

RICARDO HAUSMANN  
DANI RODRIK

## Self-Discovery in a Development Strategy for El Salvador

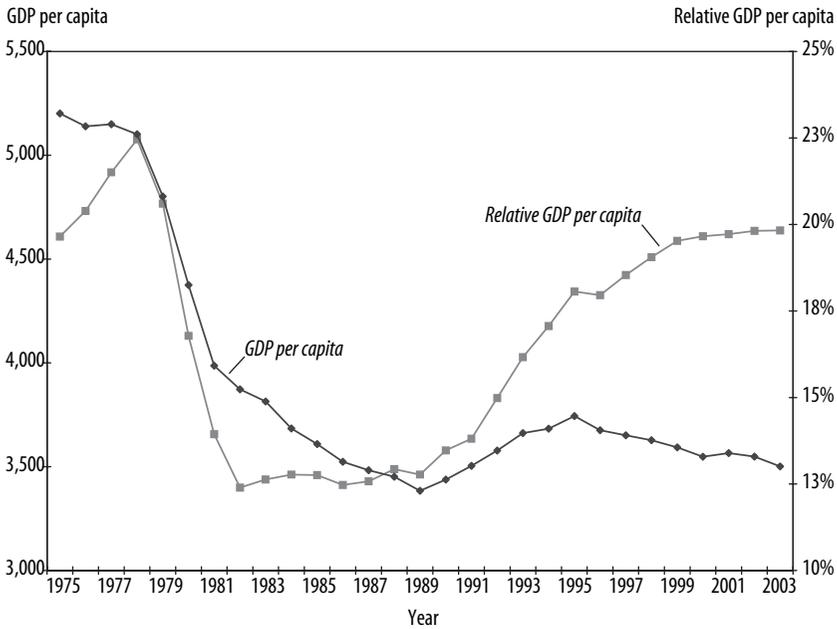
**E**l Salvador is a star reformer. After the civil war of the 1980s, the country was able to adopt important political and institutional reforms. These included the incorporation of all political groups into the electoral process, the adoption of a new constitution, the elimination of the military police, the creation of a civilian police with members from both sides of the war, and the adoption of rules to strengthen the independence of the judiciary. On the economic front, the country consolidated its fiscal position, modernized its tax system, liberalized trade and banking, improved the regulation and supervision of its financial system, privatized most state productive assets including energy and telecommunications, and reformed its social security system in line with the Chilean model. It also expanded and granted local autonomy to the school system through the Community-Managed Schools Program (EDUCO). Finally, El Salvador dollarized its financial system in November 2000. Given the investment-grade rating earned by the country, domestic money market rates have converged to U.S. levels.

Unfortunately, El Salvador is not a star performer. Standard theory would predict that such an improvement in the institutional and regulatory environment should be followed by convergence to a higher income level. Instead, after an initial period of recovery that lasted until 1997, real gross national income per capita stagnated at levels comparable to those achieved by the country in the late 1970s. Its income relative to the United States has not recovered from the fall associated with the civil war and is just over half the ratio achieved in the late 1970s (see figure 1).

El Salvador is not alone in finding that reform efforts have had smaller-than-expected growth effects. With the exception of Chile, the effects of reform on

Hausmann and Rodrik are with the Kennedy School of Government at Harvard University.

**FIGURE 1. Absolute and Relative per Capita Income, 1975–2003<sup>a</sup>**



a. Absolute per capita income is the gross national per capita income at purchasing power parity in constant 2000 U.S. dollars. Relative per capita income is relative to the United States.

growth throughout Latin America have been smaller than the initial estimates carried out in the mid-1990s.<sup>1</sup> In this context, El Salvador is an interesting case, since it has been particularly effective in applying wide-ranging reforms.

This paper explores why these reforms have failed to produce more growth and what can be done about it.<sup>2</sup> We begin by placing the economic choices faced by the incoming Salvadoran administration in a regional and historical

1. Lora and Panizza (2002); Easterly, Loayza, and Montiel (1997); Lora and Barrera (1997); Fernández-Arias and Montiel (2001).

2. The paper draws on a report on El Salvador’s economy commissioned by the Salvadoran Foundation for Economic and Social Development (FUSADES, 2003) in advance of the 2004 presidential elections. Besides ourselves, contributors to the report included Eduardo Engel, Robert Lawrence, Tamara Lothian, Anne Piehl, Lant Pritchett, Andrés Velasco, and Dean Yang. The full report had wide-ranging aims. It explored avenues to accelerate growth by increasing the economic opportunities available to Salvadorans, to reduce macroeconomic risks and adequately share them, to develop an inclusive social strategy that protects the disadvantaged and treats all with dignity, to expand personal and judicial security, and to improve the functioning and legitimacy of the political system and the market economy.

perspective. The late 1980s and early 1990s in Latin America were preceded by a decade of stagnation, but coincided with a time of unusual confidence in the future. The collapse of communism, the failure of many interventionist policies in Latin America in the 1980s, and Chile's success gave governments a clear idea of the road they wanted to leave and the road they wanted to take. Inadequate past performance and consensus on the road ahead led to a forceful policy agenda.

El Salvador's 2004 election took place at an uncertain time along both dimensions. The recent Salvadoran performance has not been stellar. Growth over the previous five years declined significantly relative to the quick pace of the early and mid-1990s and barely kept pace with a growing population, meaning that income per capita stagnated (figure 1). Incomes in rural areas declined, and nontraditional export growth, while still important, remained limited to the *maquila*, or in-bond garment sector, which now faces serious international headwinds.

But this performance is not without external explanations. Hurricane Mitch, the two 2001 earthquakes, the collapse in the price of coffee, the financial contagion induced by the Russian crisis, and the 2001–03 global recession represented a series of negative shocks. The country was able to deal with this adverse context without suffering a derailment of the development process.<sup>3</sup> This is not a minor feat compared with the performance of countries such as Argentina, Colombia, Ecuador, Uruguay, and Venezuela, where real income collapses did take place.

The recent intellectual environment is also less self-assured than it was in the early 1990s. At that time, the central tenets were fiscal discipline and sound money, openness to trade and investment, and privatization and deregulation. These required a number of changes in the way countries were managed: fiscal discipline to establish a sustainable fiscal position in which debt accumulation does not outstrip a country's capacity to pay; tax reform to produce sufficient resources for the government without generating avoidable distortions in the economy; trade liberalization to facilitate the country's integration into the global economy; openness to foreign investment to ensure that the country has access to the savings, information, management, and technology needed to enter the global market; privatization to impose market incentives on firms that would otherwise be hard to discipline and that can wreck the public finances; financial

3. While hurricanes and earthquakes are bad for welfare and national wealth, they are often followed by growth accelerations stemming from reconstruction spending. In El Salvador, the reconstruction happened, but the growth acceleration did not.

liberalization and regulation to make sure that savings are adequately remunerated, that resources go to the most efficient users, and that risk is adequately contained; and social security reform to keep pension entitlements in line with the capacity to pay and to efficiently use the savings of each generation.

Latin America took this agenda to heart. As documented by the Inter-American Development Bank (IDB), the region had implemented strong reforms by 1996, and the efforts seemed to be paying off.<sup>4</sup> The region's average per capita growth rate had tripled, and the fast reformers were growing more than the laggards. El Salvador was a clear example of this trend. While its GDP declined by a cumulative 22 percent between 1978 and 1989, it grew by 50 percent between 1989 and 1997.

Many analysts still consider this agenda, with the addition of an institutional component concerned with the protection of property rights, as the necessary and sufficient recipe for growth. In the words of Larry Summers,

I would suggest that the rate at which countries grow is substantially determined by three things: their ability to integrate with the global economy through trade and investment; their capacity to maintain sustainable government finances and sound money; and their ability to put in place an institutional environment in which contracts can be enforced and property rights can be established. *I would challenge anyone to identify a country that has done all three of these things and has not grown at a substantial rate.* And I would challenge anyone to identify a country that for any significant period has been held back either by excessive trade links with the global economy, overly sound public finances, or property rights and contracts that are excessively enforced.<sup>5</sup>

Other authors put forward an even more self-assured challenge: "Once a developing country government establishes the rules to a fair game and ensures their enforcement, it would be well advised to stand back and enjoy the self-generating growth."<sup>6</sup>

However, the period since 1998 in Latin America stands as a counter-example to this optimistic agenda. Growth barely averaged 1.5 percent a year

4. IDB (1997).

5. Summers (2003); emphasis added. The nature of the claim is essentially that openness, sound money, and property rights are necessary and sufficient, and a country cannot overdose on them. The implication is clear: first, focus on these and these only; second, don't worry about doing too much of it. On closer reading, Summers does betray a certain loss of confidence in the standard recipe, insofar as the recommendations are phrased not in terms of specific policies but vague "abilities" and "capacities" to get certain outcomes accomplished. He can thus claim that countries like India and China have succeeded by sticking to the recipe even though their trade and investment policies have been highly restrictive and their formal property rights (at least in China) are protected very badly!

6. Roll and Talbott (2001).

over 1998–2002, while several countries entered into serious output, currency, or banking crises, notably Argentina (2002), Brazil (1999), Bolivia (2002), Colombia (1999), the Dominican Republic (2003), Ecuador (1999), Uruguay (2002), and Venezuela (1999 and 2002–03). While El Salvador avoided these very negative outcomes, its GDP per capita remained essentially stagnant between 1999 and 2004.<sup>7</sup> This has happened in a country that is open to trade and investment, that has an investment-grade credit rating, sound money, and good (though not outstanding) protection of contracts and property rights, and that ranks near the top in the World Bank’s (confidential) Country Policy and Institutional Assessment ratings.<sup>8</sup> These disappointing outcomes in the region have induced a degree of humility about the adequacy of the strategy adopted and growing uncertainty about the nature of the road ahead. As Harberger recently noted regarding the Latin American experience, “When you get right down to business, there aren’t too many policies that we can say with certainty deeply and positively affect growth.”<sup>9</sup>

This implies that countries like El Salvador are now making choices about their future in an environment of less-than-stellar past performance and an intellectual context characterized by significant doubts about the correct recipe. This creates some dangers. Governments may be tempted to change things without necessarily being able to distinguish what is working well and what needs fixing; what is important and what is secondary; what risks are worth taking and which areas are best left untouched; what should be preserved and what should be improved. At the same time, the uncertainties and doubts create opportunities for establishing a new agenda for growth that is driven less by ideology and more by evidence, and that is more humble about the nature of the solutions.

## **A General Framework for Thinking about Growth Strategies**

In formulating a growth strategy, it is useful to work with a framework that explains the determinants of growth. Here we briefly develop a diagnostic framework that we then apply to the Salvadoran case.<sup>10</sup>

7. Growth in GDP per capita fell from 4.6 percent between 1991 and 1995 to 1.2 percent between 1995 and 1999, and finally to 0.0 percent between 1999 and 2004.

8. The last point is mentioned in López (2003).

9. Loungani (2003, p. 215).

10. For a more detailed version of the framework, see Hausmann, Rodrik, and Velasco (2005).

The income expected by private agents in an economy is a function of three things: the amount of assets they have (that is, the saving and investment effort), the productivity of those assets, and the proportion of output generated by the assets that the agents can appropriate. We call the third of these the appropriability factor. Appropriability of returns has to do not only with expected taxation, but also with other forms of loss, such as those generated by surprise inflation, a banking crisis, corruption, extortion, crime, or poor enforcement of property rights and contracts. Consequently, the expected returns to accumulating human or physical assets are given by

$$\text{Expected returns} = (\text{saving and investment effort}) \\ \times (\text{appropriability}) \times (\text{productivity}).$$

This framework lends itself to the following taxonomy of growth strategies: strategies that increase the saving and investment effort; strategies that increase the expected appropriability of returns; and strategies that increase the productivity of assets through improved technology. These three terms enter multiplicatively, which means that in principle they are not substitutes, but complements. Moreover, there is a big payoff to increasing the determinant that is the most binding. In the extreme, if one of these determinants is zero, the total will be zero, regardless of the effort that is made in the other two areas.

Since these factors are complements, a restriction on one of them will express itself in a high marginal return on that factor, but it will cause a low or depressed return on the other factors. Hence, a binding constraint can be potentially identified by looking at the pattern of marginal returns. The binding constraint should have a very high actual or shadow price, while the returns on the other assets are depressed. Shadow prices are relevant if there is a concern about potential externalities or other market failures. Also, extreme forms of complementarity may cause poverty traps in which all returns are low because all factors are low. This story is plausible and needs to be considered, although it is somewhat unlikely in practice.

The idea that growth may be impeded by a few and not by many constraints is consistent with the findings on growth accelerations in Hausmann, Pritchett, and Rodrik.<sup>11</sup> That paper defines a growth acceleration as a date on which an economy's growth rate accelerated by at least 2 percentage points to a level

11. Hausmann, Pritchett, and Rodrik (2004).

of at least 3.5 percent per capita, which was sustained for at least eight years. Using the Penn World Tables, they identify eighty-three such instances in the period 1957–92.<sup>12</sup> This means that on average, any given country has about a 25 percent chance of experiencing a growth acceleration in any given decade. This is a much higher frequency than would be expected if growth accelerations really required the laundry list of macroeconomic, structural, and institutional reforms that are now seen as necessary to trigger high levels of growth. It is more consistent with the idea that significant growth can be unleashed if policies remove some binding constraint.

Moreover, many growth accelerations are not sustained beyond the first eight years. This points to the following idea: high growth can be triggered by relaxing the most binding constraint, but the episode may come to an end if, as the constraint becomes less binding, growth starts to hit other constraints and these are not removed. Hence, once growth is triggered by relaxing the binding constraint, progress in other areas becomes more important to sustain growth.

Following Hausmann, Rodrik, and Velasco, we use a decision tree to illustrate the diagnostic process. That tree is presented in figure 2.<sup>13</sup> Where does the binding constraint to growth lie in El Salvador? We discuss this issue using our diagnostic framework as an organizing device.

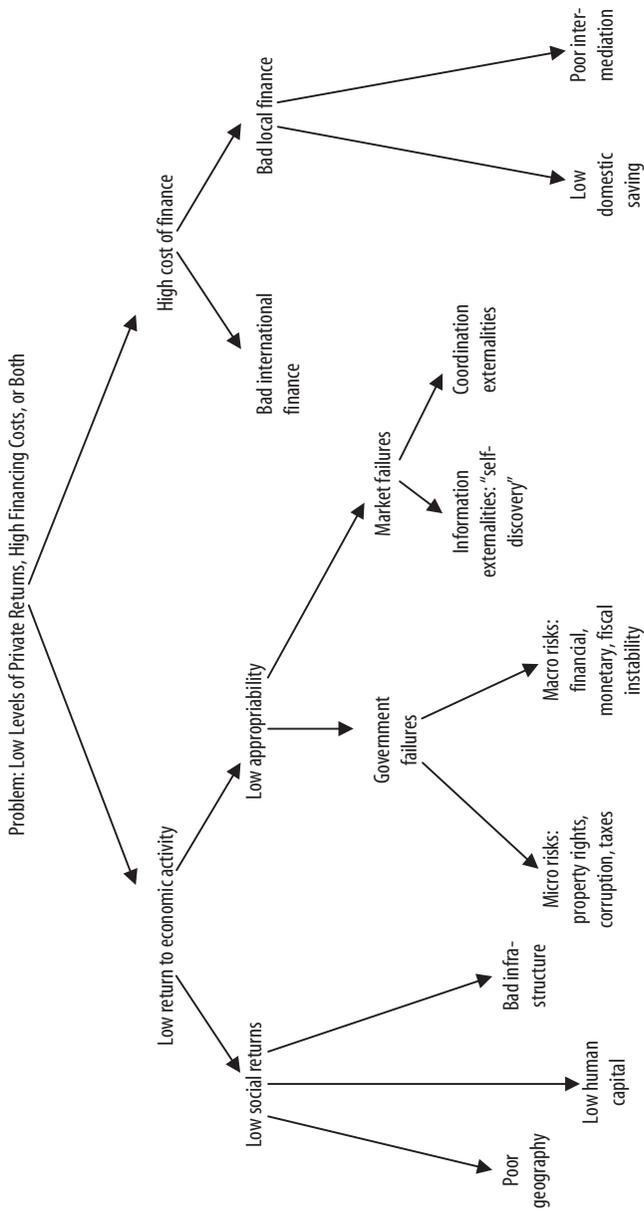
## **Lack of Saving and Human Capital**

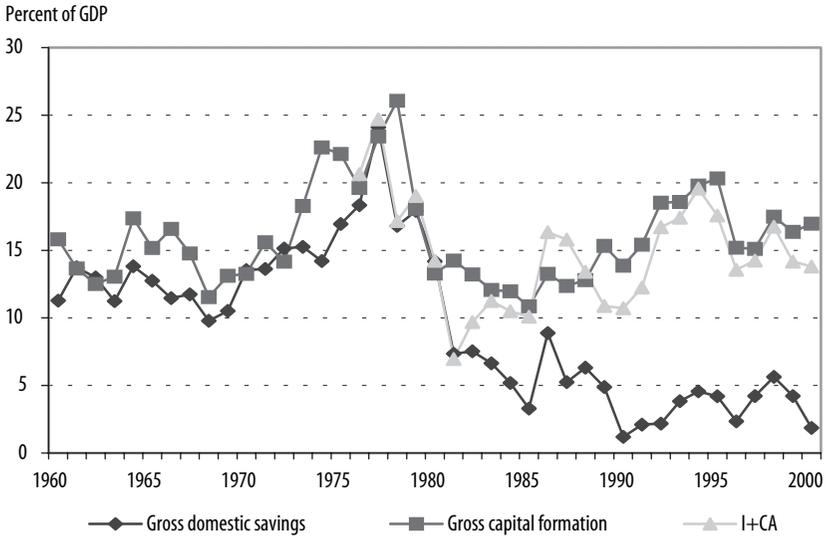
For a long time, promoting saving and capital accumulation was the dominant idea in development policy. Under this view, low growth could be explained by an insufficient increase in the supply of factors of production, particularly physical and human capital. While capital fundamentalism has long been discarded (along with Soviet-style planning), it has recently been replaced with a focus on human capital. Increasing the supply of human capital—through a greater health and education effort—is expected to lead to a faster accumulation of these assets and hence to a higher level of income. Can the poor growth performance of Latin American countries—and El Salvador, in particular—be explained by the low saving and education effort?

12. They need eight years of data before and after any given year to assess whether an acceleration has taken place. Since the Penn World Table data start in 1950 (with few observations until the 1960s) and end in 2000, the pre-1957 and post-1992 periods don't have enough information to identify an acceleration.

13. Hausmann, Rodrik, and Velasco (2005).

**FIGURE 2. Decision Tree for Growth Diagnostics**



**FIGURE 3 . Domestic Saving, National Saving (including Remittances), and Investment**

Source: Penn World Tables (<http://pwt.econ.upenn.edu>).

Two elements make this argument compelling for El Salvador: the country has a very low saving and investment rate, and it has relatively low educational attainment. The investment rate averaged less than 17 percent in the 1994–2003 period. The saving rate, including remittances as part of national income, averaged around 16 percent. This saving and investment effort is low even by Latin American standards (figure 3).

The situation is similar with regard to human capital, in that the supply of education—(measured as the average years of schooling of the labor force)—is low by Latin American standards. Secondary enrollment rates doubled in the last decade, but still only about half of the relevant age-group is attending high school.

Is lack of an adequate saving and educational effort a basic reason for the country's stagnant growth performance? If this were the case, that is, if growth were held back mainly by an insufficient supply of savings or education, one should observe high returns to both capital and schooling. The economy must be willing to gobble up additional resources, but be prevented from doing so because they are just not adequately provided. The tightness of the constraint should be observable in the price that the society is willing to pay for the scarce

resource. However, it is hard to find evidence of this in El Salvador. Saving and people, after all, can move across borders. If savings were scarce, one would observe a high foreign debt or a high current account deficit—a signal that the country is using or has already used up its access to foreign savings, given the paucity of domestic savings. Alternatively, one would observe a high willingness to remunerate savings, evidenced through high interest rates to depositors or government bondholders. El Salvador does not display these symptoms. The country has not used up its access to foreign savings: its total gross external debt stands at less than 30 percent of GDP, and the country's credit rating is investment grade, indicating that if it wanted to, it could borrow more. The current account deficit averaged 2 percent of GDP between 1994 and 2003. In addition, the country is not willing to remunerate savings at high rates: it needs to pay among the lowest interest rates in the region to attract demand for deposits or government bonds. Its banks have more liquidity than domestic credit demand can soak up, so they are actively lending to enterprises in the neighboring countries in the region. Interbank rates are in line with the U.S. Federal Funds rate and one-year rates were below 4 percent in recent years. Perhaps the most telling indicator that El Salvador is not saving constrained is that the external savings enabled by the dramatic boost in remittances have not been converted into investment. As figure 3 shows, the decline in domestic savings has substituted almost one-for-one for the increase in remittances, with no discernible effect on the total national saving or investment effort. El Salvador thus displays no symptoms that its growth is constrained by lack of savings.

This observation also implies that investment is low not because of difficulties in mobilizing the resources to invest, but because of a perceived low return on investment. In principle, this situation could be caused by the restricted supply of any of the other complements to capital: education, appropriability, or productivity.

The diagnostic of education looks similar to that of savings. As Pritchett points out, the world has achieved a massive increase in education over the last four decades, but average growth per country has declined.<sup>14</sup> This suggests that in the typical country something other than education was constraining growth. Moreover, if education were the constraint on growth, one would expect to see high returns to the few who get educated. Table 1 presents different measures for the return to education for a sample of twenty-one countries, and figure 4 shows a scattergram of returns to education and years of schooling. The image that emerges is clear: while the years of schooling of the labor force

14. Pritchett (2001).

**TABLE 1. Returns to Schooling<sup>a</sup>**

<i>Country</i>	<i>Year</i>	<i>One more year of schooling</i>	<i>Finishing primary school</i>	<i>Finishing secondary school</i>	<i>Finishing higher education</i>
Argentina	1998	0.091	0.422	0.789	1.127
Bolivia	1999	0.113	0.781	1.283	1.425
Brazil	1999	0.132	0.622	1.138	1.922
Chile	1998	0.123	0.341	0.761	1.458
Colombia	1999	0.119	0.449	0.908	1.668
Costa Rica	1998	0.098	0.326	0.684	1.220
Dominican Rep.	1996	0.068	0.281	0.377	0.896
Ecuador	1998	0.135	0.681	1.310	1.833
<b>El Salvador</b>	<b>1998</b>	<b>0.105</b>	<b>0.557</b>	<b>1.027</b>	<b>1.482</b>
Guatemala	1998	0.136	0.841	1.347	1.991
Honduras	1999	0.104	0.467	1.003	1.506
Mexico	1996	0.126	0.709	1.225	1.732
Nicaragua	1998	0.110	0.574	0.860	1.636
Panama	1999	0.116	0.483	1.015	1.559
Peru	1997	0.129	0.474	0.990	1.459
Paraguay	1998	0.129	0.665	1.181	1.662
Uruguay	1998	0.084	0.427	0.765	1.079
Venezuela	1999	0.085	0.351	0.622	1.076
Taiwan	1996	0.067	0.257	0.500	0.826
Thailand	1998	0.192	0.915	1.827	2.361
United States	1998	0.120	0.186	0.553	0.980
Maximum		0.192	0.915	1.827	2.361
Minimum		0.067	0.186	0.377	0.826
Average		0.114	0.520	0.970	1.493

Source: Authors' calculations, based on Inter-American Development Bank surveys.

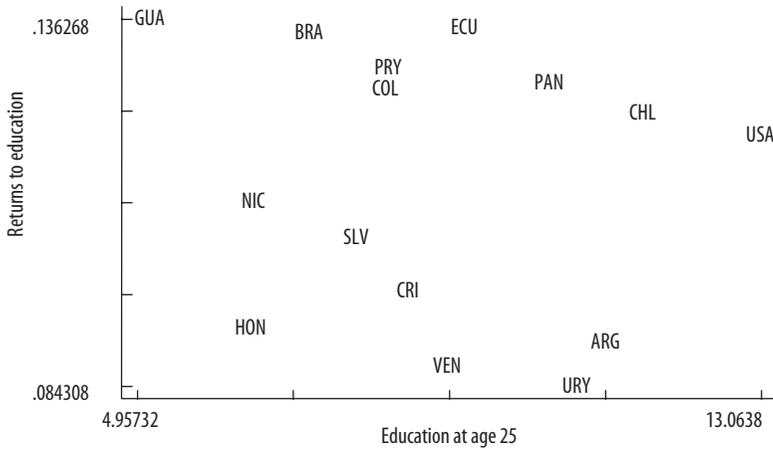
a. All columns control for age and age squared.

are low in El Salvador, the returns are also low. They are significantly lower than in countries such as Brazil, Chile, and Thailand. The evidence suggests, however, that lack of educational effort is not currently a principal source of low growth in El Salvador.

Not only are returns to schooling low in El Salvador, but they fell during the decade between 1992 and 2002. Table 2 shows the education wage premium of two different cohorts of Salvadorans: those that were twenty-five to thirty years old in 1992 and those that were thirty-six to forty years old in the same year.<sup>15</sup> We look at how much more than a person with a lower educational attainment each educational category achieved. For both cohorts, returns to

15. We look at returns by cohort to implicitly control for quality of education, since presumably the population over twenty-five has already completed its education, so that the quality of its education remains constant in the comparison.

**FIGURE 4. Returns to Education and Years of Schooling**



Source: Authors' calculations, based on Inter-American Development Bank surveys.

completing primary and secondary education declined over the decade 1992–2002. The returns to secondary education declined throughout the decade, whereas the returns to primary education rose in the first half of the decade, when the economy was growing faster and when the educational effort had not yet affected the labor market, and then fell to less than the initial level in the second half of the decade. Hence, the low GDP growth observed in 1997–2002 cannot be explained as the consequence of a tight human capital constraint in these segments of the skills market. Something else caused the slow growth, and the decline in the demand for skills brought down the returns to education.

**TABLE 2. Wage Premiums by Educational Category for Cohorts aged 25–30 and 36–40 in 1992**

Age in 1992 and educational category	1992	1997	2002
<i>25–30 years old in 1992</i>			
Primary complete versus no education	115.3	142.3	90.5
Secondary complete versus primary complete	80.0	58.5	54.3
University education versus secondary complete	3.3	43.0	61.6
<i>36–40 years old in 1992</i>			
Primary complete versus no education	168.7	191.7	142.3
Secondary complete versus primary complete	96.2	50.0	72.4
University education versus secondary complete	2.0	66.7	84.6

Source: Authors' calculations, based on the *Encuesta de Hogares de Propósitos Múltiples* (1992, 1997, 2002).

By contrast, returns to higher education increased during the decade, especially for the older cohort. The measured returns for 1992 appear to be very low, however, and the increase in returns to higher education was much higher in the first half of the period than in the second half. In fact, returns to higher education declined significantly for the younger cohort in the 1997–2002 period. Interestingly, the returns to higher education do not appear high by international standards. We estimated the returns to completing higher education relative to primary education using a Mincer regression that controls for age, gender, and previous educational attainment. The results indicate that returns to higher education in El Salvador in 1998 were modest relative to many other countries that were growing faster or had more educational attainment. The returns in 1998 were lower than all other Central American countries with the exception of Costa Rica. They were 39 percent lower than those observed in fast-growing Thailand and 13 percent below Chile, Latin America's star growth performer. To argue that growth was impeded by a human capital constraint sounds implausible. Rather, the data are consistent with the hypothesis that some other constraint was binding growth, and this created a situation in which the returns to higher education were modest despite a low supply of university graduates.

Finally, if education were the binding constraint on growth, then improvements in the supply of education should have a proportionally large effect on growth. However, while the educational effort increased significantly throughout the decade, growth declined.

This is not to say that education should be ignored. First, education has other—arguably more important—goals than growth, such as enjoyment of life, expansion of capabilities, freedom, and civic cohesiveness. Second, if El Salvador were to successfully unleash a higher growth rate, then inadequate education would eventually become a more binding constraint. However, the evidence does not support the idea that a sudden increase in the supply of more educated Salvadorans is likely to unleash significantly faster growth at the present time. If growth is being constrained by other factors, more education is likely to lead mainly to lower returns to human capital rather than to higher incomes, as has been the case. Education should therefore be seen as part of a strategy to sustain growth, but not to trigger it.

## **Low Appropriability**

If individuals or firms do not expect to appropriate a significant proportion of the fruits of their efforts, that effort will clearly be in short supply. Increasing

appropriability has been the cornerstone of development policy over the last decade. In this view, investment is not limited by the availability of savings. It is constrained by problems of appropriability or by excessive transaction costs for mechanisms designed to circumvent those problems. This strategy has been behind much of the policy and institutional reform of the last decade across the world and in El Salvador.

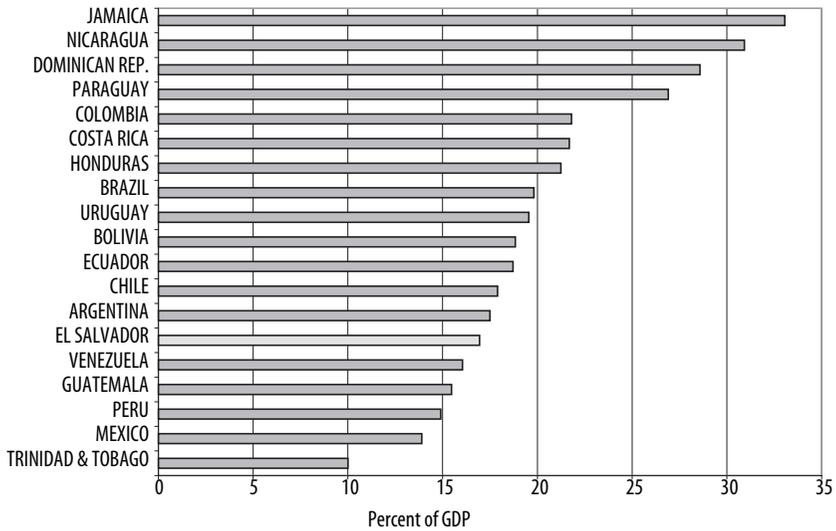
Appropriability problems can emerge from many fronts. We group these into four major areas. The first is high taxes. Actual or expected explicit taxes make private returns low and investment unattractive, although social returns may be high. The second area is macroeconomic imbalances. Unsustainable fiscal or external accounts usually presage the need for implicit taxation or expropriation through surprise inflation, depreciation, default, or banking crises. Country risk and interest rates rise in anticipation, which further depresses investment. Third, poor definition and protection of property rights may limit productive investments, if investors expect that they will not be able to appropriate the returns because their claims are ill-defined or poorly protected as a result of corruption, judicial manipulation, or outright crime. Measures to avoid these problems create additional high transaction costs that may render investment unattractive. Finally, uncertainty—deriving from political or other factors—regarding the commitment to the current rules of the game creates excessive risks about the environment in which projects will evolve.

The issues involved here are multiple and complex. We review them briefly and assess their relative importance in El Salvador.

### *Concerns about Excessively High Taxation*

Excessive taxation is clearly not the explanation of low growth in El Salvador. The country has a very moderate income tax with a marginal rate of 25 percent, which is well below the rate that global corporations pay in their home countries. The country wisely eliminated the double taxation of capital. The value added tax, at 13 percent, is moderate by regional standards and very low compared with Western Europe. Tariffs are low, and the economy is one of the most open in the region.

In fact, El Salvador may be suffering from the opposite problem. Tax revenue may be so low that the government lacks the resources to provide an adequate supply of public goods needed to make economic activity productive. *The Global Competitiveness Report* of 2002–03, which views low government spending as a virtue, ranks El Salvador fourteenth in a sample of eighty countries in terms

**FIGURE 5. Government Spending as a Share of GDP, 2000**

Source: Penn World Tables (<http://pwt.econ.upenn.edu>).

of low government spending.<sup>16</sup> The world leader in this indicator is Haiti! Even among Latin American countries, El Salvador's public spending appears low (see figure 5). This may explain why the country ranks poorly on measures of infrastructural quality (especially roads, rail, and ports) and public education (see table 3).

We conclude that excessive current or expected explicit taxation is not a sensible explanation of El Salvador's development challenge.

### *Concerns about Macroeconomic Stability*

When an economy is on an unsustainable path (for example, when the country as a whole or the government is accumulating obligations at a rate that will compromise its ability to abide by them), then participants in the economy know that the current rules of the game will need to be abandoned, and they act to protect themselves from the expected changes rather than engage in productive investments. Macroeconomic stability problems can be generated by imbalances arising from different areas. The fiscal accounts may be in deficit,

16. World Economic Forum (2003).

**TABLE 3. Indicators of Infrastructure and Public Service Quality<sup>a</sup>**

Index (1 to 7)

<i>Component</i>	<i>El Salvador</i>	<i>Regional leader</i>	<i>Ireland</i>	<i>Global leader</i>
General infrastructure quality	3.2 (56)	4.2 (Chile, 40)	3.4 (53)	6.7 (Switzerland)
Road quality (% paved)	19.8 (65)	49.4 (Dom. Rep., 42)	94.1 (17)	100 (Austria)
Rail quality	1.1 (76)	2.7 (Argentina, 49)	2.5 (54)	6.7 (Japan)
Port quality	2.7 (68)	6.0 (Panama, 11)	3.6 (49)	6.7 (Singapore)
Public school quality	2.2 (68)	4.1 (Costa Rica, 42)	6.1 (6)	6.4 (Austria)

Source: *Global Competitiveness Report 2002–03* (World Economic Forum, 2003); Instituto Centroamericano de Administracion de Empresas (INCAE).

a. Overall ranking in parentheses.

and public debt may increase faster than the capacity to service it. Long-term fiscal commitments, particularly the actuarial liabilities of the government vis-à-vis the pension system, may bankrupt an otherwise solvent government. Monetary policy may be too loose, causing a loss of international reserves and an eventual large depreciation. Banks may be taking excessive risks, which can lead to a disruptive crisis that weakens both fiscal and monetary stability. The country may be running large external imbalances that translate into reserve loss or a rapidly rising external debt and signal the need for eventual currency depreciation. The real exchange rate may be misaligned, limiting the profitability and growth of export and import-competing sectors.

The question is to what extent the relatively disappointing growth of the last few years can be interpreted mainly as the outcome of limitations on these fronts. *The Global Competitiveness Report 2002–03* ranked El Salvador thirty-third out of eighty countries in the world in terms of its macroeconomic environment, well ahead of all Central American countries and most Latin American countries, except for Chile.<sup>17</sup> This ranking reflects the country's low inflation rate, low bank spreads, good access to credit, moderate fiscal deficit, small government, and good credit rating (see table 4).

If fears of future macroeconomic problems were the issue, current returns would be high but unsustainable. We find no evidence that such returns are currently high.

While macroeconomic problems may appear in the future, especially if insufficient attention is paid to them, it seems reasonable to argue that El Salvador's low growth in the past five to six years cannot be explained in terms of macroeconomic imbalances. More likely, the puzzle is precisely why a good macroeconomic environment has not generated faster growth.

17. World Economic Forum (2003).

**TABLE 4. Competitiveness of Growth<sup>a</sup>**

Subindex of macroeconomic stability

<i>Component</i>	<i>El Salvador</i>	<i>Regional leader</i>	<i>Ireland</i>	<i>Global leader</i>
Inflation 2001 (%)	3.8 (38)	-1.1 (Argentina, 2)	4.0 (40)	-1.6 (Hong Kong)
Intermediation margin 2001 (%)	4.1 (25)	3.5 (Panama, 15)	4.7 (33)	1.3 (Japan)
Real exchange rate 2001 (90-95 = 100)	78 (78)	197 (Brazil, 2)	139 (27)	201 (Indonesia)
Fiscal surplus/deficit 2001 (% GDP)	-3.6 (52)	1.22 (Ecuador, 11)	1.7 (9)	16.4 (Norway)
Savings 2001 (% GDP)	14.6 (70)	24.6 (Honduras, 26)	22.0 (37)	51.5 (Singapore)
Expectation of recession (index 1 to 7)	4.4 (44)	4.9 (Brazil, 12)	4.9 (16)	5.8 (Australia)
Access to credit (index 1 to 7)	5.3 (4)	5.3 (El Salvador, 4)	3.9 (53)	5.5 (Croatia)

Source: *Global Competitiveness Report 2002-03* (World Economic Forum, 2003); INCAE.

a. Overall ranking in parentheses.

### *Concerns about Contract Enforcement and Property Rights*

The role of institutions in development has received increasing attention in recent years. As discussed above, they may affect growth by changing the expected appropriability of effort. Could it be that El Salvador is being held back by an inadequate institutional environment?

Our answer is negative. The Heritage Foundation ranked El Salvador thirty-fourth out of 157 countries in the world in 2006 in terms of economic freedom and third in Latin America and the Caribbean (behind only Chile and the Bahamas).<sup>18</sup> According to López, El Salvador ranks “always near the top in terms of the World Bank’s Country Policy and Institutional Assessment ratings.”<sup>19</sup> On the financial front, El Salvador ranks very favorably on indicators associated with credit availability and cost (see table 5).<sup>20</sup> This is telling because financial markets are particularly sensitive to problems of contract enforcement. El Salvador also comes out relatively well in this report in terms of corruption indicators. For example, firms report low corruption in tax collection, international trade, and public services and in political influence indicators.<sup>21</sup>

These same sources suggest that El Salvador performs less favorably in three other areas associated with appropriability: property rights, judicial autonomy, and crime. According to the Heritage Foundation, for example, property rights are only moderately well protected in El Salvador.<sup>22</sup>

18. See the Heritage Foundation website, at [www.heritage.org/research/features/index/countries.cfm](http://www.heritage.org/research/features/index/countries.cfm).

19. López (2003, p. 2).

20. World Economic Forum (2003).

21. Porter and Condo (2003).

22. See the Heritage Foundation website, at [www.heritage.org/research/features/index/countries.cfm](http://www.heritage.org/research/features/index/countries.cfm).

**TABLE 5. Indicators of Financial Quality<sup>a</sup>**

<i>Indicator</i>	<i>El Salvador</i>	<i>Regional leader</i>	<i>Ireland</i>	<i>Global leader</i>
Access to credit: index 1 to 7 (ranking)	5.3 (4)	5.3 (El Salvador, 4)	3.9 (53)	5.5 (Croatia)
Intermediation margin 2001 (%)	4.1 (25)	3.5 (Panama, 15)	4.7 (33)	1.3 (Japan)
Classification of sovereign debt (July 2002)				
Moody's <sup>b</sup>	BB+ (46)	A- (Chile, 28)	AAA (1)	AAA (Austria)
Standard and Poor's <sup>b</sup>	Baa3*** (45)	Baa1 (Chile, 32)	Aaa (1)	Aaa (Austria)

Source: *Global Competitiveness Report 2002–03* (World Economic Forum, 2003); INCAE.

a. Overall ranking in parentheses.

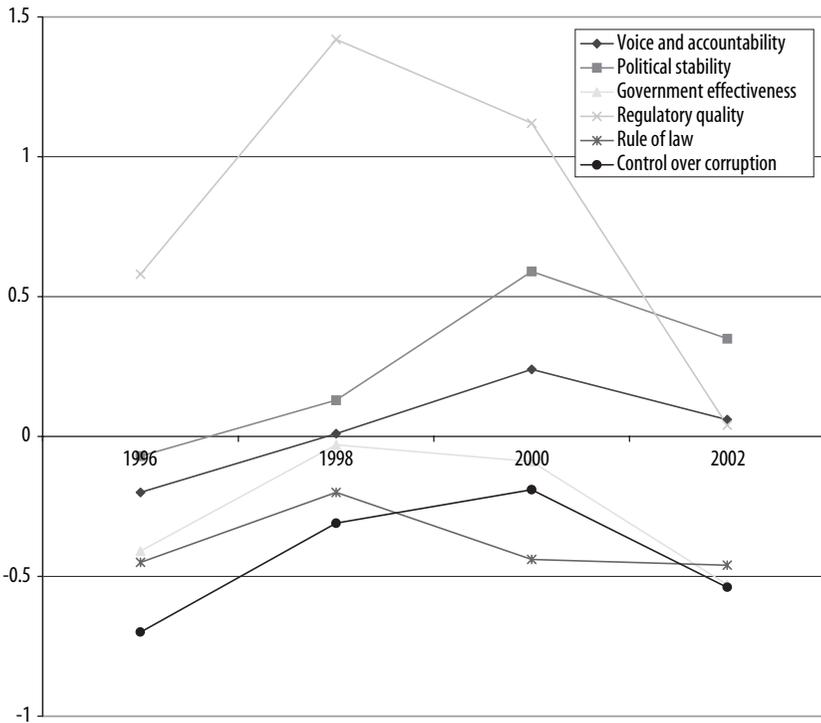
b. Moody's and Standard and Poor's data are from their respective debt classification reports for July 2002.

Kaufmann, Kraay, and Mastruzzi<sup>23</sup> provide a more nuanced picture. They measure six dimensions of institutional quality: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control over corruption. Figure 6 shows the evolution of these indexes since 1996. Higher numbers imply better performance, and zero is adjusted to represent the world average. These indicators suggest that El Salvador performs better than the world average in three areas: regulatory quality, voice and accountability, and political stability. It falls below the world average, however, in rule of law, government effectiveness, and control of corruption (see table 6). It tends to rank second to Costa Rica in the Central American region. For 2004, four of the six indexes are above their 1996 level, but they tend to show some deterioration from 2000.<sup>24</sup> This deterioration could be a result, rather than the cause, of the weaker economic performance, but there is clearly room for improvement here.

El Salvador generally scores well in some aspects of the control of corruption such as corruption in taxes, customs, and general public administration. It also scores well in government procurement and in diversion of public funds. In fact, recent measures show improvement in these areas. El Salvador also receives a good score for the transparency of financing of political parties. It does better than the Latin American average, although it has a low score on favoritism in public bidding processes and on the ability of legal political

23. Kaufmann, Kraay, and Mastruzzi (2005).

24. The Kaufmann indexes are based on a varying set of independent surveys. The 2000 index was based on four different surveys, while the 2002 index incorporates two new surveys for which no data were available in 2000. Of the four original surveys, two indicate a decline; of the new surveys, one indicates a low score. Kaufmann and others caution against interpreting too much in the variations over time.

**FIGURE 6 . Kaufmann Indexes of Institutional Quality for El Salvador: 1996–2002**

Source: Kaufmann, Kraay, and Mastruzzi (2005).

**TABLE 6 . Comparing El Salvador with Central America, Latin America, and the World**  
Kaufmann (2004) indicators

Indicator	El Salvador	Central American average	Latin American average	World average
Regulatory quality	0.56	0.15	-0.03	0
Control over corruption	-0.39	-0.24	-0.26	0
Government effectiveness	-0.22	-0.33	-0.30	0
Rule of law	-0.34	-0.34	-0.39	0
Voice and accountability	0.26	0.26	0.20	0

Source: Kaufmann, Kraay, and Mastruzzi (2005).

financing to unduly influence decisions. The country is close to the Latin American average—which is quite low by global standards—in the perception of the quality of the national assembly as an institution, confidence in the honesty of politicians, and the perception that state agencies and the legislative process can be captured by powerful corporations and individuals. El Salvador performs worst on indicators related to the judicial system: it is below the Latin American average and performs quite poorly in perceptions of corruption and the political independence of the courts.<sup>25</sup>

### *Concerns about the Political Stability of the Rules of the Game*

Uncertainty about the political willingness to maintain the rules of the game may create problems of expected appropriability and hence may block growth and investment. Since the reestablishment of peace, one of the sides to the civil war—the Farabundo Martí National Liberation Front (FMLN)—has yet to win the presidency. What would happen if it did? Would it value the set of institutions and policies that it would inherit and try to improve them, or would it adopt radical change? Fear of this latter outcome may increase the perception of risk and induce investors to follow a wait-and-see strategy. In the case of Chile, the election of Patricio Aylwin put an end to this type of fear: the left showed that it could respect the essential economic rules of the game while changing the relative importance of issues such as the level of taxation and social spending. A similar process may be taking place today with Luiz Inácio (“Lula”) da Silva in Brazil, although it is too soon yet to tell. The experience in Venezuela, however, may convince investors that giving a new government the benefit of the doubt may be unwarranted and that taking a wait-and-see attitude would be wiser. This precaution leads to less investment and growth.

The rise of political movements that question some of the basic policies of the last decade is partly the consequence of poor economic performance rather than its cause, although it may aggravate matters. People in many countries perceive that substantial reform has taken place, but the expected growth results have failed to materialize, beyond successes in inflation and credit availability. This has lowered the consensus to maintain the policies and increased the political risks associated with the stability of the rules of the game.

Politically based fears of appropriability or of drastic changes in the rules of the game can have large effects, especially in polarized societies. In the

25. We thank Daniel Kaufmann and Aart Kraay for support in making the institutional assessment more precise.

case of El Salvador, however, this concern did not appear to be high until after the 2001 parliamentary election, whereas growth has been low since 1996. This concern may have carried more weight in anticipation of the 2004 election, but it cannot be a major cause of low growth during the preceding six years. More likely, reverse causality was at play here: lackluster growth may have partially eroded the political consensus for reform.

### *Conclusion on Appropriability*

Improved appropriability has certainly paid off in El Salvador. The end of the war allowed a renewed sense of security that translated into a relatively rapid recovery of national income. Macroeconomic stability has been strong, and the legal and contract enforcement regime supports one of the most efficient credit markets in Latin America. Nevertheless, two observations are troubling: first, the investment rate in the second half of the 1990s (1996–2000) averaged a full 5 percentage points lower than in 1974–78 (16 percent of GDP versus 21 percent); and second, per capita GDP has failed to surpass the levels of the late 1970s. War and recovery clearly contributed to these patterns, but they cannot be the entire story, as large and highly destructive wars often do not produce long-run effects on growth. In fact, income per capita in 1999 (that is, seven years after the signing of the peace accords) was still 4.4 percent lower than in 1978, before the war started. By contrast, all the major participants in the First and the Second World Wars had achieved a better performance seven years after each war relative to the year prior to its start.<sup>26</sup>

Why do Salvadoran households, businesses, and entrepreneurs choose not to invest? As we have discussed, the reason cannot be the high cost or lack of availability of investable funds. Neither can we attribute the absence of animal spirits to the usual litany of disincentives that go under the heading of “poor investment climate” or other appropriability issues. El Salvador has made significant headway in tackling these usual suspects. Our interviews with businesses gave us the strong impression that the private sector has very few investment ideas lying around. We found little indication of significant pent-up investment demand waiting to be released as soon as the political news is revealed to be positive or neutral.

26. If we compare 1913 to 1925 in the case of the First World War and 1938 to 1952 in the case of the Second World War, all countries involved did better than El Salvador. See FUSADES (2003, chap. 1).

Something else must be holding El Salvador back.<sup>27</sup> Our analysis strongly suggests that El Salvador is bumping into some other constraint.

### **Bottlenecks in Generating Higher Productivity Activities**

The third element in our growth framework is productivity and innovation. What we have in mind here is not innovation and research and development (R&D) in the sense that these terms are used in the advanced economies, but the ability to identify and generate productive activities in the Salvadoran context. These are new, nontraditional products that could be profitably produced in El Salvador, but which do not currently attract investment because of various market shortcomings.

Suppose that a new product appeared on the scene, whether through serendipity or conscious action. To make matters more concrete, let us say that it is a pest-resistant cotton seed that does not require expensive and environmentally damaging insecticides, as did the varieties that caused the collapse of the Salvadoran cotton industry in the late 1970s and early 1980s. This new seed would most likely cause a major expansion in investment and cotton production in El Salvador. If the product could be freely traded internationally, it could become an important new item in the country's export basket, either directly or in the form of yarn, textile products, or apparel. While investment would

27. Studies that implicitly emphasize either factor accumulation or appropriability have difficulty in explaining the slowdown in El Salvador's growth performance. Edwards (2003), who attempts to explain the decline of El Salvador's growth by 2.8 percentage points between the first and second half of the decade, argues that adverse external factors explain between 1.0 and 1.9 percent. However, he argues that at least half of the problem lies in the failure of investment to pick up. He concludes that increased savings and better secondary education (strategy 1) and improved transparency and judicial enforcement combined with increased labor market flexibility (strategy 2) should help accelerate growth. A recent World Bank study (Loayza, Fajnzylber, and Calderón, 2002) also implicitly finds that the decline in El Salvador's growth rate after 1996 is difficult to explain. In their model, improvements in secondary school enrollment, the availability of private domestic credit, the increase in openness and in phone lines, the low inflation rate, and the absence of banking crises should have compensated for the increase in the initial level of income, the declining output gap, the increased real appreciation of the currency, and the adverse terms-of-trade shifts. This should have left growth unchanged in the second half of the 1990s relative to the first half, when in fact growth declined by 2.8 percent. They are unable to account for the growth decline. Finally, López (2003) attributes the growth decline to temporary factors related to the business cycle—namely, an unsustainable boom in the early 1990s followed by a pricking of the bubble in the second half. This clearly only complicates the question, as it indicates that the fast growth of the early 1990s was unsustainable, but does not explain why the country's speed limit is so low.

pick up, the driver in this story is the technology and innovation that caused that investment to be productive.

Now suppose that a new pest affects an existing sector—for example, coffee leaf rust (*la roya*) or the coffee borer (*la broca*). Or suppose that Brazil achieves a technological improvement specific to its domestic coffee sector or that Vietnam is able to adapt coffee to its geographic conditions. Any of these events would lower the profitability of coffee in El Salvador, and they would thus reduce investment and growth. Again, the driver here is technology and innovation, whether at home or abroad, not savings, education, or appropriability.

If we interpret El Salvador in this light, we can make the following argument. El Salvador is facing strong headwinds in its traditional sectors, and the country's entrepreneurs have not come up with new ideas in other areas fast enough to compensate. The country has lost its cotton industry completely. Coffee is in crisis. It has been hard to make a decent living in the international sugar market. To achieve growth, new productive ideas must take the place of these dying industries. The speed at which these ideas appear and their economic significance are critical. The only significant new sector is the *maquila* industry, and this represents barely U.S.\$480 million in net exports (slightly more than 3 percent of GDP). The absence of new ideas explains both why the expected return to current investment ideas is low and why investment and growth are low. It is not because of lack of savings, and it is not solely because of fear of taxation, expropriation, or fraud. It is because the actual real returns to investment are low given the absence of profitable investment opportunities.

Summers' trinity—openness, sound money, and property rights—is compatible with a technological model of the world in which increases in productivity drive growth in the long run.<sup>28</sup> Such a model would argue that productivity is increased through technological progress at the world level and the rate at which lagging countries adopt it. Poor countries are very far from the technological frontier. They need to allow every opportunity for foreign technology to seep into the country. Openness to trade ensures that firms will have access to the inputs, capital goods, and ideas that promote innovation. It also promotes competition, which forces firms to use resources efficiently. Openness to foreign direct investment facilitates access to the know-how and the managerial expertise of global firms, while openness to other forms of capital provides the financing needed to make all these things happen. Allowing every opportunity to explore and use new products and processes is a good idea. Firms should be able to trust the contracts they sign, the money they hold, and the announcements

28. Summers (2003); see discussion above.

the government makes. In such an environment, good new ideas are bound to appear spontaneously, without the government's trying to pick winners.

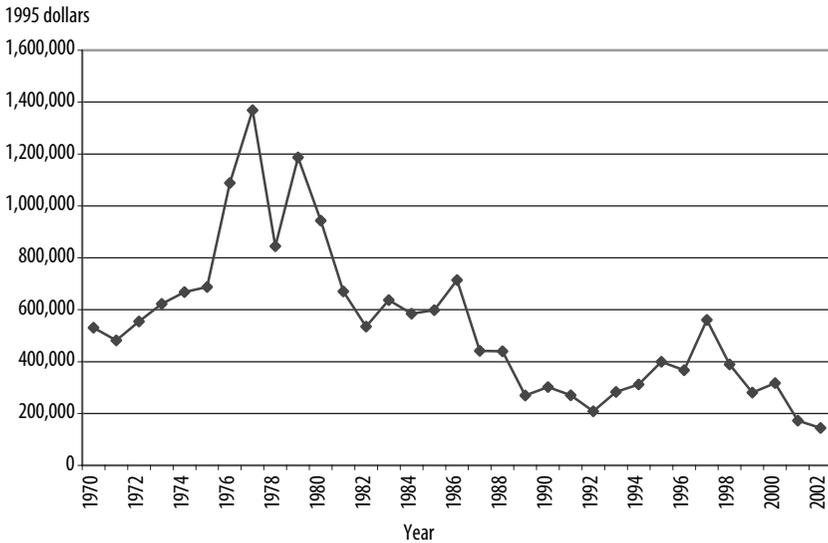
Whether this agenda can secure sufficiently rapid technological progress is an empirical question. The Salvadoran experience and that of Latin America more generally suggest that the answer may well be negative. The innovation that matters to countries such as El Salvador—namely, identifying and operating profitable new activities—is substantially more problematic than this simple picture assumes. We discuss this issue below.

## **The Challenge of Structural Transformation**

Between 1970 and 1978, the Salvadoran economy—like much of Latin America—grew at a quick pace. It expanded by 48 percent in just eight years (5.0 percent a year). In the following twenty-six years, it managed to expand by only 27 percent (1.4 percent a year). This second period can be clearly divided into at least three subperiods. There was a rapid decline between 1978 and 1989, when the economy contracted by 22 percent (2.3 percent a year). The economy then underwent a rapid recovery between 1989 and 1995, expanding by 41 percent (6.0 percent a year). Finally, growth was more moderate from 1995 to 2004, when the economy expanded a further 25 percent (2.5 percent a year).

The growth pattern of the 1970s was based on a rapid expansion of coffee, cotton, and sugar and on manufacturing output and exports, mainly to the Central American Common Market. This pattern of growth became unviable following the decline in the terms of trade for agricultural commodities and the collapse of the Central American Common Market in the 1980s. The agrarian reform and technological problems in cotton aggravated the situation. The decline was mainly driven by the tradables sector, which dropped by 31 percent between 1978 and 1989, while nontradables fell by just 15 percent. In addition, the general scarcity of foreign exchange affected tradables activities that relied on imported intermediate inputs, such as manufacturing, more strongly than nontradables.

The recovery has not been characterized by a return to the growth pattern of the 1970s. Agriculture has lagged the other sectors, and agricultural exports—led by coffee, cotton, and sugar in the 1970s—have fared even worse. The traditional commodities on which the economy relied in the past, and which fueled the boom of the 1970s, have shrunk to a small fraction of their previous size. While the volume of coffee exports has declined only marginally

**FIGURE 7 . Total Export Value of Three Traditional Commodities (Coffee, Cotton, and Sugar)**

(in absolute terms), the sector has been hit badly by a trend decline in world prices since the late 1970s. A back-of-the envelope calculation of the welfare loss to El Salvador on account of the decline in coffee prices alone yields U.S.\$384 million (around 3.2 percent of GDP on an annual basis).<sup>29</sup> Cotton exports have disappeared, a casualty of inadequate pest control techniques and land reform. Sugar exports are up, but this is mainly a result of high domestic prices that subsidize production. The net effect can be seen in figure 7, which charts the total export receipts from these three traditional commodities since 1970 (with export receipts valued at 1995 dollars). On average, the 1996–2002 level falls short of the 1974–78 level by U.S.\$613 million (around 5 percent of GDP).

While the *maquila* sector expanded rapidly in the 1990s to reach 3.5 percent of GDP in 2000, it then declined to 2.8 percent in 2004, as it faced increasing pressure from China and other competitors. The expansion of the *maquila* sector does not compensate for the shortfall experienced in the traditional sectors. This shortfall is significantly larger than current net *maquila* exports

29. This is calculated by taking the difference in export prices between two periods (1974–78 and 1996–2002) and multiplying it with the average of the export quantities in the two periods.

at present, indicating that *maquila* exports have yet to make up for the decline in traditional industries.<sup>30</sup>

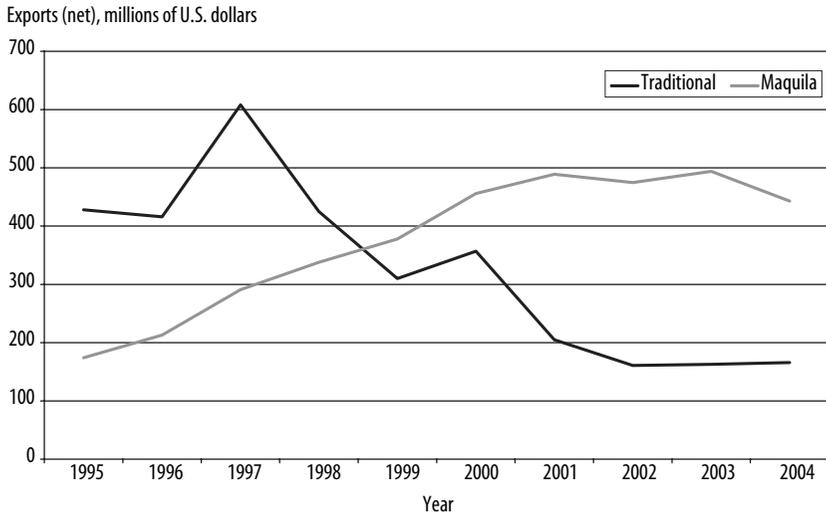
El Salvador is not particularly dynamic in identifying new products. Klinger and Lederman develop a filter to identify discoveries of new products in the export package of countries.<sup>31</sup> They look for items that were previously not exported that grow to consistent annual exports of more than a million dollars. When they apply the filter to El Salvador, they find forty-six total discoveries in 1997–2002; this is less than Guatemala (106), Bolivia (89), Colombia (74), Uruguay (63), Honduras (59), Ecuador (58), Nicaragua (55), Panama (51), and Peru (50). The only country in the region with a comparable level of income and a worse discovery performance is Paraguay (38). When compared with countries at similar levels of development outside Latin America and the Caribbean, El Salvador is far below the high performers like Indonesia (119) and Jordan (102), but above Algeria (38) and Egypt (32). Klinger and Lederman also find an inverted-U-shaped curve of the number of discoveries with respect to GDP per capita. El Salvador underperforms relative to countries of similar levels of development (it is below the GDP per capita and GDP per capita squared curve).

With a dollarized economy (which rules out competitiveness gains through currency depreciation) and a real exchange rate that is high by many standards, El Salvador is not a source of cheap labor in the Central American region and is therefore unlikely to attract foreign investment on that basis. The extension of the Caribbean Basin Initiative (CBI) benefits and the provision of North American Free Trade Agreement (NAFTA) parity in 2000 were followed by a lackluster 2.9 percent annual export performance in 2000–04 (figure 8). The liberalization of the multilateral textile and apparel regime (with the phasing out of the Multi-Fiber Agreement, or MFA, in 2005) also bodes ill for Central American countries. The areas of expansion are likely to be new activities that are yet to be identified. This suggests that the economy is in the midst of a very large structural transformation, in which many large sectors are dying out while the new sources of dynamism have been few and far between.

If, as argued above, El Salvador cannot grow by producing more of the same, it will have to grow by developing new, nontraditional industries. Significant

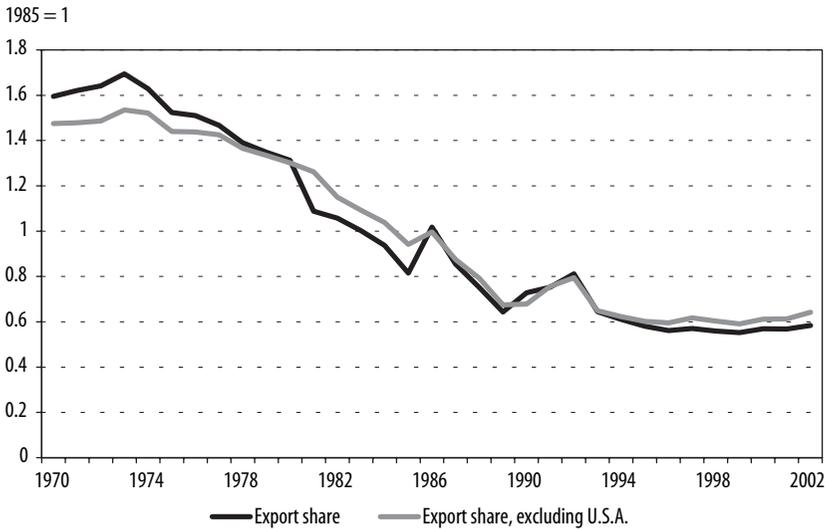
30. Net *maquila* exports stood at U.S.\$475 million in 2002 (or U.S.\$452 in 1995 dollars). This compares with the U.S.\$613 lost in the traditional sectors, as mentioned in the previous paragraph. Ideally, the comparison should net out the imported component of traditional commodity exports, but the imported component in these sectors is not large.

31. Klinger and Lederman (2005).

**FIGURE 8 . Exports: *Maquila* versus Traditional**

private investment will be required to transform the county's productive structure, but the challenge of structural change is also an obstacle for private investment. Producing *new* is a different proposition from producing *more*. Entrepreneurs need to undertake investments in new areas where profitability is inherently uncertain and depends on the complementary investments of others in the private and public sectors. Low investment, associated with low perceived returns to capital, is therefore both a cause and a symptom of the economic challenge that confronts El Salvador.

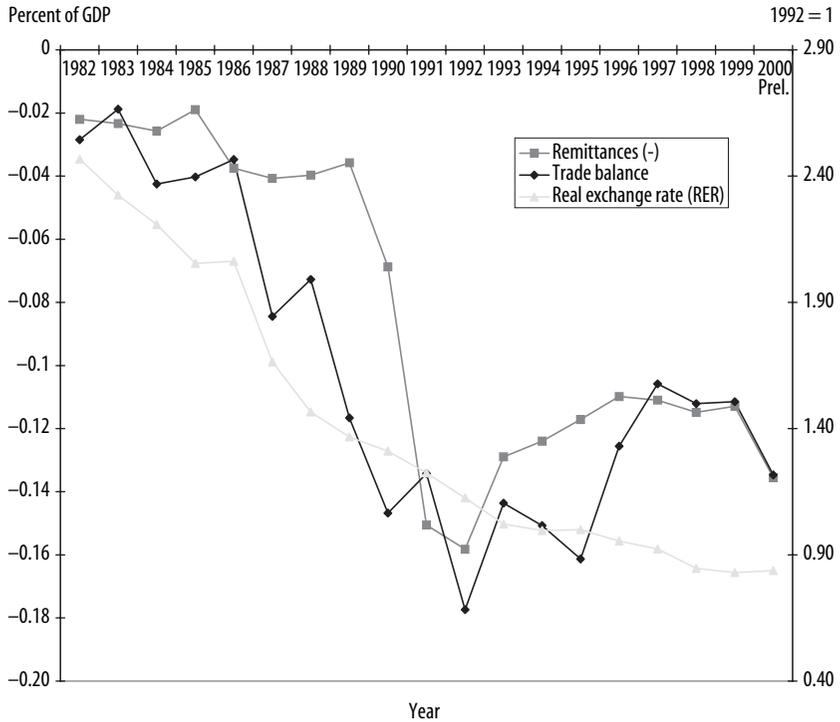
Markets are not necessarily good at facilitating the kind of structural transformation that El Salvador needs. New activities often require complementary and lumpy investments to be made simultaneously (a coordination externality). Regardless of whether they are successful, they generate valuable information for other entrepreneurs who can then choose to imitate incumbents (an information externality). Market failures in these areas can undercut entrepreneurship and depress private investment. Overcoming them requires a more strategic, proactive policy stance toward economic transformation—one that is willing to lead change rather than sit back and assume that economic growth is the natural outcome of market forces. Structural transformation therefore needs to be addressed as a policy issue. The Salvadoran government needs to take on this challenge and be ready to deploy political capital to support it.

**FIGURE 9. Trade-Weighted Multilateral Real Exchange Rate, 1970–2002**

The challenge is made even tougher by El Salvador's disadvantageous real exchange rate. The Salvadoran real exchange rate has appreciated significantly since the 1970s, no matter how it is calculated. The real exchange rate has remained roughly stable (and perhaps has even depreciated slightly) in recent years as disinflation has taken root, but this follows a long period of ongoing real appreciation (figure 9). This is all the more striking in light of the adverse shocks that the Salvadoran economy has experienced in this period (in particular, terms-of-trade shocks and natural disasters).

This real appreciation has been accompanied by an increase in the trade deficit from less than 3 percent of GDP in the early 1980s to 13.9 percent, on average, in 2000–04 (see figure 10). Remittances have undergone an even larger increase, rising to 15 percent of GDP, on average, in 2000–04. Moreover, the real exchange rate has been stable over the last decade, as has the rate of unemployment. The real exchange rate appreciation thus seems to be an equilibrium phenomenon, in the sense that it is consistent with both external and internal balance. It reflects the impact of emigration: by limiting labor supply and increasing foreign earnings, emigration raises dollar wages and strengthens the real exchange rate.

The appreciated real exchange rate, although an equilibrium market phenomenon, greatly complicates the process of structural transformation by limit-

**FIGURE 10 . Real Exchange Rate, the Trade Balance, and Remittances**

ing the profitability of search activities in the tradable sector.<sup>32</sup> We heard repeatedly in our interviews that El Salvador is unlikely to be competitive in activities in which labor costs are the main determinant of success. Comparative evidence suggests that growth spurts frequently necessitate large real depreciations that boost tradables activities. For example, Chile's recovery and growth in the mid-1980s was greatly facilitated when its real exchange rate more than doubled. More generally, Hausmann, Pritchett, and Rodrik find that growth accelerations tend to coincide with periods of very weak real exchange rates relative to the preceding years.<sup>33</sup> The absence of a comparable episode of real depreciation in El Salvador raises the premium on active policies of structural transformation.

32. In other words, we argue that the externalities involved in the process of structural transformation are affected by the level of the real exchange rate, even if it is in equilibrium.

33. Hausmann, Pritchett, and Rodrik (2004).

## Why New Industries Do Not Take off on Their Own

In low-income economies that specialize in traditional commodities, the ability to break into nontraditional, higher-productivity activities is the key driver of economic growth. Taiwan, for example, exported little besides sugar and rice in the 1950s. Its subsequent explosive growth was based on a remarkable diversification into various manufactures. Similarly, South Korea exported practically no manufactured products in the early 1960s, and Chile's dominant export was copper until the 1980s. In each of these cases, growth was accompanied, and indeed driven, by the acquisition of capabilities in an expanding range of nontraditional activities.<sup>34</sup> Such successes demonstrate the importance of macroeconomic stability and a broadly market-oriented set of policies, but the productive transformation was hardly ever a natural, purely market-driven process. It was almost always stimulated and supported by public policies and strategies of public-private collaboration.

The only significant nontraditional industry that has emerged in El Salvador in the last two decades—namely, the *maquila* industry—is itself the product of artificial inducements provided by the Salvadoran government and preferential policies of the United States. *Maquila* operations are exempt from import duties on capital equipment and inputs, and they do not pay income taxes, municipal taxes, or the tax on transfers of real property as long as their output is destined for export markets. Exports to the United States are exempt from tariffs as long as they abide by the relevant rules of origin, which require the use of U.S. textiles.

The tax and tariff advantages provided to *maquila* industries helped identify labor-intensive assembly operations as an investment opportunity for domestic and foreign investors. Since the differential incentives provided to these operations constitute a subsidy from an economic standpoint, *maquilas* were essentially the product of industrial policies.<sup>35</sup> The Salvadoran success with *maquilas* therefore confirms the point that economic transformation requires a concerted government strategy. Indeed, protection of the domestic market (and other neighboring markets) also drove diversification and industrialization in the 1960s and 1970s. Coffee profits were invested in industry largely

34. Imbs and Wacziarg (2003) show that economic growth is accompanied by productive diversification until a relatively high level of income is reached.

35. The policy regime qualifies as an export subsidy, and it has been notified as such to the WTO.

because high trade barriers in the region created profitable import-substituting opportunities.<sup>36</sup>

Market forces, left on their own, will generally remain too weak to achieve the productive transformation that El Salvador needs. We discuss here the main market failures that seem relevant in the Salvadoran case: information externalities, coordination externalities, and labor training externalities.

### *Information Externalities*

In our discussions in El Salvador, we frequently asked business people the following question: if you had \$10 million that you could invest in whatever activity you want, where would you invest? This hypothetical investor has thousands of potential projects from which to choose. Each one will require the expenditure of not only resources, but also time and effort to adapt best-practice technologies to Salvadoran conditions. Not all of these investment ideas will pay off. When the project fails, the investor loses the money. When it succeeds, the investor will reap the profits—but not for very long. A successful project is likely to attract emulators. Once the initial investment signals that there is money to be made in, say, avocados, call centers, or TV tubes, other entrepreneurs will enter the market and dissipate the profits of the original investor. The pace of emulation will be enhanced by well-functioning markets that feature cheap finance, flexible labor markets, less red tape, and easy entry and exit. Hence, any entrepreneur who innovates by investing in a new activity bears the full cost of failure if the project is a flop, but reaps only a portion of the gains if it is successful. In economic terms, the private benefit of entrepreneurship in nontraditional activities is a small fraction of the social return.<sup>37</sup> It is no wonder that entrepreneurs are unwilling to subsidize their competitors.

This is an important obstacle to entrepreneurship and investment in El Salvador currently. The Salvadoran economy needs to discover a new range of activities that it can produce at low cost. Since it is not immediately obvious

36. A striking illustration of this arose in our interview with Roberto Paloma, president of UDOC. UDOC is a highly successful shoe company that employs around 3,000 people and exports around U.S.\$50 million. It has its origins in the import substitution industrialization period of the 1950s. The company was initially financed by family money made in coffee and banking, and the absence of import competition was the stimulus for diversification into manufacturing. As the business was getting established, the company went through some rough times and had to be bailed out by the family bank. Trade protection and connected lending were critical in the establishment of this successful enterprise.

37. See Hausmann and Rodrik (2003) for further discussion.

what these activities are, the discovery process necessarily requires experimentation to see what works and what does not. Experimentation of this kind is costly and rife with information externalities. Meanwhile, the openness of the Salvadoran market and the high degree of competition keep profit margins low. The market mechanism cannot foster economic restructuring under these circumstances. Unless investments in new activities are specifically promoted, the pace of structural change is too slow and suboptimal.

### *Coordination Externalities*

Imagine now that the hypothetical investor knows, on the basis of feasibility studies, that pineapple can be produced cheaply in El Salvador. Consider the obstacles that would arise in exporting to the U.S. market. The firm needs help with transport, logistics, customs, phytosanitary standards, marketing, and distribution. It has neither the expertise nor the scale to justify making its own downstream investment in these areas. So the firm is stuck with unattractive options—dealing with third-party brokers, poor transport links, ineffective marketing, and so on. The situation would look quite different if a large number of Salvadoran pineapple exporters all needed the same services. Then the scale effects would come into operation, and the downstream services could be organized much more efficiently, either with the exporters working together or through the creation of an independent company that services Salvadoran exporters.<sup>38</sup>

Such complementarities among lumpy investment projects are a common feature of nontraditional activities. If a group of entrepreneurs considers building a hotel in the Gulf of Fonseca, they will need other investments to be in place (in infrastructure, tourist facilities, advertising abroad, and so forth). If they want to build a dyeing and finishing plant for textiles destined for the U.S. market, they will need a water-treatment plant nearby, which in turn will be built only if there is enough dyeing and finishing activity.<sup>39</sup>

In each of these cases, individual projects are likely to be profitable if complementary investments are made, but not otherwise. Given the lumpy nature of the investments, these various upstream and downstream activities must be coordinated. Sometimes the coordination can be achieved without government

38. This idea is inspired by the FUSADES experiment with pineapple, which confronted these difficulties. Another example of complementarity is that an efficient-sized pineapple packaging plant needs an adequate pineapple supply to operate at full capacity.

39. This example was provided by Miguel Lacayo.

help through sector associations and industrialists' groups. At other times, it may require government agencies to gather and motivate investors.<sup>40</sup>

### *Labor Training Externalities*

Most labor training takes place on the job, and the most significant forms of interfirm technological spillovers occur through labor mobility among firms. This creates a tradeoff: labor turnover must be adequate for new technologies and productive capabilities to disseminate among firms, but labor turnover undercuts firms' incentive to invest in on-the-job training. For example, bilingual operators for call centers require training that is specific to the firm, but much of that training is also general enough that it could be easily deployed in other firms in the same line of business (including language skills, customer relations, and software skills). The economic logic of labor turnover suggests that firms will generally underinvest in these general skills, to the detriment of the economy. The appropriate response is for the government either to subsidize firms that provide on-the-job training for general skills or, when firm-specific and general training cannot be easily distinguished, to subsidize private training facilities that provide the requisite skills. The Salvadoran Training Institute (INSAFOR) provides some of this training by taxing the payroll of firms and subsidizing demand-determined programs. The program is modest, however, at U.S.\$17 million a year.

In the context of innovation, firms may be limited by the lack of trained personnel, given the novelty of the idea, but the training required may be quite general to any firm in that new activity, whether innovator or copycat. This will slow down the process of self-discovery and reduce efficiency. Therefore, socializing the costs of training and increasing the elasticity of supply of trained personnel is crucial.

### **Proactive Policies for Spawning New Industries: Design Principles**

The previous sections outlined some of the key market failures that keep the perceived return to private investment low and thereby block economic diversification. In principle, these market failures can be addressed by well-targeted Pigovian subsidies. For example, information externalities can be corrected by subsidizing the fixed costs of entering nontraditional industries. Things are not that simple, however, as Latin American policymakers have discovered

40. For an interpretation of the South Korean and Taiwanese cases, see Rodrik (1995).

through painful experience. Governments are subject to failure, as well, and any policy approach that presumes the existence of omniscient, well-intentioned bureaucrats who can costlessly implement first-best policies while keeping political influence at bay simply cannot succeed. The approach to policy design has to be informed not just by the market failures that block economic take-off, but also by the potential government failures that can render the textbook remedies worse than the disease.

In short, a balanced strategy needs to recognize the presence of both government and market failures. The main sources of government failure are threefold: (a) the lack of complete information about the nature, source, and magnitude of the relevant market failures; (b) the possible capture of policy interventions by the firms whose behavior the interventions are aimed at regulating; and (c) the ability of the private sector to game policymakers when policies suffer from dynamic inconsistency (that is, when the promise to withdraw support from poorly performing activities lacks credibility). The generic response to these failures is to discipline policymakers by requiring nondiscretion, uniformity, and arm's-length relationships with the private sector. While such an approach may work well in the absence of any useful role to be played by policy, it becomes seriously incomplete in the presence of the challenges we identified above. These challenges—rooted in market failures—require the deployment of production incentives, which in turn cannot be provided without a degree of selectivity, nonuniformity, and interaction with the private sector.

Public interventions that have the potential to alter the allocation of resources in the economy are always subject to capture by well-connected businesses. This is the familiar syndrome of rent seeking, which has often plagued import substitution (and occasionally export promotion) policies. It is important—not just for the economic effectiveness of the policies we are proposing here, but also for their broader political legitimacy—that the institutional setting in which they are carried out provide safeguards against capture, rent seeking, corruption, and cronyism. On the other hand, policymaking must be informed by and take advantage of the detailed knowledge about market constraints and opportunities that only businessmen can convey. Complete insulation from business interests is therefore not the answer. A government effort to effect structural change must strike a delicate balance between the Scylla of private capture and the Charybdis of bureaucratic ignorance. Our institutional recommendation below must be understood in this context.

An appropriate institutional framework for economic transformation needs to strike the right balance between discipline and incentives. Too many incentives could lead to replicating the excesses of the import substitution period in Latin

America, wherein too many activities were encouraged for too long, regardless of their social contribution. Too much discipline could prolong the experience of the 1990s, which offered inadequate incentives for economic restructuring.

Designing the requisite mechanisms and institutions is a hard task. While the experiences of other countries may provide some hints, there are no blueprints that can be adopted in straightforward fashion. Domestic creativity and political leadership are crucial. Below we discuss some design principles that are helpful in structuring the appropriate mechanisms. Our approach emphasizes process over specific policies. In view of the inherent uncertainty about what is likely to work, it is more important to design robust institutional arrangements than to adopt an agenda of specific policy actions. The process of self-discovery is as much about policy learning—which types of policies work and which do not under existing realities—as it is about entrepreneurial learning. In the long run, the key is to have an effective institutional capacity for policy experimentation. Robust institutional arrangements maximize the potential of revealing welfare-enhancing interventions, minimize the political failures discussed above, and are viewed as legitimate by broad sections of society.

### *Institutional Architecture*

The institutional architecture we recommend has three key elements. These address the issues of political leadership, program coordination, and transparency and accountability.

**POLITICAL LEADERSHIP FROM THE TOP.** Just as sound finance and fiscal probity have a high-profile political champion in the finance minister, the strategy of economic transformation needs a highly placed political advocate who has the ear of the president (or perhaps is the president himself). This would ensure that the strategy receives the priority it needs. High-level political leadership is essential if the opportunities and obstacles that are identified by promotion agencies or the coordination council are to be addressed quickly and efficiently (see below).<sup>41</sup> A top political figure needs to feel responsible for making economic transformation happen, just as a central bank governor feels responsible for monetary stability and a finance minister feels responsible for fiscal solvency.

**A HIGH-LEVEL COORDINATION COUNCIL.** It may not be necessary to create new institutions from scratch if the activities of the Multisectoral Investment Bank (BMI),

41. The role played by President Park in South Korea in monitoring exports and economic performance on an almost daily basis is legendary. More recently and closer to home, the promotion of tourism in Costa Rica has been greatly facilitated by the close involvement of then-president José Figueres (1994–98) in the activities of the Costa Rican tourism competitiveness board.

the National Investment Promotion Agency (PROESA), and other agencies can be appropriately refocused. It would be useful, however, to have a coordinating agency that takes a proactive role in identifying and generating new investment opportunities, acting in line with the principles enunciated above. The coordination council would seek out and gather information (from the private sector and elsewhere) on investment ideas; goad BMI, PROESA, and others into desirable promotion efforts; achieve coordination among these different agencies when needed; push for changes in legislation and regulation to eliminate unnecessary transaction costs or other impediments; have the capacity to provide complementary public goods; generate subsidies and financial backing (either debt or equity) for new activities when needed; and credibly bundle these different elements of support with appropriate conditionalities. The council should be fairly small to facilitate its functioning, and it should preferably be composed of key economics ministries and headed by the president or vice-president. The council should have its own staff of technical experts.

**TRANSPARENCY AND ACCOUNTABILITY.** Society at large should view this strategy of economic transformation as part of a new social compact, rather than as a set of giveaways to the private sector. The proactive policies described here can sometimes be partial to large firms and entrepreneurs—unlike, say, microcredit programs or support for small and medium-sized enterprises (SMEs). This raises the premium on ensuring that these promotion activities are undertaken in a transparent and accountable manner. One possibility would be to create a broad-based board of directors to which the coordination council would report every quarter on its activities. The board would be made up not only of parliamentarians (including from the opposition), but also of representatives from business (both big and small), agriculture, trade unions, and other parts of civil society. The board would not have the power to vet or reject the council's decisions, but it would be able to question the council, seek information, and embarrass council members if necessary. This or similar mechanisms could help build trust and confidence in government programs, an important factor in a divided and polarized society such as El Salvador.

### *Design Principles*

Within this architectural setup, the new programs must conform to a set of design principles for maximum effectiveness. Here we outline ten principles that provide an initial basis for formulating an effective program.

**FOCUS ON NEW ACTIVITIES.** Incentives should be provided only to new activities, since the main purpose of the policies in question is to generate new

areas of comparative advantage for El Salvador. New activities encompass both new products and substantially new processes for producing existing products. This differs from the most common focus of policies to support SMEs, which are based on the criterion of size—not on whether the activity in question has the potential to spawn new areas of specialization. From the standpoint of growth, the key is to get entrepreneurs to try new activities.

**CLEAR CRITERIA FOR SUCCESS AND FAILURE.** Not all entrepreneurial investments in new activities will pay off. In fact, only a small fraction of business ideas are likely to be successful. From the perspective of the program objectives, however, one success can pay for scores of failures. The program must therefore clearly define what constitutes success and identify observable criteria for monitoring it. Otherwise, recipients of incentives can game public agencies and continue to receive support despite poor outcomes. The criteria should ideally depend on productivity—both its progress and its absolute level—and not employment or output. While productivity can be notoriously difficult to measure, project audits by business and technical consultants at set intervals can provide useful indications.

**SUNSET CLAUSE.** The program must contemplate a built-in sunset clause. Financial and human resources should not remain tied up for a long time in activities that are not paying off. Every publicly supported project must have not only a clear statement *ex ante* of what constitutes success and failure, but also an automatic sunset clause for withdrawing support after an appropriate period has elapsed.

**TARGETING ACTIVITIES RATHER THAN SECTORS.** Public interventions should support activities that suffer from externalities, not the sectors that confront them. This facilitates structuring the support as a corrective to specific market failures instead of as generic industrial policies. Rather than providing incentives, say, for electronics, tourism, or call centers, government programs should subsidize bilingual training, feasibility reports for nontraditional agriculture, infrastructure investment, adaptation of foreign technology to Salvadoran conditions, risk and venture capital, and so on. The government should not promote specific sectors, but should support growth-enhancing activities that often span several sectors. Similarly, the deciding factor should not be the size of the recipient enterprises. A sectoral approach may be required, however, to get the right people around the table, when coordination is an issue or when the relevant public goods and regulations have a sectoral nature. In principle, interventions should be as horizontal as possible and as sectoral as necessary.

**SPILLOVER AND DEMONSTRATION EFFECTS.** Subsidized activities need to have a clear potential for providing spillover and demonstration effects. Public

support must be contingent on an analysis of the activity's ability to attract complementary investment or to generate information or technological spillovers. Moreover, supported activities should be structured in such a way as to maximize the spillovers.

**AUTONOMOUS AGENCIES.** The agencies carrying out promotion must be autonomous and, therefore, have demonstrated their competence. Subject to certain constraints discussed below, the authorities responsible for carrying out promotion need to have enough autonomy and independence that they can insulate themselves from lobbying, design their work agenda appropriately, and have the flexibility to respond to changing circumstances. This, in turn, requires that the agencies selected for the purpose have a prior track record of professionalism, technical competence, and administrative effectiveness. When administrative and human resources are scarce, it may be better to lodge promotion activities in agencies with demonstrated competence than to create new institutions from scratch, even if that restricts the range of available policy tools.

**MONITORING.** The relevant agencies must be monitored closely by a principal who has a clear stake in the outcomes and political authority at the highest level. Autonomy does not mean lack of accountability. Close monitoring and coordination of the promotion activities by a cabinet-level politician—a principal who has internalized the agenda of economic restructuring and shoulders the main responsibility for it—is essential. Such monitoring not only guards against self-interested behavior on the part of the agencies, but also helps protect the agencies from capture by private interests. This principal might be the minister of the economy, for example, or the president. If it is not the president, the principal must have the ear of the president and must be viewed as the latter's associate rather than rival.

**COMMUNICATION WITH THE PRIVATE SECTOR.** The agencies carrying out promotion must maintain channels of communication with the private sector. Autonomy and insulation do not mean that bureaucrats should isolate themselves from entrepreneurs and investors. Ongoing contact and communication allow public officials to establish a good basis of information on business realities, without which sound decisionmaking would be impossible. This combination of bureaucratic autonomy and connectedness is what Evans terms embedded autonomy in his discussion of successful economic strategies in East Asia and Latin America.<sup>42</sup>

**MISTAKES IN THE DISCOVERY PROCESS.** Public strategies of the sort advocated here are often derided because they may lead to picking the losers rather

42. Evans (1995).

than the winners. However, an optimal strategy of discovering the productive potential of a country will necessarily entail some mistakes of that type. Some promoted activities will fail. The objective should not be to minimize the chances that mistakes will occur, which would result in no self-discovery at all, but to minimize the costs of the mistakes when they occur. If governments make no mistakes, it only means that they are not trying hard enough.

**FLEXIBILITY IN AGENCY DESIGN.** Promotion activities need to have the capacity to renew themselves, so that the cycle of discovery becomes an ongoing process. Just as there is no single blueprint for undertaking promotion, the needs and circumstances of productive discovery are likely to change over time. The agencies carrying out these policies must therefore have the capacity to reinvent and refashion themselves to fit the changing circumstances.

### Some Implications for El Salvador

Since the early 1990s, Salvadoran governments have focused their efforts on cementing macroeconomic stability and establishing a market economy. Formulating and implementing a strategy of economic transformation has not been a priority—in part because of the idea (common throughout Latin America in the 1990s) that market-oriented reforms obviated the need for such a strategy. We believe that a strategy of the sort discussed above needs to be placed at the center of the government's economic agenda, to complement other policies in fiscal, social, and regulatory areas.

Many agencies in El Salvador are currently engaged in investment promotion. These efforts, however, tend to be fairly recent, poorly focused, not adequately targeted, diffuse, and uncoordinated.<sup>43</sup> Existing programs have little political salience and do not enjoy broad political support at the highest levels of the

43. For example, BMI is a second-tier credit institution that supports private investment through lending to financial institutions. It has not focused its efforts on promoting new economic activities per se, taking a more passive stance in allocating credit according to demand. PROESA, the investment promotion agency, is very new, and it focuses its efforts on promoting foreign investment in El Salvador, rather than promoting domestic investment and entrepreneurship in new activities. Its priorities are determined along sectoral lines (for example, textile and apparel, call centers, agribusiness, and electronics), rather than along the lines of specific economic activities that need support. The ministry of the economy undertakes a range of investment coordination and promotion activities, but these tend to be done on an ad hoc basis, are not well coordinated with similar activities at other agencies, and often do not have the support of other key ministries in the government (personal interview with the minister of the economy). Finally, FUSADES has engaged in projects to develop new economic activities (for example, pineapple), but its current efforts are at too low a level to make a difference. Its microfinance operations are more appropriately viewed as a social program rather than as a program for promoting growth through economic transformation.

government.<sup>44</sup> To become more effective, these efforts not only need to be ramped up, but they must also be placed on a more solid institutional footing, as discussed previously. The design principles enumerated above reveal some of the things that the Salvadoran government ought not to do to advance this agenda: it should not create new state-owned enterprises; it should not assume that the government has all the necessary information on which activities to promote; it should not promote existing activities; and it should not focus on SMEs, employment, or distributional equity per se, but on growth-promoting nontraditional activities.

With regard to positive policy recommendations, we start by emphasizing an obvious, but important point. Most of the new policy opportunities are likely to emerge out of the changed mind-set of policymakers and the new information produced by the institutional framework we described above. Attempting to draw up a detailed and exhaustive list of policy innovations runs the risk that such a list would foreclose options that the council's own deliberations would eventually produce—or even foreclose the deliberations themselves (which are an important part of the policy development process). Salvadoran policymakers and business people are in a much better position to analyze the specific implications of this framework than external consultants with limited exposure to Salvadoran realities. Nonetheless, we present a few of the ideas developed during our visit to El Salvador to provide a sense of the possibilities.

### *Promoting New Activities by Covering Part of the Costs of Self-Discovery*

As discussed above, uncertainty about what new products can be profitably produced constitutes a key obstacle to economic restructuring. The resolution of this uncertainty typically requires some up-front investments, as well as productive tinkering to get imported technologies to work well under local conditions. Since both of these areas are rife with externalities (successes can be easily emulated), the economic case for subsidizing them is strong. The government therefore needs to defray the costs of the early stages of the discovery process. The coordination council can be allocated a budget for this purpose. The council's staff would then be empowered to cofinance feasibility studies, demonstration projects, technology transfer arrangements, and the preparation of business plans in nontraditional activities.

44. The following quote from a recent survey of El Salvador's trade practices indicates the low level of intensity of these activities: "The Salvadoran authorities have pointed out that there are no programmes of assistance either for individuals or enterprises or for regions or specific factors to facilitate modernization and adjustment to structural change" (WTO, 2003, p. 61).

We envisage a contest in which private sector entrepreneurs would bid for these resources by bringing forward potential investment proposals. The criteria for financing such studies would be that they relate to substantially new activities in El Salvador; they have the potential to provide learning spillovers to others in the economy; and their proponents are willing to submit to oversight and performance audits. Eligible projects would include both new products and new processes (for example, the importation of foreign engineers to explore technology upgrading). As a rule, cofinancing is a good instrument because entrepreneurs must risk their own resources as well the government's. The chief objective would be to create a pipeline of new investment ideas within El Salvador.

The costs of this mechanism should be modest since it subsidizes feasibility studies rather than investment projects. For example, if seventy proposals a year were financed at an average cost of \$500,000 each, total expenditures would amount to a quarter of a percent of GDP. External funding for a pilot project should be obtainable on concessional terms through the IDB's Multilateral Investment Fund; these funds could be complemented by other bilateral donors. Once the program is evaluated and shown to be successful, it should be expanded and funded through regular loans from the multilateral development banks. The IDB has recently funded initiatives similar to this one, especially in Chile. Moreover, oversight by the international financial institutions may increase monitoring of the initiative.

### *Developing Mechanisms for Risky Finance*

Moving a project from feasibility studies to the investment stage requires a sizable expenditure of resources, which must somehow be financed. El Salvador has a good banking system: credit is relatively cheap, lending spreads are low, and credit to the private sector as a share of GDP is high for a country at this level of development. Bank lending, however, is necessarily oriented toward low-risk ventures because it involves intermediating deposits, which must have a fixed price and be highly liquid. Banks thus require the presence of a secure cash flow or readily disposable collateral (or ideally both). By contrast, business development and self-discovery requires much riskier forms of financial intermediation. Ranked by increasing risk, these additional forms of finance include corporate debt, subordinated debt, preferred equity, normal equity, venture capital, and angel capital. El Salvador has a dearth of these riskier forms.

The absence of these markets is quite stark. Although the Salvadoran pension funds (AFPs) are allowed to invest up to 30 percent of their assets in BMI bonds

and up to 20 percent in Salvadoran mutual funds, fully 85 percent of AFP assets are held in the form of government debt. This is a higher ratio than in any other Latin American country (save Costa Rica) for which the International Association of Pension Fund Supervisors (AIOS) provides comparable data. The total valuation of the equity market is minimal, even though capital market laws were upgraded, the AFPs can purchase stocks, and privatization generated a potential supply of securities. In countries with strong equity markets, the markets provide a vehicle for the developers of new ideas to eventually fund their expansion or realize their gains. Early development is usually the realm of venture capital or angel capital. The presence of capital markets, however, facilitates the development of venture capital, as it offers an exit strategy for investors to realize the gains.

These markets do not develop for a number of reasons. Capital markets are highly dependent on the quality of corporate governance, as this is critical for ensuring that shareholders' interests are adequately protected by management. They also require companies to broadcast information to their shareholders and bondholders, but this information may be used by the tax authority or organized crime. The absence of a capital market, however, impedes the development of venture capital and will thus retard the process of structural transformation in El Salvador.

We propose deploying BMI as a source of venture capital to fill the gap left by capital markets. BMI has entrepreneurial and competent leadership, is profitable, and is actively looking for new opportunities. The institution could be redefined as a venture capital fund with a development philosophy along the lines discussed above. These venture capital activities should be financed with a capital contribution by the government, based on resources obtained from either privatization proceeds or loans from the multilateral development banks.

Mechanisms must also be developed to mobilize AFP resources. For example, BMI could develop a guarantee program that transfers enough risk onto its own balance sheet to allow the AFPs to participate at more appropriate levels of risk. We also envisage credit-based (as opposed to securities-based) products targeted to the AFPs. This may help the country overcome the hurdles that typically hinder the development of capital markets, such as high minimums and information disclosure.

### *Mobilizing Society to Tackle Coordination Externalities*

Coordination externalities are essentially impossible to define *ex ante*. They are very specific to each new activity. For example, tourism needs an adequate

system of road signs for foreigners to find their way around. Fruit exports require complex phytosanitary standards to be negotiated with the importing country. Airplane repairs may require an adequate system of labor certification. In all sectors, research and development needs are highly specific and changing. Forestry requires special financial arrangements to provide producers with an annual income out of their highly bunched cash flow. The government needs to have the capacity to identify and resolve these multiple coordination failures.

To address these changing coordination needs, the government has to rely on the ability of the whole society to identify these opportunities. Since opportunities are highly specific, it is logical to involve the respective business sectors in their identification. Chambers of commerce and other forms of social organization can play a constructive role in this area. However, economists are reluctant to offer these organizations a significant role in the policy process, seeing them mainly as rent-seeking activities. And they have a point, in that influence can be used to divert public resources for private or corporatist gains. Moreover, expectations by others in society that this behavior will be prevalent will reduce the social legitimacy of any initiative.

This poses a dilemma. Businesses, farmers, and labor associations are uniquely placed to identify problems that need fixing, but they can abuse their relationship with the government for private gain. One solution is to imbue the relationship with mechanisms that establish its legitimacy. Making the proposals available to the public, having them formally scored by the technical secretariat of the council with regard to their impact on the fiscal accounts and on society as a whole, and publicly discussing these assessments would naturally force proponents to be serious about the logic behind their request for public support. Ideas that cost nothing and bring some benefits should face little opposition. Ideas that have fiscal costs in the present and benefits in the future should be considered within the public investment budget. Ideas that do not bring a net fiscal gain over the long run would likely receive much less favor. The idea behind such mechanisms is to mobilize the identification of coordination opportunities while constraining rent-seeking behavior.

### *Socializing Part of the Cost of General Technical Training*

New activities will face an absence of adequately trained personnel. Innovating firms are likely to provide insufficient training, however, for fear that labor turnover will reduce the returns to on-the-job training. This will inevitably delay the process of self-discovery. There is thus a strong case for subsidizing training for vocational, technical, and language skills. INSAFOR, with annual spending

of U.S.\$17 million, is a modest step in the right direction. It is correctly focused on providing demand subsidies, rather than producing directly, but it insists on purchasing the training programs itself instead of compensating firms for their training expenditures. We propose that INSAFOR design programs especially for innovating firms. In the context of a new venture, it should offer to provide monetary grants to cofinance training efforts.

### *Actively Promoting Foreign Direct Investment*

The problem of structural transformation of any developing country is related to the identification of the particular products and processes that can be efficiently carried out there, given the country's endowments, institutions, practices, and relative prices. Potential foreign investing firms face a very similar problem. They know how to make certain products, but do not know if they can do so in a given untested country. They must guess what potential problems may arise, given the unknown setting. As before, their experimentation generates spillovers of valuable information. This justifies an active promotion policy.

To date, El Salvador has acted to reduce transaction costs and discrimination against foreign firms. The investment law (Decree 732 of 14 October 1999) guarantees freedom of investment and national treatment, notes the relatively few exceptions, and establishes a single entity—the National Investment Office (ONI)—to process required formalities. The country has also signed numerous bilateral agreements on reciprocal promotion and protection of investments. These measures reduce obstacles and facilitate investment.

However, a country should be prepared to engage in more active strategies to attract investment, particularly foreign investment. First, special attention should be given to new activities that can potentially lead to exports. Second, there is no a priori reason to favor foreign over domestic firms, but foreign firms often already possess a technology that has yet to be tested in the country. Defraying part of the cost of this test may encourage the initial investment. Activities that should be considered include providing information about the country to relevant international corporations (PROESA does this at a modest level); reducing setup costs, for example, by establishing any necessary specific local infrastructure; adjusting inefficient existing regulations; and providing cash subsidies for the training of personnel in new activities.

These specific activities must be deployed in a context that demonstrates to potential innovating firms, whether foreign or domestic, that the government has an interest in their productive success. The uncertainties involved in innovation for exports means that all contracts are going to be incomplete, because

unexpected situations will arise. It is critical that the country develop a reputation for managing these unforeseen circumstances in a cooperative spirit, without opportunism. By the same token, firms should not feel that they are protected against low productivity stemming from fundamental conditions.

### **Concluding Remarks: Promoting Self-Discovery as a Central Task of Economic Policy**

The current Salvadoran administration has inherited a valuable asset in the policy reforms of the 1990s. The present policy regime is insufficient, however, for the task of creating an environment in which the new production ideas that can carry the country forward can be identified. A concerted strategy needs to be developed for this purpose. As we have argued in this paper, the strategy needs to address the following issues: inadequate private returns to self-discovery by both local and foreign investors; coordination and economies-of-scale problems in new activities; the identification of policy obstacles to new activities and specific public investment requirements; incentive problems in labor training; and mechanisms to intermediate financial resources in high-risk operations.

In this paper, we have sketched out ideas on how to address these issues. Our goal is to open a new debate—not only in El Salvador, but in Latin America more broadly—on the design of proactive policies aimed at accelerating economic restructuring and growth in the region. Such a debate is overdue and badly needed.

# Comments

**José Miguel Benavente:** This is a very interesting paper that tries to answer a fundamental question for a least-developed country: what do Salvadorans have to do to trigger growth? El Salvador has implemented most of the standard recipe to foster growth, without any success. In other words, it has been a great reformer, but a poor performer.

The authors argue that the problem may be related to the growth of production, suggesting a close view to the production side. By putting the firm at the heart of the analysis, they develop a conceptual framework (published elsewhere) in which the expected return to accumulating human or physical assets is given by the multiplication of saving or investment efforts times appropriability times productivity.<sup>1</sup> Therefore, three strategies clearly deserve some attention in analyzing how private returns have evolved in El Salvador in recent years.

The authors spend almost a third of the paper convincing the reader—without any econometrics—that neither investment/savings and education nor appropriability issues should be viewed as a strategy for triggering growth in the case of El Salvador, although it is useful to sustain it. With regard to the third strategy, they argue that enhancing innovation and productivity should be a major goal for this country in the coming years, but not in the traditional (comparative advantage) sectors like cotton, coffee, or even *maquila*. A structural transformation should be implemented, meaning the creation of new sectors. This transformation should be addressed as a policy issue.

But why do new industries not take off on their own? The authors suggest that El Salvador is characterized by at least two kinds of pathologies: (i) government failures, featuring inadequate information, problems of capture, and time inconsistency, and (ii) market failures, related to technology externalities, coordination externalities, and informational externalities. Although I do agree

1. See Hausmann, Rodrik, and Velasco (2005).

with the analysis and interpretation of these pathologies, I would add one more closely related explanation for El Salvador's lack of growth: institutional failure. By this, I mean the poor quality of agents directly related to production: entrepreneurs, public agencies, and the environment in which they interact.

A recent study on entrepreneurship shows that Salvadoran entrepreneurs create their firms as a necessity and not as a source of prosperity, in contrast with other countries like Chile.<sup>2</sup> The study shows that Chilean entrepreneurs were better trained, older, worked previously as an employee, and were more goal-oriented than their Salvadoran counterparts. Although firms in both countries started with a similar size, on average, the Chileans had grown much faster after three years. More than 200 entrepreneurs in El Salvador cited serious financial constraints and taxation barriers that jeopardize entrepreneurship. At the same time, Salvadoran social, production, and institutional networks are very weak, especially in aspects related to information and technology.<sup>3</sup>

Public agencies also matter. The study does not say much about this issue for the Salvadoran case, but the Chilean examples given stress that institutions are important. For example, Fundacion Chile, the Production Development corporation (CORFO), and Pro Chile, as correctly suggested in the paper, were a fundamental pillar in the creation of new industries (sectors), but a critical point is that these institutions were in place before the growth was triggered in Chile.<sup>4</sup>

In the same line, I would thus add a fourth element to Summers' trinity, which Hausmann and Rodrik cite: namely, that managerial and entrepreneurial skills matter.<sup>5</sup> Structural changes to the production matrix will (also) depend on their animal spirits, risk tolerance and teamwork, as well as on the previous institutional setup.

Finally, technological innovation is another component in this complex puzzle for El Salvador. Figures for this country show a very poor performance in all the main science, technology, and innovation indicators.<sup>6</sup> Although this is an interesting issue not only for El Salvador but also for countries like Chile, policymakers have only recently become convinced that R&D and related activities are a crucial source of growth. We do not have to forget that most industrialized countries became developed because they invested in technology—not the other way round.

2. Kantis (2004).

3. See Kantis (2004, table 2.10).

4. A historical view of the development of these institutions and their importance for the creation of new industries in Chile can be found in French-Davis and others (2000).

5. Summers (2003).

6. See Benavente (2005).

**Francisco Rodríguez:** The paper by Ricardo Hausmann and Dani Rodrik constitutes a useful and enlightening application of the theoretical ideas proposed in two previous papers.<sup>1</sup> The comments in this note center on three aspects of the paper under discussion: the theoretical framework, the identification of binding constraints on growth in El Salvador, and the conditions necessary to implement the authors' policy proposal.

## The Theoretical Framework

The authors take as their starting point the theoretical framework expressed in an equation that expresses the growth rate as a multiplicative constraint of the saving and investment effort, the appropriability of returns, and the level of productivity. The authors suggest that an appropriate approach to thinking about how to increase growth in this setup is to identify the "most binding" constraint, that is, the constraint that generates the highest payoff when it is relaxed.<sup>2</sup> This thinking is put forward in the context of a more general framework, where the focus is on welfare and not growth, in their earlier work.<sup>3</sup> For the moment, however, I stick to the simpler framework of the above-mentioned equation, which I rewrite, following Hausmann, Rodrik, and Velasco, as

$$(1) \quad \gamma_c = \frac{r(1-\theta)(1-\psi)(1-x) - \rho}{1-\beta},$$

where  $\gamma$  is the growth rate of consumption,  $r$  the rate of return (which depends on productivity),  $\theta$  the level of uninternalized external effects,  $\psi$  the level of distortionary taxation,  $(1-x)$  the expected appropriability,  $\beta$  a measure of constraints on borrowing, and  $\rho$  the discount rate.

1. Hausmann, Rodrik, and Velasco (2005); Hausmann and Rodrik (2003).

2. Hausmann, Rodrik, and Velasco (2005) actually show three ways to identify the most binding constraint. In section 2.1.5, they suggest ignoring second-best interactions across markets and focusing on the largest direct effect, that is, that with the largest associated Lagrange multiplier. Their formal growth analysis in section 3, however, focuses on the total effect on balanced-growth welfare of eliminating different distortions, effectively incorporating second-best interactions in the calculation. In contrast, their applied analysis in section 4 discusses the total (direct and indirect) effect on a reduced-form equation for economic growth. It is this third approach that is repeated in the paper under discussion, and the one I follow in this note.

3. Hausmann, Rodrik, and Velasco (2005).

The authors tackle the analysis of growth strategies in this context by first defining which distortions must be taken as given (thus making explicit the fact that their analysis is second-best) and then asking which of the remaining distortions will generate the highest marginal payoff when relaxed.

The first point that I would like to make about this framework is that it relies on the implicit assumption that the analyst can change at most one constraint at any given moment in time. This assumption may or may not make sense, but it is not made explicit at any point in the analysis. It is therefore difficult to understand exactly what implicit constraint the authors are making.<sup>4</sup>

Let me make this case in the simplest context possible. Suppose borrowing constraints, productivity, and appropriability are given, and policymakers are trying to decide whether to focus their efforts on reducing distortionary taxation ( $\psi$ ) (by eliminating wasteful government expenditure) or reducing production externalities ( $\theta$ ) (by promoting the type of policies for self-discovery suggested in the text). Suppose the policymakers have two choices: they can completely eliminate one of these two distortions, or they can reduce both of them by half. What would they choose?

Let  $\Delta_j$  denote the payoff from eliminating the constraint,  $j = \{\theta, \psi\}$ , and let  $\Delta_{\frac{1}{2}(\theta, \psi)}$  denote the payoff from reducing both of them by one-half. One can assume, without loss of generality, that  $\theta \geq \psi$ . It is then straightforward to prove that  $\Delta_\theta > \Delta_\psi$ . The payoff from completely relaxing one constraint is thus the same as that which comes from completely relaxing  $\theta$ :

$$(2) \quad \Delta_\theta = \frac{r(1-\psi)(1-x)\theta}{1-\beta}.$$

Now suppose the policymaker can reduce the two constraints to half of their present value at the same time. That is, instead of concentrating on eliminating the most binding constraint, the policymaker decides to target a combination of the two constraints. The payoff will now be

$$(3) \quad \Delta_{\frac{1}{2}(\theta, \psi)} = \frac{r(1-x)\left[\left(\psi/2\right) + \left(\theta/2\right) - \left(30\psi/4\right)\right]}{1-\beta}.$$

4. In Hausmann, Rodrik, and Velasco (2005), the strategy of focusing on the most binding constraint is presented as one of a list of potential reform strategies, which also include wholesale reform, doing as much reform as well as possible, second-best reform, and targeting the biggest distortions. The option of contemplating combinations of reforms that generate the highest direct payoffs is not explicitly considered.

Note that

$$(4) \quad \Delta_{\frac{1}{2}(\theta, \psi)} > \Delta_{\theta} \Leftrightarrow \theta < \frac{\psi}{1 - (\psi/2)}.$$

Since  $\psi < \psi/[1 - (\psi/2)]$ , there is a range of parameter values for which it will be optimal to follow the strategy of relaxing both constraints instead of only one. This range can be quite large. For example, if  $\psi > 2/3$ , then reducing both constraints by half will always be better than relaxing one constraint completely.

In this simple example, I have assumed that the elimination of one constraint is as feasible as the reduction of two constraints to half their starting values. This is, of course, an arbitrary assumption, but the point I wish to stress is that the costs of changing policies need to be modeled explicitly to uncover the possible trade-offs of adopting alternative reform strategies. In the meantime, I would caution against assuming a priori that one should concentrate on only one constraint at a time.<sup>5</sup>

An alternative—and more appealing—interpretation of the Hausmann-Rodrik-Velasco framework, which the authors seem to have in mind at several points in their exposition, involves a policymaker who does not know what the second-best solution is.<sup>6</sup> She might know what the first-best solution is, but that is of little use because some constraints cannot be relaxed. She simply knows that she faces a highly nonlinear problem, in which reforms that might appear to be in the direction of the first-best solution can have disastrous welfare consequences. In that context, the Hausmann-Rodrik-Velasco framework proposes what seems to be a sensible strategy for reaching the second-best solution: relax one constraint at a time, in a direction that will generate the greatest increase in growth at a given point in time.

5. Hausmann, Rodrik, and Velasco (2005) briefly present a more complete framework in section 3.10, where they explicitly incorporate a political constraint. The framework is totally static, however, and thus says nothing about the number of strategies that can be changed at any given moment in time. On the contrary, the solution to the problem they pose indicates a second-best policy vector, to which it will be optimal to move immediately and which is likely to differ along more than one dimension from the starting policy vector.

6. “*The difficulty with a second-best reform strategy is that many, if not most, of these second-best interactions are very difficult to figure out and qualify ex ante.* The strategy requires having a very good sense of the behavioral consequences of policy changes across different markets and activities. . . . In practice, most of the second-best interactions remain obscure, and tend to be revealed after the fact rather than ex ante” (Hausmann, Rodrik, and Velasco, 2005, p. 7, emphasis added).

Posed this way, the framework is perfectly analogous to a nonlinear programming problem, in which the goal is to maximize a function with constraints, but both the function and the constraints are so highly nonlinear that it is not clear where the maximum lies. If this analogy is correct, then the field of economic policy reform has much to learn from nonlinear optimization theory. Two basic lessons strike me as evident. The first one parallels the point already made, in that changing one policy at a time will generally be a very inefficient way of reaching the maximum of this function. The majority of techniques with desirable convergence properties in nonlinear optimization tend to change all the parameters at every step, after identifying the direction of maximum increment that can be achieved. Restricting the process to changing only one parameter at a time may not only increase the time that it takes us to reach an optimum (thus generating welfare losses during the transition), but also increment the probability of not converging to the optimum.

A second lesson to be learned from the analogy is that the possibility of getting stuck at a local, but not global, maximum must be taken seriously. Many appealing characterizations of the development process take the form of models with poverty traps, from which it can be difficult to escape. For example, Murphy, Shleifer, and Vishny's classic characterization of underdevelopment describes how an economy's low productivity and low levels of aggregate demand reinforce each other, generating a low-level equilibrium in which the economy is not large enough to adopt more efficient technologies, and its low productivity generates a low aggregate demand.<sup>7</sup> From the perspective of relaxing the most binding constraints, it may appear that there is not much that can improve this economy's situation. Given its low productivity, higher aggregate demand will do little except generate inflation; given its low aggregate demand, the introduction of more efficient technologies will generate huge losses for whoever pays the fixed cost of techniques that only make sense in large markets. In this context, the model requires that policymakers think not only about changing both policy dimensions at once, but also about the need for large changes in them. These examples are not meant to argue that the Hausmann-Rodrik-Velasco framework should be rejected. Indeed, they prove its usefulness precisely because they are not issues that are likely to be raised in this way without their framework. As with any useful model, however, its use requires not only knowing how to apply the framework, but also knowing when to think outside it.

7. Murphy, Shleifer, and Vishny (1989).

## The Binding Constraints of the Salvadoran Economy

The Hausmann-Rodrik-Velasco methodology leads to a one-by-one analysis of the different potentially binding constraints on economic growth. The strategy is one of inference by iterative elimination: the authors argue that the binding constraint cannot be the availability of credit (as that is plentiful), human capital (as it shows low returns), or appropriability (as the country has good protection of property rights and macroeconomic policies); therefore, the problem must be low returns to investment. This is where the self-discovery theory kicks in: since traditional sectors are not doing very well, the problem must be that investors have not yet discovered the new sectors that must replace them. Discovering new sectors requires solving the informational externalities that drive the authors' self-discovery theory: El Salvador needs to create a strategy that creates incentives for entrepreneurs to discover where the country has a comparative advantage.

Although the authors may be right in pointing to the lack of incentives for gathering information on the economy's comparative advantage as an important component of Salvador's growth problems, the strategy of iterative elimination makes their argument heavily dependent on the lack of relevance of other constraints. As emphasized above, a strategy of thinking about one binding constraint will not always be the most productive one; most likely, at times several constraints will be binding, in the sense that relaxing them together, even by a small amount, would be better than concentrating on just one. In their iterative elimination, the authors rush too rapidly to dismiss a number of potential constraints that may be playing an important part in El Salvador's growth problems.

First is the role of education. The authors echo Pritchett's argument that expansions in the fraction of educated individuals that are unaccompanied by increases in the economic growth rate are indicative of a small social payoff to education.<sup>8</sup> As Pritchett recognizes, this result is true to the extent that the quality of education is held constant. If the quality of education is falling, then increases in the number of educated workers may not necessarily translate into a higher quality-adjusted workforce, and there is no reason why they should affect the growth rate positively. Frankly, I would be surprised if the decade of political violence in El Salvador had not had a substantial effect on the capacity of its school system to deliver adequate education. Indeed, the authors present an interesting piece of evidence that points in this direction.

8. Pritchett (2001).

According to the data in table 2, the wage premiums earned by the cohort of 36- to 40-year-olds in 1992 were on average 25.6 percent greater than those of the cohort of 25- to 30-year-olds. This age difference corresponds to the difference between those who were educated before the war and those who were educated during the war. The data seem to confirm that the quality of schooling fell considerably during the war. Whether it recovered is a question that will require further research and time to answer. Education may well be a binding constraint in El Salvador, and a high payoff may be achieved by raising educational quality.

This argument may apply more broadly to many public goods and services, whose provision suffered both from the war and from inadequate reconstruction efforts. In discussing whether taxes may be too high, the authors admit that “tax revenue may be so low that the government lacks the resources to provide an adequate supply of public goods needed to make economic activity productive.” The authors do little to pursue this explanation further, but it seems to me that herein lies a major, if not the main, constraint to economic growth.

Many pieces of evidence point to a widespread collapse in the provision of public goods during the war (and inadequate recovery in the aftermath). For example, El Salvador’s war was characterized by a prolonged attempt by the Farabundo Martí National Liberation Front (FMLN) guerrillas to cause the regime’s economic collapse by demolishing the nation’s infrastructure. Existing estimates put the cumulative total cost of economic sabotage by the FMLN between 1980 and 1990 at \$1.0–1.5 billion. From 1981 through mid-1987, the FMLN destroyed or seriously damaged eighty-three of the country’s ninety-two major bridges, including the country’s two largest, which connected San Salvador to other departments.<sup>9</sup> In an economy traditionally reliant on a small number of agricultural exports, destroying roads and bridges also meant destroying the means whereby export goods are brought to markets, and it may be associated with the subsequent lackluster performance of the economy’s traditional export sectors.

A much less tangible example is the rule of law. El Salvador’s homicide rate, at 50.2 per 100,000, is now the second highest in the world, and it is 9.12 times that of neighboring Costa Rica and 6.9 times that of Nicaragua.<sup>10</sup> In a 1999 survey, 55 percent of Salvadorans stated that crime would justify a coup d’état.<sup>11</sup> Some analysts have traced the high violence rates in El Salvador to

9. INS (2000).

10. WHO (2002, table 2.1).

11. Wood (2001).

the rapid demobilization of the two armies and the lack of an effective restructuring of police forces, which represent particularly costly state failures.<sup>12</sup>

These facts all point to the possibility that the prolonged civil war caused a severe decline in the state's capacity to provide a broad array of public goods and services that are necessary for the safe conduction of profitable economic activity. The emphasis on sound macroeconomic policies and fiscal solvency prevalent during the post-war period may have coincided with a less-than-adequate channeling of resources to the rebuilding of the nation's economic and social infrastructure. Similarly to the pattern identified by Easterly and Servén for Latin America more broadly, the economy may have been saving in financial resources at the cost of sacrificing important public productive assets.<sup>13</sup> The resulting lack of public and social capital will function as a binding constraint on present economic growth, which will manifest itself in the low perceived rates of return on domestic investments that the authors identify.

### **Varieties of Intervention**

When it comes to policy design, Hausmann and Rodrik have a difficult task. The type of distortion that they identify can only be addressed by government intervention, yet the history of government intervention aimed at creating successful export industries in Latin America is not very encouraging. As they recognize, the problems of state capture and dynamic inconsistencies of intervention policies are pervasive. The authors must convince their readers that they have come up with an institutional design that is relatively protected from those sources of policy failure. The authors' proposal contains three key components that are meant to create these conditions. First, the strategy must be seen as a high-level goal of the government, so that it will garner the commitment of the political leadership and force bureaucrats to take their jobs seriously. Second, it must have a high degree of transparency and accountability, so that bureaucrats will not be able to disguise their actions from the general public. Third, there must be a set of rules (for example, built-in sunset clauses, clear benchmarks for success or failure, and incentives targeted to new activities) that will stop the initiative from serving other purposes than those for which it is designed.

12. See, for example, Kincaid (2000).

13. Easterly and Servén (2003).

This design makes sense in theory, but I have my doubts as to whether it is likely to work in practice. Too many high-profile initiatives in the region have ended up in the dustbin of economic ideas, quickly forgotten after the political benefits to be gained from their implementation were reaped. It is difficult to believe in the power of rules, legal or otherwise, in a continent whose most recent political developments include the ouster of a president for abandonment of his post while he was sitting in the presidential palace. Transparency and accountability have little effect unless those to whom you are accountable actually have an incentive to make you behave differently.

Contrasting these elements with successful cases of developmentalist strategies reveals a striking fact: the regimes that were able to successfully engineer these strategies did not tend to implement them through bodies whose actions were very transparent or accountable (at least in the sense of public accountability, or the possibility of embarrassment stressed by the authors) or that were bound by strict limits on their actions. One of the few things that the Korean, Taiwanese, and Chilean states all shared was a high degree of discretion in their capacity to design, implement, and modify policy interventions and an almost absolute protection from public criticism.

Another common element in these three experiences is that they all arose in response to a real threat of disappearance of the private sector through a takeover by extreme-left regimes. They can thus be seen as instances of a particular type of Hobbesian solution, in which private elites concede much of their power to the military because this is the only way that they can be saved from the greater threat of wholesale expropriation by an extremist regime. In all three societies, economic success was seen as a necessary condition for the sustainability of the regime and for the survival of the capitalist way of life. As Wade points out in reference to Korea and Taiwan, “whereas the governments of most other developing countries know that they can fail economically and not risk invasion, the governments and elites of these countries knew that without fast economic growth and social stability this could well happen. This led them to make an unusually close coupling of national security and economic strength.”<sup>14</sup>

My reading of this evidence is that successful developmentalist strategies will be carried out by states that are sufficiently strong and autonomous to impose the social goal of development over the short-run interests of the private sector, yet also sufficiently oriented toward a development strategy in

14. Wade (1992, p. 314). This exact phrase could be used to describe Chile if “invasion” is replaced with “left-wing insurgency.”

which the private sector plays a central role. It is in that sense not surprising that the most successful development experiences of the postwar era involve the three societies that survived the strongest threat of the imposition of a communist regime.

Does the Salvadoran state fit this criterion? The fact that it arises from the prolonged civil war against a left-wing armed insurgency would seem to indicate that it does. Yet the genesis of the Nationalist Republican Alliance (ARENA) is quite different from that of the military regimes cited above, with a much stronger role played by traditional economic families in its constitution and definition of basic goals.<sup>15</sup> The evidence regarding the lack of provision of basic public goods in the postwar period is not encouraging, in that it does not seem to signal a state that is intent on a developmentalist goal. Perhaps recent political developments in the country and in the region will spur elites into allowing the emergence of a state that is sufficiently strong and autonomous to stave off the challenge of the left. In my view, only such a state is capable of seriously carrying out proposals like those put forward by Hausmann and Rodrik.

15. See Griffith and González (2002).

## References

- Benavente, José Miguel. 2005. "Caracterización del sistema innovativo nacional de El Salvador." Washington: World Bank.
- Easterly, William, and Luis Servén (eds.). 2003. *The Limits of Stabilization: Infrastructure, Public Deficits, and Growth in Latin America*. Stanford University Press.
- Easterly, William, Norman Loayza, and Peter J. Montiel. 1997. "Has Latin America's Post-Reform Growth Been Disappointing?" *Journal of International Economics* 43(3-4): 287-311.
- Edwards, Sebastian. 2003. "Desaceleración del crecimiento económico en El Salvador: un análisis exploratorio." San Salvador: Fundación Salvadoreña para el Desarrollo Económico y Social.
- Evans, Peter. 1995. *Embedded Autonomy: States and Industrial Transformation*. Princeton University Press.
- Fernández-Arias, Eduardo, and Peter J. Montiel. 2001. "Reform and Growth in Latin America: All Pain, No Gain?" *IMF Staff Papers* 48(3): 522-46.
- Ffrench-Davis, Ricardo, Oscar Muñoz, José Miguel Benavente, and Gustavo Crespi. 2000. "The Industrialization of Chile during Protectionism (1940-82)." In *An Economic History of Twentieth-Century Latin America*, vol. 3: *Industrialization and the State in Latin America*, edited by Enrique Cárdenas, José A. Ocampo, and Rosemary Thorp. Macmillan.
- FUSADES (Fundación Salvadoreña para el Desarrollo Económico y Social). 2003. *Oportunidad, seguridad, legitimidad: bases para el desarrollo*. San Salvador.
- Griffith, Kati, and Luis Armando González. 2002. "Notas sobre la 'autonomía' del Estado. El caso de El Salvador." In *El Salvador: la transición y sus problemas*, edited by Rodolfo Cardenal and Luis Armando González. San Salvador: UCA Editores.
- Hausmann, Ricardo, Lant Pritchett, and Dani Rodrik. 2004. "Growth Accelerations." Harvard University.
- Hausmann, Ricardo, and Dani Rodrik. 2003. "Economic Development as Self-Discovery." *Journal of Development Economics* 72(2): 603-33.
- Hausmann, Ricardo, Dani Rodrik, and Andrés Velasco. 2005. "Growth Diagnostics." Harvard University.
- IDB (Inter-American Development Bank). 1997. "*Latin America after a Decade of Reforms: Economic and Social Progress in Latin America, 1997 Report*." Washington: Inter-American Development Bank.
- Imbs, Jean M., and Romain Wacziarg. 2003. "Stages of Diversification." *American Economic Review* 93(1): 63-86.
- INS (Immigration and Naturalization Service). 2000. "El Salvador: FMLN Guerrilla Attacks on Infrastructure and Commerce in San Miguel and the Response of the El Salvadoran Armed Forces Third Brigade." Washington: INS, Resource Information Center. (Available at [uscis.gov/graphics/services/asylum/ric/documentation/SLV01002.htm](http://uscis.gov/graphics/services/asylum/ric/documentation/SLV01002.htm), accessed 9 May 2005.)

- Kantis, Hugo (ed.). 2004. *Desarrollo emprendedor: América Latina y la experiencia internacional*. Washington: Inter-American Development Bank.
- Kaufmann Daniel, Aart Kraay, and Massimo Mastruzzi. 2005. "Governance Matters IV: Governance Indicators for 1996–2004." Policy research working paper 3630. Washington: World Bank.
- Kincaid, Douglas A. 2000. "Demilitarization and Security in El Salvador and Guatemala: Convergences of Success and Crisis." *Journal of Interamerican Studies and World Affairs* 42(4): 39–58.
- Klinger, Bailey, and Daniel Lederman. 2005. "Diversification, Innovation, and Imitation off the Global Technological Frontier?" Washington: World Bank, Office of the Chief Economist for Latin America and the Caribbean. Mimeographed.
- Loayza, Norman, Pablo Fajnzylber, and César Calderón. 2002. "Economic Growth in Latin America and the Caribbean: Stylized Facts, Explanations, and Forecasts." Washington: World Bank.
- López, Humberto. 2003. "El Salvador: Growing in the Millennium." Washington: World Bank.
- Lora, Eduardo, and Felipe Barrera. 1997. "A Decade of Structural Reforms in Latin America: Growth, Productivity, and Investment Are Not What They Used to Be." Working paper 350. Washington: Inter-American Development Bank, Office of the Chief Economist.
- Lora, Eduardo, and Ugo Panizza. 2002. "Structural Reforms in Latin America under Scrutiny." Washington: Inter-American Development Bank.
- Loungani, Prakash. 2003. "Interview with Arnold Harberger: Sound Policies Can Free up Natural Forces of Growth." *IMF Survey* 32(13): 213–16.
- Murphy, Kevin M., Andrei Shleifer, and Robert W. Vishny. 1989. "Industrialization and the Big Push." *Journal of Political Economy* 97(5): 1003–26.
- Porter, Michael E., and Arturo Condo. 2003. "Atlas Electrica: International Strategy." Case 704-435. Harvard Business School.
- Pritchett, Lant. 2001. "Where Has All the Education Gone?" *World Bank Economic Review* 15(3): 367–91.
- Rodrik, Dani. 1995. "Trade Strategy, Investment, and Exports: Another Look at East Asia." Working paper 5339. Cambridge, Mass.: National Bureau of Economic Research.
- Roll, Richard, and John Talbott. 2001. "Why Many Developing Countries Just Aren't." University of California at Los Angeles.
- Summers, Lawrence H. 2003. "Godkin Lectures." Harvard University, Kennedy School of Government.
- Wade, Robert. 1992. "East Asia's Economic Success: Conflicting Perspectives, Partial Insights, Shaky Evidence." *World Politics* 44(2): 270–320.
- WHO (World Health Organization). 2002. *World Report on Violence and Health*. Geneva.

- Wood, Elizabeth Jean. 2001. "From Civil War to Political Democracy in El Salvador: Advances and Outstanding Challenges." University of Notre Dame, Kellogg Institute.
- World Bank. 2005. *World Development Indicators*. Washington.
- World Economic Forum. 2003. *The Global Competitiveness Report, 2002–2003*. Oxford University Press.
- WTO (World Trade Organization). 2003. "El Salvador: Trade Policy Review." Geneva.

Copyright of *Economia* is the property of Brookings Institution Press and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.