current set of policies and (public and private) institutions and programs dealing with the promotion of SMEs, which is defined in the SME Promotion and Formalization Law (No. 28015, in July 2003).

[30] Questionnaire format can be sent upon request.

Table 6. Features of the Selected Sample of PDPs and Beneficiaries, 2008

	Institution		Beneficiary Firms		
Government Institution	**Number of Workers and Years of Activity**	**Annual Budget (US$ Millions)**	**Number of Workers and Years of Activity**	**Share of Exports Out of Total Output Value**	**Sectors/Products**
I. Export, Investment, Micro and Small Firms, Promotion and Coordination Agencies/Programs					
PROMPERU (PROMPEX)	426; 2 years (12 years)	5.3	50; 12 years 360; 45 years 26; 11 years 110; 21 years	12%; 10%; 100%; 5%	Shoes; Shoes; Garments of Textiles; Plastic Frame
MI EMPRESA (PROMPYME)	60; 2 years (11 years)	2.9	50; 12 years 2; < 1 year 20; 2 years	12%; 0%; 5%;	Shoes; Edible mushroom (Shiitake); Apparel
PERU COMPITE-CNC	9; 6 years	0.3	19; 3 years 921; 59 years	100%, 100%	Cacao; Garments Using Tangüis or Pima Cotton as Inputs
PROINVERSION	nd; 6 years	35	Nd	nd	All Sectors

Table 6., continued

Government Institution	Institution: Number of Workers and Years of Activity	Institution: Annual Budget (US$ Millions)	Beneficiary Firms: Number of Workers and Years of Activity	Beneficiary Firms: Share of Exports Out of Total Output Value	Beneficiary Firms: Sectors/Products
II. Technology Support Institutions/Programs					
INCAGRO	30; 8 years	43.1 (Phase II, 25.0 IBRD loan), for 5 years (2005-2009)			
INCAGRO-Region II	4; 2 years		30; 8 years	90%	Organic Coffee
INCAGRO Region III	3; 8 years		5; 2 years 3; 1 year	0% 0%	Coffee; Trout
CITE (Technical Office)	7; 8 years	0.2			
CITE-CAL	15; 10 years	2.0	50; 12 years 360; 45 years 50; 23 years	12%; 10%; 5%	Shoes; Shoes; Leather and Shoes
CITE-MADERA	27; 8 years	1.3	15; 18 years 220; 19 years 21; 28 years	0%; 20%, 0%	Wood Products; (Furniture, Desks, beds, etc.) Furniture; Wood Products

Source: Authors' compilation from project questionnaires. In addition to these PDP governmental institutions, the unit of Development of COFIDE is in charge of providing finance to small and micro firms. This unit has twenty-one professionals with an annual budget to finance the US$59.8 million project for the period 2004-2008. COFIDE was created in 1971 (as first floor banking) and in 1992 it became second floor banking. PROINVERSIÓN was created in 2002 and has an average annual budget of US$44.9 million.

The ministry in charge of the SME policy until 2008 was the Ministry of Labor and Employment Promotion[31] (MTPE). The National Council for SME Development (CODEMYPE) is the dialogue unit that advises MTPE and suggests programs and instruments to MTPE to promote small and micro enterprises. MI EMPRESA, created in October 2006, is the program attached to MTPE in charge of the promotion of SMEs. MI EMPRESA replaced PROMPYME, the Commission for the Promotion of Small and Micro Enterprises, created in 1997. This commission was the main instrument promoting SMEs in the Fujimori administration (1995-2000).

Although most of the institutions and programs have boards of directors composed of several representatives from the government and private sector, which coordinate their activities, the National Council of Competitiveness was created in 2002 as the main government entity in charge of the coordination and cooperation activities of all sectors and entities to foster firms' competitiveness. The Council's programs involve only activities of coordination and cooperation; they do not involve transference of resources.

The two technological support programs (INCAGRO and the network of CITEs), as well as the sanitary and phytosanitary instruments for agriculture (through SENASA), are the most representative entities regarding the technological policies and provisions of public inputs needed for the control and eradication of pests and diseases in the agricultural sector in terms of the number of beneficiaries they assist.

According to the SME Promotion Law (No. 28015), COFIDE is the government financial institution that canalizes financial resources to SMEs. The COFIDE unit analyzed in this paper concentrates on providing financial services to SMEs of the agricultural sector. Finally, institutions and programs that support cluster development policy are still in an infant stage in Peru. These are described in Section 7 of this paper.

The selection of the sample of fifteen beneficiaries (which received benefits or services from five of the selected PDP institutions and programs) is an attempt to gather information on firms' perceptions concerning the way PDP institutions and programs work and concerning the impact of these institutions and programs on firms' productive performance arising from the benefits or services that they receive. Also, the sample beneficiaries' responses are used for the

[31] In 2009, this function will be transferred to the Ministry of Production (PRODUCE).

purpose of comparing government and private sector perceptions of the activities and their impact on these PDP institutions and programs. Further, the sample of firms provides information on the weaknesses and restrictions of the received PDP services and offers suggestions on how to overcome these disadvantages. The sample was chosen randomly from a group of firms provided by the PDP´s institutions and programs.

The assessment of the selected PDPs will be presented in the next four sections. In Section 4 on the standard trade policy, the analysis shows that, despite the trade liberalization process carried out in Peru since 1990, the protection structure is still biased in favor of traditional manufacturing sectors, such as textiles and apparels, and the agricultural sector. This structure has been maintained regardless of the trade instrument used by the Peruvian government. Section 5 describes the institutional settings of PDPs based upon the responses on the questionnaires. Section 6 presents some indicators of the productive impact of the selected PDPs, and Section 7 describes program and project components of the cluster development policy in Peru.

4. Trade Policy in Peru, 1990-2007

This section briefly examines the structure of protection arising from trade policy in Peru, conceptually formulated as a horizontal-market intervention policy, during the period 1990-1997.

Since the early 1990s, Peru's trade policy has been aimed at consolidating the process of deregulation and liberalization of the trade regime. As such, the stated goal of trade policy formulation has been to create non-distorting incentives that allow an efficient allocation of resources and foster the development of economic activities according to market signals. In terms of the basic framework described in Section 3, trade policy is addressed to eliminate or reduce market distortions (induced by government interventions in the market). In this regard, the main trade instruments used by the Peruvian government—tariff rates, non-tariff barriers (i.e., NTBs, such as technical barriers, tariff-quotas, and quantitative restrictions) and preferential trade arrangements (PTAs) are aligned not only in terms of the objective of the trade policy, but also with respect to the free trade commitments with international trade organizations such as the World Trade Organization and the Asian Pacific Economic Cooperation, of which Peru is a member.

Thus, the objective of the tariff policy is a progressive reduction of tariffs in a uniform way. Similarly, the objective of NTBs is to progressively reduce NTBs to the maximum extent possible in order to minimize possible distortions in trade. The respective objective of PTAs, in accordance with the multilateral trade negotiations strategy, is to accelerate the benefits of further trade liberalization and facilitation.

The Ministry of Economy and Finance (MEF, 2004) is in charge of formulating and implementing economic policy in general, and trade policy in particular. The Ministry of External Relations represents Peru in international forums, in coordination with other ministries and state agencies. Other state bodies supporting the implementation of trade policy include the Customs Agency of Peru (ADUANET), in charge of supervising trade operations and administrating and collecting all taxes related to external trade; the Ministry of External Trade and Tourism (formerly the Ministry of Industry, Tourism, Integration, and International Trade Negotiations (MITINCI), responsible for international trade negotiations and regional integration policy; and the National Institute for the Defense of Competition and the Protection of Intellectual Property (INDECOPI), in charge of monitoring enacted legislation to preserve free and fair competition conditions. INDECOPI is also the main agency responsible for the protection of intellectual property rights and the implementation of contingency measures (i.e., antidumping and safeguard measures). The role of the private sector in policy formulation is largely channeled through professional associations representing different enterprises (particularly, SNI, ADEX, CONFIEP, and CONVEAGRO). These associations participate on an ad-hoc basis in coordination meetings with the relevant ministries and agencies. As a consequence of this institutional setting, the protection structure in Peru is a result of the trade barrier policy formulated by the government and the lobbies undertaken for these associations representing the traditional manufacturing and agricultural sectors. This structure and the evolution of the three main instruments are described in turn.

4.1 Tariff Barriers

According to MEF (2004), the tariff policy must be oriented to reduce the average tariff and its standard deviation considering the following aspects: i) an appropriate balance between the effective impact on output, employment, and government revenues and the allocation of resources and consumers' welfare; ii) other reforms/policies that may impact output and

employment; iii) negotiations on preferential trade arrangements; and iv) a simple and transparent administration system. The Peruvian government has imposed three basic tariff rates: the most-favored-nation (MFN) ad-valorem tariff rates; the preferential ad-valorem tariff rates; and the tariffs of the agricultural sector associated[32] with the price band.[33] Tables 7, A6, and A7 show the MFN ad-valorem tariff rates[34] of the trade liberalization process carried out in Peru between 1990 and 2007, and Table 8 reports the effective rate of protection by sectors.

[32] The agricultural sector also has temporal tariff rates and specific import taxes. The latter group of taxes is applied to forty-five agricultural tariff lines (MEF, 2004).

[33] The products associated with the prices band are: rice (HS, 1006300000); yellow maize (HS, 1005901100); milk (HS, 0402211900); and sugar (HS, 1701990090).

[34] Peru grants MFN treatment to all partners. There is little evidence of tariff escalation at the aggregate MFN level. Taking into account surcharges and variable specific duties, the average applied tariff on raw materials is slightly higher than on fully processed products, but these aggregate figures do not incorporate tariff concessions granted for specific activities, which could introduce some escalatory effects in specific industries.

Table 7. Tariff Rate Indicators in Peru, 1990-1993

Level and Tariff Structure, 1990-1993							
	1990 Sept.	**1990 Dec.**	**1991 June**	**1991 Dec.**	**1992 June**	**1992 Dec.**	**1993 Dec.**
Average Ad-Valorem Tariff Rates	32	26	17	17	18	18	16
Standard Deviation	17	13	4	4	4	4	3
Maximum Tariff Rate Including Surcharges	60	50	25	25	25	25	25
Number of Tariff Lines by Ad-Valorem Tariff Rate							
5%	0	0	25	0	0	0	0
15%	2,177	2,177	4,294	4,319	4,767	4,779	5,629
25%	1,945	1,945	950	950	1,716	1,704	854
50%	1,147	1,147	0	0	0	0	0
Total	5,269	5,269	5,269	5,269	6,483	6,483	6,483

Source: Authors' compilation based on Rojas (1996).

Table 8. Nominal Ad-Valorem Tariff Rates and Effective Rate of Protection and Output in Peru by Sector, 1990-2007

	1990-1992			1996-1997			2001-2002			2006-2007	
Sector/Period	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff[21]**	**Growth Rate of Index of Physical Volume of Production**
Agriculture and Livestock[1]	23.5[2]	24.5[4]	-4.6	15.4[12]	15.5[10]	5.9	16.2[13]	18.6	2.2	14.9	5.7
Dairy	27.8[2]	35.9	7.6	24.3[12]	30.9	1.5	22.6[13]	45.9	6.6	25.0	8.9
Milling and Baking	22.3[2]	22.3	5.1	17.3[12]	16.3	4.3	18.0[13]	29.3	5.5	13.9	4.6
Sugar	18.5[2]	11.2[5]	-9.8	12.8[12]	9.7	2.4	14.4[13]	21.5	9.8	15.5	14.3
Beverages and Tobacco	39.6	47.1	13.0[23] 1.6[16]	16.1	15.5	1.8	17.2	29.5	4.9	15.5	9.6
Fishmeal	15.0	4.3	7.3	12.0[12]	13.4	-3.7	0.0[13]	-2.8	-11.3	11.9	-10.3
Other Foods	24.0	40.3	4.7	17.3	24.1	3.6	17.2[13]	34.8	3.8	17.2	14.1
Mineral Extraction[1]	15.6[15]	-4.9[8]	3.2	12.0[12]	11.9[10]	8.8	12.0	13.7	12.1	5.8[20]	1.7
Crude Oil[1]	15.0[14]	20.9[8]	-3.7	12.0	12.0[10]	-3.0	0.0[13]	4.9	-0.7	1.3	6.1
Textiles	21.8[7]	24.7[7]	-7.0	19.4	24.3	7.6	17.5	26.0	4.9	16.3	2.3
Apparel	31.4	54.9	-7.0[22]	19.7	23.0	-0.7	17.7	34.2	3.1	20.0	3.0
Leather and Leather Products	24.9	40.2	-5.5	13.5	10.2	-3.3	12.0	14.2	-13.7	10.8	-1.0
Shoes	39.9	43.5	-15.3[22]	19.0	29.6	-3.9	16.3	37.9	-13.5	16.4	-6.7
Furniture	28.6[2]	39.0[4]	-18.0[22]	13.9	12.7[10]	-0.1	12.0[24]	n.a	8.5	9.0	4.2[19]
Paper	23.8	32.7	-16.1	13.6	13.4	0.0	9.6[13]	14.7	5.3	8.2	13.0
Printing and Publishing	23.8	24.5	10.1[22]	13.6	13.5	-2.3	11.7[13]	18.2	9.2	9.0	6.5

Table 8. Nominal Ad-Valorem Tariff Rates and Effective Rate of Protection and Output in Peru by Sector, 1990-2007

	1990-1992			1996-1997			2001-2002			2006-2007	
Sector/Period	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff[21]**	**Growth Rate of Index of Physical Volume of Production**
Basic Chemicals and Fertilizers	16.1	21.9	-4.8	13.9	13.4	8.2	6.0[13]	12.2	0.6	4.1	7.6
Medicines	15.1[2]	15.1	-4.8	12.0[12]	13.4	4.3	10.8[13]	17.0	9.2	7.0	20.3
Other Chemicals	19.9	25.5	6.1	13.5	12.7	10.6	9.0[13]	15.3	5.4	7.0	16.8
Plastics and Articles Thereof; Rubber and Articles Thereof	19.9	27.9	-8.1[18] 2.2[17]	13.7	13.2	4.9	12.0	13.9	7.1	5.7	7.9
Siderurgy	16.6[2]	22.9	-3.6[1]	13.5	13.4	11.6	9.3[13]	17.4	1.6	6.4[20]	10.5
Various Metal Products	21.7	35.0	-3.0	13.6	13.8	0.2	10.6	14.7	-2.3	6.4	18.3
Machinery and Equipment	22.3[2]	41.4[4]	6.3	12.3[12]	12.5[10]	6.4	12.0[24]	n.a	-11.3	3.1	14.9
Non-Electric Machinery	17.8	18.8	6.3	13.6	13.6	3.0	7.5[13]	16.2	-7.2	5.3	13.0
Appliances	25.3[2]	34.0[4]	-2.5	n.a	n.a	-1.4	n.a	n.a	-6.3	7.6	20.9
Transport Equipment	19.7	23.3	-21.1	13.6	13.3	-13.0	10.4	18.7	-7.3	6.0	36.2

Table 8. Nominal Ad-Valorem Tariff Rates and Effective Rate of Protection and Output in Peru by Sector, 1990-2007

	1990-1992			1996-1997			2001-2002			2006-2007	
Sector/Period	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff**	**Effect. Protec.**	**Growth Rate of Index of Physical Volume of Production**	**Ad-Valorem Tariff[21]**	**Growth Rate of Index of Physical Volume of Production**
Other Manufactured Products	23.3	36.0	4.0	13.6	12.9	2.3	11.8	16.2	1.3	9.4	19.0
Refined Oil	15.0[14]	13.4[6]	0.0	15.0[9]	15.0[11]	1.3	9.7[13]	31.0	1.1	2.7[20]	1.5
Basic Industry of Non-Ferrous Metals	16.2[14]	14.9	2.9	13.5	13.5	5.1	12.0[24]	n.a	9.0	8.1	-3.2
Simple Average	20.7	26.6	0.4	15.9	15.5	3.4	12.2	19.2	2.7	7.6	8.8

Source: BCRP (1989,1993,1995), INEI (2002), Fairlie (2004), Rossini (1991), Boloña (1997), González-Vigil (2001), Pasco Font (2000), EDILCEX (1999). n.a. means not available. [1] Growth rate of Agricultural GDP. [2] Ad-Valorem Tariff of 1990 and 1991. [4] Does not include dates of 1992. [5] Does not include year 1991. [6] Effective Protection of 1992. [7] Year 1992. [8] Effective Protection of 1991. [9] Ad-Valorem Tariff of 1996. [10] Effective Protection of 1997. [11] Effective Protection of 1996. [12] Ad-Valorem tariff of 1997. [13] Ad-Valorem Tariff of 2002. [14] Ad- Valorem Tariff of 1992. [15] Ad-Valorem Tariff of Mineral Products. [16] Only tobacco. [17] Only plastic. [18] Only rubber. [19] Only wood and furniture. [20] Ad-Valorem Tariff of 2007. [21] Ad-Valorem tariff 2006. [22] Growth Rate of 1992-1991. [23] Only beverages. [24] Ad-Valorem Tariff of 1999.

The chronological changes in the MFN tariff rates and other import taxes were as follows during the period 1990-2007:[35]

i) In March 1991, tariff rates were reduced to two rates: 15 percent for capital goods and intermediate inputs and 25 percent for consumer goods. Most of the quotas were eliminated. Peru also does not have tariff-quotas.

ii) In June 1993, a rate of 15 percent was established for 86 percent of tariff lines, and a rate of 25 percent for the remainder.

iii) Through Supreme Decree No. 035-97-EF of April 13, 1997, the tariff rates were reduced to 12 percent and 20 percent. Simultaneously, tariffs on some 300 agricultural products (including certain grains, meat, milk, and vegetables) were increased from 15 percent to 20 percent.

iv) Supreme Decree No. 035-97-EF introduced, in 1997, a 5 percent tariff surcharge on 331 agricultural products. Changes introduced later that year by Supreme Decree No. 119-EF-97 increased the number of tariff lines subject to the surcharge to 350. The tariff surcharge was applied on the c.i.f. value of imports before tax.

v) Supreme Decree No. 141-99-EF of August 24, 1999, added two more lines and increased the surcharge for meat products to 10 percent (56 items in HS Chapters 02 and 16). As of September 1999, 296 lines were taxed at 5 percent and 56 at 10 percent. All of these items corresponded to agricultural products (HS 1-24) except for one category, dextrin and starch, classified in HS Chapter 35.

vi) Variable specific duties have been applied since 1991 to imports of several agricultural products. These duties are intended as a price stabilization and protection mechanism. They also provide a dedicated source of revenue for the agricultural sector since the collected duties are exclusively channeled to the Agricultural Development Fund. Variable specific duties are based on the difference between a floor price and the f.o.b. import price

vii) For each product, a moving average over the previous 60 months of international f.o.b. prices is calculated and adjusted using the U.S. consumer price index. The floor price is this 60-month average adjusted by adding a share of the standard deviation

[35] These changes are reported in Fairlie et al. (2004), WTO (2000 and 2007), and Paredes and Sachs (1991).

during the period. The specific duty is determined as the difference between the floor and statutory reference prices increased by multiplying the difference by a "margin" factor to account for additional import costs (e.g., transport and insurance). By 2001, the mechanism of variable specific duties currently applied to 23 tariff items in five product groups: milk, maize, sorghum, rice, and sugar; the mechanism was eliminated for wheat products in August 1998. The WTO Secretariat reported estimates of ad-valorem equivalents for 1999 (based on August 1999 prices), which were 6 percent for rice, 21 percent for maize, 27 percent for milk, and 54 percent for sugar (WTO, 2000 and 2007);

viii) From 2001 to 2006. there were many changes in the ad-valorem tariff rates for specific agricultural, capital, and intermediate tariff lines, which were originated by lobbies of private associations from these sectors (Fairlie et al., 2004);

ix) By 2006, the customs tariff had three duty rates: 0 percent, 12 percent, and 20 percent. Moreover, Peru applied additional duties of 5 percent to imports of certain products (392 tariff lines from Chapters 1-24 of the HS). Accordingly, in actual practice, tariffs had five duty rates (0 percent, 12 percent, 17 percent, 20 percent, and 25 percent).

The tariff rate dynamics and the structure of the effective rate of protection of the Peruvian economy indicate in the first place that, despite the decline in tariff rates and their dispersion, a relative high degree of protection has been maintained for some specific sectors producing standard or mature consumer goods, such as agriculture (e.g., sugar, rice, maize), beverages, tobacco and processed foods (including dairy products), textiles, apparel, and shoes. In the rest of the sectors dealing with consumer, intermediate, and capital goods, their rate of nominal and effective protection rates have had lower levels than the simple average tariff rate. Lobbies from firms in market-concentrated manufactured[36] consumer goods sectors (through private associations such as the National Industry Society) and associations from the agricultural sector (such as the Agrarian National Confederation and the National Convention of the Agro Sector) may explain the differences in the protection structure in Peru. Furthermore, some top producer firms from the protected manufactured consumer goods (such as apparel and textiles)

[36] Tables A1 and A2.

sectors are also the main exporters of goods from these sectors. A conjecture derived from this data is that horizontal market intervention PDP policies, such as tariff rate reductions, may be distorted in the presence of lobbies from groups from concentrated sectors and micro and small firms, and from groups representing small farmers from the agricultural sector, which may influence the structure of the instruments used in such policies.

4.2 Non-Tariff Barriers

The second group of trade instruments used by Peru (as well as all other countries) is the set of non-tariff barriers (NTBs). Since the early 1990s, the main NTBs have included: i) import prohibitions and restrictions,[37] which are used for the environment, safety, agriculture, and animal and health protection, and are applied to a few tariff lines;[38] ii) contingent measures (such as antidumping, countervailing duties, and safeguards); iii) technical regulations and standards; and iv) sanitary and phytosanitary measures. More than 60 percent of the NTBs are dominated by these latter two types of NTBs.

Table 9 shows the distribution of the number of NTBs in Peru and their partners by sectors and for 2002.[39] Peru and its main partners from developed countries impose a higher share of NTBs on agricultural and food products. Some developed and Latin American countries (e.g., the United States, Mexico, countries of the European Union, and Brazil) and China also impose a significant share of NTBs on manufactured goods. Estimated equivalent tariffs on agricultural and manufactured goods are 43 percent and 16 percent, respectively, and have been computed by Kee et al. (2006). Tello (2008c) has estimated equivalent tariffs for NTBs of about 90 percent for 10 agricultural products.[40] These figures indicate that, in addition to tariff barriers, NTBs have contributed to protecting the agricultural and food sectors, and to a lesser extent the manufacturing sector.[41]

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[37] These require an authorization from the relevant ministry. Some substances also need to be registered within the sanitary authorities; this gives exclusive import rights to the holder of the respective sanitary certificate. In order to control narcotics, the state has a monopoly on narcotics trade (WTO, 2000 and 2007).
[38] Prohibited imports are: used clothes, tires, engines, and spare parts. Restricted imports include: plant products and other regulated articles; animals and products of animal origin; food and beverages; veterinary products; animal feed and additives for personal use; agricultural pesticides and wild fauna and flora, among others.
[39] This distribution and number of NTBs have not changed significantly up to 2006 (WTO, 2007).
[40] Including rice, apples, and wheat.
[41] Some 1.9 percent of the total number of NTBs has been imposed on textiles and apparel.

Table 9. Non-Tariff Barrier Structure Imposed in Peru and its Main Partner Countries by ISIC Sector, 2002

Country	Agricultural, Livestock, Fishing, and Food Products (%)	Mining, Petroleum, and Natural Gas (%)	Manufacture (%)	Rest of Products (%)	Weighted Average of NTBs per Tariff Line	Number of NTBs Faced by Peruvian X's of Goods	Total Number of NTBs
Peru	63	0.1	28	9	4.6		6209
Argentina	6	1	87	6	2,4	214	2848
Brazil	19	0	79	2	2,6	2556	42821
Canada	45	0	55	0	0,2	326	2122
Chile	60	1	38	1	2,1	3276	14707
P. R. of China	20	8	61	12	0,9	51	1566
Colombia	59	0	41	0	7,6	519	13971
USA	45	0	54	1	2,4	5785	10640
Japan	96	0	4	0	1,2	399	1232
Mexico	24	0	72	4	2,0	1718	14430
European Union[1]	27	0	73	0	0,7	1859	4524

Source: Authors' calculations based on UNCTAD (2004), ADUANET (2008), and European Commission (2004-2008). [1] The number of NTBs is the average of the restrictions of 11 countries considered in the European Union.

4.3 Preferential Trade Arrangements

The third trade instrument used by Peru has been the preferential trade areas, in particular from Latin American countries, initiated with the Andean Community in 1970 and continued in a greater proportion of arrangements since 1998 within the framework of the Latin American Integration Association (LAIA), as shown in Table 10.[42]

Table 10. Preferential Trade Arrangements (PTAs) of Peru, 1970-2003

No.	PTAs-Country Members	Initial Date	Export/Import Share Out of Total Export/Import Value (%) - 2006		Sectoral Preferences (HS code)
			Export	Import	
1	Peruvian Unilateral Trade Liberalization	1980-1982; 1990 - up to now	25.6% (out of GDP)	(16% out of GDPI)	All sectors (8.2%, MFN ad-valorem average; 12% in agriculture and fishing, 2006)
2	Regional – Andean Community. Ecuador, Bolivia, Colombia, and Venezuela	1970. In 1993, it changed to a Free Trade Area (Peru withdrew from it that year and was reinstated in 1997)	6.1%	14.1%	All the sectors. Tariff reduction was slow, and it took 30 years to achieve a Free Trade Area (Preferential average ad-valorem tariff was zero in 2006)
3	Complementary Economic Agreement (CEA) No. 39 between Brazil and the Andean Community	1999	3.4%	10.5%	Coffee (09), Cereals (10), Milk Products (11), Oils (12), Agricultural Products (13 and 26), Food (20, 21), Fuels (17), and Some Manufactured Goods (Average preferential ad-valorem tariffs 5.8% and 7.9% in agriculture and fishing, 2006)

[42] Many other agreements have been and are being implemented since 2006, including that with Chile, the United States, and Canada. These will be in force from 2009 onwards.

Table 10., continued

No.	PTAs-Country Members	Initial Date	Export/Import Share Out of Total Export/Import Value (%) - 2006		Sectoral Preferences (HS code)
			Export	Import	
4	Partial Complementary Economic Agreement (PCEA) No. 48 between Argentina and Andean Community (This arrangement replaced the CEA No. 11, 21, 09.20)	2000	0.3%	5.2%	Live Animals (01), Meat (02), Vegetables (07), Fruits (08), Coffee (09), Cereals (10), Milk Products (11), Oils (12), Agricultural Products (13 and 26), Foods (20, 21), Fuels (17), and Some Manufactured Goods (Average Preferential tariff 5.9% and 8.1% for agriculture and fishing in 2006)
5	CEA No. 38l Chile-Peru,	1998	6.4%	5.6%	Most of the sectors (Average preferential tariff 0.8% and 2.3% for agriculture, 2006)
6	CEA No, 8, Mexico-Peru,	1987	1.7%	3.4%	Specific agricultural and food sectors with no significant tariff reductions (Average preferential tariff 8.1% and 12.0% for agriculture and fishing, 2006)

Source: ALADI (2007), WTO (2000, 2007), Tello (2008). Peru signed the Generalized System of Preferences - UE (jul-71), GSP - Japan (ago-71), GSP - EE.UU (1976), GSP Plus UE-ANDEAN (1991), and Andean Trade Preferences Act (in 1991) and extended the Andean Trade Preferences Drug Eradication Act (in 2001).

In 1998, less than one-third of Peru's total imports originated in members of the Latin American Integration Association (LAIA), including those in the Andean Community, and less than 20% of that total was granted preferential treatment. The share of Peruvian exports benefiting from negotiated preferential arrangements was lower: only around 18% of Peru's total exports were destined for LAIA countries. By 2006, approximately 17.9% of Peru's total exports went to trading partners with which preferential agreements were in force, and 39% of its total imports came from those partners. Within those categories, nearly 14.1% of Peru's imports were bought from Andean trading partners, and 6.1% of its exports were sold to them. Around 15.7% of Peruvian imports came from the MERCOSUR countries, while 3.7% of the country's exports were directed to those markets.

Except for the free trade area with Andean countries, for which tariff rates have been zero for all goods since 2006, the simple average and the structure of tariff rates follow the same pattern as the most-favored-nation rates. Thus, the average simple rates are: 0.8 percent with Chile, 8.1 percent with Mexico, 5.9 percent with Argentina, and 5.8 percent with Brazil. On the other hand, the tariff rates of the agricultural, textile, and apparel sectors for all these countries are between 12 percent and 17 percent, except for Chile, whose tariff rates for most sectors are zero.[43]

Summarizing, trade policy in Peru, within its different instruments, has been consistently designed to reduce market price distortions, fundamentally through a decline of its MFN and preferential ad-valorem tariff rates. As in other (developed and developing) countries, lobbying groups of firms and producer associations in Peru seem to have distorted an otherwise horizontal-market intervention policy maintaining a relatively high level of protection in some specific sectors and products.

5. Institutional Features of Selected PDPs in Peru, 1990-2007

Table 11 shows the institutional main features of the selected PDPs. It can safely be argued that the majority of the selected PDP institutions and programs address particular market and government failures, although the objectives and problems that they are supposed to address (or solve) do not necessarily invoke the list of "economic failures" described in the basic framework (Section 3.1). Thus, information externalities are a key rationality for Peruvian export and investment agencies and the SME promotion program. In addition, this last program deals with the suboptimal level of entrepreneurship, and limited access to resources and business development services. The missing public input feature and spillover effects of the technological and innovation process seem to be a key rationale for the programs that support technological and innovation processes. Capital market imperfections and limited access to credit for SMEs are key economic failures behind the micro finance program of COFIDE. Addressing coordination

[43] On August 22, 2006, Peru and Chile signed a free trade agreement that modifies and replaces LAIA Economic Complementarity Agreement No. 38 of June 22, 1998. The new agreement seeks to further bilateral trade liberalization efforts and covers such topics as: competition policy; trade in services (temporary entry of business people and cross-border trade in services); investment; cooperation with regard to labor and migration; dispute settlement; traditional knowledge; and a commitment to negotiating the mutual recognition of diplomas at a later date. However, the authorities have stated that no time-frame has been established for the agreement's entry into force (WTO, 2007).

failures to strengthen specific productive chains seems to be the goal for the Peruvian coordinating council. In addition, PROINVERSION addresses this kind of failure. Finally, export drawbacks attempt to compensate for domestic price distortions in the Peruvian economy.[44]

A second feature common in export, investment, and SME promotion agencies and with respect to export drawbacks is the changeable legal framework during the period 1990-2007, which may have hindered the effectiveness of these policies. For example, the export promotion policy of non-traditional exports has a long story in the Peruvian economy. It began in 1969, when an export subsidy (CERTEX, export certificates) was established. The export subsidy became effective in 1978 (Decree Laws 21492 and 21530) and implemented a 22 percent subsidy rate. The second best rationality was argued as support for this policy (Schydlowsky et al., 1983). This subsidy was eliminated in 1990. Along with this subsidy, the first export promotion agency (FOPEX) was created in 1978, and from then on this agency went through several changes as described in Table 11. By 2008, PROMPERU had merged two promotion agencies: the export of goods agency (formerly called PROMPEX) and the tourism services agency (formerly called FOPTUR). Frequent legal changes have also occurred in the program that promotes SMEs. The last change occurred in November 2008 when MI EMPRESA was transferred from MTPE to PRODUCE.

A third feature of most PDP institutions and programs is described in Table 11. They are often led by a multi-sectoral board of directors from the executive branch and private sector (e.g., producer association personnel, representatives of SMEs, university staff). However, the coordination at this level is not always assumed by the staff of operation units in charge of the coordination of activities of the program. Further, priorities of the services implemented by a PDP institution or program are modified as often as the changes in the executives of the public and private sector on the board of directors. Thus, these last two features, on one hand, produce unstable interventions despite the fact that economic failures and firms immersed in these are not changing. On the other hand, limit the learning process of services provide by the program or institution.

[44] Cluster development policy is analyzed in Section 7.

The fourth feature of the selected PDPs, except for PROINVERSION, is the orientation or bias toward promoting small and medium-sized firms from the non-traditional sectors of manufactured and agricultural goods. Thus, in addition to the economic failure rationale for intervention derived from the uneven size distribution of the firms and the predominant role of micro and small-sized enterprises, empowered groups of SMEs may have contributed to the bias of the selected PDPs toward small and micro firms.

Table 11. Institutional Features of Selected PDPs in Peru, 1990-2007

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
I. Export, Investment, and Micro Firms' Promotion and Coordination Agencies						
PROMPERU (PROMPEX)	-To promote the growth and diversification of exports of goods and services under an integrated market, product and business, thereby contributing to the positioning of Peru as an exporting country. -To develop Peru as a "brand name" export and tourism product. -To consolidate the institution as an entity that offers high quality and efficient products and services so as to obtain the two previous goals. Attempt to strengthen external networks and inter-institutional activities; to motivate exporter participation and; to promote specific export sector activities.	i) Firms Asymmetric Information; ii) Information Externalities; and iii) Lack of entrepreneurial knowledge and limited access to knowledge of international business marketing, and good and quality management practices (PENX, 2003). PROMPEX trains inexperienced exporters on the export process, marketing, and business negotiations; performs and disseminates analyses on country and product market trends; provides specific information on trade opportunities abroad as well as specialized counseling and technical assistance on how to take advantage of these opportunities; coordinates and supports (and in some cases co-finances) firms' participation in international trade missions and trade shows, and arranges	PROMPERU (New National Commission to Promote Exports and Tourism) was created on 28/02/2007 by Supreme Decree 003-2007-MINCETUR. This is composed by the former PROMPEX (National Commission to Promote Exports) and the former PROMPERU. (The Commission to Promote Peru was created on February 19, 1993, Supreme Decree No. 010-93-PCM, which was changed to Decree of Law on July 17, 1996.) PROMPEX was created on March 29, 1996, by Decree of Law No. 805. Previously, the National Commission to Promote Exports, with the support of UNDP (United Nations Development Program), was created by Supreme Decree No. 010-93-PCM on February 19, 1993. In 1996, the former PROMPERU incorporated to FOPTUR (Fund to Promote Tourism), which was	1. Organization of International and Local Fairs and Missions 2. Training Exporter programs (i.e., Wednesday Exporter Program) 3. Programs to develop Plans to Export (i.e., (PLANEX) 4. Training on System of Quality Management of Marketing and Manufactured Goods (i.e., BPMM and 5S program) 5. Services on Digital Opportunities from APEC (i.e., ADOC PERU) 6. Advertisement Services (i.e., the Peru Marketplaces program) PROGRAM DESCRIPTIONS: i) In the case of Fairs. costs of travel, lodging, and implementation of the stands are paid by the beneficiary; PROMPERU assumes the cost of organization and information; ii) In the case of	1. Non-Traditional Products (export sector) and tourism: Agro-industry, fisheries and aquaculture, textiles and footwear, metal engineering, materials and finishes for construction, chemicals, wood, crafts, and jewelry and services. Flag products[1] are those image products of Peru: alpaca, vicuña, Peruvian gastronomy, pisco, maca, Peruvian cotton (pima and tanguis), lucuma, and Chulucanas ceramics. 2. Exporters of all sizes are the beneficiaries.	PROMPERU (formerly PROMPEX) is led by a board of 8 directors from the executive branch and 10 representatives of the private sector (4 from the export and industrial sectors, 1 from SMEs, 2 from the trade and tourism sectors, and 3 from tourism regions from the Amazon). Beneficiaries are informed of the programs through: i) Invitations (if they have a history of working with PROMPERU or agency predecessors); ii) Direct contact (between PROMPERU and beneficiary); iii) Indirect contact (through recommendations from other beneficiaries or suppliers); and iv) Finding new opportunities through newspapers, the internet, etc. In addition, PROMPERU informs beneficiaries through: i) Regional coordinators; ii) Local agents; and iii) Online

Table 11. Institutional Features of Selected PDPs in Peru, 1990-2007

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
		meetings with potential foreign buyers in particular; organizes these kinds of trade events; and sponsors the creation of consortia of firms aiming at strengthening their competitive position in external markets.	created on April 10, 1977, by Decree of Law No. 21948. Export promotion in Peru started in 1978 when FOPEX (Fund To Promote Non-Traditional Exports) was created on November 11, 1978, by Decree of Law No. 22342. This unit was deactivated in 1985 and replaced by ICE (Institute of External Trade) in 1986. This also was deactivated in January 1992 by Decree Supreme No. 005-92-ICTI/DM.	Missions, PROMPERU finances the costs of organization and training (lectures, seminars, and visits); iii) In training programs and technical assistance (PLANEX, BPMM, and 5S), the costs of the services may be total or partially assumed by PROMPEX, and the period of the programs ranges from 6 to 8 months (for BPMM) and from 3 to 6 months (for PLANEX). For all the rest of the services, some nominal fees are charged.		publications.

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Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
PROINVERSION	Promoting the development of private investment by identifying potential markets, and eliminating the difficulties, obstacles, and distortions in coordination with public entities involved. The main specific objectives (and activities) are: i) Developing public-private partnerships ii) Asset sale or promotion of joint ventures or management agreements for state-owned agencies? iii) Promoting foreign private investment iv) Providing information and guidance on the possibilities of investing in Peru v) Promoting local business vi) Identifying obstacles to investment and proposing measures to eliminate them.	i) Information Externalities; and ii) Coordination Failures. Agency provides information on procedures for opening a business and supplies the necessary forms. Also coordinates with other public- and private-sector agencies to eliminate bureaucratic obstacles and simplify/ facilitate investment process. Under the Private Investment Law, the government grants an appropriate business climate for investment through: i) national treatment of foreign investment; ii) free remittances of profits and dividends; iii) free capital re-exports; iv) access to domestic credit; v) free access to all forms of technology acquisition; vi) freedom to acquire domestic assets and purchase international insurance; vii) free subscription of legal stability agreements (or law contracts for 10years).	Created on December 24, 2002, by Supreme Decree 027-2002-PCM. Through this decree, COPRI (Commission for the Promotion of Private Investment), CONITE (National Commission of Foreign Investment and Technology), and management of the Economic Development Commission for the Promotion of Peru (PROMPERU) were transferred to FOPRI (Fund for the Promotion of Private Investment, which was created on September 25, 1991, by Decree of Law No. 647) changing its name to PROINVERSION. COPRI was created on September 25, 1991, by Decree of Law 674, and CONITE was created on May 25, 1976, by Decree of Law 21501. In June 1998, COPRI incorporated to PROMCEPRI (Commission for the Promotion of Private Concessions, which was created on August 20, 1996, by Decree of Law 839) by Emergency Decree 025-98, Law 27111. On November 13, 1991, Peru approved the Framework Law for the growth of private investment by Decree of Law 757. Previously, on	In addition to main investment promotion activities, PROINVERSION provides specific services such as: i) Program "Costa Sierra" (Coast – Mountain), which promotes investment in roads linking both regions; ii) National Project "INVIERTE PERU," which is project competition to have access to financial services; iii) "Mi Pequeña Empresa Crece" (My Small Enterprise Grows) provides guidelines for the Development of Micro and Small Enterprises; and iv) Other information and Road Show services.	All sectors and firms of any size.	PROINVERSION's board of directors includes seven Ministers of State in the production and investment fields (the Prime Minister, Minister of Economy and Finance, Minister of Foreign Trade and Tourism, Minister of Housing and Construction, Minister of Production, Minister of Energy and Mining, and Minister of Transportation and Communications). Moreover, it has signed an agreement on cooperation and assistance with regional and local governments. Investors are informed of the activities and services of PROINVERSION through websites and other means of communication. PROINVERSION offers three primary information and contact services free of charge to investors: one at the initial stage of a firm's investment in the country, another to assist when the firm is being established in the country, and another to assist when the firm starts its activities.

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			September 25 through Decree of Law No. 674, the Promotion of Private Investment Law was enacted, which also created COPRI. On August 29, the Law of Promotion of Foreign Investment, (Decree of Law No. 662) granted legal stability contracts and guarantees to foreign investment. On December 27, 1996, a law was approved regulating the delivery concession to the private sector of public works infrastructure and public services by Supreme Decree 059-96-PCM.			

Table 11. Institutional Features of Selected PDPs in Peru, 1990-2007

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
MI EMPRESA (PROMPYME)	To promote formalization, development, and competitiveness of SMEs through: i) formalization of? services; ii) promoting SME associations; iii) granting access to new markets; iv) providing information on financial services, and v) providing services on good labor practices.	Information externalities, foster entrepreneurship, facilitate services that are limited to SMEs, and to strengthen their bargaining power. This program also provides some business development services not easily available or absent in rural areas.	The MI EMPRESA Program was created on October 12, 2006, as a joint program of PRODAME (Self–Employment and Microenterprise Program) and PERU EMPRENDEDOR (FONDEMI-BONOPYME) by Ministry Decree 356-2006-TR. In 2007, MI EMPRESA incorporated to the Center for Promotion of Small and Micro Enterprise-PROMPYME by Law 27658 and PROFECE (Program Women´s Employment Consolidation) by Supreme Decree 010-2007-TR. According to Decree of Law No. 29271, in October, 2008, MI EMPRESA will be attached to PRODUCE in 2009. In 2006, the National Plan for the Promotion and Formalization for Competitiveness and Development of Micro and Small Enterprises 2005-2009 was approved by Supreme Decree 009-2006-TR. The Center for Promotion of Small and Micro Enterprises PROMPYME) was created on April 16, 2002, by Law 27711 on the basis of the Commission for the Promotion of Small and Micro Enterprises –	The main services programs are: i) MYPE competitive. These are subsidies (vouchers) used to provide technical assistance and training programs to SMEs to improve their degree of competitiveness; ii) Promoting associations; iii) New Business Initiatives, providing information and capital support to SME new ventures. These services and training could take from 8 to 24 months; iv) State Purchases to promote sales from SMEs to government entities; v) MYPE net; vi) Entrepreneurship identity, providing information and legal support to formalization of SMEs. This process could take 2 days. Services are free of charge or through vouchers.	All sectors and small and micro firms.	Until 2008, this program was attached to MTPE. As of 2009, it will be attached to PRODUCE. Until 2008, MI EMPRESA was part of the National Direction of SMES and under the Vice-Ministry of Employment and SME Promotion. The main guidelines and services depended upon the Minister of MTPE and the National Council for SME Development (CODEMYPE). The board of this council consists of 19 representatives of the executive branch, regional governments, SMEs, and universities. MI EMPRESA has decentralized offices in 18 regions of Peru. Beneficiaries are informed of the programs through: i) Promotional fairs; ii) Radio, newspaper, or online publications; iii) Agents from MI EMPRESA; and iv) coordination with governments or the Regional Chamber of Commerce.

Table 11. Institutional Features of Selected PDPs in Peru, 1990-2007

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
			PROMPYME (which was created on November 24, 1996, by Supreme Decree 059-97-PCM) In 2003, the Law on the Promotion and Formalization of Micro and Small Enterprises by Law 28015 and its regulations were approved by Supreme Decree 009-2003-TR. Moreover, the Manual of Organization and Functions of the Ministry of Labor and Employment Promotion were approved by the Secretary General`s Decree 292-2003-TR/2003. On January 9, 1985, the law of small industrial enterprise was approved by Law 24062. In 1993, the government, through Article 59 of the Constitution of Peru, promoted the formation of small enterprises in all their forms. On June 30, 2002, the Rules of Organization and Functions of the Ministry of Labor and Employment Promotion were approved by Ministry Decree 173-2002-TR, which was changed to Supreme Decree 018-2006-TR.			

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
PERU COMPITE - CNC	Improving competitiveness through coordination, cooperation, and capacity building between the main public and private operators.	To overcome coordination failures in order to strengthen productive chains (e.g., cotton-textiles-apparel-fashion chain; forest-wood-furniture chain, and coffee-cacao chain).	On April 18, 2002, the Council of National Competitiveness was created by Supreme Decree 024-2002-PCM. On November 27, 2003, Guidelines of the National Competitiveness Strategy for the formulation of the National Competitiveness Plan was approved by Supreme Decree 094-2003-PCM. On July 28, 2005, the National Competitiveness Plan was approved by Supreme Decree 057-2005-PCM	CNC undertakes several kinds of coordination and facilitation activities such as promoting competitive production lines; firms' innovation, productive chains located in different regions; firms' associations; training programs and public-private partnerships.	All sectors and any size of firms working in productive economic activities at the national level, not at the level of specific products. They are focusing on productive chains in sectors such as: agro-industry (export sector); timber; textiles, fashion; apparel; fishing; tourism; and crafts.	The board of directors consists of 11 ministers, 6 representatives from private organizations and firms, including SMEs, and 2 executive directors. This board defines all programs, projects, competitiveness strategies, and activities of the CNC. Agents (e.g., firms, associations, public institutions, etc.) are informed of the programs through: i) Invitations to round tables; ii) Official announcements; iii) Newspapers; and iv) Online publications. The CNC does not transfer resources to agents. It only supports coordination, facilitation, and cooperation activities through meetings and round tables.

II. Technology Support Institutions

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
INCAGRO-Region II / INCAGRO-Region III	To contribute to the development of the innovation process in the agriculture sector through innovation and technology, organization and operation of the market, and improving the degree of competitiveness of farms.	Spillover effect of the innovation process and the provision of missing inputs, given the public goods feature of this process.	On August 30, 2000, an Operation External Debt agreed upon between the Republic of Peru and the International Bank for Reconstruction and Development (IBRD) was approved to partially finance the Agricultural Research and Extension Project by Supreme Decree 093-2000. On October 20, 2000, Loan Agreement IBRD 4519-PE, which contains the terms of the loan and utilization project (Phase I), was announced. Finally, on December 22, 2000, the Operating Manual Project Agricultural Research and Extension was approved by Ministry Decree 964-2000-AG. In 2005, the conditions of the loan and project implementation for Phase II between Peru and the International Bank for Reconstruction and Development (IBRD) were announced by the Loan Agreement 7285-PE.	INCAGRO undertakes 4 main programs: i) Funds for Development Services (FDSA), which co-finance strategic research areas and training; ii) Funds for Agricultural Technology (FTA), which co-finance adaptive research and extension services; iii) Fund Awards Moray, which promotes high-quality research projects.	Agriculture, livestock, forests, rural tourism, and crafts, and firms of any size, although most beneficiaries are from small farms. Examples of products benefiting in macro-region II are coffee, cacao, tara, ñuña, estevia, sugar cane, corn, wheat, peppers, paprika, grapes, pineapples, granadilla, artichokes, asparagus, herbs, dairy products, guinea pigs, and shrimp. In macro-region III, the products are grains, tubers, fiber, dairy products, and trout.	The board of directors consists of the Minister of Agriculture, the chief of INIA (National Institute of Agriculture Research), and 9 professionals from different private organizations and universities. Beneficiaries are informed of the programs through: i) Official announcements; ii) Workshops and forums; iii) Letters of invitation (e.g., FDSA services program); and iv) Online publications and newspapers. Funds are allocated through competition. Projects are selected by: their impact, environmental policies, and production capacity. The financing of

projects is shared among INCAGRO (50-80%), beneficiaries (15-30%). and their financial partners (5-20%). In the case of extension service (the predominant services in INCAGRO), the shares are 55% (INACGRO), 30% (beneficiary), and 15% (collaborator). Disbursement is made according to the goals achieved on a base line of work put forward by both parties. This line is monitored through processes and supported by technical assistance and training.

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
CITE	To promote technological innovation centers and transfer technological innovation to small and medium-sized enterprises through information systems, training and technical assistance to solve the problems of quality, productivity, and access to technological knowledge.	Spillover effect of the innovation process and the provision of missing inputs, given the public goods feature of this process.	On September 13, 2000, the Law of Innovation Technological Center (Law 27267) was approved by Supreme Decree 027-2000-MITINCI	The central office supervises the network of CITES and manages the PACM (Program to Support the Improvement of Competitiveness); the fund for innovation and the public investment project of the three public CITEs. The network of CITEs seeks to establish a net capable of increasing the interactions of the R&D process between CITEs, enterprises, regional or local governments, and other actors (stakeholders) of the national innovation system. Fees for technical assistance and other services depend upon the CITEs.	Manufacturing and agro-industry sectors distributed in a network of CITEs, both public and private. The three government CITEs are: CITE-Cal (leather and footwear); CITE-VID – Ica (grapes); CITE-MADERA (timber, wood, furniture). Private CITEs include sectors such as: fruits in Loreto (e.g., camu camu, sacha inchi, and medicinal plants); textiles in Arequipa; agro-industry in Tacna (peppers, oregano, and aromatic plants); camelidos textiles in Arequipa; agro-industry in Ayacucho (avocados, peppers) and Piura (mangoes, bananas, algarrobina); metal - mechanic in Lima; logistics services; software; and dairy products. They are focusing on medium-sized firms and SMEs.	The CITE head office is attached to PRODUCE which, through the Vice-Ministry of Industry and SMEs, leads the program. The office in PRODUCE also coordinates with MINAG, INIA, SENASA, INRENA, PROMPEX, universities, and technological institutes to implement its activities. The rest of the CITEs, both public and private, have their own boards of directors, and the central office coordinates the network of CITEs. Beneficiaries are informed of the programs through: i) Electronic newsletters, triptychs, fairs, and industry events; ii) Local governments, NGOs, and associations; iii) Local radio (weak presence); and iv) Diagnostics from companies and demand from producer associations.

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
CITE-CAL	- Improving the competitiveness of the production line of the leather and footwear industries through innovation and technology transfer. -Reducing the technology gap between small and large companies in the footwear industry through specialized research and quality control requirements, both in the domestic and foreign markets.	Spillover effect of the innovation process and the provision of missing inputs, given the public goods feature of this process.	On July 22, 1998, the Innovation Technological Center of Leather, Footwear, and Related Industries was created by Supreme Decree 063-98-ITINCI. It opened on November 2, 1998.	The main services provided are: i) fashion information; ii) shoes designed by computer; iii) laboratory testing; iv) experimental plants; v) technical assistance; vi) training; vii) total quality; viii) Kaisen and 5S methodology. Provision of technical services at competitive market prices. Services of Total Quality, Kaisen and 5S programs are subsidized at 70%. Training lectures are on the premises of CITE-CAL, and the second phase of technical assistance is on the premises of the beneficiaries. The duration is about a year and a half.	Footwear and leather, and small and medium-sized enterprises.	This government CITE depends upon PRODUCE, and its board of directors consists of leading entrepreneurs. Beneficiaries are informed of the programs through: i) Posters placed in the geographic area; ii) Electronic newsletters; iii) Information from other PDPs (e.g., PROMPERU, direct contacts between CITE-CAL and beneficiary); iv) Triptychs; v) Local radio (weak presence); vi) Industry events; vii) Fairs: and viii) Producer associations.
CITE-MADERA	Increase the competitiveness of the timber industry by solving problems of quality, access to information technology, planning, and production at different stages of transformation and industrialization of the wood.	Spillover effect of the innovation process and the provision of missing inputs, given the public goods feature of this process.	On June 10, 2000, CITE-MADERA was created by Supreme Legal Device No. Supreme No. 150-2000-ITINCI.	The main services provided are: i) standardization and laboratory testing; ii) training; iii) productive development service; iv) information services; and v) technical assistance. Training courses are paid for by the beneficiaries at reduced prices. Topics of the courses include	Timber and wood. Small and medium-sized enterprises.	This government CITE depends upon PRODUCE, and its board of directors consists of leading entrepreneurs and representatives of PROMPEX and INRENA (National Institute of Natural Resources). Beneficiaries are informed of the programs through: i) The internet; ii) Workers' experience; iii) Information from

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
				enterprise development, microfinance, and a skill-development center. The duration of a course is about 2 months. The rest of the services have fees charged at low rates.		businesses, unions, and institutions; and iv) Websites.
SENASA	Promoting the implementation of plans and programs for prevention, control, and eradication of pests and diseases that affect agricultural activities.	Missing public goods related to sanitation activities, which generate positive externalities generated to the agricultural sector.	On November 28, 1992, SENASA was created as the Decentralized Public Agency of the Ministry of Agriculture by Decree of Law 25902, Organic Law of the Ministry of Agriculture. On July 22, 2000, the Framework Law for Agricultural Sanitation was approved by Decree No. 27322. On June 27, 2008 the Law for Agricultural Sanitation was approved by Decree of Law 1059.	Services are focused on: i) animal health; ii) plant health; iii) agricultural and livestock safety; and iv) a diagnostic center. Services are fully funded by the government with public and international organization resources.	Agricultural products oriented toward domestic and export markets. All firms directly involved in agricultural services from SENASA are benefited.	SENASA is a decentralized and autonomous office of the Ministry of Agriculture led by a board of directors consisting of representatives of the executive branch and associations of private firms. Beneficiaries are informed through the website, publications, and 25 SENASA decentralized regional offices. SENASA's actions include: i) Provision of a list of agricultural inputs and livestock that can be used within the national territory through their registration and control; ii) Monitoring and control of pests that may be harmful to farming; iii) Control of diseases that affect different types of livestock; iv) Certificates (on the basis of international standards) affirming the absence of

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
						pests and diseases in products and by-products of plants and in products of animal origin.
III. Micro Finance						
COFIDE , (Only the Development Unit)	Contributing to sustainable and decentralized development of Peru through the consolidation of small and medium-sized enterprises, strengthening financial institutions and social inclusion.	Capital market imperfections, asymmetric information, which may generate financial constraints in access to credit by micro and small firms.	On March 18, 1971, COFIDE was created as a public firm. In 1981, it was changed to a corporation, with administrative, economic, and financial autonomy. Then, in 1997, it was changed to a mixed company as a result of the incorporation of the CAF (Andean Development Corporation) as a shareholder. On August 24, 1992, COFIDE defined its unique role as a second-tier bank, in addition to developing international support and financing for small and micro enterprises in urban and rural areas.	The main services include: i) structural products and structured financial products; ii) volunteer promoters; and iii) business centers through COFIDE regional offices. Information services are free of charge, and loan projects (supplied by commercial banks and other financial institutions) are offered at preferential interest rates.	All sectors and SMEs.	The Development Office is a unit of COFIDE in charge of providing financial services to SMEs. COFIDE is a financial government firm led by its board of stockholders and a directorate consisting of 6 to 11 professionals. Beneficiaries are informed through: i) Seminars organized by COFIDE or the Regional Chamber of Commerce; ii) A network of project managers; and iii) Direct contact from firms to the COFIDE Development Unit Project Manager, representatives of the National Chambers of Commerce, and occasionally other government institutions (e.g., PROINVERSION) identifies feasible productive projects and participants in them, which are then analyzed for the provision of financial resources by COFIDE.

IV. Export Incentives

Government Institutions or Program	Objectives	Addressed Economic Failures	Legal Framework and Modifications	Classification and Main Program Services	Sectors and Size of Beneficiary Firms	Institutional Framework
Export Drawbacks	Restitution of Input Ad-Valorem Tariffs.	To compensate for the input imported price distortions caused by tariffs.	On June 23, 1995, through Supreme Decree No. 104-95-EF, the Rules of the Simplified Restitution Procedure of Customs Rights were approved. It established a 5% (out of total f.o.b. value) restitution rate to the export tariff lines that are applicable to drawback benefits. The requirement is that export f.o.b. value for each tariff line fall within a range of higher or equal to US$10,000 and lower or equal to US$10 million. This upper limit was modified to US$20 million through Supreme Decree No. 093-96-EF, enacted on September 25, 1996. On August 8, 2002, through Supreme Decree No. 127-2002-EF, the list of national sub-tariff lines excluded from benefits of drawback was approved. The next year, the Rules of the Law of Customs Crimes were approved, through Supreme Decree No. 121-2003-EF on August 26, 2003. It defined the main infractions in the use of Customs services.		Any sector or firm of any size that satisfies the drawback requirement. Exports of products classified in some 270 ten-digit tariff headings are not entitled to any duty drawback. These headings include: animal waste material, coffee, fish fats and oils, sugar, food residues, minerals, skins, wool, waste of textile fibers, and jewelry and gold and silver articles. By 2007 requirements included: i) exports that incorporate imported inputs	The Customs Office (from SUNAT, the National Administration Tax Agency) administrates the export drawbacks. The list of steps to claim the drawback is: i) The export company must declare its intention to follow the procedure of drawback in the export process. Then, the Integrated System of Customs Management (SIGAD) must check the procedure according to the Rules of the Drawback's regime (check to ensure that all the tariff lines are applicable, for example); ii) The export company must

			The Ordered Unique Text of the General Laws of Customs was approved on September 8, 2004, which described the objectives, the role, the main characteristics, and the functioning of Customs. Finally, the different sanctions that SUNAT was going to impose on agents that commit infractions were published through "the Sanctions Board against the General Law of Customs" cited in Supreme Decree No. 013-2005-EF on January 25, 2005.		and fall within a tariff heading for which the total value of exports in the previous year did not exceed US$20 million; ii) the drawback is granted only to exports for which the c.i.f. value of the imported inputs does not exceed 50% of the f.o.b. export value; iii) the mechanism is limited to exports that incorporate no inputs imported under a concessional or preferential regime.	present a drawback request through electronic transmission of the request or by submitting a document stating the request; and iii) The devolution (if applicable) is through checks and credit notes.
Government Institutions or Program	**Objectives**	**Addressed Economic Failures**	**Legal Framework and Modifications**	**Classification and Main Program Services**	**Sectors and Size of Beneficiary Firms**	**Institutional Framework**
Free Zones and CETICOS	To develop the northern and southern zones of Peru by promoting private investment in infrastructure and productive activity.	Reductions of Tax and Trade distortions.	On August 29, 1996, the importation of used vehicles (ground transportation) was restored. In 1996, the creation of CETICOS in Ilo, Matarani, and Tacna by Decree of Law 842 and Paita by Decree of Law 864		Manufacturing sectors except for products classified in ISIC Rev 2 categories 3114 (canning, preserving, and processing of	The Free Zones are led by a board of directors in charge of the administration of the building facilities and services located in the zone. Benefits in

was declared a priority for development in northern Peru.
On December 31, the Rules of CETICOS were approved by Supreme Decree 023-96-ITINCI.
In 1997, alignments for the development of requirements for public auction sale of land in CETICOS Ilo, Matarani, Paita, and Tacna were approved by Ministry Decree 063-97-EF/15; the text of the rules with features of law related to CETICOS (Decree of Law 842, 864, 865 and Law 26831) was approved by Supreme Decree 112-97-EF.
On October 1, 2000, the General Customs Procedures related to the Quality System of Customs INTA-PG 22 and the specific procedure referred to CETICOS and the entry and exit of goods and vehicles INTA-PE.22.02 were approved by Resolution of the National Customs Agency 000 ADT-2000-003656.
On December 16, 2002, the Law Free Zone and Trade Area of Tacna were approved.
In 2005, Law 28569 (law delegated autonomy to CETICOS) was approved as was re-importation of used vehicles (ground transportation).
In 2006, the Rules of

fish, crustaceans, and similar foods, apart from the preparation of products based on fish meal); 3115 (manufacture of vegetable and animal oils and fats); 3118 (sugar factories and refineries); 3122 (manufacture of prepared animal feeds; 3530 (petroleum refineries); and 3720 (non-ferrous metal basic industries, apart from refined copper piping and accessories of refined copper piping); and those that recorded exports of over US$15 million in 1996 (applicable only to tariff headings listed in Supreme Decree No. 005-97-ITINCI); it also allows “maquila” and assembly

the zones include: i) Exemption from tariff duties and other taxes levied on imports; ii) Exemption from income tax, general sales tax (VAT), municipal promotion tax, and selective consumption tax (ISC) until 2022. Benefits to CETICOS include: i) Exemption from tariff duties and other taxes levied on imports; ii) Exemption from income tax, general sales tax (IGV), municipal promotion tax, and selective consumption tax (ISC) until 2012.

	Organization and Operation of CETICO MATARANI by Supreme Decree 011-2006-MINCETUR, CETICO ILO by Supreme Decree 014-2006-MINCETUR, and CETICO PAITA by Supreme Decree 013-2006-EF were approved. On May 11, 2007, Law 29014, the Law to ascribe CETICOS ILO, MATARANI, and PAITA to Regional Government of Moquegua, Arequipa, and Piura; ZOFRA TACNA to Regional Government of Tacna; and ZEEDPUNO to Regional Government of Puno was approved.	activities; processing, repair, and packaging of merchandise; and storage, distribution, marketing, and other services related to the aforementioned activities. These activities can be implemented by firms of any size.

Source: www.promperu.gob.pe, PROINVERSION (2008), www.miempresa.gob.pe, APEC (2007), Consejo Nacional de la Competitividad-CNC_(2005), INCAGRO (2008), PRODUCE (2008), www.senasa.gob.pe, Barrantes (2002), www.cofide.com.pe, www.elperuano.com, Congreso de la Republica (2000), www.congreso.gob.pe www.zofratacna.gob.pe, WTO (2007), questionnaire from the project. Author´s work. [1] Selection criteria are: 1.In relation to the origin: 1.1. Peruvian origin; 1.2 .It is not produced or marketed extensively by other countries; 2. In relation to production and management: 2.1. Quality likely to be regulated, standardized, or certified; 2.2. Employment generation; 2.3. Multiplier effect; 3. Export Potential: 3.1. Potential market (demand); 3.2. Response capacity (supply).

Moreover, from the first Fujimori administration up until today, political figures have influenced the promotion of productive activities of the SMEs.[45] A fifth feature of the selected PDPs is the variety of services or programs (on average more than six) carried out by each institution or program, and sometimes some of them overlap between agencies (e.g., the best practices of marketing and manufactured goods of PROMPERU are similar to the quality technical assistance of CITE-CAL[46]). On the other hand, it is not clear which kind of economic failures each service is addressing, in particular when services are provided regardless of the size and the level of development of the firm.

The last feature shown in Table 12 is that services provided by PDP institutions and programs to beneficiaries are subsidized fully or partially, and the costs of the services and financial support, except for COFIDE funds or resources, are relatively low. In addition, medium-sized firms and some small firms said in the interview that they are willing to pay higher services fees if the services are suitable to needs of the firms. Microenterprises usually demand services free of charge. It is worthwhile also to mention that the CNC does not transfer resources to firms in its coordination and facilitation activities.

Table 12 provides the differences in perceptions of the institutional settings of PDPs between government officials and beneficiaries who responded to the questionnaire. The figures in this table (and the questionnaire answers) indicate that:

- Permanent private sector participation (5 marks on a scale of 1 to 5) since the creation of the institution, program, or project was pointed out in INCAGRO, CITE-MADERA, PROINVERSION (in particular in the infrastructure program Costa-Sierra), COFIDE (in the selected microfinance program), and Peru COMPITE. Three beneficiaries from CITE-MADERA and CITE-CAL cited their permanent participation in the creation of these CITES. This might

[45] The first vice president of the Fujimori administration was the owner of a textile and apparel firm with stores located in the Gamarra Cluster. The second vice president of the Fujimori administration was president of APEMIPE (Association of Small and Medium Producers of Manufactured Products of Peru)), FENAPI (National Federation of Small and Medium Producers of Manufactured Products), FOGAPI (Guarantee Fund for SMEs), and FOPEI (Promotion Fund for SMEs). In the Toledo administration, a key player in promoting SMEs was the administration's first Minister of Social Employment, who was also the advisor of PROMPYME in the Fujimori administration.

[46] A beneficiary of both agencies took both programs. This beneficiary pointed out that the CITE-CAL program performed better than the PROMPERU program.

suggest the high priority given to private sector grants to technological support programs and the provision of public infrastructure.

- Micro and small firm beneficiaries of MI EMPRESA (PROMPYME) and CITE-CAL were completely satisfied (5 marks on a scale of 1 to 5) with the "instruments or support programs" (interventions) that they received. In general, government officials give a higher grade than the beneficiaries do when evaluating the effectiveness of the program services implemented by PDP institutions and programs.

Table 12. Institutions' (I) and Beneficiaries' (B) Perceptions of the Institutional Framework of Selected PDPs in Peru, 1990-2007

Perception Of	Average		Scale (1= No Impact/Participation/Applicable; 5= Best Performance)										Total Number	
			1		2		3		4		5			
	I	B	I	B	I	B	I	B	I	B	I	B	I	B
Degree of private sector participation in the creation of the program/project	3.5	2.6	27.3	50.0	0.0	0.0	9.1	16.7	18.2	5.6	45.5	27.8	11	18
Evaluation of the instruments used	4.5	3.7	0.0	5.6	0.0	0.0	18.2	27.8	18.2	44.4	63.6	22.2	11	18
Evaluation of the way the institutional setting works	3.4	3.8	0.0	0.0	9.1	0.0	45.5	50.0	45.5	22.2	0.0	27.8	11	18
Evaluation of whether the institution is necessary	4.8	4.4	0.0	0.0	0.0	0.0	9.1	11.1	0.0	38.9	90.9	50.0	11	18
Evaluation of the performance of														
i) the institution														
ii) the average intervention	4.0	3.9	0.0	0.0	0.0	0.0	27.3	33.3	45.5	38.9	27.3	27.8	11	18
iii) the overall evaluation of the project	3.9	3.9	0.0	0.0	0.0	5.6	27.3	33.3	54.5	27.8	18.2	33.3	11	18
	4.1	na	0.0	n.a	0.0	n.a	18.2	n.a	45.5	n.a	36.4	n.a	11	n.a
Assessment of the participation of														
ii) the beneficiaries	3.9	n.a	0.0	n.a	0.0	n.a	36.4	n.a	36.4	n.a	27.3	n.a	11	n.a
iii) private associations	3.5	n.a	0.0	n.a	0.0	n.a	63.6	n.a	18.2	n.a	18.2	n.a	11	n.a
iv) sub-government	3.3	n.a	9.1	n.a	0.0	n.a	45.5	n.a	36.4	n.a	9.1	n.a	11	n.a
Levels														n.a
Overall evaluation of the project	3.9	n.a	0.0	n.a	0.0	n.a	10.0	n.a	90.0	n.a	0.0	n.a	10	n.a

Source: Author's compilation based on Project Questionnaire. Note: n.a. = not applicable.

- The largest and oldest firm of the sample and one small firm considered the creation of Peru COMPITE and CITE-MADERA, respectively, not to be indispensable. In general, both beneficiaries and government officials considered the selected PDP institutions to be indispensable.
- Although, on average, both government officials and beneficiaries concurred in their "good" (4 marks on a scale of 1 to 5) performance perceptions of the institutions and interventions, relatively large firms with more than 100 workers in PROMPEX and CITE-MADERA, and small firms from PROMPEX, CITE-MADERA, and Peru COMPITE rated these institutions as only "acceptable" (3 marks out of 5).
- Government officials' perceptions of the participation and response of firms, private associations, and local governments, was considered "acceptable" or "good" (3 or 4 marks out of 5) in about 75 percent of the selected PDP institutions and programs.
- Overall evaluation rates were provided by all the institutions except the program MI EMPRESA (PROMPYMPE). Nine were evaluated as "good" institutions and only one as "fair" or "acceptable" (Peru COMPITE).

Regarding the deficiencies in the PDP institutional setting, the main deficiencies stressed by officials of the PDP institutions and programs in the interviews are: i) the high degree of variability in the small annual budget from year to year; ii) the continuous changes in the administration and legal framework; iii) rigid norms applied to execution of the expenditure, and a long waiting period for project approvals; iv) restrictions on training skilled workers from foreign countries; v) lack of suitable legal devices to improve the interventions or programs; vi) necessity to differentiate the objectives and kinds of technical assistance to micro or small firms from medium-sized firms; and vii) coordination problems within the government institutions, with some of the institutions failing to understand the role of each institution and others imposing administrative or coordination barriers to PDP activities.

On the other hand, some of the main deficiencies pointed out by beneficiaries are: i) insufficient program budgets to be able to access a larger variety of technical assistance programs or to improve them; ii) a lack of continuous monitoring during the application of

technical assistance programs from the initial stage to the final stage in order to evaluate the effectiveness of these programs; iii) a lack of concentration on specific functions, in particular on institutions with too many functions;[47] iv) the need to differentiate the kinds of technical services, training, and information programs between firms with differences in size, degree of development, and capabilities, and to improve the skills of trainers; v) an inadequate professional capacity to transfer technology; vi) reduced, or lack of, executive empowerment of government coordination units, which also need to be decentralized; vii) insufficient information and contacts with regard to international markets, and weak organization sometimes of international fair events; viii) a lack of an entrepreneurial and capitalist culture of micro firms, in particular from the rural sectors; ix) the length of some programs related to certification of products are rather long; x) too many bureaucratic procedures; xi) weak coordination and a lack of trust among small and micro firms that hinder their ability to take advantage of the programs (e.g., through formation of producer associations or consortiums); and xii) free programs from other government institutions create confusion on the part of beneficiaries when PDP program costs need to be shared between them and the PDP institution.

A series of simple rules that may increase the effectiveness of the PDP interventions regardless of the productive impact of the selected PDPs (analyzed below) emerge from the institutional setting features shown in Table 11, the deficiencies in the PDP interventions quoted in the interviews and in the responses to the questionnaire, and the economic failures addressed by the selected sample of Peruvian PDPs.

First, if the PDPs' objectives are to transform productive structure, to increase total factor productivity, and to enhance the innovation process, then interventions need to focus directly on the sources of economic failures (not on their symptoms) and to create quality productive changes within the private sector, avoiding a dependency of the private sector on government interventions and transfer of resources. Table 11 shows that most PDP institutions and programs provide a variety of services, and it is not clear which specific economic failures they are supposed to be solving. Moreover, some of these services (or interventions) are provided to all firms regardless of their different levels of development and the types of needs they face. On the other hand, whereas more advanced firms are willing to pay higher fee rates for services suitable

[47] For example, PROMPERU now promotes tourism and the export of goods and services.

to their needs, the emphasis on providing fully subsidized services to small and micro firms may create a culture of dependency on public funds for these SMEs and a lack of interest for medium-sized and advanced firms. As shown in the next section, export drawback is another example that supports this first rule.

In addition, government institutions[48] in charge of PDPs usually misunderstand the kinds of economic failures they need to cope with, and they struggle within themselves to obtain political empowerment and the largest share of public and international funds thinking that private firms need the government interventions for their productive development. This struggle has led, on one hand, to an unstable legal framework for some PDP institutions and programs and, on the other hand, to frequent changes of the executives on the board of directors, which affects the learning process of interventions.

Second, the set of interventions of productive development policies (in particular, innovation support programs) needs to be differentiated by sector and firms' degree of development, productive capabilities, and size; and decentralized (in an autonomous way) in the case of providing missing local public goods and services. This rule is a direct consequence of the differences in the needs faced by firms with distinct levels of development and size and the localization of firms in Peruvian territory.

Third, unless economic failures involve the provision of public goods that generate externalities with an ample base of sectors and geographic areas (e.g., agricultural sanitation services provided by SENASA and public investment in infrastructure), most PDP interventions, if they are necessary, need to be implemented either through public-private partnership or through services provided by the private sector, with the main role of PDP institutions being monitoring the results of the interventions and the adequate use of the resources. These suggested partnerships and the need for monitoring PDP interventions were expressed by beneficiaries in the interviews.

Fourth, in those PDPs with a mixed public-private component and with a focus on small and medium firms, the best way to allocate resources and create an entrepreneurial culture is through fund competition and the shared cost of the interventions (similar to those implemented by INCAGRO). If a suboptimal level of entrepreneurship is a key failure faced by SMEs, then

[48] Including government administrations, which change every five years in Peru.

fully subsidized public services hardly would be an instrument to create an entrepreneurial culture.

Lastly, PDP institutions and programs also need to have coordinated, empowered units at the operational level to create the relevant ties with others and related PDPs. As suggested in the third feature of the institutional framework shown in Table 11, multi-sectoral coordination seems to exist only at the executive level (at the board of directors), but once interventions are implemented at the level of the operational units from different government entities, these usually do not coordinate their actions.

6. Assessment of the Productive Impact of Selected PDPs in Peru, 1990-2007

This section summarizes the relevant, available, and dispersed evidence on the potential productive impact of the selected PDPs in Peru during the period 1990-1997. The first group of data is based upon a set of papers that have evaluated the impact of some PDPs using research techniques. The second group of data related to export incentives is based upon customs statistics from Peru (ADUANET) during the period 1993-2007 and other sources of data. The last and third group of data is based upon the impact perceptions of PDP government officials and beneficiaries that draw upon questionnaire responses.

6.1 Evidence from Specific Studies

Regarding the output, export, and productivity impact of trade barrier reductions, the scanty evidence (including the data shown in this paper) is not conclusive. This indicates that:

i) Simple correlation coefficients (Table A2) between tariffs or effective protection rates and output growth are most of them are positive and not statistically significant.

ii) As tariff rates have declined, the productive structure has shifted toward the export sector, dominated by primary goods. Thus, during the period 1985-1990, 10.5 percent of the GDP was goods and services shipped abroad; this share doubled by the end of 2007. Mining and agricultural sectors have increased their GDP share, and manufacturing has slightly reduced its share during the period 1991-2007.

iii) Some of the most protected sectors, relatively speaking, such as agriculture, textiles, apparel, and shoes during the initial period (1990-1992) of horizontal tariff liberalization, decreased their levels of output, learned from trade adjustments, and, during the rest of the period, recovered their rates of growth supported by the protected tariff structure.

iv) Morrison and Semenick (2000) provide evidence that manufacturing firms became more technically efficient in response to market and trade liberalization reforms during the period 1990-1992. Further, weak regression estimations suggest that a high effective rate of protection and market concentration generates a lower degree of technical efficiency. Thus, tariff liberalization and import competition improved technical efficiency in sectors such as textiles and clothing.

v) Gallardo and Arrieta (2000) reported parametric TFP estimates during the period 1993-1996 for the manufacturing sector in Peru and found that TFP increased during this period at an average rate of 2.05 percent. Protected and concentrated industries (such as food, textiles, apparel, and shoes) also increased their levels of TFP. There was no evidence, however, on the sources of the increased TFP (i.e., increased technical efficiency and/or increased technology change).

vi) Tello (2008d), using a gravity specification of trade flows that included factors such as comparative and competitive advantages, real exchange rates, transport costs, and countries' features (such as language, distance to markets, and other features) finds no statistically significant effect of tariffs on imports and foreign direct investment flows and a significant effect of foreign trade barriers on export flows.

The most plausible and safe conjecture derived from all these pieces of evidence is that trade liberalization, together with structural reforms, has: reduced market price distortions, encouraged firms in concentrated and/or protected industries to become more efficient, shifted to a higher degree the productive structure toward exports, and increased the role of FDI in particular sectors, such as the export mining sector (see Table 17). However, these reforms have

not altered the sectoral and productive structure of goods in the Peruvian economy in a significant way.

The main impact of the trade policy has been to increase the importance of the export sector and foreign direct investment, particularly in the mining, finance, telecommunications, and manufacturing sectors. Consistent with the macro evidence reported in Section 2, economic growth in Peru during the period 1990-2007 seems to be based upon a higher level of investment (domestic and foreign) and gains in the technical efficiency of formal firms.

A more conclusive result concerning the real export impact of export drawbacks is reported in a study from BCRP (2008). Using a panel of data on non-traditional export firms for the period 2001-2007, the study finds that the reduction of input ad-valorem tariffs and/or real exchange rates does not statistically affect real exports of firms. Moreover, a small exporter with less than 50 workers and close to half a million dollars in exports in 2007—which receives about US$25,000 of export drawbacks—reported in the interview that this transference of funds, although available to the exporter, did not effectively produce any increase in exports.

The impact of export promotion activities from PROMPEX during the period 2001-2005 has been recently evaluated by Volpe and Carballo (2008). They find that export promotion actions are associated with increased exports, primarily along the extensive margin (i.e., number of export products per firm and destination market), but not on the intensive margin (i.e., average exports per firm and market). Their conclusion seems to be robust across alternative specifications and estimation methods. Looking at the questionnaire responses and the ADUANET evidence (described below), some caveats to the "econometric" results need to be borne in mind. First, beneficiaries of PROMPEX could also be beneficiaries of other PDP institutions or programs that offer similar technical assistance services (for example, those of the CITEs), so that positive effects of PROMPEX activities cannot be distinguished from those of other PDP interventions. Second, product diversification in larger and older export firms could mean slightly differentiated products, particularly in light and mature industries such as textiles, garments, and shoes.[49] Third, since 2003, one of the strategies of the Exporter Plan of Peru (PENX, 2003) has been the diversification of export products; thus beneficiaries from

[49] For example, one large beneficiary firm from PROMPEX exported three different products or tariff lines such as "shoes with leather sole which cover the ankle" (HS 6403510000); "shoes with leather sole which do not cover the ankle" (HS 6403590000); and "shoes with leather sole" (HS 6403990000).

PROMPEX could be selected because of the firms' propensity to diversify products. Therefore, diversification was not a result of PROMPEX activities but, instead, a result of the selection process.

The economic impact of the Control Program to Eradicate the Fruit Fly from SENASA activities using gravity specifications was estimated by Barrantes and Miranda (2005) and Barrantes (2002). They found that this program increased the exports of fruits and vegetables or fresh products (hortofrutícolas) in the range of 200 percent to 320 percent during the period 1995-2004.

6.2 Evidence from ADUANET and Other Sources

Tables 13 to 16 show the ADUANET figures for: i) export drawbacks, ii) tariff lines from CETICOS and the Free Zone of Tacna, iii) the structure and the rate of growth of new export tariff lines[50] that appeared during the period 1993-1999, and iv) 361 export tariff lines for which exporters received benefits from PROMPEX. Table 17 reports the figures for the inflows of foreign direct investment during the period 1990-2007 from national (PROINVERSION, 2008) and international (UNCTAD, 2004) sources.

As described in Table 11, the export drawback regime was introduced by Supreme Decree No. 104-95-EF on June 23, 1995, effective from November 1995.[51] It has been amended on numerous occasions since its creation showing the political strength of exporter associations affecting productive policy in Peru. This PDP is a "legacy" of the older non-traditional export promotion policies implemented in Peru at the end of the 1970s (Schydlowsky et al., 1983). The tariff liberalization process since the 1990s, particularly from imported inputs, has reduced the "government intervention rationale" for this kind of policy. Moreover, if the objective of PDPs is to change productive structure to increase productivity and foster innovation, this objective can

[50] A new export tariff line is an export product that meets the following requirements: i) it was exported for the first time in any year "to" of the period 1993-1999 with an export value of, at most, US$10,000; ii) there are exports in at least half of the years of the period 2007-present; and iii) it has achieved an export value higher or equal to half a million US dollars in any year of that period.

[51] Peru does not consider this regime to be a subsidy, but it has notified the WTO Committee on Subsidies and Countervailing Measures concerning the regime for reasons of transparency. This notification generated several questions and replies within the Committee, with several focused on the refund of 5 percent of the f.o.b. value of the good exported regardless of the actual amount of duties paid on imported inputs. The Peruvian authorities justified this procedure for reasons of fiscal and administrative simplicity, noting that the beneficiaries of the system are small-scale exporting enterprises.

hardly be accomplished through transference of public resources to firms without knowing where these resources will be used. In 1998, drawback refunds totaled US$54.8 million, which represented less than 1 percent of the total value of exports. By 2007, these refunds had increased to US$178 million, representing less than 0.7 percent of the total value of exports.

Figures in Table 3.6 provide the structure, rate of growth, and role of firms and product concentration of the Peruvian drawback during the period 2003-2007. They indicate first, that five 10-digit tariff headings explained close to 46 percent of the total value of exports receiving drawbacks[52] and 10 firms (or less than 1 percent of total drawback beneficiary firms) received about 20 percent of the total drawback refunds.[53]

Second, about three-quarters of the total drawback exports were concentrated in three sectors (i.e., textiles and apparel, non-traditional fishing products, and non-traditional agricultural products). Moreover, exports of firms from these sectors accounted for between 70 percent and 80 percent of the total export value of Peru for their respective sectors and, by 2007, half of the total non-mining exports were affected by drawback refunds. The concentrated sectoral structure in Peru (Tables A2 and A3) has implied an unequal distribution of drawback beneficiaries, which are biased toward large and medium-sized firms exporting between US$20 million and $140 million in products per year. Thus, in 2007, the nine top textile/apparel firms received about 40 percent of total drawback refunds from this sector. In addition, lobbying export groups (e.g., National Association of Exporters, ADEX) are still pressing the government to increase the amount of drawbacks (ADEX, 2008).[54]

Third, in general and for most sectors, the annual rate of export value growth receiving drawbacks has been lower than the respective rate of the export value that is not a beneficiary of drawbacks.

Analogous to the tariff policies, conceptually assumed horizontal PDPs, such as export drawbacks, can be distorted in the presence of sectoral, product, and firm concentration and the political forces of producer associations. This evidence suggests—as does the evidence presented

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[52] These include: fresh, refrigerated and frozen asparagus, cotton t-shirts, shorts, and frozen squid.
[53] Five of these firms were from the textile and apparel sectors, one was from the agricultural sector, two were from the steel and jewelry sectors, and two were from the chemicals products sector.
[54] In September 2008, the Ministry of Economy and Finance evaluated the elimination of drawbacks, given that the input ad-valorem tariff was 2 percent. ADEX, however, argued that drawbacks are applied in seven Latin American countries. They help to overcome the infrastructure costs and are approved by the World Trade Organization.

in the previous section (i.e., drawbacks do not seem to encourage real exports, and a small exporter reported in the interview that export drawbacks have not affected the productive structure of the firms or encouraged exports)—that this policy needs to be eliminated and the freed public resources need to be used for productive development policies that directly address and foster the transformation of the productive structure and the process of innovation.

The rationale for implementing Free Zones in Peru was to develop some specific low income zones through the establishment of fiscal, production, and export Free Zones. Thus, under Legislative Decree No. 704 of November 1991 (free, special trade treatment and special development zones), six industrial and two trade zones were created. However, only three industrial/Free Zones (Ilo, Matarani, and Paita) and one special trade zone in Tacna were active in 1996.[55]

The CETICOS (Centers for Exports, Transformation, Industry, Commercialization, and Services) established under Legislative Decree Nos. 842 and 864 (Table 11) are considered primary customs zones. They are intended to foster economic development in regions where they are located through the creation of port and production infrastructure, as well as through the promotion of private concessions of public works and services. In particular, CETICOS are intended to generate employment through the promotion of "maquila" and assembling operations, port services, and vehicle reconditioning and repair.

In mid-2005, Peru abolished the export requirements for obtaining benefits under these schemes. Previously, annual exports outside Peru had to amount to at least 92 percent of the revenue of firms receiving benefits under the CETICOS scheme, and 50 percent of the revenue of firms receiving benefits under ZOFRATACNA. The Tacna Free Zone (ZOFRATACNA) replaced the Tacna CETICOS, which was in operation until 2002.

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[55] Legislative Decree No. 704 was partly derogated in August 1996 and complemented by Legislative Decree Nos. 842 and 864 of August and October 1996, which established new zones (Centers for Exports, Transformation, Industry, Commercialization, and Services – CETICOS) using the physical infrastructure already in place in the free zones of Ilo (department/region of Moquegua), Matarani (department/region Arequipa), and Paita (department/region Piura) as well as the special trade treatment zone of Tacna (department/region of Tacna). Subsequently, Law No. 26953 of May 21, 1998, created an additional CETICOS in the region of Loreto but, in early 2000, its precise location and the required regulations were yet to be defined. Finally, Law No. 28864 of August 6, 2006, provides for the creation of the Special Economic Zone of Puno, offering benefits that are similar to those of CETICOS and ZOFRATACNA.

According to WTO (2000), CETICOS produced encouraging results in boosting activities related to the reconditioning and repair of vehicles, particularly in terms of employment. In 1999, 1,683 persons were employed in these activities, of which some 70 percent were located in Tacna and some 20 percent in Matarani. A total of 40,823 vehicles were imported into the CETICOS in 1999, mostly in Tacna (83 percent) and Matarani (12 percent). These results are explained primarily by the strong incentives established through Legislative Decree No. 843 and Supreme Decree No. 087-96-EF of August 29, 1996. Legislative Decree No. 843 permitted the importation of used vehicles, after a temporary suspension by Urgent Decree No. 05-96 of January 23, 1996, but only under certain conditions, namely that they had been designed and built as left-hand-drive vehicles and had never been written off in an accident. However, these two criteria do not apply to second-hand vehicles imported through the ports of Ilo or Matarani into a CETICOS for reconditioning or repair. Supreme Decree No. 087-96-EF introduced differentiated fiscal treatment for used vehicles imported through CETICOS: they are subject to a 0 percent excise tax rate, while other used vehicles are subject to a 30 percent rate.[56] The tax base applicable to products from CETICOS and ZOFRATACNA excludes the value of inputs obtained from Peruvian customs territory, but not the value added to them. Machinery and other imported capital goods may remain in ZOFRATACNA for unlimited periods and until 2012 in the CETICOS.

The amendments that abolished the export requirements applicable until mid-2005 under the CETICOS and ZOFRATACNA regimes did not alter the scope of benefits offered by the two schemes. Accordingly, the revenue obtained from sales made from CETICOS and ZOFRATACNA within national territory is exempt from income tax.

Between December 2002 and February 2007, the value of goods imported into ZOFRATACNA was approximately US$851.4 million, of which about one-third represented used vehicles. During the same period, exports from ZOFRATACNA to destinations within Peru amounted to US$370.9 million. Since late 2002, the Peruvian government has forgone an estimated US$114.6 million in taxes following implementation of the ZOFRATACNA regime (WTO, 2007).

[56] Until 2000, the rate was 55 percent.

Table 14 shows estimates of import tariff lines from exporters located in CETICOS in the Free Zone of Tacna. Most of these imports are used right-hand-drive vehicles, which are modified to left-hand-drive in CETICOS. From these exports, only manufactured exports are subject to benefits, according to law. The main hypothesis that can be drawn from this table is that these fiscal and production Free Zones have not encouraged exports of goods to the rest of the world; rather they have served as vehicles to produce goods for the domestic market (within Peruvian territory).

A preliminary conjecture drawn from this scanty evidence is that export incentives, as well as infrastructure export facilities provided in the Free Zones and CETICOS, do not seem to be enough to promote exports if entrepreneurship or the capacity of firms to innovate/imitate are lacking.

Figures in Table 15 may represent the "productive" impact of PDPs in terms of new export products (i.e., tariff lines) implemented in Peru since 1990, in particular as a result of the export strategy to promote non-traditional products, which began in Peru at the end of the 1970s. In the 1990s, this strategy was initiated with the liberal structural reforms and the creation of PROMPEX (National Commission to Promote Exports) in 1993 (Table 11). The export strategy was transformed into a National Strategic Export Plan (i.e., PENX, 2003) in the Toledo administration. Apart from the export incentives described above, the export promotion agencies, and the rest of the selected PDPs, exports in Peru are not subject to any charge or indirect tax.[57]

In addition, the Development Finance Corporation (COFIDE), a public-sector, second-tier development bank, administers a number of export financing programs (in addition to the one described in Table 11). Thus, through the FIEX (Foreign Investment Fund) program, exporters may borrow to finance their working capital and purchases of machinery, equipment, spare parts, and other investments. Loans may range up to US$3 million for working capital and up to US$20 million for investments, with payback terms of between one and fifteen years. The annual interest rates that COFIDE charges commercial banks making FIEX loans vary between LIBOR + 1.5 and LIBOR + 2.25 percentage points. Commercial banks are free to set the interest rates at which they offer FIEX loans to their customers. COFIDE also extends credits at market

[57] The General Sales Tax (IGV) paid on inputs to be used in the production of goods for export is held as a tax credit in favor of the exporter. Consumption Selective Tax is also zero for exporters.

interest rates for shipment operations. Since 2002, COFIDE has operated an export credit insurance scheme, known as SEPYMEX, for small and medium-sized enterprises, under which firms exporting up to US$8 million per year may insure up to US$1 million in pre-shipment credits. The premium is 0.35 percent for every 90 days' insurance coverage, and the policy covers half of the insured amount (WTO, 2007).[58]

The structure and rate of growth of the "new" export products in Table 15 indicate the following:

- During the period 1993-2007, 284 new export tariff lines with increasing export value and continuity through time were exported. Close to half of them were exported after 1993, the year of the creation of PROMPEX. This means that an important share of total new export products during the period 1993-2007 were a result of structural reforms rather than the actions undertaken by PROMPEX.
- Close to 50 percent of the new export tariff lines are from the textile, garment, and agricultural sectors, representing 50 percent of the total export value of these new products.
- In terms of their export contribution to old non-traditional export products (i.e, S1 column in Table 15), new exports in plastic and rubber, wood products, textiles and garments, and other manufactured goods were the most important ones. However, their contribution relative to the total export value (dominated by traditional primary exports) was rather small, only 2.7 percent in 2006.

Consistent with the macro evidence provided in Section 2, these facts suggest that the PDPs and structural reforms implemented in Peru during the period 1990-2007 have not changed, in a significant way, the productive structure concentrated in natural resource-intensive primary activities and standard and mature light industries.

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[58] Another fixed asset financing for exporters, apart from private banks, is the Guarantee Fund for Small Industry (FOGAPI). FOGAPI is a private guarantee facility established as a foundation in 1979 with the support of GTZ, COFIDE, the Association of Small and Medium Industrial Enterprises of Peru (APEMIPE), the National Society of Industries (through COPEI), the National Service of Training in Industrial Work (SENATI), and the former Industrial Bank of Peru. FOGAPI was created to provide loan guarantees to support the medium- and small-sized enterprise sector in gaining access to finance (USAID, 2007).

Table 16 provides the export structure and rate of growth of 361 export tariff lines from the bio-trade, marketplace and flag[59] (i.e., *bandera*) products promoted by PROMPEX during the period 1993-2007. Among the mean features of these products are:

i) Not all of the 361 tariff lines have been exported in a continuous manner throughout the period 1993-2007.
ii) Most of the export tariff lines (i.e., 66 percent in 2006-2007) belong to the agricultural non-traditional sector representing 51 percent of total export value from this sector and 87 percent of the total export value of the export tariff lines promoted by PROMPEX during the period 2006-2007.
iii) The export products promoted by PROMPEX represented only 3.1 percent of total Peruvian export value during the period 2006-2007.
iv) Comparisons of figures and tariff lines in Tables 15 and 16 suggest that not all of the PROMPEX-promoted products are new export products, nor have they been established as "permanent export products." Thus, another caveat to the results found by Volpe and Carballo (2008) is that the probable impact on export diversification (i.e., the extensive margin) of PROMPEX interventions might only have been temporary without consolidating export tariff lines with a sustainable and increasing rate of growth.

Finally, Table 17 covers the magnitude of inflows of FDI (foreign direct investment) during the period 1990-2007 associated with the structural reforms and PDPs, in particular those linked to PROINVERSION and Investment Promotion Laws (see Table 11). Foreign investment policy falls within the purview of the MEF. It is the responsibility of the Private Investment Promotion Agency (PROINVERSION) to propose and implement national policies for the promotion of private investment in accordance with the general policy guidelines established by the MEF. PROINVERSION also oversees investors' compliance with the investment

[59] These are the followsing: products from camelids (e.g., llamas and alpacas), pisco, Peruvian gastronomy, maca, cotton, lucuma and Peruvian pottery (in 2009, camu-camu, kiwicha, and Peruvian boxes will be included) (COPROBA, 2007). Through Supreme Decree No. 015-2004-MINCETUR on July 28, 2004, the Commission of Flag Products was created, which was formed with representatives of MINCETUR, Ministry of Foreign Affairs, Regional Governments, MINAG, PROMPERU, INDECOPI, PROMPYME, ADEX, COMEX PERU, AGAP, SNI, Lima Chamber of Commerce, and PROMPEX. In "Source" of Table 11, the requirements for being selected as flag products are listed.

commitments they have assumed in cases where this task has not been assigned to any other regulatory agency.

National and foreign investments are subject to the same conditions. Under Legislative Decree No. 662, foreign investments made in the country are automatically granted authorization. The same decree also stipulates that, once foreign investments have been undertaken, they are to be registered with PROINVERSION. Foreign investors are guaranteed the right to transfer the whole of their capital, dividends or profits, out of the country in freely convertible currencies. Areas of activity in which limitations are placed on private investment, whether national or foreign, include the development of protected nature reserves, although the regulated development and use of such areas may be permitted subject to regulation under the applicable laws. Foreigners may not acquire or possess (under any title whatsoever) mines, land, forests, bodies of water, or fuels or energy sources located within 50 kilometers of the country's borders, either directly or indirectly, as individuals or as corporations, on pain of surrendering their ownership rights to the state. Exceptions may be made in the interests of public need as expressly declared by supreme decree and approved by the Council of Ministers, as required by law.

Peruvian investment policy also provides guarantees of legal stability to domestic and foreign investors and the companies in which they invest through agreements in the form of "law contracts" that are subject to the Civil Code's general provisions concerning contracts. These agreements have a term of 10 years, except in the case of concession contracts, where they cover the term of the concession. Disputes are settled by arbitral tribunals. Between 2000 and 2006, a total of 137 legal stability agreements covering US$3.741 billion in investments were signed; 115 of these agreements were in effect as of the end of 2006 (80 contracts with investors and 35 with recipient firms). In addition, by 2006, Peru had concluded reciprocal investment promotion and protection agreements with 33 countries, 30 of which are still in effect (WTO, 2007).

PROINVERSION provides information on procedures for opening a business and supplies the necessary forms. PROINVERSION also coordinates with other public- and private-sector agencies to eliminate bureaucratic obstacles and simplify and facilitate the investment process. More features of PROINVERSION are listed in Table 11.

Reinforcing the result of significant changes in productive structure associated with PDPs and structural reforms, figures in Table 17 indicate that foreign direct investment is concentrated in mining, telecommunications, manufactured goods, finance, and energy. These sectors account for about 86 percent of the total stock of FDI in 2007. The stock FDI rate increased from 6.2 percent during the period 1990-1995 to a maximum of 22.7 percent (UNCTAD figure) and a minimum of 14.5 percent (PROINVERSION figure). The most important sectors receiving FDI flows during the period 1990-1995 were mining, finance, and manufacturing. These sectors accounted for about 72 percent of total FDI flows during that period. These figures reinforce the hypothesis that private investment, particularly foreign investment, has been an important source of economic growth in Peru during the period 1990-2007.

Table 13. Structure and Rate of Growth of Exports Receiving Drawbacks by Sector in Peru, 2003-2007

Sectors	2003-2005				2006				2007			
	S1	S2	%	% (Rest)	S1	S2	%	% (Rest)	S1	S2	%	% (Rest)
Primary	**36.1**	**7.8**	**33.3**	**25.3**	**37.9**	**5.9**	**10.6**	**37.6**	**40.7**	**6.3**	**24.5**	**14.0**
Mining	0.0	0.0	0.0	31.4	0.0	0.0	-100.0	32.7	0.0	0.0	0	14.6
Traditional Fishing	0.0	0.0	0	20.4	0.0	0.0	0	2.3	0.0	0.0	0	8.4
Non-Traditional Fishing	9.6	76.6	34.7	-30.8	10.7	74.7	17.8	60.9	11.6	82.5	25.9	-26.4
Traditional Agriculture	0.2	1.7	7.8	16.8	0.2	1.0	47.8	42.4	0.2	1.2	-1.6	-24.8
Non-Traditional Agriculture	26.3	71.3	33.3	7.8	27.0	68.3	7.9	38.7	28.9	70.0	24.2	18.1
Manufactures	**63.9**	**57.6**	**25.4**	**22.2**	**62.1**	**51.4**	**8.2**	**32.7**	**59.3**	**47.8**	**10.4**	**21.4**
Textiles and Apparel	37.7	77.8	24.6	10.0	34.3	71.6	1.8	42.4	32.8	67.5	10.7	25.9
Chemical Products	8.3	41.1	26.6	21.9	7.7	39.4	2.4	16.1	7.9	35.1	19.2	30.0
Non-Metallic Minerals	2.9	66.6	16.7	33.5	3.1	70.9	31.9	-15.1	2.8	60.2	3.3	40.0
Basic Metal	5.2	39.3	33.5	31.0	6.8	29.2	38.9	53.8	6.6	29.4	12.8	10.3
Metal-Mechanic and Machinery	1.9	29.5	52.2	26.4	2.1	38.7	0.3	-27.8	2.0	33.2	11.3	30.2
Timbers and Papers	6.3	63.3	17.9	24.7	6.6	61.0	18.9	23.4	5.5	53.9	-4.4	22.0
Several (including Jewelry)	0.8	14.1	49.3	19.4	0.8	15.0	-2.6	11.7	0.9	19.0	32.0	-0.8
Skins and Leathers	0.7	76.4	28.8	-95.1	0.7	72.7	4.1	69.6	0.7	74.9	13.2	0.9
Rest of Manufactures	0.1	8.6	31.0	-2.4	0.0	5.0	-43.7	15.8	0.0	7.8	58.4	-0.2
Total Exports Receiving Drawbacks (mill. of dollars)	2193	-	28.2	29.5	3072		9.1	29.3	3555	-	15.8	14.7
Share Out of Total Export Value		16.8				13.0				12.9		
Share Out of GDP		3.1				3.3				3.3		
5 Tariff Lines Concentration Ratio (%)		45.8				46.7				42.6		
10 Firms Concentration Ratios (%)		20.0				21.4				20.2		

Source: Authors' compilation based on ADUANET (2008).. S1, share out of total export value receiving drawbacks. S2, share out of total export value of the respective sector. The average number of firms receiving drawbacks are, respectively, for each period: 1148, 1268, and 1357 (ADEX, 2008).

Table 14. Estimated Structure of Imports from Free Zone of Tacna by Sectors in Peru, 1993-2007

Sectors	1993-1995			1996-2000			2001-2005			2006			2007		
	S1	g%	US$ mill (Avg.)	S1	g%	US$ mill (Avg.)	S1	g%	US$ mill (Avg.)	S1	g%	US$ mill	S1	g%	US$ mill
Manufactures	**100.0**	**99.5**	**43.9**	**100.0**	**19.1**	**90.4**	**100.0**	**-1.5**	**97.5**	**100.0**	**41.0**	**132.9**	**100.0**	**-19.2**	**107.4**
Textiles[1]	2.8	228.8	1.2	1.9	35.9	1.7	2.5	32.5	2.4	2.9	221.3	3.9	3.7	2.4	4.0
Timbers and Papers[2]	0.3	246.8	0.1	0.2	65.3	0.2	0.3	79.2	0.3	0.1	-13.1	0.1	0.0	-72.9	0.035
Chemical Products															
Non-Metallic Minerals[3]	0.0	192.9	0.02	0.0	176.9	0.03	0.1	24.5	0.1	0.0	-12.9	0.007	0.0	33.2	0.009
Basic Metal and Jewelry															
Metal-Mechanic and Machinery[4]	95.5	98.5	42.0	94.0	19.8	85.0	88.7	-1.7	86.5	86.3	33.1	114.8	81.4	-23.8	87.5
Rest of Manufactures[5]	1.3	105.6	0.6	3.9	58.3	3.5	8.5	10.0	8.3	10.7	111.7	14.2	14.9	12.7	16.0
Total	**100.0**	**99.5**	**43.9**	**100.0**	**19.1**	**90.4**	**100.0**	**-1.5**	**97.5**	**100.0**	**41.0**	**132.9**	**100.0**	**-19.2**	**107.4**
Share of Free Zone on Total Imports		0.8			1.2			1.1			0.9			0.5	
Free Zone w/respect to total GDP		0.1			0.2			0.2			0.1			0.1	

Source: Authors' compilation based on ADUANET (2008).[1] The main products are t-shirts, socks, pants, and shirts made of cotton. [2] The main products include wood furniture, books, catalogues, and other goods. [3] Especially, mirrors for automobiles and other glass manufactured products [4] The imports include all kinds of vehicles (motorcycles, automobiles, trucks, etc.) and their parts. [5] It includes shoes. S1, share of import value out of total import value of TACNA. g% Average annual rate of growth.

Table 15. Structure and Rate of Growth of New Export Tariff Lines by Sector in Peru, 1993-2006

Sector	1993			1994 – 1996			1997 - 1999			2000 - 2005	2006			
	No. of tariff lines	S1	S2	No. of tariff lines	S1	S2	No. of tariff lines	S1	S2	Rate or Growth of Export Value	No. of tariff lines	S1	S2	Rate or Growth of Export Value
Agriculture	15	0.02	9.66	22	1.68	20.81	42	8.59	14.98	10.98	42	7.97	15.00	32.63
Food and Beverage	4	0.00	0.75	7	0.38	2.58	9	1.34	1.44	10.93	9	4.18	1.64	41.34
Chemical Products	10	0.05	10.07	22	1.04	6.29	30	4.14	4.14	12.33	30	4.45	4.14	37.01
Leather	4	0.23	3.67	5	6.16	1.47	6	10.50	0.32	44.43	6	5.58	0.25	1.40
Plastic and Rubber	6	0.01	4.32	9	0.38	2.58	15	4.14	4.46	37.86	15	32.11	12.57	0.23
Wood Products	3	0.12	5.30	3	1.56	2.12	4	6.76	2.55	33.47	4	28.86	14.88	89.03
Papers	7	0.01	0.65	9	0.56	0.76	12	1.07	0.40	41.11	12	5.62	2.90	62.94
Textiles and Garments	36	0.03	27.59	50	1.75	33.83	66	6.25	17.52	32.87	66	15.02	34.24	14.91
Shoes	2		1.01	2	0.03	0.22	2	0.15	0.16	81.31	2	0.12	0.05	-76.32
Machinery	23	0.05	24.18	34	1.42	13.44	51	5.09	8.89	26.62	51	5.62	8.85	-5.06
Other Manufactures	27	0.04	12.80	38	2.36	15.88	47	41.96	45.14	5.37	47	13.99	5.47	-6.50
Total	137	0.01	0.39[1]	201	0.42	66.7[1]	284	3.24	601.6[1]	12.68	284	2.74	645.3[1]	20.31

Source: Authors' compilation based on ADUANET (2008).S1, share out of export value of each sector. S2, share out of total export value of the new export tariff lines. [1] Expressed in millions of dollars.

Table 16. Structure and Rate of Growth of Exports Benefited by PROMPEX[2] by Sector in Peru, 1993-2007

	1993			1994 – 1999				2000 - 2005				2006 - 2007			
Sector	**No. of tariff lines**	**S1**	**S2**	**No. of tariff lines (Avg.)**	**S1**	**S2**	**Rate or growth of export value**	**No. of tariff lines (Avg.)**	**S1**	**S2**	**Rate or growth of export value**	**No. of tariff lines (Ave.)**	**S1**	**S2**	**Rate or growth of export value**
Agriculture	37	15.99	68.29	47	26.06	68.47	29.70	67	46.91	75.59	25.14	83	50.86	87.45	25.00
Food and Beverage	5	0.93	2.50	6	2.14	3.29	44.05	10	3.79	1.34	14.22	11	3.41	1.15	12.42
Chemical Products	7	7.77	13.18	11	5.70	8.02	13.93	12	9.16	7.87	32.54	13	4.45	3.96	4.91
Leather	4	13.01	1.81	4	22.46	1.09	22.39	3	23.14	0.94	13.02	4	12.61	0.48	-20.69
Textiles and Garments	5	0.48	3.54	6	2.18	9.09	234.93	0	3.91	8.66	6.68	8	1.46	2.96	-45.92
Other Manufactures	8	3.95	10.66	8	6.54	10.05	23.64	8	15.86	5.59	11.57	8	11.89	4.00	8.57
Total	66	1.30	43.6[1]	94	2.08	713.1[1]	29.74	108	3.92	2365.4[1]	21.33	126	3.09	1580.6[1]	16.61

Source: Authors' compilation based on ADUANET (2008).S1, share out of export value of each sector. S2, share out of total export value of the PROMPEX export tariff lines.

[1]In millions of dollars. [2] Include 361 tariff lines from bio-trade, marketplace, and flag products.

Table 17. Structure of Foreign Direct Investment Flows and Stocks by Sectors in Peru, 1990-2007

Sector	1990-1995		1996-2000		2001-2005		2006		2007	
	Flow	Stock	Flow	Stock	Flow	Stock	Flow	Stock	Flow	Stock
Total	100	100	100	100	100	100	100	100	100	100
Primary Sector	25.9	33.4	14.5	19.4	38.8	15.0	49.1	21.8	41.9	22.0
Mining	25.1	29.8	13.2	17.9	31.7	14.5	41.1	19.4	41.9	19.4
Agriculture	0.5	0.3	0.7	0.3	0.0	0.3	0.0	0.3	0.0	0.3
Fishing	0.1	0.2	0.0	0.1	0.5	0.1	7.9	0.9	0.0	1.0
Petroleum and Derivatives	0.2	3.2	0.6	1.2	6.6	1.4	0.0	1.3	0.0	1.3
Non-Primary Sector	74.2	66.7	85.5	80.7	61.2	83.8	51.0	78.2	61	76.6
Telecommunications	12.0	14.1	22.5	29.3	(54.1)	31.4	(0.6)	23.8	20.1	22.3
Finance	25.8	8.5	17.3	12.3	31.9	14.6	17.6	16.0	24.8	16.2
Energy	2.4	2.7	20.8	14.8	6.7	11.8	0.1	10.7	0.1	10.6
Manufactures	22.3	25.1	14.7	15.4	44.4	16.2	28.9	17.6	0.2	17.3
Others	10.7	14.2	8.4	7.7	18.6	7.2	4.2	7.5	13.7	7.6
Services	1.0	2.1	1.8	1.2	13.8	2.6	0.7	2.6	2.1	2.6
Millions of $	639.0	2 547.1	1 443.6	8 770.3	332.8	13 869.8	1 497.5	15 446.4	336.2	15 802.6
Rate of Growth	384.9	35.7	42.1	19.5	(83.6)	2.6	2 343.6	10.7	(77.6)	2.2
Investment (% GDP)	1.4	6.2	1.8	16.0	2.1	22.0	1.6	16.6	0.3	14.5
UNCTAD DATA										
Inward FDI (millions of $)	1 093.6	2 634.6	2 000.8	8 724.7	1 762.6	13 291.8	3 467.0	19 335.7	5 342.6	24 744.2
Outward FDI (millions of $)	9.1	190.2	22.4	547.9	77.1	810.1	428.1	1 475.5	809	2 284.2
Inward FDI (% GDP)	2.8	6.3	3.6	15.9	1.6	20.8	3.7	20.8	4.9	22.7
Outward FDI (% GDP)	0.0	0.5	0.0	1.0	0.1	1.3	0.5	1.6	0.7	2.1
Inward FDI (rate of growth)	32.8	36.7	(13.2)	15.1	34.5	7.7	34.4	21.8	54.1	27.8
Outward FDI (rate of growth)	(8036.5)	84.2	30.4	1.1	100.5	16.1	146.6	40.9	88.9	54.8

Source: Authors' calculations based on PROINVERSION (2008) and UNCTAD (2004).

6.3 Evidence from Perceptions of Government and Beneficiaries of PDPs

Table 18 reports the last piece of evidence on the productive impact of the selected PDPs, which has been obtained from the questionnaire distributed for this paper. The figures of this table indicate:

i) Except for the sample of four beneficiaries (i.e., firms that export between 5 percent and 100 percent of their total output value) of PROMPEX (PROMPERU), all of the remaining beneficiaries grant a higher performance rate in most indicators (shown in Table 18) than the rates considered by government officials belonging to PDP institutions and programs.

ii) Beneficiaries of PROMPEX grant the lowest grade on the product diversification indicator and the highest rate (at a moderate level of 3 marks out of 5) to the export volume impact of PROMPEX intervention. These results are in contrast to the ones found by Volpe and Carballo (2008), and they are consistent with the caveats pointed out in Section 6.1 and the stylized facts reported in Section 6.2.

iii) Investment policies, through the "eyes" of government officials of PROINVERSION, have had a full impact (5 marks out of 5) on output and employment. This perception is consistent with the stylized facts presented in Section 6.2 and Section 2.

iv) Beneficiaries of MI EMPRESA (PROMPYME) are not exporters, and they grant higher marks (although at moderate rates between 3.7 and 3 out of 5) to indicators of employment, TFP, output, reduction of poverty, and degree of coordination with public institutions. Thus, interventions that attempt to reduce economic failures faced by micro enterprises are seen as fairly effective for these firms.

v) Beneficiaries appreciate the impact of coordination activities implemented by Peru COMPITE.

vi) By far, perceptions of performance rates of beneficiaries of INCAGRO have been the highest in most of the indicators.

vii) Beneficiaries of CITEs recognize in a moderate way (between 3 and 4 marks) the impact of their interventions on output, productivity, employment, and product diversification. Thus, compared with PROMPEX, beneficiaries' perceptions indicate that CITEs' interventions have had a higher rate of product diversification than PROMPEX interventions.

viii) Government officials from COFIDE grant a good performance rate in most of the indicators from the financial support obtained from COFIDE interventions.

ix) In terms of the relation benefit (performance perception indicators) and costs (average transference of resources per beneficiary), PROMPEX interventions have incurred in the highest cost and have the lowest benefits. INCAGRO, CITEs, and MI EMPRESA have had the lowest costs with higher returns for beneficiaries.

Table 18. Impact Indicators of Selected PDPs in Peru, 2001-2008

PDP Government Institution	Scale from 1 (No Impact or Not applicable) to 5 (Best performance)							Number of Beneficiaries or Clients (Period)	(US$) Resources Transferred per Beneficiary
	Output	Exports	TFP	Prod. Diversif.	Employ-ment	Poverty	Degree of Coord.		
PROMPERU									
Institution	3.0	4.0	4.0	4.0	4.0	4.0	3.0	709 (2005)	5882.7 (2005)[1]
Beneficiaries	2.8	3.0	2.5	1.9	3.1	2.6	2.1		
PROINVERSION									
Institution	5.0	1.0	1.0	1.0	5.0	4.0	1.0	n.a	n.a
Beneficiaries									
MI EMPRESA (PROMPYME)									
Institution	2.5	2.5	2.5	2.5	2.5	2.5	2.5		
Beneficiaries	3.0	1.0	3.0	2.3	3.7	3.0	3.7	59993 (2008)[2]	48.3
PERUCOMPITE-CNC									
Institution	1.0	1.0	1.0	1.0	1.0	1.0	5.0		
Beneficiaries	2.0	4.0	2.0	2.0	4.0	3.0	4.0	n.a	n.a
INCAGRO									
Institution	4.0	3.3	3.7	3.7	3.3	3.0	2.3	FDSE: 2,697 (2001-2007)	FDSE: 8,046.1 (2001-2007)
Beneficiaries	4.0	4.3	4.0	4.0	4.0	3.3	4.0	FTA: 34,052 (2001-2007)	FTA: 645.3 (2001-2007)
CITE (Technical Office)									
Institution	3.7	2.7	3.0	3.3	2.3	3.3	3.3	n.a	n.a
CITE–MADERA									
Institution	4.0	1.0	1.0	3.0	1.0	4.0	3.0	15841 (2002-2007)	492.4 (2002-2007)
Beneficiaries	3.7	1.0	3.3	3.0	3.3	3.3	2.7		
CITE–CAL									
Institution	3.0	4.0	4.0	4.0	3.0	3.0	3.0	710 (average per year)	n.a
Beneficiaries	4.0	3.7	3.0	3.0	3.0	3.0	1.7		
COFIDE									
Institution	4.0	4.0	4.0	4.0	4.0	4.0	3.0		
Beneficiaries								1,879 (2004-2008)	6369.6 (2004-2008)[3]

Source: Authors' compilation based on PDP questionnaires. [1] Investment expenditure for PROMPEX in year 2005 was US$4.17 million, and there were 709 beneficiaries according to Volpe and Carballo (2008). n.a Not applicable/not available. [2] Estimated figures from goals of MI EMPRESA for 2008. [3] This figure is the annual average disbursement made by COFIDE during the period 2004-2008.

7. Cluster Development and PDPs in Peru, 1990-2007

7.1 Historical Background

The failure of the modern sector of the economy to absorb the growing urban population has been accompanied by a sustained expansion in the number of micro and small-scale enterprises (SMEs). Official data reveal that three-quarters of the labor force work in firms with fewer than 50 workers, with larger firms accounting for only one-quarter of the labor force.[60] A critical component of this expansion can be attributed to the development of territorial networks of SMEs, commonly referred to as "clusters."

Various studies conducted since the early 1990s reveal that small firms are not randomly scattered but concentrated in some neighborhoods and localities. In the case of the capital city of Lima, a number of clusters have been identified. They include the "garment complex" of Gamarra (La Victoria), a conglomerate of firms that recycle electric equipment in Paruro (Lima-Cercado), the suppliers of the footwear industry in Caqueta (El Rímac), the Wilson cluster, which constitutes the largest concentration of suppliers of ICT hardware and software (Lima-Cercado), the Industrial Park of Villa El Salvador, which hosts a significant number of furniture producers, and the association of metalworking firms in the industrial park of Infantas (Los Olivos), among others.

The same phenomenon has been documented in other cities of the country. The cluster of footwear producers in Trujillo, 350 miles north of Lima, is a case in point which, by the way, has been the subject of at least two doctoral dissertations (Távara, 1993; San Martín, 1995a). The first studies on these clusters (Castro, 1991; Ponce et al., 1990, Villarán, 1993) were mainly focused on local networks of SMEs and resorted to the notion of "collective efficiency," coined by Schmitz (1999), to make sense of their nature.

A significant experience in the Peruvian context is the Industrial Park of Villa El Salvador, a district located on the southern edge of the Lima metropolitan area. This district was formed in 1971 when some 500 impoverished families invaded a plot of land and constituted a so-called "self-managed urban community." The initiative to build this park was led by the local government and resulted in a unique institutional set-up, built upon an autonomous quasi-public

[60] Instituto Nacional de Estadística e Informática, http://www1.inei.gob.pe/web/NotaPrensa/Attach/6870.pdf

entity that managed the lot allocation process and the facilities. In spite of its limitations, and partly because of them, this experience has been widely regarded as a model of SME clustering and local development in Peru (Ponce et al., 1992).

As explained below, some geographical clusters have also developed in rural areas, stimulated by the expansion of agro-industrial production chains. Evidence on these clusters, scattered and fragmented, is usually found in unpublished reports written by staff in public agencies and by independent consultants. Table 19 presents the locations of Peruvian clusters that have been referred to in the literature.

Table 19. Clusters in Peru

ID#	Cluster – Location	Outputs
1	Dairy agro-industry in Bambamarca, Cajamarca	Cheese
2	Asparagus agro-industry in Viru, La Libertad	Asparagus
3	Tourism circuits in the northeast of Peru	Historic and cultural attractions
4	Association of grape producers in Peru (PROVID)	Table grapes
5	Handicraft in Chulucanas, Piura	Pottery handicraft
6	Garments in Gamarra, La Victoria, Lima	Garments
7	Garments in Puno and Arequipa	Alpaca hair garments
8	Organic banana plantations, Chira Valley, Piura	Organic bananas
9	Tourism circuits in historic Cusco	Historic and cultural attractions
10	Handicraft in Huamanga, Ayacucho	Pottery and textile handicraft
11	Leather and footwear production, El Porvenir, Trujillo	Footwear
12	Fishmeal industry, Chimbote, Ancash	Anchovies and fishmeal
13	Wineries in Ica	Wine
14	Sugar cane agro-industry, La Libertad	Sugar
15	Receptive tourism chain, Macronorte	Historic and cultural attractions
16	Tourism circuits in the Mancora, Tumbes	Beach resorts
17	Metalworking in Infantas, Los Olivos, Lima	Basic tools and metal furniture
18	Olive production chain, Tacna	Olives
19	Artichoke production in the Mantaro Valley, Junin	Artichokes
20	Organic coffee production	Coffee
21	Lemon production in Piura	Lemons
22	Mango production in Piura	Mangoes
23	Panela production (brown sugar syrup) in Piura	Panela (brown sugar syrup)
24	Handicraft in Taricá, Ancash	Pottery handicraft
25	Trout farming in Huancayo	Trout

ID#	Cluster – Location	Outputs
26	Tourism circuits in the Huaylas corridor, Ancash	Historic and cultural attractions, adventure sports
27	Association of lucuma producers (PROLUCUMA)	Pouteria lucuma
28	Association of Haas avocado producers (PRO-HAAS)	Haas avocados
29	Suppliers of the Yanacocha mining	Inputs and supplies for the mine
30	Bio Fair, Reducto Park, Miraflores, Lima	Organic products (certified)

Source: Apoyo (2005: 5)

More recent research has shed some light on the local linkages of large-scale producers in specific industries such as mining. A study by Kuramoto (1999) on "the productive agglomeration around the mining activities" finds that, in the case of the Yanacocha mine located in northern Peru, the linkages with local producers are rather weak due to technological and institutional bottlenecks. A new study by the same author (Kuramoto, 2001) refers to the agglomeration of productive enterprises in the central Sierra region of Peru, around the Cerro de Pasco mine, and also to the cases of Yanacocha (Cajamarca) and the Southern Peru Copper Corporation (Toquepala).

Kuramoto finds that "the expansion of mining production and the decentralization of mining activities are generating a rather limited relationship between the new large mining firms and the national suppliers of inputs and equipment" (2001: 114). Her study reveals that national suppliers have been unable to meet the technological requirements of the large mining projects. Furthermore, she points to the international procurement procedures, particularly with regard to financial conditions, which favor the selection of foreign suppliers, thereby hindering the development of linkages with the local economy.

Yet, the study by Torres (2003) on the cluster around the mines of the Southern Peru Copper Corporation in Toquepala (Tacna) and Cuajone (Moquegua), on the southern coast of Peru, finds stronger backward linkages. Thus, national suppliers account for 85 percent of the total value of operational inputs purchased by the mine. Around 35 percent of the value of machinery and equipment also has national origin. However, forward linkages are still weak, insofar as most of the refined copper production is exported without further processing.

It should be noted that the concept of clustering used by Torres, and to some extent also by Kuramoto, is somehow devoid of local and territorial content. It is more closely related to the

notion of productive linkages developed by Hirschman three decades ago (1977). Furthermore, these studies on the mining sector emphasize critical aspects of the relationship between mining firms and local communities, namely the impact of mining activities on the local environment as well as the distribution of rents from mining. The history of mining regions in Peru has been plagued by conflicts around rent distribution and environmental concerns, and there is an emerging body of literature on this issue, which has yet to inform cluster analysis and the design of PDP (Dulanto, 2007; Glave and Kuramoto, 2007).

A recent study by Tello (2008b) provides an updated survey on the clusters literature and refers to other cases, including the cluster of tourism services in Cusco, and the cluster of dairy products in Cajamarca. A case in point is the "garment complex" of Gamarra, which has been the subject of various studies, including a doctoral dissertation (Visser, 1996). In this case, the notion of "cluster" refers to a territorial agglomeration of SMEs in Lima. Ponce (1994) provides a thorough assessment of the origins of this cluster, pointing at agglomeration economies and location factors such as access to transport infrastructures, a vicinity with a large wholesale market, and the development of stable market relations with retailers and traders in the countryside. He also emphasizes "the massive use of subcontracting" and argues that "cooperation among firms is widely spread" (1994: 119, 124). However, a study conducted in 1995—based on new survey data—questions Ponce's optimistic statement that "Gamarra has a tradition of a strong division of labor, outsourcing, and cooperation" (Tavara and Visser, 1995). Furthermore, this study finds no evidence of the institutional developments that might be required for a sustainable growth of this cluster.

Two more recent studies on Gamarra also provide conflicting assessments. In a conclusion much like Ponce's optimistic account, Chion (2001) underscores the transformation of Gamarra into a prosperous and buoyant neighborhood, as a result of a pattern of development that is based on trust, fairness, and ethics. She points at "the emergence of innovative entrepreneurial organizations" (2001: 72, 76) and notes the positive effects of the structural reforms, which have expanded access to new technologies and services, particularly ICTs. In contrast, Triveño (2008) finds critical weaknesses in the cluster, mostly related to the lack of leadership of local authorities and a legitimacy deficit within the realm of producers' associations. A similar study conducted by PROEXPANSION (2005), Triveño's consulting firm,

suggests that failures of collective action resulting from a lack of trust, and the bargaining power of real estate interests—which has led to very high rents—continue to hinder the development of this cluster.

7. 2 Institutional Constraints

The role of clusters in local and regional development has attracted the attention of scholars in various disciplines, including economics, history, geography, and urban studies. There is a vast body of literature on industrial districts, some of which provides significant policy lessons for developing countries (Schmitz and Musyck, 1993; Van Dijt et al., 1997; Kagami and Tsuji, 2003; Pietrobelli and Rabellotti ,2005). Yet, and with very few exceptions, the territorial dimension of PDPs has been largely ignored by policymakers in Peru. The tradition of dialogue and cooperation between public and private actors is rather limited, not only at the national level, but also within regional and local environments.

It must be noted that the process of decentralization, perhaps the most significant and far-reaching process of reform that has been attempted in Peru, is still incipient, and its main results are yet to be seen. To be sure, some progress has been achieved in the realm of political and administrative decentralization, but much more work is required to design regional and local development strategies in order to articulate public and private investment policies (Ballon et al., 2006). Unfortunately, regional and local authorities are frequently concerned with more urgent and pressing issues, usually related to the transfer of functions and resources from the national government, and they face a different set of priorities. By and large, the institutional structures in most of the regions are too weak and ill-prepared to promote SME clusters and local development.

One of the first experiences in this regard was the "Programa de Promoción y Fomento a la Pequeña Empresa Industrial de Trujillo" (PROIND-Trujillo), perhaps the most comprehensive experiment in promoting SME development ever tried in Peru. It began in the early 1980s in Trujillo, with financial and technical support from the German Development Agency (GTZ). The objectives were to foster industrial decentralization and regional development, supporting the integration of small-scale producers with medium- and large-scale firms. To achieve these objectives, the program provided a wide range of services, such as specialized training and direct

on-site assistance at the firms' workshops. It also sponsored the creation of producers' associations and the organization responsible for trade shows and market fairs.

The achievements of this program were remarkable, particularly between 1981 and 1986, when PROIND had access to technical and financial support from GTZ. The program operated in a semi-autonomous fashion, with about twenty well-trained, well-paid, and highly motivated technicians. It delivered substantial support to small-scale producers and is regarded as one of the key drivers of the footwear cluster in Trujillo. However, the organizations represented in the PROIND Executive Committee—five public agencies and two associations of private firms—were finally unable to bring about institutional reforms and strengthen regional governance. The program activities became disassociated from the operations of the state bureaucracy and the private organizations of the region, so the program turned into an isolated concern. German support came to an end in 1988, as initially planned, and the program failed to generate the incentives required to secure stable sources of revenue (Távara, 1996a).

During the 1990s, public support to some clusters took the form of direct intervention by political authorities with close connections to the world of SME associations. A case in point was President Fujimori's Vice President, Ricardo Márquez, a prominent figure who was a medium-scale garment producer.[61] Márquez led a drive to organize several consortia of garment producers in the Gamarra cluster with the purpose of exporting their output. Some of the consortia actually managed to reach export markets, but none of them survived once political support, and the Fujimori regime itself, came to an end.

Programs in support of SMEs at large were dispersed among several state agencies and ministries, each with its own policies and guidelines. Even the military unit in charge of the Presidential Palace security under Fujimori became involved in implementing the "maquicentros" program, which was supposed to provide technical assistance and training to SMEs. Lack of coordination and leadership within the state led to inefficiencies and weakened the prospects of institutional reforms (Villáran 2007: 49, 252).

In November 1997, the government issued a decree creating the Small Business and Microenterprise Development Commission (PROMPYME), with the declared objective of

[61] Márquez's firm, JEAN EXPORT CORPORATION S.A.C., was founded in 1982 and is part of a network of 47 shops and stores, 12 of them in the garment cluster of Gamarra.

improving the access of SMEs to markets. Its board of directors was to be led by a representative of President Fujimori, and he appointed Márquez, who was also in charge of PROMPEX, the agency devoted to export promotion.

7.3 The "Development of Business Networks" Program

The Toledo regime (2001-2006) put forward a new approach, focusing on employment generation through SME development policies. The Ministry of Labor and Social Promotion became the Ministry of Labor and Employment Promotion (MTPE), and PROMPYME was transferred to its realm. One of the main programs, which has been specifically designed for cluster development, is referred to as "Development of Business Networks in Garment-Making and Tourism Clusters." Sponsored by the IDB, which provided a non-reimbursable fund of US$970,000, the program's general objective was "to help the cluster of small tourism enterprises in Cusco, and those of the garment-making sector in Gamarra, to become more competitive. The specific objective is to create cooperative business networks capable of strengthening the dynamics for collective efficiency within each cluster, and to optimize market access for member enterprises."[62]

The executing agency of this project was PROMPYME. The first disbursement took place in September 2004 and was used to hire consultants who would support network formation activities. A critical component during the first phase was "training on networking and competitive models of inter-firm cooperation," which contributed to enhancing the skills of key PROMPYME staff and network promoters, some of whom became the network managers. Firms were chosen to set up the networks according to explicit criteria, after a process of advocacy and training.[63] Network managers and consultants were hired to develop specific diagnoses on the technologies and capabilities of each firm, conduct strategic planning, and draft and implement business plans. Workshops and seminars were organized to discuss the results and to provide

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[62] Country counterpart financing is estimated at US$630,000.
http://www.iadb.org/projects/Project.cfm?language=English&PROJECT=TC0302010

[63] Each network was to be formed with four firms or more. In the case of Gamarra, participation was limited to formal firms with less than US$800,000 in annual sales and fewer than 50 workers. They were required to attend the training sessions and formally state their willingness to provide all the information required to elaborate the diagnosis and draft the business plan.

technical assistance and training. In April 2005, there were already 17 networks in a formative stage within the Gamarra complex, each with its own strategic and business plans. In the case of Cusco, 12 networks were initially formed, but only seven were operational by June 2007.

According to a report evaluating the project, which was conducted by an independent consultancy firm from April to June 2007, most of the participants regarded technical assistance and training activities as "very positive," insofar as they helped them "work more professionally" (Recursos S.A.C., 2007: 29). In the case of Gamarra, the report underscores the creation of joint trademarks, which diminished transaction costs and helped the firms market their products. About 70 percent of the networks had purchased their own internet domain names, and some of them already had their websites available. In the case of Cusco, similar achievements are worth mentioning, particularly with regard to the networks of restaurants and hotels (improvements in sanitation standards, sharing information on suppliers) and the network of travel and tourism agencies (development of new tour circuits in cooperation with municipalities and local communities).

The main outcomes of this project are presented in Table 20. By June 2007, most of the goals had been accomplished. Tough performance indicators at the firm level were yet to be measured (10 percent increase in productivity and 20 percent increase in sales). In addition, the project had contributed to stimulating the development of the market for business development services (BDS), particularly in Gamarra, raising expectations concerning quality standards and improving decision-making as to the type of specific services that are required (Recursos S.A.C., 2007: 18).

It must be noted, however, that the project suffered from significant delays, particularly during the initial stage and also as a result of changes in the staff of PROMPYME, following the change in national government (July 2006). It was noted that some delays were also due, in part, to rigidities related to administrative rules within the IDB (Recursos 2007: 16). Some firms abandoned the effort and quit the networks, as they failed to deliver the expected benefits.

Furthermore, in the case of Gamarra, the project at large was unable to meet one of the main expectations of some of the firms, particularly the smaller ones, namely to enhance local governance and improve access to basic services, including security (Recursos S.A.C., 2007: 11).

Somehow the project itself failed to develop its own institutional network, a key condition to ensure sustainability.

It was expected that the networks would continue operating on their own, once the implementation of the project came to an end. According to Recursos, by mid-2007, eight networks in Gamarra were paying 25 percent of the manager's salary, and six were paying just 10 percent. In the case of Cusco, most of the networks already paid 25 percent of their manager's salary by March 2007, and they were expected to reach the 50 percent goal by mid-2007. The consulting firm estimated that "most of the networks will continue functioning with some level of coordination among the member firms, and it seems probable that at least half of them will continue working even without external support" (Recursos S.A.C., 2007: 34-35). Reportedly, by the end of 2008, there were at least five networks in Gamarra and three in Cusco that were still operational.[64]

Unfortunately, the project came to an abrupt halt when the government decided to shut down PROMPYME, the executing agency, transferring all of its personnel, assets, projects, and liabilities to the Ministry of Labor.[65] A former Minister of Labor noted that the project ceased to be viable once the government decided to place it within the administrative structure of the Ministry, subjecting it to all the cumbersome procedures that impair the efficiency of the Peruvian public sector. The closure of PROMPYME has met some criticism, as the agency achieved important goals during the Toledo regime while operating with some degree of autonomy.[66]

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[64] Jaime Giesecke, IDB Country Office Specialist, personal communications, December 22, 2008.
[65] The D.S. No 003-2007-TR, issued in February 2007, mandated an absorption merger so that PROMPYME became part of MI EMPRESA, a program within the Ministry of Labor.
[66] Fernando Villarán, personal interview, November 21, 2008. See Mifflin (2008) and Villarán (2008).

Table 20. Goal Achievement Indicators (Cusco and Gamarra)

	GOALS OF THE PROJECT	Total	Achievement (%)
	COMPONENT I: PROMOTION OF ASSOCIATIVE BUSINESS NETWORKS		
1	20 networks with agreed upon business plans, with at least 160 participant firms overall	20	100%
	160 participant firms (total)	300	188%
2	10 executives and professionals from PROMPYME and the executing agency of the project, and at least 12 professionals from each cluster, trained in management and advocacy of networks and competitive models of business cooperation	50	100%
3	Shared vision of competitive development in each cluster	112	100%
4	250 firms in each cluster are sensitive and responsive on the benefits of business cooperation		No records were found

Table 20., continued

	COMPONENT II: FACILITATING ACCESS TO PRODUCTIVE AND ORGANIZATIONAL TECHNOLOGIES		
	GOALS OF THE PROJECT	Total	Achievement (%)
1	20 networks operationally formalized, with hired managers	20	100%
2	100% increase with respect to the baseline level, and 10% annual increases thereafter, in technical assistance investments aimed at optimizing productive and organizational processes	20	100%
3	Compliance with the Action Plan for each network, with respect to contracting business development services	1	70%
4	At least 70% of the participant firms are satisfied with the business development services contracted by the networks	78	78%
5	At the end of the project implementation, the set of participant firms increases its productivity by at least 10% overall	0	Has not been measured
	COMPONENT III: ACCESS TO MARKETS		
1	Market strategies for each network are executed in at least 80% of the cases	70	70%
2	At least 10 garment firms and tourist operators are developing new networked business as a result of contacts made in the course of the business meetings that take place twice a year	14	140%
3	At the end of the project implementation, there was at least a 20% increase (with respect to the baseline) in the total sum of sales of the participant firms, consistent with the market strategies		Has not been measured
	COMPONENT IV: MONITORING AND DISSEMINATION OF PROJECT OUTCOMES		
1	A private entity is ready to replicate the project model in other clusters	0	Has not been found
2	There is a video and a publication with at least four practical cases on how to organize and consolidate associative business networks, and a link to information on the project on PROMPYME's website.		Only unedited material and videos on the networks. More work is required for a publication.
3	Two workshops are organized to disseminate the project results, with business people and representatives of private organizations who might be interested in replicating the project	0	Pending execution

Source: Recursos S.A.C (2007: 20).

7.4 The Centers for Technological Innovation

A second program that has supported cluster development has involved the Centers for Technological Innovation (CITEs). Even though CITEs have not been specifically designed with a cluster approach in mind, in practice their implementation has contributed to strengthening the development of specific clusters, since they were located in areas with high concentrations of SMEs specializing in a particular industry. CITEs provide a wide variety of services such as technical assistance, training and specialized information, laboratory tests, quality control, and certification, among others. The objective of this program is to enhance SME competitiveness through innovation and increased productivity. CITEs are understood to be a tool in support of industrial development and value-added generation in the regions in order to promote enhanced quality, productivity, and innovation throughout the production chains.[67]

The first CITE was CITE-CAL, devoted to the leather and footwear industry. It was created in July 1998, during the Fujimori regime, under the sponsorship of PROMPEX, the export promotion entity; MITINCI; and the Spanish Cooperation Agency (AECI). It was located in the "Caquetá cluster" (El Rimac district, near downtown Lima), where a number of SME traders provided a wide variety of inputs for the footwear industry. Next came CITE-MADERA, which was established two years later within the Industrial Park of Villa El Salvador, Lima, one of the strongholds of SME producers specializing in wood furniture. The same year, a new CITE was created in support of wine and pisco producers that operate in Ica, the main winery area 300 kilometers south of Lima.

The law of CITEs was passed in May 2000, just a few months before the end of the Fujimori regime. It defines CITEs as "public or private entities whose aim is to promote innovation, quality, and productivity, as well as to provide information for the competitive development of the different stages of production of the national industry."[68] The law states that centers created through private initiative can also operate as CITEs, provided that they comply with basic requirements (such as operating with a suitable infrastructure and qualified personnel)

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[67] Ministerio de la Producción. Plan Operativo Institucional 2008. http://www.produce.gob.pe/RepositorioAPS/1/jer//transparencia/otros/poi2008.pdf

[68] Law No. 27267, Art. 2.

in order to become duly qualified and officially approved by the Ministry (initially MITINCI, currently PRODUCE).

The three CITEs referred to above (leather and footwear, furniture, and wineries) are publicly funded. As stated above (Table 6), the average amount of public funds spent in the CITE program reached an average of US$2.6 million per year between 2006 and 2007, including the budget of the Technical Office (OTCITE) in charge of running the CITE program.

The CITEs draw on other sources of revenue, charging for some of the services they provide. According to the Executive Director of CITE-CAL, public funds account for 60 percent of their total budget, and the other 40 percent comes from private sources. An evaluation conducted on the performance of CITE-CAL shows very positive achievements, including customer satisfaction (Carrasco, 2004).

In addition to these three publicly-funded centers, there are ten other CITEs that have been created through private initiative. They specialize in agro-industrial production within various regions, including Tacna, Arequipa, Piura, and Ayacucho, in garment and textile production, including textiles produced from the hair of camelids such as alpaca and vicuña (Arequipa). There is also a private CITE located in the metal-mechanic cluster of Infantas (Lima), which is run by a producer association (ATEM), and there is another one in Iquitos, which specializes in tropical fruits and medicinal plants. It must be noted that most of these CITEs operate within geographical clusters of SMEs.

Mercedes Carazo, the current director of the CITE Technical Office (OTCITE), reports that CITEs' activities are "…demand-driven, identifying key agents of the territorial cluster and the technological problems that impair competitiveness, based on firm-level diagnosis within the cluster, also addressing the demands of the communities and associations that operate in those territories." Her own evaluation is that the instruments they used were completely adequate (5 on a scale of 1 to 5) with respect to their activities within the clusters.[69]

She also contends "the CITE model is indispensable in clusters with an intense presence of SMEs, both urban and rural, as a bridge between knowledge and the firms." They can play a critical role in the future in support of local development programs, strengthening the

[69] Answers to the questionnaire, translation by the authors.

institutional linkages required to build local and regional systems of innovation. CITEs can also contribute to incubating firms in ancillary activities and fostering the generation of higher value-added products.

Finally, among the factors that could enhance the effectiveness of the CITEs, Carazo argues that more commitment is necessary from the local governments, pointing out the potential benefits that might accrue through alliances with regional universities. She also refers to creating local incentives for innovation, "securing the stability and continuity of the specialized professionals, paying them market salaries," promoting benchmarking techniques to facilitate information flows within the network of production chains and research centers, and investing more resources in specialized training for the staff of CITEs.

7.5 The "Cluster Promotion Program"

A third program that deserves to be mentioned is the "Cluster Promotion Program." Sponsored by the IADB, which provides a non-reimbursable fund of US$2.73 million, "the goal of the program is to contribute to the competitive development of SMEs in Peru through the promotion of clusters. The purpose is to support the establishment of a joint public-private working mechanism with national coverage: i) to foster more competitive SME performance through interfirm linkages and cooperation between firms and supporting institutions; and ii) to promote public-private cooperation in the field of production development policies."[70]

The amount of country counterpart financing in this case is expected to reach US$1.9 million. The program comprises three components. The first one provides for "the establishment and dissemination of a competitive mechanism to evaluate and select proposals for co-financing collective business development strategies and actions." The second "will include co-financing and support for carrying out the selected subprojects," and the third "will include program monitoring and evaluation, coupled with actions to systematize and transfer learning experiences."[71] It is expected that competitiveness of SMEs in at least 12 clusters will increase as a result of this program.

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[70] http://www.iadb.org/projects/Project.cfm?lang=en&query=&id=pe-m1005&project=pe-m1005
[71] Donor's Memorandum, PE-M1005, Document of the IADB-Multilateral Investment Fund.

Up until now, this is one of the largest programs in support of clusters that has been implemented in Peru. As stated in the donor's memorandum, "it will provide continuity for the MIF's SME-related actions in the country, particularly the project for the development of business networks in garment-making (Gamarra) and tourism (Cusco) clusters," which are referred to above. Perhaps as a plausible reaction to the experience with PROMPYME, the design of this program provides a distinct organizational structure, which comprises a "public-private steering committee" in which private sector members hold a majority position. This committee is expected to establish strategic guidelines and decide on the specific projects to be selected for support, based on evaluation reports issued by independent consultants.

This program has also faced some delays, as the executing agency (Apoyo) decided to quit.[72] Furthermore, the government has reportedly delayed disbursements of the country counterpart financing. The first phase of awareness-building was completed in 2008, and available funds are being allocated on a competitive basis to the best projects. The program will finance up to 70 percent of each specific project (40 percent from the IDB and 30 percent from local counterpart funding). The remaining 30 percent is expected to come from the beneficiary firms, as co-payments for rendered services. Even though it is too early to assess implementation and results, based on preliminary information on the specific projects that have won the first two competition rounds (northern and southern Peru), it seems that most of the specific projects to be supported aim at strengthening agro-industrial production chains geared toward export markets, instead of territorial clusters of SMEs in urban areas.[73]

More recently, the government launched the program "Gamarra exporta." Mercedes Aráoz, the Minister for International Trade and Tourism, announced in October 2008 that an Information Center would be created in Gamarra to provide SMEs in this cluster with valuable information on fashion trends and best practices in marketing as well as manufacturing. The center will also provide free training services on the scope and content of the trade agreements that Peru has signed, particularly with regard to the customs procedures and requirements in

[72] Its role has been taken up by a consortium that includes the main organization of business associations in Peru (CONFIEP), a consulting firm (InterCooperation), two NGOs (SASE and Minka), and the Peruvian association of NGOs involved in SME promotion (COPEME).

[73] One of the authors of this report is also a member of the "public-private steering committee."

other countries as well as the technical features of fabrics with a growing demand worldwide. It was not possible to find further evidence on this initiative as we were writing this report.[74]

In addition to the three major programs referred to above, which involve public resources, there are some initiatives led by NGOs and external donors in support of clusters of SMEs, some of which involve substantial transfers of resources. A case in point is the program in support of micro and small enterprises (APOMIPE). Sponsored by the Swiss Agency of Technical Cooperation (COSUDE) and executed by Inter-Cooperation and Minka (a Peruvian NGO based in Trujillo), the program aims at enhancing SME bargaining power and competitiveness by promoting concerted local development processes. It builds upon "motivated local actors" and the promotion of trust relations, and emphasizes the involvement of existing local institutions, particularly local governments.[75] Unfortunately, the information required to assess the impact of this type of program is difficult to find.

7. 6 Cluster Development and Public Policies

A critical and yet unresolved question in the development literature is whether the transformation of stagnant localities into dynamic clusters can be fostered through public policy. Available evidence is not conclusive on this matter, and one wonders to what extent sustainable cooperation and trust, innovation, and cluster development can be promoted at all, particularly in countries such as Peru.

International studies on successful cases of local development place a substantial emphasis on historical and regional peculiarities, such as the high degree of cultural cohesion and the strength of local governance. For instance, the "innovation milieu" approach in the clusters literature emphasizes the role of institutional and cognitive frameworks in facilitating collective learning and innovation, while reducing the uncertainties related to these processes (Camagni, 1991). Along these lines, it is difficult to explain the dynamism of the Italian industrial districts without considering the long merchant and craft traditions as well as institutions such as the Italian extended family, the kinship network, and the commune. Some authors have even observed that industrial districts "could be found but they could not be made,

[74] http://guillermotejadadapuetto.blogspot.com/2008/10/gamarra-exporta-ayudara-las-mypes.html
[75] http://www.erweiterungsbeitrag.admin.ch/ressources/resource_es_24943.pdf

that the rules which hold them together exist at a level much more fundamental (or subconscious) than that at which public policy operates" (Piore, 1990: 58-9).

Yet, a recent study shows effective cluster support interventions in some OECD countries. It reveals that they originate from one of three policy families, namely regional development policy, science and technology policy, or industrial/enterprise policy. These policies are explicitly geared toward innovation, "linking people, skills and knowledge at a regional level." Eventually, they can also foster the generation of employment and facilitate restructuring and adaptation of some sectors of the economy. As for the rationale for cluster support in general, this study emphasizes "the transaction costs and coordination costs to bring appropriate actors together," among other factors. It also observes that "there are economic rationales for all levels of government (local, regional, national and in some cases supranational) to support them" (OECD, 2007: 11-14).

Unfortunately, and with very few exceptions, there has been very little research on cluster development in Peru, let alone on successful policy-making experiences in support of SMEs at the local level, so it is difficult to address the question stated in the opening paragraph of this section. Furthermore, the ability of Peruvian public agencies to pursue innovative policy measures has been undermined, at least since the late 1980s, by significant reductions in the state budget devoted to PDPs. As noted in Section 2, the size of public investment resources transferred to the Peruvian economy in terms of GDP has been relatively low and declining since the mid-1990s. It is not surprising that the main programs examined in this section have been funded—and somehow driven—by external donors, often with active involvement of NGOs.

It must be noted, along these lines, that in Peru public policies in support of clusters have been exceptional and isolated, not only due to budget constraints, but also because of the institutional fragmentation and the often conflicting relationships between public agencies at different levels of government.[76] In a sense, cluster development policies have been subsumed into a more general set of public policies in support of SMEs. Their impact has been limited insofar as they have operated, at least since the mid-1990s, within a narrow public policy

[76] The cases of PROIND in Trujillo and the Industrial Park in Villa El Salvador, Lima, stand among the few important exceptions in this regard.

framework, largely dominated by a different set of priorities, particularly investments in infrastructure.

The development literature reveals that programs and policy interventions in support of (clustered and not clustered) SMEs are based, albeit often implicitly, on a market failure rationale. To achieve sustained economic development, SMEs require access to a wide variety of services such as specialized technical assistance, technical training, consulting services related to quality management and market intelligence, participation in trade fairs and technology missions, laboratory services, and guidance on certification processes, to name a few. They usually face intense competition from firms located abroad, some of which operate within enriching and nurturing environments, frequently backed by full-fledged support programs.

Market incentives suffice to secure the provision of some of these services, usually referred to as business development services or BDS. Yet, in certain cases, market provision might be limited, particularly when it involves interactions in a context of asymmetric information on service quality. Supply of some services might also require investments leading to non-negligible sunk costs, for instance, in the production of databases and training contents. Furthermore, business development services might generate positive externalities and have the attributes of public goods, being indivisible or non-excludable. Under these conditions, collective provision of BDS becomes both more efficient and more effective.

Contractual relations along the production chain might be a solution, particularly when they involve large firms with financial resources, technological capabilities, and access to export markets (CEPAL, 1996). This seems to be the case with respect to some agro-industrial production chains in Peru, in which large firms are directly providing BDS to small-scale producers.

However, neither market provision nor hierarchical contractual relations represent a general solution to the provision of BDS. Their scope might be limited in urban settings, due to the lack of production standards, disparate technological capabilities, and higher transaction costs. In the Peruvian context, the weakness of local training institutions and the limited effectiveness of the property rights regime also hinder the development of BDS markets (Morales et al., 2008; Tavara, 1996b).

Clusters might certainly evolve in the direction of creating a favorable environment for the sustainable collective provision of BDS. Spatial concentration, itself, facilitates this provision. It is well known that, under certain conditions, geographic proximity enhances visibility and increases the frequency of interactions, thereby facilitating the solutions for collective action problems, for instance, in the production of local public goods (Axelrod, 1984; Olson, 1965).[77] Willingness to pay for BDS can take several forms, including direct payments for specific services, membership fees to business associations and consortia, and taxes and other contributions to local organizations. Of course, free-riding behavior undermines collective action and leads to business failures. This is why local governance becomes a critical dimension for the sustainable evolution of clusters.

Finally, it must be emphasized that cluster competitiveness also rests on the effectiveness of a broader set of social policies, particularly with regard to education, health, and social assistance. Unfortunately, Peru is one of the laggards in the Latin American region: public expenditure has been much lower in Peru than the average for the region, with only Ecuador and Guatemala spending less on education, health, and social assistance as a percentage of GDP. Furthermore, access conditions are very unequal, with low-quality services hurting the poor. A recent study reveals that anti-poverty programs are not having a significant effect on reducing malnutrition. It also notes that, "unless the quality of education improves, Peru will not be able to compete in an increasingly global economy, and graduates arriving in the labor market will be met with frustration instead of success" (Cotlear, 2006: 2).

It is also possible that social policy programs, aimed at alleviating the substandard living conditions of the poor as a matter of justice and fairness, overlap in time and space with programs in support of SMEs, which operate under a different set of principles, including efficiency and competition. Ambivalence and confusion concerning these values and principles not only create a fertile ground for malfeasance, but they also obstruct the emergence of a self-sustaining rationale. Unfortunately, in Peru, there is no evidence, so far, of deliberate efforts to

[77] Collective action might also fail due to the fragmentation and lack of legitimacy of producers' associations, the heterogeneity of social norms, and the flaws of the judiciary system. Yet, under certain conditions, external interventions by "political entrepreneurs" and visionary actors can secure viable solutions (Taylor, 1987).

streamline the process of decentralization, regional development, and state reform, particularly in the realm of social policies, with the design and implementation of PDPs in support of clusters.

7.7 Final Remarks

Apart from a few exceptional and isolated initiatives, we have not found established and stable PDPs in support of clusters in Peru. As stated in the former section, cluster support programs have been a subset of policies in support of SMEs at large, which have also been very limited in terms of both their scope and the amount of resources involved.

Furthermore, the most important initiatives, such as the development of business network programs and cluster promotion programs, have been driven by external support, particularly from multilateral agencies, such as the IDB, and bilateral donors. This is the case with regard to the first CITE, which was initially funded by the Spanish agency AECI. Public counterpart funding has represented a smaller share of total resource transfers. Other initiatives are fully funded by external donors, but there is little available information on them.

Along these lines, it seems that one of the main flaws of the programs implemented in Peru is that they have failed to involve all of the appropriate actors, particularly regional and local governments, universities, and representative producer associations. In some cases, the programs were implemented in a top-down fashion, instead of promoting flexible and cooperative network relations. To be sure, regional universities and research centers are often weak and ill-equipped to meet the challenges of global competition through innovation, but, nonetheless, their contribution is crucial for clusters to have any chance of successful evolution. Without substantial reforms in education and social policies at large, these chances are very slim.

On a more positive note, the CITE program has all the potential to become a key driver in cluster development. Even though it has a limited budget, the program is geared toward innovation and competitiveness, with a clear focus on clustered SMEs. Furthermore, it has shown vision, leadership, and a commitment to the basic principles of policy implementation in accordance with best practices, allowing for the active participation of private actors. Somehow, the CITEs are becoming the building blocks in the emergence of local and regional systems promoting innovation.

The process of decentralization, which is still in progress, might certainly speed up this evolution and open up new avenues for policy innovation, provided that more public resources are devoted to PDPs. A broad consensus has been reached in Peru that there is significant scope for progress resulting from the decentralized development of each and every region. The establishment of institutional networks based on social organizations, regional and local governments, universities, and state agencies could facilitate the pooling of resources and joint efforts to pursue common goals and improve the living conditions of the population. A new generation of leaders and organizers is needed in order to achieve this result, thereby building a self-sustaining rationale and bringing about the political and institutional reforms that are required to foster cluster development.

8. Conclusions and Final Remarks

This paper has assessed the institutional setting and productive impact of a sample of selected productive development policies (PDPs), institutions, and programs implemented in Peru during the period 1990-2007. This assessment is based on a simple, basic framework of a series of "economic or market failures" that may constrain the transformation of the productive structure, the process of innovation, and the growth (in a sustainable way) of total factor productivity.

In the political setting of PDPs, three actors are clearly identified in defining the PDPs: government institutions (at all levels and branches, in particular the executive branch); the associations of producers and large firms positioned in (output, product, and exports) concentrated sectors; and the dominant group of micro firms (with respect to Peruvian firms' size distribution) represented by different associations and political agents.

Macro and micro evidence—including responses to a set of questionnaires distributed to government officials and firms' beneficiaries of the selected PDP institutions and programs presented in this paper—indicates, on one hand, that the PDPs and structural reforms implemented in Peru during the period 1990-2007 did not alter the productive structure of the Peruvian economy in a significant way. This economy is still based on the primary activities of natural resources and the manufactured products of light industries. On the other hand, from all the selected PDPs analyzed in this paper, the institutions or programs with the highest performance indicators and benefit-cost ratios (measured in terms of the number of beneficiaries and transference of resources per beneficiary) are those that support technological innovation and programs designed to promote micro and small enterprises complemented by financial programs from COFIDE. Export incentives and the services provided by the export promotion agency are the PDP interventions with the lowest performance indicators and benefit-cost ratios. Furthermore, it is not clear if these interventions have addressed the most relevant economic failures faced by micro, small, and large-sized firms. Finally, cluster development policy is in its initial stage with no clear objective or impact on cluster development.

A series of rules that may improve the economic performance of PDPs, without requiring more resources than the ones already allocated to PDP activities, has been drawn from the evidence and interviews discussed in this paper. First, if the objectives of PDPs are to transform the productive structure, increase total factor productivity, and enhance the innovation process,

then interventions need to focus directly on the source of market failures (not on their symptoms) and create quality productive changes within the private sector, thereby avoiding the dependency of this sector on government interventions and the transfer of resources.

Second, the objectives and programs of PDPs need to be sustainable over time and not subject to significant changes in order to allow modifications in the productive structure and sustainable increases in productivity. The legal framework of the selected PDPs, enacted during the period 1990-2007, underwent changes from one presidential administration to the next and, for some PDPs, there were changes in the framework during one administration. The unstable legal framework, coupled with frequent changes in the executives on the boards of directors of the PDP institutions or programs, as well as changes in the priorities of the PDP interventions, may affect the learning process and degree of effectiveness of the PDPs.

Third, the bureaucratic procedures and the number of institutions and programs in the system of PDPs need to be simple in order to avoid duplication and achieve a greater impact. The system needs to be based on four kinds of institutions or programs that address the relevant economic failures identified in the Peruvian economy.

The first set of institutions or programs needs to provide missing public inputs and goods, which generate positive externalities in different sectors and geographic areas (e.g., SENASA), regardless of the firms' degree of development or size. The second set of institutions or programs needs to deal with information externalities, business development services, financial constraints, and the lack of an appropriate level of modern entrepreneurship in micro and small firms. Private or semi-public incubator institutions have strong ties with professionals, research institutions, and universities, and sharing the costs of the incubation process of successful micro enterprises can be an example of what this kind of institution can do. The third set of institutions or programs needs to be focused on firms with a higher degree of development and technological capabilities (usually medium- and large-sized firms) that are also facing economic failure (although of a distinct nature) related to coordination and information externalities and the "semi-public good" feature of the process of innovation. The implementation of this kind of institution or program may be carried out either by the private sector (including universities and NGOs) or through a public-private partnership with costs shared by the government and beneficiary firms. This kind of entity needs to provide services or interventions that are suitable

for sectors in which medium- and large-sized firms undertake productive activities, and it needs to have units that are empowered to coordinate with other firms, and public and private institutions. Examples of this kind of entity are INCAGRO and CITEs.

Finally, the fourth set of institutions or programs would deal with providing an appropriate business climate, providing information on opportunities and international markets to national and foreign investors, and fostering complementary and interrelated investment through appropriate coordination activities. This kind of institution or program also may be based on a public-private partnership with costs shared by firms and the public sector. An example could be an improved PROINVERSION institution focused on those types of economic failures.

The fourth rule that may improve the economic performance of PDPs, without requiring more resources than the ones already allocated to PDP activities, can be applied to the last three kinds of institutions or programs, namely that they need to be autonomous and decentralized, and have units that are empowered to coordinate in order to interrelate the programs and interventions between them and other public and private institutions. Moreover, all three kinds of institutions or programs need to have an export orientation in terms of the quality of products and innovations generated through these PDP interventions.

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ANNEX TABLES

Table A1. Outline of Stabilization and Main Structural Reforms in Peru, 1990-1996

No.	Policy/Reform	Instruments/Interventions
I. Stabilization Program		
1	**Monetary and Financial Liberalization**	i) Recovery of the independence of monetary policy from fiscal policy and the autonomy of the Central Bank; ii) Administered growth of total monetary base at decreasing rates; iii) Elimination of controls and free interest rates.
2	**Exchange Rate**	i) Change in the exchange regime to a unified and administered floating regime through transactions (purchases and sales) of the Central Bank in the foreign exchange market.
3	**Fiscal**	i) Reduction and disciplined management of government expenditures; ii) Improvements in tax administration; iii) A simplification of the tax regime although with relative high volatility in tax rates and creation of specific taxes which depended upon emergency needs of tax revenues.[78]
4	**External Debt**	Resumed negotiations with international community through an external debt restructuring program.
II. Structural Reforms		
1	**Trade and Capital Liberalization**	i) Reduction in the level and dispersion of ad-valorem tax rates, although maintaining a differentiated structure by sectors. In March 1991, ad-valorem tariff rates were reduced to two rates: 15% (capital goods and intermediate inputs) and 25% (consumer goods). Most quotas were eliminated; ii) A simplification of the customs procedures and administration; iii) Elimination of state monopoly in imported foods; iv) From 1991 to 2008, although there is a decreasing rate in the average ad-valorem tariff rate, there are still some sensible products that are subject to a relatively high level of protection; v) Free market flows of capital .
2	**Investment and Privatization**	i) During the period 1990-1996, 87 state enterprises were privatized, including the main public utilities (.e.g., telecommunications, electricity, mining, some petroleum, and banks state firms); ii) In 1991, a promotion investment law was promulgated, which granted stable rules for (foreign and national) investment practically without restrictions and with clauses of legal guarantees in the contracts established between firms and the government.[79]
No.	**Policy/Reform**	**Instruments/Interventions**

[78] Since 1991, the income/corporate tax rate has been 30% and the general sales (or value-added) tax has been 19% (during the period 1991-1996, it was 18%).

[79] Including: i) national treatment; ii) no restrictions on trade, production, export, and import activities; iii) no restrictions on profits and dividend remittances; iv) no restrictions in the use of currencies in the foreign exchange markets; v) free re-exports of invested capital; vi) access to domestic credit; vii) free use of technology and royalties; and viii) free use of national or international insurance policies.

3	**Export Promotion**	i) Elimination of export subsidies (or CERTEX); ii) Devolution of indirect taxes (e.g., sales, consumption, and specific taxes); iii) Drawback since 1995; iv) Export processing zones since 1996.
4	**Labor Markets**	Deregulation and relaxing labor market rigidities (e.g., reduction of administrative procedures for hiring and expanding the set of ways to hire temporary workers).
5	**State Reforms and Institutional Framework**	i) Promulgation of several laws changing/reforming institutions or creation of new ones (such as Central Bank; Private Banks; regulation institutions of public utilities and the financial system; law reforming the tax system; reform of the pension system); ii) Formulation and implementation of social programs through the creation of the National Compensation of Social Development (FONCODES).

Source: Authors' compilation based on Pascó-Font (2000) and Paredes-Sachs (1991).

Table A2. Structure and Ten Products/Firms' Concentration Ratios in the Peruvian Export Sector, 1993-2007

Sector	1993-1995			1996-2000			2001-2005			2006			2007		
	Product	Firms	Sx	Product	Firms	Sx	Product	Firms	Sx	Product	Firms	Sx	Product	Firms	Sx
Total[1]	56.8	42.3	100.0	57.2	38.7	100.0	45.0	43.5	100.0	62.5	50.3	100.0	57.1	49.0	100.0
Primary Sector	76.2	29.5	80.6	74.9	40.2	78.2	76.6	55.2	80.4	80.0	59.6	84.3	39.7	59.5	84.1
Mining[2]	79.7	58.0	45.6	89.9	67.5	46.1	97.0	75.9	53.3	96.2	73.3	61.7	96.3	72.3	61.7
Agriculture[3]	41.9	11.7	10.1	52.3	14.8	10.9	50.6	18.0	9.0	54.0	21.5	7.6	45.5	18.5	7.1
Fishing	89.1	33.1	20.5	86.6	38.4	16.1	90.4	39.9	11.5	86.3	41.4	7.5	83.1	42.5	7.1
Petroleum and Derivatives [4]	100.0	100.0	4.4	100.0	100.0	5.1	92.8	100.0	6.6	99.0	100.0	7.5	47.1[5]	100.0	8.1
Manufactures	29.8	20.6	19.4	28.2	36.9	21.8	26.5	37.3	19.6	43.1	49.4	15.7	19.6	46.3	15.9
Food/Beverage	86.4	24.8	2.9	80.1	75.7	2.7	64.6	58.5	2.4	76.9	78.3	2.0	53.0	75.5	2.9
Chemicals	40.9	33.8	2.3	34.2	59.4	3.1	39.9	52.9	3.4	35.9	57.8	2.5	25.4	51.1	2.1
Metal-Mechanic	17.9	10.1	1.0	30.4	19.3	1.2	17.4	13.1	3.4	15.3	17.8	2.5	14.7	20.3	2.9
Textiles and Apparel	10.9	19.1	8.9	24.9	39.1	9.1	42.9	42.2	8.5	45.1	35.0	6.2	40.1	32.4	6.3
Average Annual Exports in Millions of Dollars	2 518.2	1 875.3		3603.8	2 438.2		4 860.6	4 698.6		14 875.0	11 971.4		15 962.9	13 698.4	
Average Share Out of GDP	5.7	4.2		6.5	4.4		4.5	4.3		15.9	12.8		14.6	12.6	

Source: Authors' compilation based on ADUANET (2008). [1] The 10 tariff lines are: Other forms of unwrought gold, (7108120000), Cathodes and section of cathodes of copper (7403110000), fishmeal with a fat weight more than 2% (2301201010), Zinc mineral and its concentrates (2608000000), Copper mineral and its concentrates (2603000000), Not roasted, not decaffeinated coffee (0901110000), Lead mineral and its concentrates (2607000000), Unwrought silver (7106911000), Raw oil of petroleum (2709000000), Unrefined copper (7402001000). [2] The products are: Gold, Copper, Zinc, Silver, Lead, molybdenum, tin. [3] Coffee, asparagus, mangos, grapes, some vegetables, onions, avocados, fruits, and vegetables. [4] The average number of firms per year is four. [5] In this year, some previous tariff lines were not exported, while some new tariff lines appeared. Sx is the export share of each sector out of total export value.

Table A3. Structure and Ten Firms' Gross Output Value Concentration Ratios by Sectors in Peru, 1994-2006

Sector	1994-1995		1996, 1999-2000		2001-2005		2006	
	Output Share	Firms	Output Share	Firms	Output Share[4]	Firms	Output Share[4]	Firms
Total	100.0	4.5	100.0	8.4	100.0	9.3	100.0	11.4
Primary Sector	14.9	18.0	15.1	20.2	16.3	30.0	22.2	34.3
Mining	6.0	44.5	6.3	45.4	8.7	54.8	15.3	49.9
Agriculture	8.2	4.3	8.0	8.9	6.9	10.0	6.2	8.7
Fishing	0.6	45.5	0.8	33.6	0.7	44.4	0.7	38.6
Manufactures	22.0	19.0	22.6	12.1	16.4	n.a	16.4	n.a
Food/Beverage	26.8	30.3	26.3	31.9	32.1	n.a	30.2	n.a
Petroleum and Derivatives	13.3	85.9[3]	13.4	62.5[2]	5.0	n.a	5.9	n.a
Metals	11.1	21.1	9.9	26.7	8.0	n.a	11.9	n.a
Chemicals	9.3	23.2	9.1	37.4	25.6	n.a	19.4	n.a
Textiles	4.8	32.1	4.5	36.8	7.1	n.a	6.1	n.a
Apparel	2.5	23.8	4.0	24.5	7.6	n.a	6.2	n.a
Rest of Manufactures	32.1	8.9	32.7	9.9	14.6	n.a	20.2	n.a
TGV[1] (millions of $)	82,580		89,843		107,690		154,788	

Source: Authors' compilation based on BCRP (2008), INEI (2004, 2002) and Cavanagh (2007, 2006, 2004, 2003, 2002, 1998, 1997, 1996). [1] Millions of soles. [2] Three firms. [3] Four firms. [4] For period 2001-2005, output shares are GDP shares rather than TGV shares. na not available. Total Gross Value (TGV) and components of the primary sector was estimated using the 1994 ratio of total valued added out of TGV from the input-output matrix of INEI (2004) and the GDP value obtained from the National Accounts of the Central Bank of Peru. Data from the manufacturing sector from 1994-2000 are estimated fromthe Annual Manufactures Survey of INEI (1993-2000).

Table A4. Distribution of Formal Companies According to Ranges of Annual Sales and Number of Dependent Workers, Peru, 2006 and 2001

Annual Sales (In thousand dollars)	(2006) Number of firms which declared not having dependent workers	(2006) Number of companies declaring having dependent workers, from			2006	2001
		1 to 9	10 to 49	More than 49	TOTAL	TOTAL
x ≤ 85	748 099	67 760	2 382	753	818 994	467,001
85< x ≤ 150	13 126	13 005	1 295	97	27 523	35,075
150< x≤ 963	9 390	19 024	5 358	694	34 466	
x ≥ 963	921	3 656	4 299	2 842	11 718	7348
TOTAL	771 536	103 445	13 334	4 386	892 701	509,424

Source: Authors' compilation based on MTPE (2007) and SUNAT (2001). The exchange rate used is 3 soles per dollar. The tax unit used was of 3400 soles. In 2006, the number of informal micro and small firms was 3,217,479.

Table A5. Distribution of Micro and Small Firms and Independent Units by Economic Activity, 2006, and Employment, 2004 (%)

Activity	Micro Firms (≤10 workers)	Small Firms (10 to 50 workers)	Total Small and Micro Firms	Share of Employment (2004)	Total Micro and Small Firms and Independent workers
Agri., and Fish.	59.6	74.6	1923950	53.1[1]	2381299
Industry	6.6	2.9	209675	8.9	548160
Construction	2.2	4.9	70744	4.1	155936
Trade	19.8	1.3	626108	15.6	1419490
Services	12	16.3	387001	18.3	1317298
Total (Number)	3167751	49727	3217478		5862179
Number of Workers				7226385	

Source: Authors' compilation based on MTPE (2007) and Chang (2007). [1] Include Mining and Energy.

Table A6. Tariff Rate Indicators of Peru by Economic Sectors, 2001-2007

Sector / Item	Year	All Goods	Agriculture excluding Fish	Fish and Fish Products	Petrol-eum Oils	Wood, Pulp, Paper and Furniture	Textiles and Clothing	Leather, Rubber, Footwear and Travel Goods	Metals	Chemical & Photographic Supplies	Transport Equipment	Non-Electric Machinery	Electric Machinery	Mineral Products, Precious Stones & Metals	Manu-factured Articles, n.e.s
Simple average applied tariff rate	2001	11.9	15.9	11.8	10.9	10.8	17.5	11.1	9.8	7.6	12	12.4	11.5	9.5	11.9
	2002	10.9	16.1	11.9	11	10.4	17.7	10.8	9.1	7.2	8.8	7.5	9.4	9	10.2
	2003	10.9	16.1	11.9	11	10.3	17.7	10.8	9.1	7.2	8.8	7.5	9.4	9	10.2
	2004	10.2	15.2	11.9	11	10.3	17.7	10.4	8.6	7.2	6.7	5.6	8.1	8	9
	2005	10.2	15.1	11.9	11	10.2	17.7	10.4	8.6	7.2	6.7	5.6	8.1	8	9
	2006/ 2007	8.3	14.5	11.8	2.7	9.2	17.4	8.8	6.4	4.5	3.2	1.9	5.1	5.8	7.1
Overall standard deviation (SD) of distribution of all applied tariffs	2001	5.2	7	1.2	2.9	2.8	4.2	5	3.6	4	0	2.1	1.9	3.7	1.1
	2002	5.7	6.1	1.6	0.8	2.4	6.2	2.1	3	3.4	1.5	2.5	2.4	2.1	2.8
	2003	5.7	6.1	1.6	0.9	2.4	6.2	2.1	3	3.4	1.5	2.5	2.4	2.1	2.8
Number of tariff lines	2001	6890	923	132	21	337	909	204	700	1431	203	735	432	329	534
	2002	6991	957	136	39	358	930	222	705	1446	202	713	429	328	526
	2003	6992	957	136	40	358	930	222	705	1446	202	713	429	328	526
	2005	6994	957	136	40	358	930	222	707	1446	202	713	429	328	526
	2006/ 2007	6994	957	136	40	358	930	222	707	1446	202	713	429	328	526

Source: Authors' compilation based on APEC (2001-2007).

Table A7. Percentage of Tariff Lines by Tariff Rates, 2001-2007

Tariff Rates/ Year		All	Agr. excluding Fish	Fish and Fish Products	Petroleum Oils	Wood, Pulp, Paper and Furniture	Textiles and Clothing	Leather, Rubber, Footwear, Travel Goods	Metals	Chemical & Photo. Supplies	Transp. Equip.	Non-Electric Machinery	Electric Machinery	Mineral Products, Precious Stones & Metals	Manufac-tured Articles, n.e.s
0%	2001	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2004	1.6	6.5	0	0	0	0	0	0	0.7	1.5	2.4	0.2	4.9	0
	2005	1.6	6.5	0	0	0	0	0	0	0.7	1.5	2.4	0.2	5.8	0
	2007	43.3	18.1	1.5	77.5	23.7	4.1	35.6	46.2	62.1	73.3	86.4	57.6	51.8	40.7
0%<X≤5%	2001	19.7	10.2	2.3	14.3	14.8	3.4	26	27.6	54.6	0	1.4	6	30.7	1.9
	2002	23.1	9.7	1.5	12.8	19	2.4	19.8	27	59.9	1.5	24.5	7.2	32	1.9
	2003	23.1	9.7	1.5	12.5	19.3	2.4	19.8	27	59.9	1.5	24.5	7.2	32	1.9
	2004	37.2	9.7	1.5	12.5	21.5	3.2	32.9	41.4	59.3	58.9	77.3	46.6	36.3	35
	2005	37.2	9.7	1.5	12.5	21.5	3.2	32.9	41.3	59.3	58.9	77.3	46.6	36.3	35
	2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5%<X≤10%	2001	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0
	2002	15.3	1	0	0	2.2	0.8	14	14.6	0	61.9	56.5	41.3	9.5	33.3
	2003	15.3	1	0	0	2.2	0.8	14	14.6	0	61.9	56.5	41.3	9.5	33.3
	2004	1.9	0.4	0	0	0.6	0	0.9	1.7	0	8.4	3.5	3.1	10	4.2
	2005	1.8	0.4	0	0	0.6	0	0.9	1.7	0	8.4	3.5	3.1	7.9	4.2
	2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10%<X≤15%	2001	64.3	49.6	97.7	85.7	85.2	23.9	59.3	72.4	45.4	100	92.8	94	69.3	98.1
	2002	45.3	47.9	98.5	87.2	78.8	22.9	52.2	58.4	40.1	36.6	15.3	51.5	58.5	64.8
	2003	45.3	47.9	98.5	87.5	78.5	22.9	52.2	58.4	40.1	36.6	15.3	51.5	58.5	64.8
	2004	43.2	43.2	98.5	87.5	77.9	22.9	52.2	56.9	40	31.2	13.3	50.1	48.8	60.8
	2005	43.3	43.4	98.5	87.5	77.9	22.9	52.2	57	40	31.2	13.3	50.1	50	60.8
	2007	40.7	41.9	98.5	22.5	76.3	22	50.4	53.8	37.9	26.7	10.5	42.4	48.2	59.3
15%<X≤20%	2001	11.6	7.3	0	0	0	72.7	14.7	0	0	0	0	0	0	0
	2002	11.6	6.8	0	0	0	73.9	14	0	0	0	3.7	0	0	0
	2003	11.6	6.8	0	0	0	73.9	14	0	0	0	3.7	0	0	0
	2004	11.6	7	0	0	0	73.9	14	0	0	0	3.5	0	0	0

Tariff Rates/ Year		All	Agr. excluding Fish	Fish and Fish Products	Petroleum Oils	Wood, Pulp, Paper and Furniture	Textiles and Clothing	Leather, Rubber, Footwear, Travel Goods	Metals	Chemical & Photo. Supplies	Transp. Equip.	Non-Electric Machinery	Electric Machinery	Mineral Products, Precious Stones & Metals	Manufac-tured Articles, n.e.s
>20%	**2005**	11.6	7	0	0	0	73.9	14	0	0	0	3.5	0	0	0
	2007	11.5	7	0	0	0	73.9	14	0	0	0	3.1	0	0	0
	2001	4.4	32.8	0	0	0	0	0	0	0	0	0	0	0	0
	2002	4.7	34.6	0	0	0	0	0	0	0	0	0	0	0	0
	2003	4.7	34.6	0	0	0	0	0	0	0	0	0	0	0	0
	2004	4.5	33.2	0	0	0	0	0	0	0	0	0	0	0	0
	2005	4.5	33	0	0	0	0	0	0	0	0	0	0	0	0
	2007	4.5	33	0	0	0	0	0	0	0	0	0	0	0	0

Source: Authors' compilation based APEC (2001-2007).

Table A8. Simple Correlation Coefficients Between Protection and Output Growth

Period	Effect. Protec. (EP)	Ad-Valorem Tariff (Ad-T)	Number of Obs.	
			EP	Ad-T
1990	0.179997	0.197888	21	21
1991	0.080016	0.211503	24	22
1992	0.033140	-0.023056	25	20
1992-1990	0.171839	0.107353	70	63
1996	0.085155	0.085536	23	20
1997	-0.117760	-0.156950	28	27
1997-1996	-0.094741	-0.176910	51	47
2001	0.475277**	-0.473040	25	10
2002	-0.051854	0.099638	25	25
2002-2001	0.129495	0.056930	50	35
2006	n.a	-0.286554	n.a	26

Source: Table 3. n.a: not available. N: observations. **significant 5%

Table A9. List of Government Institutions and Beneficiary Firms

I. Government Institutions		
Institution	**Position of the Respondent**	**Name**
CITE (Technical Office)	Director	Mercedes Inés Carazo
CITE-CAL	Executive Director	Jesica Moscosso
CITE-MADERA	Executive Director	Adriana Rios Vásquez
COFIDE	Development Division Manager	María Eugenia Tuesta
INCAGRO	Head of Policy, Monitoring and Evaluation	Hugo Wiener Fresco
INCAGRO Region II	Head of Decentralized Unit II	Fidel Torres Guevara
INCAGRO Region III	Head of Decentralized Unit III	Roberto Rojas Escobar
MI EMPRESA (PROMPYME)	Business Development Services Coordinator	Arturo Manrique
PERU COMPITE – CNC	Advisor to the Executive Management	Luis Chang Chang Fun
PROINVERSION	Manager of Program Coast and Mountains	Jaime Shimabukuro Maeki
PROMPERU (PROMPEX)	Export Director	José Quiñones

Table A9., continued

II. Firms

Firm	Position of the Respondent	Government Institution Providing Services
CENFROCAFE	Executive Manager	INCAGRO
Comercial Maderera Rímac S A COMARSA	Executive Manager	CITE-MADERA
Cooperativa Agraria Cafetalera INKAFE VRAE	Executive Manager	INCAGRO
Coton Baby HLR. SAC	Legal Representative	MI EMPRESA (PROMPYME)
Inversiones Lucky Bear E.I.R.L	Legal Representative	CITE-CAL, MI EMPRESA (PROMPYME), PROMPERU
INVERSIONES SANTA INES SAC – Hvca.	Executive Manager	INCAGRO
Juan Leng Delgado S.A.C	Executive Manager	CITE-CAL, PROMPERU
MEXTHON SAC	Quality Management System Coordinator	PROMPERU
Muebles Vivanco E.I.R.L	Legal Representative	CITE-MADERA
Negociación Futura	Sales Manager	PROMPERU
Taller de Capacitación e Investigación Familiar (TACIF)	Coordinator of the Support System for Enterprise Development	CITE-MADERA
TOBBEX International S.A.C	President	CITE-CAL
VSF-CICDA (Centro Internacional de Cooperación para el Desarrollo Agrícola)	Project Coordinator	PERU COMPITE –CNC
Franky & Ricky	Legal Representative	PERU COMPITE –CNC
Plan de Negocios	Owner	MI EMPRESA (PROMPYME)