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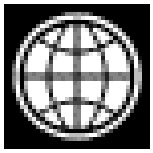
Honduras
Investment Climate Assessment

(In Two Volumes)

Volume I

November 27, 2004

Finance, Private Sector and Infrastructure
Latin America and the Caribbean Region



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MAIN ABBREVIATIONS AND ACRONYMS

ADR	Alternative Dispute Resolution
CAFTA	Central American Free Trade Agreements
CAS	Country Assistance Strategy
CEPAL	*Comisión Económica para América Latina y el Caribe*
CITE	*Centro de Innovaciones Tecnológicas*
CNBS	*Comisión Nacional de Banca y Seguros*
COHCIT	*Consejo Hondureño de Ciencia y Tecnología*
COHEP	*Consejo Hondureño de la Empresa Privada*
DGPI	*Dirección General de Propiedad Intelectual*
ENEE	*Empresa Nacional de Energía Eléctrica*
FIAS	Foreign Investment Advisory Service
FDT1	*Fondo de Desarrollo de Telecomunicaciones (Primero)*
FDI	Foreign Direct Investment
FIDE	*Fundación de Inversión y Desarrollo de Exportaciones*
GDP	Gross Domestic Product
GNI	Gross National Income
IC	Investment Climate
ICA	Investment Climate Assessment
ICS	Investment Climate Survey
ICT	Information and Communication Technologies
IDB	Interamerican Development Bank
IMF	International Monetary Fund
IV	Instrumental Variables
INFOP	*Instituto Nacional de Formación Profesional*
ITU	International Telecommunication Union
ISO	International Organization for Standardization
MSME	Micro, Small and Medium Enterprises
NAC	National Anti Corruption Council
NAFTA	North American Free Trade Agreements
NGO	Non Governmental Organization
NQC	National Quality Council
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
P	Productivity
PPIAF	Public-Private Infrastructure Advisory Facility
PRSC	Poverty Reduction Support Credit
PRGF	Poverty Reduction and Growth Facility
RE	Random Effects
R&D	Research and Development
TFP	Total Factor Productivity
WBI	World Bank Institute

Honduras Investment Climate Assessment

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ABSTRACT

The 21st century reality is that Honduras does not compete only with its Central American and Latin neighbors. Thanks to the ongoing Central American Free Trade Agreements (CAFTA) negotiations, the country will have the opportunity to accelerate the pace of its integration into the global economy. Improving the investment climate is essential for Honduras to take advantage of the opportunities provided by CAFTA, attract foreign investment, diversify exports and increase growth. This report identifies the critical constraints on private sector productivity and growth in Honduras and provides policy recommendations for addressing them, including a summary of the Government's ongoing and planned initiatives and some additional suggestions. The diagnostic is based on the results of a survey of a stratified sample of 450 Honduran manufacturing firms. The report focuses on four key areas of the investment climate: (1) *governance*, (2) *infrastructure*, (3) *innovation, quality certification and labor skills*; and (4) *finance*. Overall results of the ICS and of an econometric analysis based on the results of the survey show that bottlenecks in all four investment climate variables increase Honduran firms' costs of doing business and reduce their productivity.

The Report comprises two Volumes. Volume I includes a detailed summary of the entire Report. Volume II includes five background chapters. The first chapter presents on overview of the structure of the Honduran economy, while each of the other four chapters analyzes the findings of the Investment Climate Survey and provides policy recommendations in one of the four areas of the investment climate.

Chapter 1 (in Volume II) provides an overview of **CAFTA, the Honduran economy and the investment climate**, focusing on the importance of microeconomic factors and structural reforms to improve them. It also includes a summary of findings of the survey and overall implications for the public and private sectors.

Chapter 2 focuses on **governance, including red tape, corruption, and crime**. Registering a firm in Honduras is a lengthy process and bribes are often required to obtain services, permits and procurement contracts from the government. Red tape is also associated with informality, which has a significant negative impact on Government's revenues. Honduran firms do not trust the judicial system to settle disputes. Especially in the North and West, firms are frequently victimized by crime, which increases the cost of doing business. The Government has already made substantial progress toward reducing administrative hurdles, improving the public sector financial management system, reducing corruption, streamlining and increasing the transparency of procurement processes, reforming the criminal code, strengthening the rule of law, promoting judicial independence, improving judiciary performance, and reducing crime. The chapter includes a variety of recommendations geared towards accelerating business registration and operating procedures, reducing corruption and improving transparency in public management, improving the transparency of procurement processes, improving the overall effectiveness and efficiency of the judicial system, and reducing crime.

Chapter 3 addresses **infrastructure**, including power, telephony, ICT and transportation. Honduran firms suffer from frequent, lengthy power outages, often wait six months to a year to establish a telephone connection and, when they have a phone, frequently suffer interruptions. The Internet is not a common means of communication for Honduran firms, especially micro, small and medium enterprises (MSMEs). Transport losses account for about one-third of total quantifiable losses due to infrastructure and, looking forward, Honduran firms consider transport bottlenecks to be key constraints on taking advantage of the opportunities offered by CAFTA. The Government has already begun opening parts of the power, telecom and transportation sectors to private competition. The chapter contains further recommendations for improving the reliability of the infrastructure and meeting growing demand for electricity, communications and transportation.

Chapter 4 is concerned with **quality, innovation and labor skills**. Many Honduran firms are unaware of the benefits of international quality standards certifications or unable to acquire them. Honduran firms buy new equipment to remain competitive in local markets, but seem not to innovate or introduce advanced technology to improve productivity and become competitive in international markets. Although almost half of Honduran firms offer training to their employees, most of it is internally provided. The quality of the public training system is poor, and the courses it offers are largely irrelevant to the needs of Honduran businesses. The Government has several projects planned or underway to help increase the demand for quality certification and accreditation, improve the supply of quality systems, and attract FDI. Several proposals have been offered for reforming vocational training, and, although none have passed into law, consensus is building. The chapter contains detailed recommendations to ensure successful implementation of a good quality infrastructure, encourage innovation, cultivate select value-added Foreign Direct Investment, increase technology transfer, and stimulate demand for and reform the supply of vocational training in Honduras.

Chapter 5 considers the **access to and cost of credit**. Small and medium enterprises in Honduras find it especially difficult to access credit, and pay higher interest rates than larger firms. The Government has already made progress toward improving protection of property rights, increasing access to credit, and enhancing the overall structural stability of the financial system. Further possible measures to facilitate the pledging of assets and improve both public and private credit registries — among other things - are described in the chapter.

Any policy agenda to improve the investment climate, particularly one organized around the diverse measures suggested in this report, requires broad-based strategies aligning many different policies and close collaboration among the private sector and many different government Ministries. Constant Government progress to reduce constraints on economic growth, as well as firms' dynamic pursuit of new markets and innovation, are both essential in order for the country to take advantage of the opportunities offered by the new trade agreements, improve growth and fulfill social expectations. Improving the investment climate in Honduras will require cross sector strategies and actions geared towards aligning economic policy, public management, infrastructure, technology, FDI, innovation, training and finance policies. The Government is moving in the right direction — the Competitive Commission is an excellent example of effective collaboration between the private and the public sectors. Continuing public-private effort to improve the country's investment climate will allow Honduras to become a dynamic player in the Central American Region and a fast growing, competitive economy in the global market.

INTRODUCTION

1. Objectives, rationale and scope of the study. The objective of this study is to evaluate private sector constraints on growth in Honduras. The study does this by presenting the results of a survey of 450 Honduran manufacturing firms conducted during the year 2003 (the Investment Climate Survey, or ICS) to assess key bottlenecks that detract from productivity and growth. The study argues that ongoing trade liberalization initiatives will not, *per se*, lead to sustainable increased economic growth in Honduras, and that reducing bottlenecks to firms' operation is necessary for Honduras to exploit the opportunities offered by the trade agreements and start on a path of sustainable growth and reduced poverty. The study addresses constraints on growth by looking at governance, access to infrastructure and credit, technology adoption and labor skills. These four variables stood out on the basis of quantitative evidence from the ICS, including both descriptive statistics and the results of an econometric analysis based on the ICS data.

2. Target audience. This study targets both the Honduran public and the private sectors. Its main aim is to stimulate and inform a dialogue between the Honduran Government and representatives of local firms in all areas related to the investment climate. Its dissemination objectives are two fold. One the one hand, we hope that the report will help the Government devise a microeconomic reform agenda that could help increase private sector's productivity and growth. On the other hand, we would like the study to help the private sector identify new potential for growth, become more dynamic, identify and exploit linkages with local and foreign firms and public institutions that could increase its innovation and productivity levels. The study does not attempt to stipulate a comprehensive and final set of policy reforms. Rather, it should be considered as a first input for discussion and for design of a Government Action Plan to improve the country's investment climate.

3. Organization of the study. Key findings of the Study are summarized in Volume 1 — Executive Summary and Policy Recommendations. The detailed Investment Climate Assessment is included in Volume II, which is divided into five main sections. The first section presents a brief assessment of the performance of the Honduran economy over the past few years, an overview of the key elements of the investment climate and a brief description of the Honduras Investment Climate Survey. The rest of the report analyzes the results of the survey in the four key areas of the investment climate:[1] (1) business-government relationships — with specific reference to red tape, procurement, the judiciary system and crime; (2) infrastructure — energy, information and communication technologies (ICTs), and transport and logistics; (3) the capacity of Honduran firms to move up the value chain by introducing innovations, adapting new technologies, certifying the quality of their processes and products, and improving the skills of their labor force; and (4) access to and cost of finance. For each variable, the report examines the results of the survey, presents complementary evidence to better assess the country's progress in each area, and suggests key policy recommendations.

4. Comparator countries. To the extent possible, Honduran firms' performance and views are compared to those of firms located in other Central American countries and other Regions. Comparator countries have been chosen on the basis of three criteria: (1) similar income countries (e.g., Ecuador, Nicaragua, Guatemala), (2) countries that are competing with Honduras (e.g., China and Bangladesh — both operating in the apparel manufacturing sector) and (3) countries where the World Bank has already conducted investment climate surveys and for which the results of the surveys are available and comparable with those of Honduras.

[1] This report does not address the country's macroeconomic framework. Macroeconomic policies are covered by the IMF's PRGF Program. See Chapter One in Volume II for further justification for the focus on microeconomic constraints.

5. Sources of information for diagnostic and policy recommendations. The report describes the main findings of the survey and provides policy recommendations for each area covered by the survey, including a brief summary of the Government's ongoing and planned initiatives and some additional suggestions. The ICS is a diagnostic tool that helps identify key bottlenecks for firms' development and growth, but it is not designed to devise policy recommendations. The policy recommendations included in the study draw from background papers that were prepared to complement the findings of the ICS and to design the World Bank Honduras Trade Facilitation and Productivity Enhancement Project[2]. Other essential documents used as references for policy recommendations include the World Bank Country Assistance Strategy (2003) and the Honduras World Bank PRSC Matrix (2004) — providing short- and medium-term recommendations that the Government and the World Bank has discussed during the past few months. Each Chapter of the Study will include references to documents used for additional recommendations related to specific topics.

[2] See a description of the Project at: http://web.worldbank.org/external/projects/main?pagePK=104231&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P070038

CHAPTER 1. EXECUTIVE SUMMARY

1.1 Improving the investment climate in Honduras is essential for the country to take advantage of the opportunities provided by CAFTA and to move to a path of sustainable growth. Thanks to the ongoing Central American Free Trade Agreements (CAFTA) negotiations, Honduras will have the opportunity to accelerate the pace of its integration into the global economy in the next few years. However, trade liberalization, *per se*, will not be sufficient to ensure that Honduras exploits the benefits of CAFTA. Cross country studies and a recent report on the impact of NAFTA on the Mexican economy show that improving countries' overall investment climate is a necessary condition to support attraction of foreign investment, export diversification and private sector productivity and growth.[3]

1.2 This report identifies the critical constraints on firms' productivity and growth in Honduras, and provides policy recommendations for addressing them. The diagnostic is based on the results of a survey of Honduran manufacturing firms covering various aspects of the investment climate. Converging evidence from a number of studies has identified key variables across four areas of the investment climate that are critical for exploiting the opportunities of trade openness and increasing private sector productivity and growth:[4] (1) *governance*, including red tape, corruption and crime;[5] (2) *infrastructure* services that affect business productivity, including energy, telephony, Internet access, and transport; (3) the capacity of firms to move up the value chain by improving *innovation, quality certification and labor skills*; and (4) access to *finance*. The analysis presented in this report is based on the results of a detailed evaluation of the investment climate in Honduras using a unique database of manufacturing firms interviewed over the course of the last year. The investment climate survey (ICS) was conducted by the World Bank and a private company, and covers a stratified sample of 450 firms in Honduras. The 12 sectors represented in the sample are responsible for 82 percent of total manufacturing employment in the country. The 14 departments included in the sample are responsible for more than 99 percent of employment in those sectors.

1.3 Overall results of the ICS show that bottlenecks in all four categories of investment climate variables affect Honduran firms both in terms of their managers' perceptions and in terms of their productivity — and increase their costs of doing business. Between forty-seven and sixty-three percent of Honduran surveyed firms reported that problems related to *governance* and *finance* are key constraints on growth — see Figure 1-1. The firms also reported that, in 2002, they lost 12.9 percent of their total sales because of problems related to *governance* and inefficiencies in the *infrastructure* (7.6 percent and 5.3 percent of total sales respectively) — see Figure 1-2. These findings are reinforced by a systematic econometric analysis to estimate the impact of different investment climate (IC) variables on firm productivity.[6] The results, summarized in Table 1-1, indicate that IC variables related to governance, infrastructure, innovation and access to finance are highly statistically significant and that the direction of

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[3] On the effects of NAFTA, see G. Perry, D. Lederman, W. Maloney and L. Serven (World Bank, 2003). On the potential effect of CAFTA, see F. Jaramillo *Que Sabemos de los efectos del CAFTA?* (World Bank, 2004).

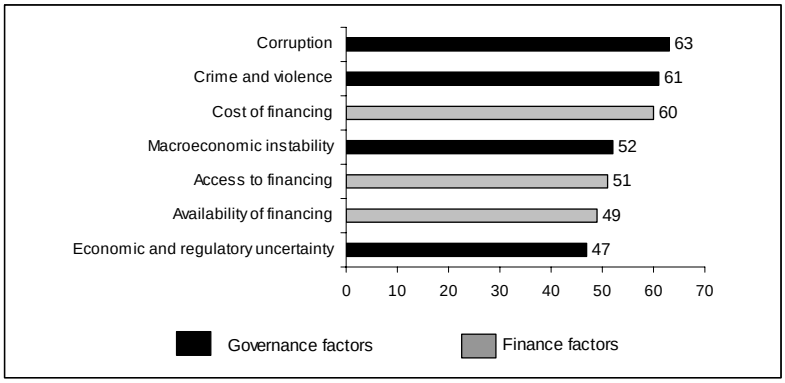
[4] See specific bibliographic references on this in the chapters of the report.

[5] Note that while a sound macroeconomic framework is a necessary precondition for improving a country's investment climate, macroeconomic issues are not covered in this report. (See the Introduction and Chapter One).

[6] For the purposes of the present report, total factor productivity (TFP), or more generally *productivity*, is considered to be that part of the production of goods (sales) that is not explained by the main production inputs (labor, intermediate materials and capital). We employ several productivity measures depending on the functional form of the production function considered, the level of aggregation and the estimation methodology. ANNEX A provides detailed information about this econometric approach and the empirical results obtained.

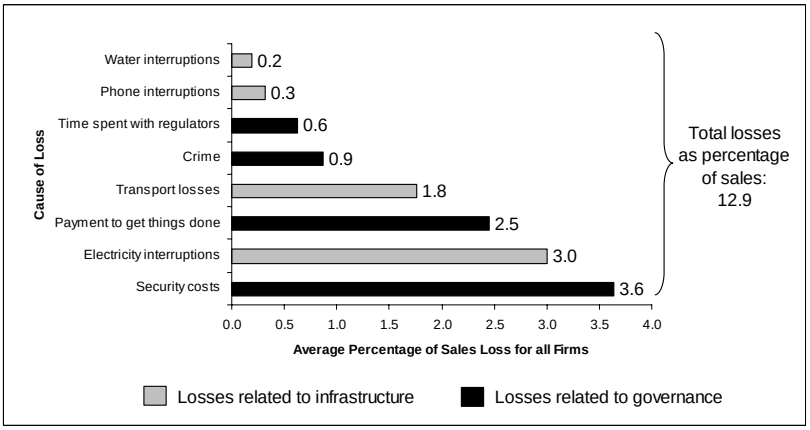
the impact, for all the productivity measures used, is as expected. Governance, corruption and crime-related variables have in general a negative impact upon productivity. Thus, for example, an extra day spent on government inspections reduces productivity between 5.8 percent and 10.7 percent. Infrastructure variables are also relevant for productivity. Among these, internet access has a particularly strong positive effect — having Internet access raises productivity between 11 percent and 15 percent. There is clear evidence that labor training and innovation — as measured by external training provided for firm employees and the share of staff engaged in R&D — increase productivity, with a strong positive impact in the case of labor training. The effects of quality certification and other forms of innovation — such as the share of computer-controlled equipment — as well as of education of the labor force are also positive, although less pronounced[7]. Finally, financial and corporate governance variables also exhibit positive large and statistically significant effects on productivity. In fact, the highest positive effects on productivity are estimated to stem from having externally audited financial statements.

Figure 1-1: The perspective of Honduran firms — main constraints on growth. Percentage Values.



Source: Honduras Investment Climate Surveys.

Figure 1-2: Major quantifiable causes of lost revenue for Honduran firms.



Source: Investment Climate Surveys.

[7] Those variables were significant, and with similar elasticity values, if estimated by random effects (RE).

Table 1-1: Elasticities and Semi-elasticities of Investment Climate (IC) Variables on Productivity, after Controlling for Other Firm, Industry and Country Characteristics

	Restricted OLS Estimation			Unrestricted OLS Estimation		
	Solow Res.	1 step		Solow Res.	1 step	
		Cobb-Douglas	Translog		Cobb-Douglas	Translog
Red Tape, Corruption and Crime						
Number of days spent in inspection-and regulation-related work	-0.097** [0.043]	-0.099** [0.043]	-0.058 [0.041]	-0.101** [0.043]	-0.107** [0.043]	-0.068* [0.041]
Fraction of sales undeclared to the tax authority for tax purposes	-0.601** [0.263]	-0.612** [0.260]	-0.416* [0.243]	-0.676** [0.267]	-0.767*** [0.255]	-0.593** [0.250]
Payments to deal with bureaucracy "faster", percent of sales	0.031** [0.012]	0.033*** [0.012]	0.015 [0.012]	0.031** [0.012]	0.030** [0.012]	0.013 [0.012]
Number of criminal attempts suffered	-0.029** [0.012]	-0.031*** [0.012]	-0.018 [0.011]	-0.032*** [0.012]	-0.029** [0.011]	-0.018 [0.012]
Infrastructure						
Average duration of power outages (log)	-0.095* [0.052]	-0.085* [0.050]	-0.072 [0.047]	-0.088* [0.052]	-0.075 [0.050]	-0.024 [0.049]
Days to clear customs for imports (log)	-0.097** [0.041]	-0.106** [0.042]	-0.125*** [0.039]	-0.105*** [0.041]	-0.105** [0.043]	-0.119*** [0.041]
Shipment losses (fraction of sales lost)	-1.860** [0.850]	-2.119** [0.867]	-1.229 [0.811]	-1.948** [0.852]	-2.530*** [0.871]	-2.063** [0.825]
Dummy for Internet access	0.147*** [0.038]	0.144*** [0.041]	0.119*** [0.039]	0.139*** [0.038]	0.128*** [0.039]	0.111*** [0.037]
Quality, Innovation and Labor Skills						
Fraction of computer-controlled Machinery	0.119 [0.082]	0.13 [0.082]	0.132* [0.079]	0.117 [0.083]	0.131 [0.085]	0.084 [0.086]
Fraction of total staff engaged in R&D	0.594** [0.287]	0.667** [0.294]	0.581** [0.270]	0.589** [0.285]	0.607** [0.280]	0.580** [0.268]
Dummy for ISO quality certification	0.154 [0.102	0.167 [0.103]	0.024 [0.093]	0.142 [0.101]	0.176* [0.105]	0.105 [0.103]
Fraction of total staff with secondary education or higher	0.036 [0.058]	0.048 [0.059]	0.03 [0.059]	0.033 [0.057]	0.054 [0.060]	0.056 [0.062]
Dummy for training provided beyond "on-the-job" training	0.117*** [0.036]	0.105*** [0.036]	0.089*** [0.033]	0.116*** [0.036]	0.110*** [0.036]	0.098*** [0.034]
Finance and Corporate Governance						
Dummy for incorporated company (*Sociedad Anonima*)	0.150*** [0.039]	0.140*** [0.042]	0.115*** [0.038]	0.146*** [0.039]	0.132*** [0.040]	0.117*** [0.038]
Dummy for external audit of financial Statements	0.168*** [0.042]	0.159*** [0.042]	0.121*** [0.038]	0.170*** [0.042]	0.150*** [0.042]	0.116*** [0.038]
Other Control Variables						
Age of the firm (log)	0.050** [0.020]	0.049** [0.020]	0.046** [0.018]	0.051*** [0.20]	0.043** [0.019]	0.032* [0.018]
Share of imported inputs (fraction)	0.113** [0.049]	0.101** [0.051]	0.096** [0.047]	0.110** [0.049	0.074 [0.051]	0.101** [0.048]
R-Squared	0.20	0.20	0.36	0.26	0.51	0.94

Notes: (1) Robust standard errors shown in parentheses under coefficient estimates.
(2) Significance is given by robust standard errors. * significant at 10 percent; ** significant at 5 percent; *** significant at 1 percent.
(3) The regressions include a constant, industry dummies, country dummies and year dummies.

Box 1-1: Productivity Analysis: Some background information to help interpret the results of Table 1-1

In order to evaluate the economic impact of investment climate (IC) variables on productivity, data were collected through the Investment Climate Surveys (ICS) of Honduras, Nicaragua and Guatemala. In the econometric analysis, all the observations from the firms of these three countries were pooled, generating a combined sample of 1,300 observations[8]. This pooling is justified on grounds that if we were to conduct productivity analysis for each country separately, we would not be able to make reliable inferences for industries due to the insufficient number of observations.[9] Table 1-1 presents the results of the pool regression estimated by ordinary least squares (OLS) to get the impact of investment-climate (IC) variables on six different measures of productivity (see Box A-1) for more on the six productivity measures). Each row of the table shows the estimated regression coefficients of each explanatory IC variables, obtained by running each (log) productivity measure on all the explanatory IC variables listed in the table, as well as controlling for industry, country and year dummies. In addition, the estimated regressions also control for the age of the firm and the share of its imported inputs. The table shows elasticity and semi-elasticity estimates for both restricted and unrestricted OLS regressions, depending on whether the input coefficients of the production function are allowed to vary by industry (unrestricted), or assumed the same for all industries (restricted).[10] For purposes of reading the table, the IC variables are divided into several categories related to: Red Tape, Corruption and Crime; Infrastructure; Quality, Innovation and Labor Skills; and Finance.[11]

1.4 The next sections will analyze the findings of the ICS in each of the four areas of the investment climate and provide preliminary policy recommendations for each of them. For each investment climate variable, the report examines the results of the survey, together with complementary evidence, and suggests key policy recommendations. The diagnostic findings are mainly based on the ICS, while policy recommendations draw from background notes produced in preparation for this study and on existing documents that are currently informing the dialogue between the Honduras Government, the World Bank and other donors. The Matrix attached at the end of the Executive Summary provides an overview of all key issues related to the Investment Climate and of suggested policy recommendations.

RED TAPE, CORRUPTION AND CRIME

1.5 Registering a firm in Honduras is a lengthy process. Although interactions with the Government are less cumbersome once the firm is registered, bribes are often required to obtain services and permits from the Government. Both lengthy registration and inspection times have a negative effect on productivity. It takes twice as long to register a firm in Honduras as it does in Guatemala, and three times as long as in Nicaragua — about 90 days on average, and more (about 125 days) for small and medium firms. Registration also takes longer for firms located in large cities

[8] The sample covers 461 firms in Guatemala, 370 – in Honduras, and 469 – in Nicaragua.

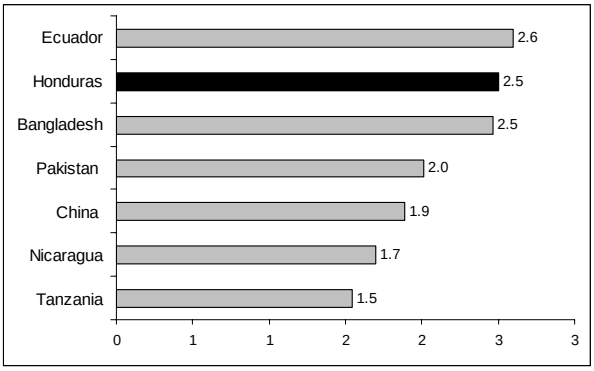
[9] For example, in such a country-by-country analysis we would end up with an industry having only 5 observations in Honduras. However, pooling the three countries together gives at least 33 observations in the industry with the minimum number of observations, thus allowing for more reliable statistical results.

[10] For more detail on the restricted and unrestricted estimation and the functional forms of the production function see Box 1-1.

[11] Evaluations in terms of (log) productivity gains and losses were also performed country by country. The detailed results of this analysis are included in Chapter One and Annex C of Volume II. They complement the pooled (Guatemala, Honduras and Nicaragua) panel data elasticity estimations with an estimate of the average (log) productivity gains and losses due to the average IC variables of Honduras.

(Tegucigalpa and San Pedro) and for companies operating in industries — such as food, plastics and chemicals — that require special health or environmental permits. Once a firm is registered, interacting with the Government seems to be less of a hurdle. The amount of time that registered firms spend dealing with inspections (about 12 days per year) is less than in Nicaragua and about the same as in Guatemala. However, as shown in Figure 1-3, Honduran firms pay 2.5 percent of their sales in bribes to persuade the government to get things done, more than in all comparator countries except Guatemala and Ecuador. The econometric analysis (see Table 1-1) indicates that firms that make payments to "speed up" bureaucratic processes enjoy a productivity increase — an additional payment of 1 percent of sales increases firms' productivity between 1.3 percent and 3.3 percent. Honduran firms' productivity is also significantly affected by the number of days they spend on inspection- and other regulation-related activities — one day spent interacting with the Government results in a decrease in productivity ranging from 5.8 percent to 10.7 percent.

Figure 1-3: Percentage of sales lost due to unofficial payments to "get things done," all firms — international comparison



Source: Investment Climate Surveys

1.6 The productivity losses of the Government due to the high informality can be estimated at about 6 percent of GDP. The lengthy and expensive procedures required to register and operate a firm in Honduras increase the cost of doing business and — together with other factors, such as taxes — contribute to the country's large informal economy. Independent estimates place the informal economy in Honduras at 50 percent of GDP[12], about the same as in Guatemala and well above the level in Nicaragua (45 percent), the Dominican Republic (36 percent) and Costa Rica (26 percent). Given that the average value-added tax in Honduras is 12 percent, a rough estimate of the Government's losses due to informality would be 6 percent of GDP.[13] Reducing informality to the level seen in Costa Rica, for example, would increase Honduras' GDP by about 3 percent. The regional regression results (Table 1-1) indicate that the proportion of annual firm sales that are not declared to the tax authorities exerts a significant negative effect on firm productivity. A one-percent increase in the fraction of undeclared sales (out of total annual sales) is estimated to reduce firms' productivity between 0.42 percent and 0.77 percent. This negative effect of the average share of undeclared sales on average country-wide productivity is stronger in Honduras than in Guatemala, and of a slightly lower magnitude than in Nicaragua.[14]

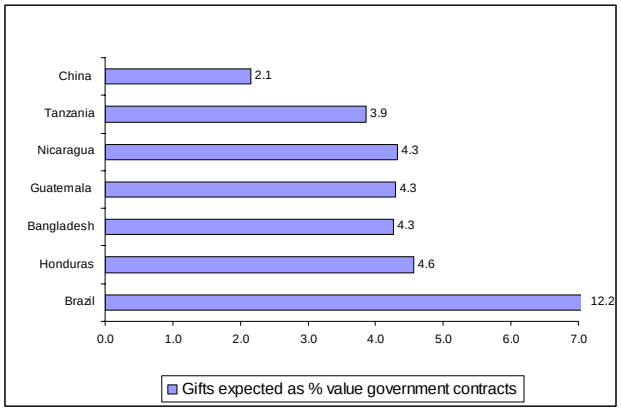
[12] Figures from Schneider (2002).

[13] A precise computation would require estimating the profits of the informal private sector and considering losses related to both the value added tax and other taxes, such as income and property taxes, that informal firms don't pay.

[14] See Chapter One and Annex C in Volume II.

1.7 Honduran firms often pay bribes to obtain procurement contracts from the Government and do not trust the judicial system for settling disputes. Surveyed Honduran firms reported expecting to kick back about 4.6 percent of the value of a procurement contract in order to obtain the award — about one third of the amount reported by Brazilian firms, but more than firms in all other comparator countries (including Bangladesh) and more than twice the amount paid by Chinese companies (see Figure 1-4). MSMEs and firms operating in some industries pay more — the kickback averages 6 percent for medium firms and about 8 percent for chemical and wood firms, while companies in the textile, garments, food and beverage sectors pay less than the average. Bureaucratic procedures should be made more transparent and efficient, so that there is no room for productivity gains (between 1.3 percent and 3.3 percent) to those firms which make payments to deal with bureaucracy faster — see Table 1-1. Among surveyed Honduran firms, 39 percent believe that the judicial system will not uphold contracts or property rights in a dispute, significantly more than in Peru and Brazil. Many firms, especially micro and small firms, avoid the courts — for example, only 19 percent of small firms with a payment dispute turned to the judiciary for help in 2002. Part of the problem may be efficiency — it takes an average of 38 weeks to have a case settled in court, and firms rely on the courts more in regions where they are relatively more efficient (e.g., the North West, where it takes 29 weeks on average to settle a case).

Figure 1-4: Percentage of contract paid to win a public contract, international comparison.

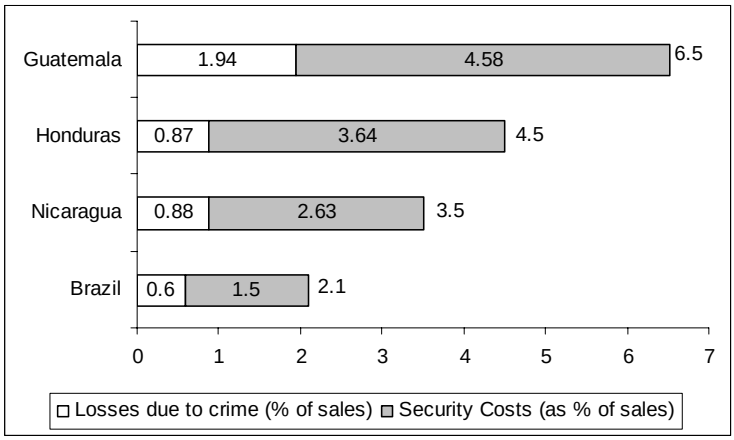


Source: Investment Climate Surveys.

1.8 Honduran firms — especially in the North and West — are frequently victimized by crime, which increases the cost of doing business and reduces their productivity. One in three firms in Honduras suffered a criminal attack in 2002, a lower rate than in Guatemala and comparable to the rate in Nicaragua. As shown in Figure 1-5, Honduran firms lost, on average, 0.9 percent of their sales in 2002 due to crime; they spent an additional 3.6 percent of sales on security measures, including guards, security walls or doors, alarms, and theft insurance. Total losses added up to 4.5 percent of sales — a significant proportion, second only to that in Guatemala, which is an outlier in the Region with respect to crime. Companies in the West and North suffer more attacks than firms located in other areas, and consequently experience higher losses and spend more on security. Large firms are victimized more often, but micro businesses lose more, presumably because their total revenues are smaller. Only 55 percent of firms that suffer a crime report it to the police, and the police solve 10 percent of the cases on average — more for crimes reported by large firms, and less for those reported by smaller firms. Despite widespread belief that organized youth groups (*maras*) are responsible for most crime in Honduras, the firms report that only about a quarter of the crimes against them are perpetrated by gangs. The econometric analysis shows that criminal attempts affect firms' productivity negatively and significantly. With every new criminal attempt, firms' productivity is reduced between 1.8 percent and 3.2 percent. The regional analysis also points to crime mostly reducing productivity in old and large firms. The country-by-country analysis

shows that the average number of criminal attempts suffered has a larger (in absolute terms) effect on average productivity in Guatemala than in Honduras and Nicaragua.

Figure 1-5: Percentages of sales lost due to crime and security expenses, all firms — Central American countries



Source: Investment Climate Surveys

Recommendations on Red Tape, Corruption and Crime[15]

1.9 Accelerating business registration and operating procedures requires continued progress toward implementing the recent reform law, the *Ley de Simplificación Administrativa*. The Government has already made substantial progress toward reducing administrative hurdles (for example, by reducing the time required for several key steps in business registration) and has recently engaged in discussions with the World Bank about specific measures to reduce the time and cost of business administration, including pilot tests in selected municipalities and public agencies (i.e., the Municipality of Tegucigalpa and the Health and Environmental Ministries). A Business Simplification Committee modeled after a similar organization in Chile will be created to implement these initiatives. The Committee will be responsible for all programs regarding simplification of business registration procedures, including identifying potential reforms, engaging with the relevant government offices, and assisting with process re-engineering. The Government and the Bank also plan to analyze in more detail the specific administrative bottlenecks faced by firms operating in industries with the most cumbersome procedures.

1.10 Reducing corruption and improving transparency in public management requires strengthening the Government's efforts to improve the public sector financial management system, making Government expenditures available for public scrutiny, improving quality and reducing corruption in the civil service, and promoting decentralization while maintaining accountability at the local level. The Honduran National Anti-Corruption Council (NAC) is already implementing a plan to reduce corruption and increase transparency in Honduras, and the Government has engaged with donors to identify and address major causes of corruption. Suggested measures to improve financial

[15] Besides the CAS and the PRSC, key reference documents for the policy recommendations provided in this chapter include: background papers on Business Registration and Operations prepared for this Study; the Honduras Country Financial Accountability Assessment (2003), background documents on Civil Service Reform prepared as inputs for the PRSC (2004), the Doing Business Report (2004), the WBI paper "Governance and Anti-Corruption in Honduras: An Input for Action Planning" (2004), and the IDB Peace and Citizen Coexistence Project for the Municipalities of the Sula Valley (2004).

management include enhancing the skills of human resources, improving budgeting and accounting processes, and providing technical assistance to the treasury. Reducing corruption in the civil service can be accomplished by restoring control over wage management, introducing competitive merit-based recruitment and promotion processes, limiting political appointments, and creating an independent regulatory body. Experience in other Latin American countries has demonstrated that the need to promote decentralization must be carefully balanced with sufficient accountability. Creating a single agency to coordinate and regulate the municipal sector, combined with reforms to the law of municipalities, would support decentralization. To improve accountability at the local level, it will be important to provide technical assistance, training, and standardized tools and processes (e.g., budget and accounting toolkits) to municipalities. Finally, overall monitoring capacity at the central level should be fortified, to ensure that implementation at the local level is conducted in an effective and transparent manner.

1.11 The Government has made substantial progress toward reducing corruption and improving efficiency in procurement, but some work remains to be done to ensure a smooth transition to the new Audit Court and to improve the transparency of procurement processes. The Government has already established a strong Office of the Auditor General, secured approval of a new State Procurement Law, and promulgated a set of regulations for an Audit Court. Before the Audit Court can fully assume its duties, the skill of its staff must be sufficiently developed — especially in the areas of internationally accepted standards and audit methodologies. In the meantime, the Government could rely on private auditing firms. The new Procurement Regulatory Office provided for in the State Procurement Law needs to be established, and its role communicated to government agencies, the private sector and the general public. Standardizing manuals, contracts, and procurement documents would also help reduce corruption, as would creating electronic procurement systems providing both public information and secure transactions. *Chilescompra*[16] is a good model for such a system, as it has successfully improved transparency, lowered transaction costs, and reduced corruption in Chile.

1.12 The Government also needs to continue its effort to promote independence, reduce corruption and improve the overall effectiveness and efficiency of the judicial system. Specific measures to increase the efficiency of business dispute resolutions are essential to improving the investment climate. While significant progress has been made in the last year to improve the criminal procedure codes, the civil code still needs to be revised — especially with regard to commercial and labor matters. Under the Maduro administration, reforms have already been passed to strengthen the rule of law, promote judicial independence, and improve judiciary performance. Implementation work has recently begun, including the enactment of a constitutional amendment increasing the independence of the judiciary and creating a transparent process for the selection of a Supreme Court, and the introduction of oral procedures, which have reduced resolution times. The Government is now considering additional measures to build judicial branch governance capacity, win the confidence and trust of citizens, and improve access to justice for high priority target populations. Possible new programs in these areas should be carefully coordinated to avoid inefficiencies and duplications. To win the trust of the business community, the Government should consider making further efforts to improve the judicial system's capacity to address business disputes, including training on corporate settlements and case management. Alternative Dispute Resolutions (ADR) mechanisms — such as mediation and arbitration — should be strengthened and scaled up, since they can ensure swift resolution of contract disputes and reduce the burden on the courts.

1.13 The Government has already taken steps in the right direction to reduce crime by focusing on measures at the local level; the firms themselves can also help. The Government has already outlawed the *maras (Ley Antimara*, August 2003*)*, decided to decentralize part of the police force, and

[16] For a description of the system, see Chile's Government Portal: http://www.worldbank.org/publicsector/egov/eprocurement_chile.htm

planned a variety of crime prevention measures including involving community police in the municipalities, amending the police personnel law, increasing police salaries, and passing the Social Policy and Coexistence Law. The Government and the IDB have also signed a loan aimed at reducing criminality in the Sula Valley through institutional support to municipalities, prevention activities, a pilot community policing program, and a communication campaign. Experience from Latin America and elsewhere suggests that similar initiatives would help in other regions with high crime rates, such as the broader Tegucigalpa area. In fact, the Government and the World Bank are currently discussing development of crime prevention pilots in several urban areas in Honduras. An effective crime prevention and reduction strategy must include comprehensive safety audits, judicial and policing reform, social prevention, and situational prevention. Rationalizing and unifying the collection and reporting of crime statistics would facilitate future studies of crime and its possible solutions. Firms can also help to reduce the frequency and impact of crime, not only by continuing to invest in security measures, but also by participating in municipal violence and crime reduction programs, by providing conflict resolution, mediation and early childhood education programs, and by sponsoring local programs for at-risk youth in their communities.

INFRASTRUCTURE

1.14 Honduran firms suffer from frequent, lengthy power outages, which point to inefficiencies in the distribution and transmission systems and somehow unreliable generation — due to high dependency on *El Cajon*, whose energy production fluctuates with hydrological conditions. The industrial price of electricity in Honduras (US$0.089/kWh) compares favorably with the prices in other Central American countries (an average of US$0.087/kWh).[17] However, 92 percent of the surveyed Honduran firms suffered at least one power cut in 2002, and the average number of cuts was 29. On average, firms were in the dark for 127 hours in 2002, resulting in losses of 3 percent of total revenues — losses were 5.1 percent of total sales *for firms that experienced a power cut*. As shown in Figure 1-6, only firms in Nicaragua lost a greater percentage of sales to power outages. Poor system reliability and high losses (transmission and distribution losses were estimated at 21 percent in 2002)[18] reflect operational inefficiencies of the vertically integrated public monopoly (*Empresa Nacional de Energía Eléctrica* — ENEE), especially in the distribution segment, as well as inadequate investment in upgrading and maintaining the system — particularly in transmission. As for generation, it is important to emphasize that the country's capacity is highly dependent on the hydrological conditions of *El Cajon* (29 percent of total installed capacity in 2003). Dry seasons reduce *El Cajon's* production significantly (e.g., in 2002, El Cajon generated 41 percent less energy than in 2000), which could create problems, especially in view of the growing demand (an average increase of 8.7 percent between 1997 and 2001).[19]

1.15 The econometric analysis shows that power outages have a limited, but significant negative effect on firm productivity. The econometric analysis of firms' productivity reveals that a one-percent increase in the average duration of power outages (measured in hours per day) results in 0.02 percent to 0.1 percent decline in productivity, depending on the particular productivity measure used[20]. The pooled regional estimates also indicate that the negative impact of outages on productivity generally affects old firms more than young ones. The country-by-country comparison establishes that the average impact of power outages on average (log) productivity is more pronounced in Honduras and Nicaragua than in

[17] CEPAL (2003), from official data provided by countries. This is the latest figure available which allows for consistent international comparisons.

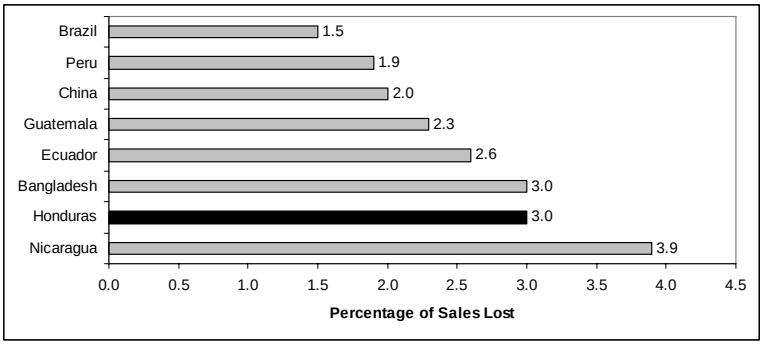
[18] CEPAL (2003).

[19] See demand projections for the Honduran electricity sector in PPIAF (2003).

[20] The variable is significant in three of the six estimated regressions, albeit at the 10 percent level of significance only.

Guatemala[21]. This finding is in line with the results of the previous paragraph, whereby Honduras and Nicaragua display the largest losses due to electric power outages.

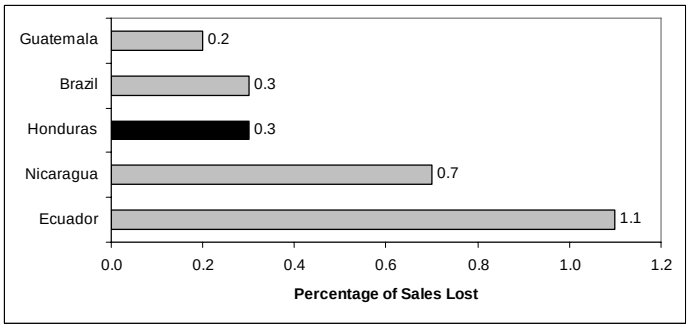
Figure 1-6: Percentage of sales lost due to power outages, all firms — international comparison



Source: Investment Climate Surveys

1.16 Honduran firms often wait six months to a year to establish a telephone connection and, when they have a phone, they may suffer interruptions. Honduran firms wait longer to obtain a telephone connection than companies located in any comparator country. Fourteen percent of surveyed firms report that they were asked for informal payments to speed the process. Among surveyed firms that had managed to acquire a telephone connection, 24 percent experienced telephone interruptions in 2002. On average, Honduran firms were disconnected for 56 hours out of the year, which translated into losses of 0.3 percent of total revenues — 3.1 percent for firms that experienced a cut — see Figure 1-7. The (relatively) high rate of telephone interruptions appears to be the result of inefficiencies in the state-owned telecom monopoly (Hondutel) and its failure to invest in network improvements. Furthermore, tariffs for international calls are high (because Hondutel cross-subsidizes local calls with artificially high international tariffs) and cellular calls are still more expensive than in El Salvador or Guatemala (because the cellular market in Honduras was dominated by a monopoly provider until last year).[22]

Figure 1-7: Percentage of sales lost due to telephone cuts, all firms — international comparison



Source: Investment Climate Surveys

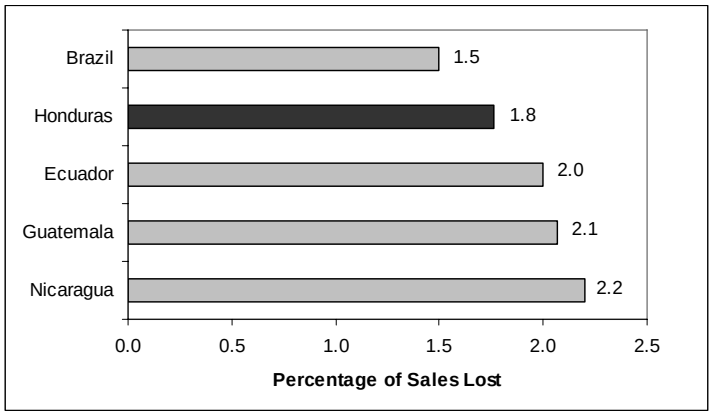
1.17 The Internet is not a common means of communication for Honduran firms — especially MSMEs — but it significantly increases the productivity of firms that use it. Only 22 percent of surveyed firms in Honduras have a website, and only half of surveyed firms use e-mail — fewer than in Peru, Guatemala, Ecuador and Brazil. Use of the Internet in Olancho and the West is even lower, and it is particularly limited among micro and small enterprises (which is expected, to a certain extent). The main

[21] See Chapter One and Annex C in Volume II.
[22] Tariffs from ITU (2003). These are the latest figures available that allow for consistent international comparisons.

causes for low Internet use are the low penetration of computers, the lack of technology skills among employees, an underestimation of the potential benefits of electronic communication on firms' productivity, and the relatively high (although decreasing) cost — the retail cost of 20 hours of dial-up Internet at the end of 2002 was estimated to be US$40, the equivalent of 52 percent of the monthly GNI per capita. [23] The pooled regressions in Table 1-1 show that firms with Internet access have from 11 percent to 15 percent higher productivity than firms without Internet access. This effect is particularly strong for old firms and is highly significant statistically in all estimated specifications.

1.18 Transport losses account for about one third of total quantifiable losses due to infrastructure. Looking forward, Honduran firms consider transport bottlenecks to be key constraints on taking advantage of the opportunities offered by CAFTA. Thirty-seven percent of surveyed Honduran firms reported suffering losses while merchandise is in transport (due to spoilage or breakage) and nine percent reported suffering transport interruptions (e.g., late deliveries of supplies or late shipments because of delays in ports, airports and the road system). Losses associated with these inefficiencies of the transport network amounted to 1.8 percent of total sales — see Figure 1-8 — one third of total infrastructure losses — see Figure 1-2. A preliminary analysis of the patterns of transport losses points to possible inefficiencies in the ports and airports of the Sula Valley (where most *maquilas* are located), and in the land transport system in the East and the North Regions. The findings of this first assessment are consistent with firms' perception that transport bottlenecks are a key constraint on taking advantage of the opportunities offered by CAFTA. Twenty-eight percent of Honduran firms (mostly large firms located in the free zone) rate air transport costs a critical constraint, while 16 percent and 17 percent list land transport costs and maritime transport costs as concerns, respectively (these are located mainly in the East and the North). Firms in the perishable industries — food and beverages — suffer greater merchandise losses when interruptions occur, indicating the importance of developing an effective cold supply chain. Shipment losses — defined as the fraction of sales lost during transportation due to spoilage, theft, breakage, and other deficiencies in the transport means used — were found to exert a statistically significant negative impact upon firm productivity. The magnitude of this negative impact ranges from 1.2 percent to 2.5 percent, i.e. a one-percent increase in the fraction of shipment losses (out of the total value of the shipment consignment) is estimated to reduce firm productivity by 1.2 percent to 2.5 percent.

Figure 1-8: Percentage of sales lost due to transport (both merchandise losses while in transport and losses due to transport interruptions) International Comparison



Source: Investment Climate Surveys

[23] ITU (2003).

Recommendations on Infrastructure[24]

1.19 Improving the reliability of the electricity supply and meeting growing demand for electricity requires improving the performance of ENEE, further promoting private sector participation, building generation capacity to ensure growing demand can be met in the medium term, reforming the sector regulatory framework and strengthening the institutional capacity of policy agencies and the regulator. Although the generation segment has been opened to private participation since 1994, transmission and distribution remain under the monopoly of the *Empresa Nacional de Energía Eléctrica* (ENEE). To bring more transparency to the operation of ENEE and better understand where the main bottlenecks are, ENEE is considering creating separate business units — and separate accounts — for its various areas (generation, transmission, dispatch and distribution). To improve distribution efficiency in the medium term, the Government should consider introducing mechanisms to involve the private sector in distribution. Expansion of electricity generation is being undertaken through the award of contracts to private firms at competitive prices. Additional investment in new hydroelectric and thermal generation is required in the medium term to ensure that increasing demand can be met. How much of the total investment needed in generation will be financed by the public and the how much by the private sector will depend on the progress in the implementation of the Central American integrated electricity market and on investment conditions. Finally, the Government needs to modernize the legal framework of the energy sector, and strengthen institutional capacity. Although several reform laws have been drafted, none have been approved. Important reforms to be pursued over the coming years — besides transforming ENEE to improve its efficiency, promoting more active private participation in the sector and increasing generation capacity — are reinforcing the sector policymaking and regulation functions, establishing a sub-secretariat of energy, strengthening the regulator and defining transparent procedures for appointing the commissioners.

1.20 The measures the Government has already taken to reform the telecom sector should be continued and augmented. The Government has already created a sector policy, introduced competition in the cellular market, started a franchise program for telephony in underserved areas, and initiated the privatization of Hondutel. The franchise program, called *Telefonía para Todos,* allows private investors to sign commercial agreements with Hondutel to provide services in areas without telephone access. Moreover, although Hondutel's exclusivity is scheduled to expire in December 2005, the Government has expedited the process by letting private parties begin providing services in 2004. Further reducing costs and improving the reliability of the telephone system will require increasing Hondutel's productivity and improving its network through allowing private participation and management, as well as rebalancing tariffs to reflect the true costs of phone calls. Allowing private participation and management in Hondutel will increase investments in the network and improve capacity. Rebalancing tariffs to reflect the true cost of phone calls would reduce the costs of international calls, benefiting exporters and MSMEs. The Government is also considering funding universal telephony schemes in remote areas, which would significantly benefit MSMEs. The fund could be designed following the minimum-subsidy model of the Chilean *Fondo de Desarrollo de Telecomunicaciones* (FDT1).

1.21 To help ensure that the conditions are right for Honduran firms to make *productive* use of ICT, especially the Internet, the Government may want to consider addressing some ICT-related policy issues, increasing its own use of ICT, and improving ICT literacy among entrepreneurs. To encourage Honduran firms to use the Internet as a business tool (e.g., to sell online) rather than just as a means of communication, the Government could pass an e-commerce law protecting intellectual property rights on the Internet and increasing online security. Because OECD evidence has shown that direct use

[24] Policy recommendations in this section draw from the CAS, the PRSC, inputs to the Honduras Development Policy Review (2004), and the PPIAF Report "Private Solutions for Infrastructure in Honduras" (2003).

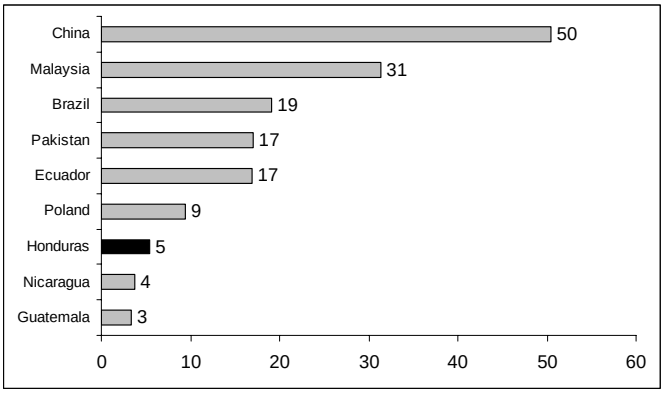
of ICT by the government is one of the most effective ways to facilitate ICT adoption in the private sector, the Honduran Government could drive diffusion of ICT among MSMEs by introducing electronic invoicing, online procurement, and Internet tax collection, among others. Training and advisory programs focused on integrating digital tools into MSMEs' business processes, coupled with online information and simplified hardware and software tools, would also help. Because general ICT training has been found to be ineffective, the training should be sector-, location- and (as much as possible) firm-specific. Public-private partnerships could also be established linking MSMEs to larger firms through e-commerce and cluster- and industry-focused portals and marketplaces. Increasing the overall ICT skills of the population is also paramount. Because experience has shown that there is a risk that Internet Centers can turn into unsustainable subsidized ventures if not properly managed, the Government might want to carefully re-evaluate the "Ciber Honduras" initiative for its impact and sustainability. In general, any universal Internet access initiatives should be developed cautiously on the basis of successful international experiences and their results thoroughly evaluated before scaling up. Best practice is to base the design and evaluation of Internet Centers on four foundations: private ownership and management, strong demand from the local business community, rich complementary assets, and coordination with local business institutions. Public sector ownership is justified only for Centers providing services to poor communities, where unsatisfactory returns on investment would not attract any private operators.

1.22 The capacity and efficiency of the logistics and transportation system can be increased by encouraging further private sector participation in the major ports, improving roads, increasing regulation of the trucking industry, and conducting in-depth studies to identify other logistical bottlenecks. The Government is currently increasing private sector participation in Puerto Cortés, Honduras' dominant national port. The port is engaged in a concessioning process aimed at increasing efficiency and expanding capacity, and the Government plan includes international certification, private sector participation in port management, expansion through private financing, and outsourcing functional services. The Government is also making an effort to improve the road that connects the south of the country with the Port, which is essential to ensure increases in traffic to the Port both from Honduras and from the neighboring countries. Additional measures that would make the port more efficient and help turn it into a regional hub include eliminating discrimination of freight coming from and going to neighbor countries, and providing logistics services such as warehousing, packaging and quality control, container repairs, a truck center, customs, and financial agencies. These services would promote customer fidelity, attract more volume, reduce unit costs, and induce the consolidation of production and distribution hubs. Turning to the air transportation system, Honduras' most important freight airport, San Pedro Sula, and other international airports, including the Toncontín airport in Tegucigalpa, were given in concession in 2000, but the concessionaire has delayed expanding capacity and charges high warehouse fees. Increasing control over the private operators for the completion of their investment programs and the regulation of their fees would help to overcome the shortcomings of the current concessions. Additional studies are necessary to identify the specific inefficiencies of the San Pedro Sula and Toncontín airports. With respect to the land transportation system, the Government could reduce transport inefficiencies by maintaining and rehabilitating the road network; concessioning some main highways might also help improve efficiency and reduce the burden on public resources. Given the aged trucking fleet and lax oversight of the trucking industry, reviewing trucking industry regulations and establishing stronger regulatory oversight of the industry could improve efficiency and reliability. Facilitating border crossing by implementing automatic, paperless, non-discretionary processes would reduce delays and smuggling, and improving security along the roads would help reduce thefts. To identify additional bottlenecks along the supply chain, future studies should target specific industries and particular regions; in fact, the World Bank is currently financing a supply chain study in Honduras focusing on the apparel, seafood, coffee and tourism industries.

QUALITY, INNOVATION AND LABOR SKILLS

1.23 Many Honduran firms seem unaware of the benefits of international quality standards certifications; those that are aware of the benefits have trouble acquiring them. As shown in Figure 1-9, only 5 percent of Honduran firms have ISO certifications[25] — ten times fewer than in China — and other quality certifications are also rare. About 18 percent of firms hold a non-ISO quality standard certificate. In both cases, most certifications are held by large firms or firms in the apparel industry. The lack of quality certification reduces firms' export potential. There are no ISO certifiers in the country and only three of the forty existing labs are accredited, which increases producers' costs and delivery times, because they must ship their samples to Tegucigalpa for testing. The econometric analysis indicates that in the regional regressions a dummy variable for having ISO certification is associated with higher levels of productivity, however the result is significant in only one out of six alternative definitions of productivity (see Table 1-1). The effect is as follows: obtaining an ISO certification is estimated to raise firm productivity from 2.4 percent to 17.6 percent. This result is particularly relevant for large firms[26].

Figure 1-9: ISO certified firms — international comparison. Percentage values.



Source: Investment Climate Surveys

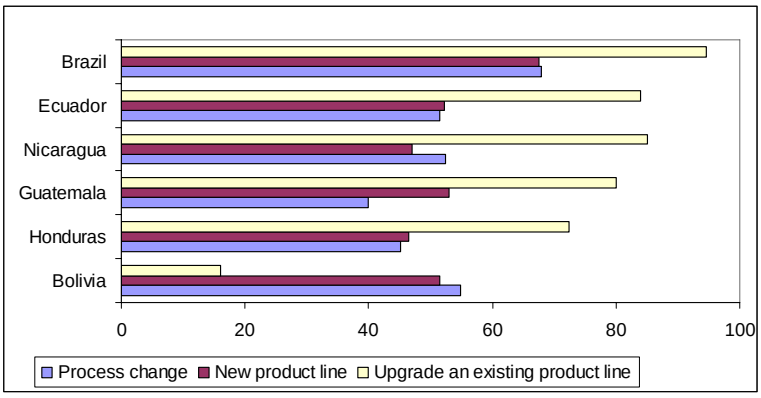
1.24 Honduran firms buy new equipment to remain competitive in local markets, but seem not to innovate or introduce advanced technology to improve productivity and become competitive in international markets. As shown in Figure 1-10, more than 45 percent of Honduran firms surveyed claim to innovate by changing processes, upgrading existing product lines, and introducing new products. Moreover, 67 percent of surveyed firms adopted a technological innovation in the past three years. In light of Honduras' overall low productivity levels, and especially the fact that — with the exception of apparel and a few higher value agricultural exports — the country relies heavily on agricultural commodities, we speculate that firms upgrade and renovate their products for the local markets. This is confirmed by the fact that while Honduran firms innovate mainly by buying new equipment, the technological content of their equipment remains low (79 percent of Honduran firms do not own computerized machines), and firms do not take advantage of technology licensing (only 3 percent of Honduran firms include technology licensing as one of their three most important channels of innovation, and only 15 percent license foreign technologies). Also, collaboration — with clients, suppliers, industry associations, or R&D institutions — plays only a marginal role in technology transfer and innovation in Honduras.

[25] For a description of ISO management system standards, see*:* http://www.iso.ch/iso/en/iso9000-14000/basics/general/basics_1.html

[26] Expanding the definition of the quality certification variable to include not only ISO, but also other types of certification, does not change the results.

1.25 Technology adoption affects firm productivity positively and generally significantly. Both the use of computer-controlled machinery and the engagement of staff in R&D activities have a positive impact on firms' productivity. The latter variable is statistically significant in all six regression specifications, the former only in one (see Table 1-1). The magnitudes of the impacts are as follows: increasing the fraction of total staff engaged in R&D activities by 1 percent is estimated to raise firm productivity between 0.6 percent and 0.7 percent. Increasing the fraction of computer-controlled production equipment (out of total equipment) by 1 percent is expected to raise firm productivity by 0.1 percent, but the significance of this result is not robust to different definitions of productivity.

Figure 1-10: Innovating firms — international comparison. Percentage values.

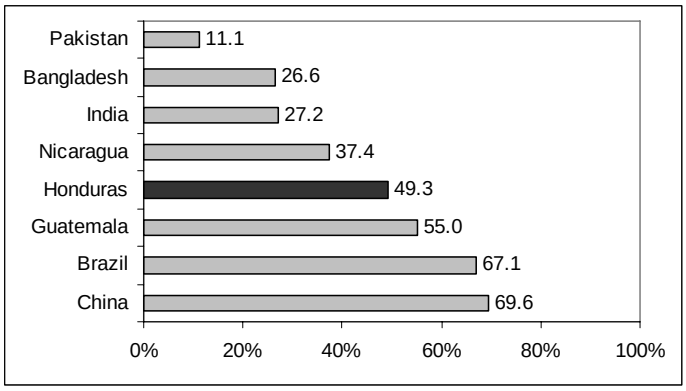


Source: Investment Climate Surveys

1.26 Although almost half of Honduran firms offer training to their employees, most of it is internally provided. The quality of the public training system is poor, and the courses it offers are largely irrelevant to the needs of Honduran businesses. As shown in Figure 1-11, about 49 percent of the private enterprises in Honduras provide formal employee training, but only 29 percent use external training. In light of the mature industries in Honduras and the lack of technological innovation, such training is often sufficient for firms' immediate needs — the most frequently cited reason for not providing formal training is that learning by doing or informal training is sufficient. Moreover, the existing supply of training by public institutions and NGOs is fragmented and inadequate, and the poor quality of public training discourages firms from using it. Almost 75 percent of surveyed firms include "lack of relevance to the company's work" as a reason for the inadequacy of public training in Honduras, and about 56 percent of them cite "lack of skilled technical personnel as trainers." Large firms and firms in more advanced industries rely on private training instead of the public offerings — e.g., 58 percent of large firms versus 11 percent of micro firms use private training. The econometric analysis indicates that training provided by firms to their employees beyond "on the job" training positively affects firm productivity (the results are highly significant at the 1 percent level in all six estimations). The estimated impact is quite large — if a firm engages in a training program for its workers other than on-the-job training, its productivity is estimated to increase between 8.9 percent and 11.7 percent. The result is especially relevant for small firms. A second variable utilized in the regression to assess the impact of employee education on productivity is the percentage of staff at each firm with secondary education or higher. This variable exhibits a positive effect on productivity, although its impact is not significant in any of the six estimated regression specifications (see Table 1-1). The estimated size of the coefficients suggests that raising the percentage of staff (out of the total number of firm employees) with secondary or higher education by 1 percent will result in an increase in productivity between 0.03 percent and 0.06

percent. Therefore, the analysis suggests that, in Honduras, training is more important than secondary education — a finding that is supported by other recent studies.[27]

Figure 1-11: Percentage of firms providing formal training — international comparison



Source: Investment Climate Surveys

Recommendations on Quality, Innovation and Labor Skills[28]

1.27 The Government plans to develop an effective quality systems infrastructure and stimulate demand for quality certification over the next few years. Both measures will hasten adoption of quality standards among Honduran firms. To help increase the demand for quality certification and accreditation, the Government is considering financing technical assistance and matching grant programs complemented by quality promotional campaigns and targeted at local firms, especially MSMEs and non-accredited laboratories in areas with a high concentration of businesses. To improve the supply of quality systems, the Government is also supporting development of a standard National Quality System, including a National Quality Council (NQC), an internationally-recognized Accreditation Authority, institutes that can certify firms to ISO and other technical standards, and an efficient National Quality Information Service. To ensure successful implementation, the NQC should be composed of a few experts that can define quality standards and coordinate the national quality systems infrastructure — its main role would be to oversee the National Quality System and act as the focal point for all standards and conformity-assessment activities. Creation of an internationally-recognized Accreditation Authority and development of ISO certifiers will increase the efficiency of accreditation and certification services in Honduras by ensuring that local laboratories and firms will not be obliged to turn to foreign authorities to get accredited and certified. Finally, rationalizing and strengthening the National Quality Information System will make information about standards, technical regulations, and conformity assessment programs in Honduras more readily available, thereby improving the country's ability to comply with the requirements of its trading partners, making it easier and cheaper for local firms to collect information on export requirements, and helping foreign firms understand the requirements for selling their goods and services in Honduras.

[27] See Coulombe, Serge, Jean-François Tremblay and Sylvie Marchand, (2004), "Literacy Scores, Human Capital and Growth Across Fourteen OECD Countries", Published by Statistics Canada.

[28] Policy recommendations in this section draw from various background papers prepared for the Investment Climate Assessment and the World Bank Honduras Trade Facilitation and Productivity Enhancement Project (2004), from Thompson D. (2003), Fuster J. (2004), from the FIAS Report on Reform of Labor Skills Training (2004) and from inputs to the Honduras Development Policy Review (2003).

1.28 Innovation can be encouraged through developing an efficient innovation infrastructure, (including centers offering technology, training and advisory services), cultivating Foreign Direct Investment, strengthening cooperation between the public and private sectors and increasing technology transfer. The Government has recently devised plans to pursue some of these initiatives. The Government intends to encourage innovation and technology diffusion among Honduran firms by supporting development of centers that will have the specific purpose of providing firms (especially MSMEs and firms in industries in which Honduras has, or could easily develop, a comparative advantage) with specific training and advisory services on equipment use and production processes, as well as access to and information about new productive technologies (such as for raw material quality control, design, manufacturing, production and testing techniques, and packaging and labeling). Such centers, which are functioning successfully in a number of countries, will be piloted in the coming years in a few areas in Honduras. The Government also plans to develop a more proactive policy to attract selected value-added Foreign Direct Investment — a key conduit for technological innovation — in order to improve the productivity of local industries with the highest growth potential. In the last few years, thanks to the effort of the Government, the Foreign Investment and Export Promotion Agency (FIDE) and dynamic local private entrepreneurs, Honduras has succeeded in attracting foreign companies that have helped increase value added and diversify the country's production and export base. Further efforts in this direction are needed in the future. Beyond the immediate benefits of increased production, employment generation and technology transfer, foreign companies can act as portals to new markets, facilitate the transfer of managerial and technical skills to domestic firms, and serve as incubators for small and medium enterprises associated with their productive chains. Further initiatives that would help the country make progress on innovation include providing incentives to strengthen cooperation between the public and private sectors with the goal of improving productive innovation — for example, by competitively allocating research and innovation funds to institutions that have clear linkages to the private sector, especially to industries with high comparative advantages. Chile, for example, has successfully developed such innovation networks in the wood and fruit industries. Tax rebate schemes, matching grants, and granting universities the right to file patents establishing ownership of their research would also stimulate innovation. Strengthening the institutional capacity of the Directorate General of Intellectual Property (DGIP) at the Secretary of Industry and Trade is also necessary to increase technology transfer from abroad via licensing, as well as to foster development of an indigenous technology center. Finally, the Government would benefit from a strong coordination body responsible for designing and coordinating implementation of a clear national innovation strategy. For a start, this would require carefully assessing the performance of, and — if it is deemed appropriate — strengthening, the *Consejo Hondureño de Ciencia y Tecnología* (COHCIT).

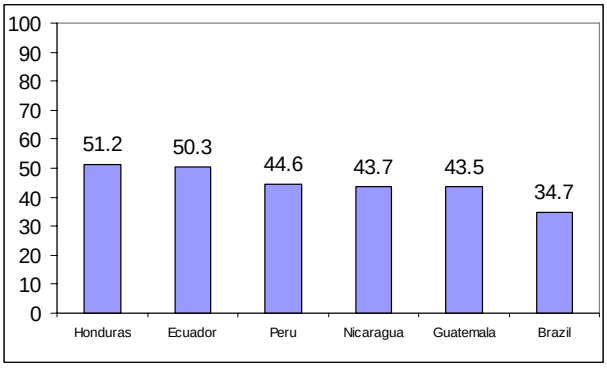
1.29 In order to stimulate demand for and reform the supply of vocational training in Honduras, the Government must first separate the governance and planning of training from the provision of training. Despite the fact that a succession of proposals for reforming vocational training in Honduras have come and gone over the past few years, there is a general consensus among them that training reform requires reducing the monopoly of INFOP, the state institution that currently handles all aspects of training, including governance, planning, financing, standards, and provision. In coordination with the private sector, the Government could establish a more autonomous national training agency to *plan and direct* vocational training, while encouraging the private sector to *provide* the training that best suits its needs, for example through a trial matching grants scheme. Although discontinuance of the national payroll levy for training in the short to medium term would lead to the collapse of the vocational training system, the Government and the private sector need to reach a consensus about how best to use the payroll levy that balances the needs of the productive sector with the social objectives and economic priorities set by the Government. The supply of training courses could be expanded through more efficient use of the funds, and the quality and, most importantly, *relevance* of the training could be improved by involving the private sector in curriculum development and provision. In order to effect these changes, the training law in Honduras would need to be revised. While the Government is aware of

the importance of these reforms and is making an effort to move them forward, their successful implementation depends on reaching consensus among various public agencies, and on careful communication of the reform objectives and implementation steps to both the public and the private sector.

ACCESS TO AND COST OF CREDIT

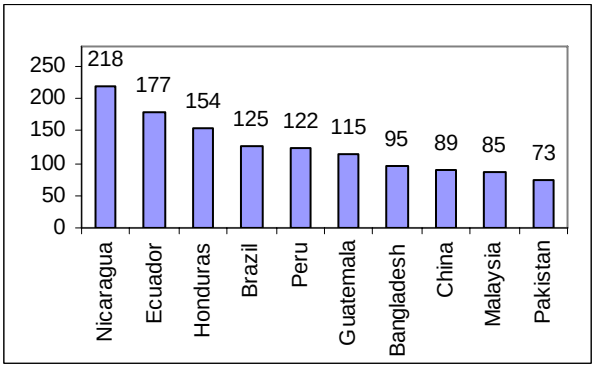
1.30 Micro and small enterprises find it especially difficult to access credit. Overall, 51 percent of Honduran firms already have access to credit (as shown in Figure 1-12), but the possibility of receiving credit from a bank varies widely with firm size. Small firms that have a need for credit find it more difficult to obtain a loan than large firms do: only 50 percent of micro firms with a demand for credit are able to receive it, compared with 73 percent of large firms. Only 31 percent of *maquilas* report a demand for credit, suggesting that their external linkages provide them with sources of reliable hard currency funds. While not the main source of funding, bank financing in Honduras accounts for 26 percent of firms' working capital needs, pairing Honduras with more advanced countries such as Brazil (the share of bank financing in Nicaragua and Guatemala is 13 percent and 14 percent respectively). Bank financing is also more common for large and medium firms. The *maquilas* are again the exception, relying much more heavily on retained earnings for working capital than any other group in the survey. Excessive collateral requirements and cumbersome bank bureaucratic procedures deter many firms from applying for a loan. About 90 percent of Honduran firms requesting a loan were asked for collateral or a deposit, and collateral requirements were high, representing 154 percent of the loan amount on average, as shown in Figure 1-13. Real estate is the most important form of collateral — firms reported pledging 60 percent of their real estate for collateral purposes, and up to 80 percent when owner assets are included. Collateral requirements especially deter micro and small firms.

Figure 1-12: Percentages of firms with loans — international comparison



Source: Investment Climate Surveys

Figure 1-13: Average value of collateral as a percentage of loan size — international comparison



Source: Investment Climate Surveys

1.31 Micro and small enterprises also pay higher interest rates. The main reason that Honduran firms cite for not applying for a loan is high interest rates (cited by 82 percent of firms). Interest rates on loans in Lempiras average 24.7 percent per year, compared with 11.3 percent for loans in U.S. dollars — higher than in El Salvador and Costa Rica. This difference reflects both currency risk and the fact that loans in USD are mainly granted to large companies. The survey results indicate that only 20 percent of firms access USD loans and that 77 percent of the firms that receive US loans are large- and medium-sized. Regression analysis shows that micro firms pay between 7 percent and 8 percent more than large firms, small firms between 3 percent and 3.5 percent more than large firms, and medium firms between 2.5 percent and 3 percent more.

1.32 Demand-side issues notwithstanding, the state of the Honduran banking system is not conducive to private sector development. The liberalization of the banking sector in Honduras during the early 1990s led to a proliferation of small and weak institutions whose quality of assets deteriorated rapidly, partly due to a lax regulatory and supervisory framework. Hurricane Mitch also contributed, together with the decline of private sector productive capacity. Currently, the Honduran financial system still faces a delicate situation, with a number of players in the system struggling with loan delinquency and non-performing loans. While banks have recently increased credit to the private sector, the level of intermediation of the banking system is still below pre-Mitch levels (80 percent ratio of credit over deposits, versus 90 percent at the end of 1998).[29] Also, despite recent portfolio diversification, bank concentration in particular sectors — and the associated risks — are still high. Finally, banks in Honduras have high operational costs, which may be affecting the cost of financial intermediation: Honduras' ratio of administrative expenses over average assets is 6.4 percent, almost twice El Salvador's.[30]

1.33 Improved financial disclosure — through producing externally-audited financial statements — raises firm productivity. The pooled regression analysis indicates that having externally audited financial statements have a highly significant and positive impact on firm productivity. By having its financial statements audited by an external auditor — which presumably improves financial disclosure and alleviates information asymmetries in the financial market — firms are estimated to increase their productivity between 11.6 percent and 17 percent. These findings are consistent with analyses and recommendations pointing to insufficient information disclosure in the financial market as causing inefficiencies.

Recommendations on Access to and Cost of Credit [31]

1.34 A first step: continue efforts to enhance the soundness and efficiency of the financial system. The Honduran financial system faces several issues that affect its functioning and limit its potential to become an efficient intermediary of funds. A continuation of the consolidation trend observed in the last few years may help increase the efficiency of banks, providing a foundation upon which improvements in terms of access and cost of finance could be built.

1.35 The Government has already made progress toward improving protection of property rights and the Immovable Assets Registry, which will help increase access to credit. Further possible measures include facilitating the pledging of assets and improving both public and private credit registries. Recent studies found that 72 percent of the 174,000 real estate urban properties in Tegucigalpa (with a total estimated value of US$2 billion) did not have registered titles.[32] The forthcoming *Ley de Propiedad* will improve registration and protection of property rigths, in turn increasing the availability of real state titles to be used as collateral. The *Ley* envisions integrating the National Cadastre with the Property Registry, which will reduce inconsistencies and disputes in authenticating rights. Possible further measures to enhance the functioning of the Registry include enhancing its processing capabilities by automating and simplifying procedures — it takes 60 days to register a piece of land in Honduras[33] versus 1 day in developed countries — and reviewing the fee

[29] Doing Business, 2003.

[30] Authors' calculation on the basis of data from the Central Bank and CNBS (2002).

[31] Policy recommendations in this section draw from a background paper on access to and cost of finance prepared for the Investment Climate Assessment, the Honduras ROSC on the Insolvency and Credit Right System and the World Bank Financial Sector Technical Assistance Credit.

[32] COHEP, 2001.

[33] PAAR, 2002.

structure of title registration. A second complementary measure that would help increase firms' opportunities to pledge more (and different) collateral is the creation of a Movable Assets Registry. This would particularly help MSMEs, for which these assets could be a primary source of collateral to obtain credit from banks. The role of the public credit registry (CNBS) needs to be clarified and distinguished from the roles of private credit bureaus, and the quality, accuracy, scope and timeliness of the information CNBS provides needs to be improved. To encourage the use of private credit registries, the government may want to consider providing an adequate framework for the use and protection of the information contained in the registries.

1.36 Improving judges' experience with — and knowledge of — commercial law cases would improve creditors' rights. Recent cross-country studies suggest that judicial efficiency in creating security titles and enforcing contracts is a primary source of spread differentials. Providing technical assistance to increase the experience of the judiciary on commercial law and credit rights would enhance firms' confidence in the judicial system, improve creditor rights, and increase the use of insolvency procedures, possibly reducing the cost of credit.

CONCLUSIONS

1.37 For Honduras to take full advantage of CAFTA and achieve sustainable private sector development and growth will require a clear investment climate agenda, effective implementation mechanisms, and close collaboration among all parties. Any policy agenda to improve the investment climate, particularly one organized around the diverse measures suggested in this report, requires aligning many different policies and establishing close collaboration among the private sector and many different government Ministries. The Honduran Government is headed in the right direction in this respect, but sustaining the momentum will require continued vigilance. The 21st century reality is that Honduras is not being compared with — and does not compete only with — its Central American and Latin neighbors. In the context of a global economy, there is a price to be paid for complacency and a premium to be gained by being a first mover. Constant Government progress to reduce constraints on economic growth, as well as firms' dynamic pursuit of new markets and innovation, are both essential in order for the country to take advantage of the opportunities offered by the new trade agreements, improve its growth performance and fulfill social expectations.

Table 1-2: Honduras' investment climate at a glance.

Topic	Honduras		Nicaragua		Guatemala		Brazil		Ecuador	
	1995	2001	1995	2001	1995	2001	1995	2001	1995	2001
Macro Indicators										
GNI per capita, PPP (current international $)[a]	2,260	2,450	1,780	1,880	3,430	3,880	6,410	7,180	na	na
Population (Millions) [a]	5.6	6.6	4.4	5.2	10.0	11.7	159.5	172.4	11.5	12.9
Exports and Import of goods (% of GDP)	72.3	66.3	82.7	99.9	37.2	39.4	14.2	23.2	47.2	54.5
GDP growth (annual %) (1990-1995 vs 1996-2001)[a]	3.6	3.0	1.5	4.6	4.3	3.6	3.2	2.1	2.7	1.7
Gross capital formation (% of GDP) [a]	31.6	32.4	24.9	33.8	15.1	15.2	22.3	21.4	21.6	25.7
Foreign direct investment, (% of GDP) [a]	1.3	3.0	4.1	8.9	0.5	2.2	0.7	4.4	0.2	6.3
Average Years of Education [b]		4.1		4.4		3.1		4.6		6.5
Governance										
Days to register a business [c]		100.0		32.0		50.0		na		na
Number of Days spent dealing with Inspections [c]		12.1		21.3		9.9		13.7		15.5
Senior Management Time Spent dealing with Regulators(%) [c]		8.5		7.8		10.3		7.8		15.6
Payments necessary "To get things done" (% Sales) [c]		2.5		1.7		3.7		na		2.6
Informal Economy (% GNI) [a]		49.6		45.2		51.5		39.8		34.4
Bribes on Government Contracts (% of Contract) [c]		4.6		4.3		3.7		12.2		9.0
Percentage of firms who don't trust the judicial system[c]		38.6		41.0		47.7		22.5		56.4
Share of firms experiencing a crime [c]		30.0		27.0		5.2		23.1		37.0
Losses due to crime (% of Sales)		3.2		3.3		3.8		0.6		1.3
Security Cost (as a percentage of total costs) [c]		3.6		2.9		5.5		1.9		5.2
Infrastructure Indicators										
Share of Firms that experienced a power cut [c]		92.1		88.7		74.1		64.1		71.1
Sales lost due to power outages (percent) [c]		3.0		3.9		2.3		1.3		2.5
Days to obtain an electricity connection [c]		32.5		31.4		62.3		25.6		41.2
Telephone mainlines (per 1,000 people) [a]	27.0	46.1	22.1	31.2	28.6	64.7	85.1	182.1	60.9	103.7
Days to obtain a telephone connection [c]		175.0		118.4		47.7		18.2		129.7
Losses due to telephone interruption (% sales) [c]		0.3		0.7		0.2		0.3		1.1
Personal computers (per 1,000 people) [a]		10.8		8.9	3.0	12.8	17.3	50.1	13.1	23.3
Share of Firms that use email for business purposes [c]		50.2		38.5		66.4		92.0		83.2
Share of Firms that use a web site for business purposes [c]		21.8		16.6		29.2		73.1		55.4
Roads, paved (% of total roads) [a]	20.4	20.4	10.0	11.0	26.0	34.5	8.9	5.5	12.7	18.9
Losses while in transport [c]		1.6		1.6		1.7		1.0		1.5
Losses due to transport interruptions [c]		0.1		0.6		0.4		0.5		0.5
Days to Clear Customs - Imports[c]		5.1		5.2		9.4		13.8		17.1
Days to Clear Customs - Exports [c]		1.9		2.0		2.3		8.4		7.1
Innovation										
Share of Firms with ISO Certification [c]		5.4		3.3		3.3		14.1		16.8
Share of Firms with Other Quality Certification [c]		17.0		20.3		11.9		9.1		21.0
Share of Firms Introducing Technological Innovations (Last two years)[c]		67.3		67.9		80.9		na		na
Share of Firms with a Foreign License [c]		15.2		9.1		19.6		7.5		23.4
Share of Firms with Computerized equipment [c]		21.4		11.1		23.5		na		na
Share of Firms providing formal training[c]		49.3		37.4		55.0		67.1		68.9
Share of Firms using private training providers[c]		43.5		37.2		42.2		74.5		na
Finance										
Interest Rate in USD for Large Firms [c]		11.0		13.3		10.2		na		na
Share of Firms with a Loan [c]		51.2		43.7		43.5		34.7		50.3
Share of Firms with Audited Financial Statements [c]		43.2		30.2		34.2		19.1		47.1
Percentage of Revenues Reported for tax purposes [c]		68.0		66.4		77.0		67.4		79.8

[a] WDI -- b "Closing the Gap in Education & Technology" World Bank 2002 -- c World Bank Investment Climate Dataset

Table 1-3: Summary Matrix

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Governance: Red Tape and Corruption	• Business registration is lengthy. Municipal licenses and health permits are particularly cumbersome. • Registration times are longer for MSMEs (125 days). • Bribes are a common practice to ensure that the Government "gets things done" (bribe tax is 2.5 percent of firms' total sales). • The informal economy is estimated at 50 percent of GDP, causing estimated tax revenue losses of 6 percent of GDP.	• Passed the *Ley de Simplificación Administrativa* (June 2002). • Sponsoring creation of a Business Simplification Committee to simplify procedures in government agencies and municipalities (by May 2004). • Started simplification pilots at the municipal level (Tegucigalpa in June 2003). • Created the Honduran National Anti Corruption Council. • Final passing of the *Ley de Propriedad* expected in the next few months. The Ley will contribute to reduce informality.	• Implement legislative and public administration reforms supporting simplification. • Scale up simplification pilots (pilots in six municipalities and six government agencies planned by 2006). • Analyze the specific needs for administrative simplification for firms in industries with high operational burdens (e.g., food, chemicals and plastics). • Reduce corruption by reforming the civil service and promoting accountability at the municipal level while building monitoring capacity at the central level.
Governance: Procurement	• Extra payments are a common practice to get contracts from the Government (4.6 percent of the value of a procurement contract on average). MSMEs and firms in the chemical and the wood and furniture industries pay more.	Initiatives undertaken to increase transparency of procurement processes: • Created an Office of the Auditor General • Approved a new State Procurement Law • Promulgated a set of regulations for an Audit Court.	• Assess procurement processes of MSMEs and firms in the chemical and wood and furniture industries. • Train staff in the Office of the Auditor General; use external auditors in the short term. • Establish the new Procurement Regulatory Office called for in the Procurement Law. • Implement online procurement, with standard manuals, bidding documents and procurement contracts. Facilitate online bidding by MSMEs.

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Governance: Judicial System	• Trust in the judicial system is low — 39 percent of firms do not believe the courts will uphold contractual rights, and only 24 percent of firms with a payment dispute went to court in 2002. • Court enforcement is slow and costly, and judges are perceived as corrupt. • Alternative dispute resolution schemes are underdeveloped.	• Passed legal reforms of the criminal code. • Enacted a constitutional amendment increasing judicial independence and creating a transparent process to select a Supreme Court. • Introduced oral procedures. • Planning a reform to increase effectiveness, efficiency and independence of the judicial system — various programs in this area should be coordinated.	• Review and improve the Civil Code — especially on commercial and labor matters. • Simplify the judicial process, and streamline specific procedures (e.g. debt collection) to reduce court delays and judicial caseload. • Train judges on corporate matters. • Evaluate existing alternative dispute resolution schemes and assess potential for scaling up.
Governance: Crime	• Crime increases the cost of doing business, through both direct and indirect losses (losses due to crime and security costs are 4.5 percent of total sales). • Crime is more frequent in the Sula Valley and for large firms, but the cost is higher for MSMEs. • Firms do not rely on the police and police intervention is ineffective, particularly for micro and small firms (with only 5 percent to 7 percent of reported cases solved). • Gangs (*pandilleros* and *maras*) are responsible for a limited percentage of crimes against firms (25 percent of the total).	• Passed the Social Policy and Coexistence Law (2002) and the *Ley Antimara* (2003). • Plans underway to involve community police in municipalities, amend the police personnel law, increase police salaries and partially decentralize the police force. • Started pilot project to prevent and reduce crime in the Sula Valley (begun in March 2003 with IDB financing).	• Expand crime prevention programs to various municipalities in both urban and rural areas. • Involve business organizations (e.g., Chambers of Commerce) and individual firms in Government initiatives to reduce crime. • Increase the effectiveness and accountability of police and public prosecutors. • Pursue further expansion of community policing. • Harmonize national statistics on crime and study the causes of crime against the corporate sector.

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Infrastructure: Electricity	• Firms experience frequent, lengthy power outages, which increase costs — 92 percent of firms have suffered at least one power outage in 2002, and firms averaged 127 hours without power. • There are operational inefficiencies of the public monopoly (ENEE) — especially in the distribution segment — and inadequate upgrading and maintenance investments — especially in transmission. • Generation capacity is not fully reliable due to high dependency on El Cajon, whose energy production fluctuates with hydrological conditions.	• The generation segment has been opened to private participation. • Expansion of electricity capacity is being undertaken through the award of contracts to private firms at competitive prices. • ENEE has started the process for creating separate business units in generation, transmission and distribution.	• Improve the overall efficiency of ENEE. • Invest in new hydroelectric and thermal generation in the medium term to meet growing demand. • Reinforce the sector policymaking and regulation functions, establish a sub-secretariat of energy, strengthen the regulator and define transparent procedures for appointing commissioners. • The Government is considering mechanisms to involve the private sector in distribution, which would in turn improve efficiency.
Infrastructure: Information and Communication Technologies (ICT)	• Firms wait 6 months on average — among the highest in the region — to get a telephone connection and, once service has been established, they may experience interruptions. • Long-distance tariffs and cellular costs are higher in Honduras than in any comparator country — although cellular costs are decreasing quickly. • The Internet is not a common means of communication for Honduran firms — especially MSMEs. • Firms' underestimation of the potential of computers and the Internet as productive technologies.	• 2003 sector policy objectives include issuing cellular licenses, establishing a financing scheme to provide fixed line services in partnership with Hondutel, reforming sector legislation, and restarting privatization of Hondutel. • Competition introduced in mobile market by awarding a second cellular license in 2003. • Created *Telefonía para Todos*, a franchising program whereby private investors contract with Hondutel to provide services in underserved areas and become eligible for a license once the sector is fully liberalized in 2005. • Planning to amend current legislation to establish a new legal and regulatory framework providing clarity and certainty to private operators. • Cyber Honduras initiative, including various ICT-related projects. Implementation has not started.	• Rebalance tariffs to reflect the true cost of calls • Continue efforts to strengthen the capacity of the Telecom Regulator. • Develop universal access telephony schemes to help connect isolated areas and MSMEs. • Diffuse ICT among MSMEs by (a) addressing ICT-related policy issues; (b) increasing Government's own use of ICT (c) improving ICT literacy among entrepreneurs and (d) developing training coupled with relevant online information and simplified tools for MSMEs. • Pass an e-commerce law protecting intellectual property rights and increasing security online. • Proceed cautiously with publicly funded Internet Centers and re-evaluate the Cyber Honduras initiative before launch.

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Infrastructure: Transport, Logistic Services, and Customs	• Losses due to transport inefficiencies affect firms' cost of doing business. • Firms rate transport (particularly air transport) as a critical constraint on taking advantage of CAFTA. • A preliminary analysis of the patterns of transport losses point to inefficiencies in the ports and airports of the Sula Valley, and the land transport system of the East and North. • The specific transport inefficiencies in the capital should be further analyzed. • Firms in the perishable goods industries are the ones that suffer most because of losses while merchandise is in transport. • Customs clearance time is adequate for exports, but high for imports, especially for small firms.	• Puerto Cortes is currently under a concessioning process aimed at increasing efficiency and expanding capacity. The plan includes certification to international standards, approval of a *Ley General de Puertos* allowing private sector participation in the management of the port, expanding the port through private financing, outsourcing functional services, and transitioning one terminal to private cargo management. • The Government is improving road connections between the south of the country and Puerto Cortes. • A study to assess bottlenecks along the supply chain of key industries is ongoing.	• Eliminate discrimination of freight to and from neighboring countries through Puerto Cortes, and develop a Center for Logistic Activities. • Encourage private participation in other ports. • Spur the private operators of the San Pedro Sula airport to complete their investment programs and rationalize their fares. • Continue improving the road network, strengthen road security, and review trucking regulations. • Institute automatic processes at border crossings, and integrate statistical systems with neighbors • Study the efficiency of major airports.
Quality Standards and Certification	• Few firms — and almost no MSMEs — have ISO9000 or ISO14000 certification. Adoption of non-ISO quality standards is also limited. Most firms perceive quality as a cost rather than an investment. • There are no ISO certifiers in the country and only three of the forty existing laboratories are accredited. This increase producers' costs and reduces potential for export.	• Revise existing quality norms and standards. • Assess current quality systems used by laboratories. • Promotional and training initiatives targeted to MSMEs, trade associations and public agencies, to raise their awareness of the importance of quality certification. • Assessment of the existing Quality Information Systems — at COHCIT, the Ministries of Trade and Health.	• Finance technical assistance and matching-grant programs to stimulate certification of MSMEs and accreditation of labs. • Develop a good Quality Infrastructure, including a Quality Council and an efficient National Quality Information Service. • Establish an internationally recognized Accreditation Authority and ISO certifiers. • Rationalize and strengthen the National Quality Information System.

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Technology Adoption and Innovation	• Two-thirds of interviewed firms claim to have recently introduced innovations by acquiring new equipment or machinery, but the technological content of the equipment is low. • High value FDI and linkages between local and foreign companies are limited. • Technology licensing is not a common channel for acquiring new technologies. • Linkages with clients, suppliers, industry associations, and R&D institutions are limited.	• Plans being made to support development of pilot Innovation Technology Centers (CITEs) for firms in the wood and furniture, textiles and handicrafts industries — with support from the World Bank and the Central American Bank for Economic Integration. • Draft Business Plans for three CITEs completed. • Preparation of sector studies to identify strategic industries where Honduras could attract FDI in the future.	• Develop three pilot CITEs (in Tegucigalpa, San Pedro and another location to be identified). • Develop a proactive policy to attract FDI and strengthen linkages between local and foreign institutions. • Clarify institutional responsibilities on innovation and strengthen the responsible body. Define and coordinate implementation of a long term national innovation strategy. • Strengthen the Directorate General of Intellectual Property (DGIP). • Strengthen linkages between firms and research institutions.
Skills and Labor Training	• Many firms offer formal training, but most of it provided internally. • Many firms rely on learning-by-doing and informal training. • The existing supply of public training is fragmented and inadequate. • The poor quality of public training discourages firms from using it.	• Several proposals have been offered for reforming vocational training, and, although none have passed into law, consensus is building.	• Separate the governance of training from the provision of training by establishing a national planning agency (separate from INFOP) • Restructure INFOP. • Expand the supply of training through more efficient use of the payroll levy funds, and allocate the funds to training programs that are most relevant to the needs of the private sector, building private sector confidence in the use and effectiveness of the levy. • Establish standards, and certification systems for public training providers. • Increase provision of private training.

	Deficiency by Aspect of the Investment Climate	Recent/Ongoing Government Activities & Initiatives Planned for the Short Term (6 months)	Recommended Actions for the Medium Term (6 months to 3 years)
Access to and Cost of Finance	• Retained earnings are the main source of working capital financing — especially for large firms and maquilas. • High interest rates and collateral requirements are the main constraints to access credit. • Interest rates are lower for large firms and loans in US dollars. US dollars interest rates are higher in Honduras than in El Salvador and Costa Rica. • Collateral requirements are high; real estate is what counts, but the real estate registry is inefficient and does not have a complete coverage. • Having audited statements increases the chances of obtaining a loan, but auditing is (indirectly) costly. • The banking system has problems of delinquency and non performing loans. Banks' portfolios diversification is limited. Bank's administrative costs are high.	• Program to enhance the overall structural stability of the financial system — including efforts to improve the regulatory and legal environment and monitoring of systemic risks. (Ongoing). • *Ley de Propriedad* under approval, which will facilitate pledging of real estate as collateral. The *Ley* envisions integrating the National Cadastre with the Property Registry, which will reduce inconsistencies and disputes in authenticating rights.	• Continue efforts to enhance the soundness and efficiency of the financial system. • Successful implementation of the *Ley de Propriedad*: e.g., automating and simplifying procedures of the Registry and reviewing the fee structure of title registration • Create a Movable Asset Registry to ease pledging collateral other than real estate. • Train judges on corporate matters • Clarify the role of the national public registry (*Central de Riesgos — Comisión Nacional de Banca y Seguros* - CNBS) as a monitoring tool and prevent its use by commercial banks. • Improve the functioning of CNBS and encourage use of Private Credit Registries. • Conduct studies to improve understanding of the financial relationships of the maquilas.

ANNEX A

Box A-1: Productivity Analysis: A Summary of the Methodology

This box is based on the analysis of Escribano and Guasch (2004) "Assessing the Impact of the Investment Climate on Productivity using Firm-Level Data: Methodology and the Case of Guatemala, Honduras and Nicaragua". Annex C in Volume II includes a detailed explanation of the methodology. The present box provides a summary of the main methodological issued considered and the key steps and procedures undertaken.

Escribano and Guasch (2004) argue that TFP, or *productivity* in general, includes the effect of any variable affecting the production process which is different from the main inputs of production — labor (L), capital (K) and intermediate inputs (M). In particular, TFP is assumed to include the effects of IC variables such as infrastructure, governance, quality of labor, innovation, research and development (R&D), technological and regulatory changes, competition and any other firm-specific characteristics or control variables (C). Prior to measuring the impact of each of these IC variables on productivity, we have to face a challenging identification problem due to common causes simultaneously affecting both the inputs of production (K, L and M) and TFP, i.e. the usually unobserved IC and control variables mentioned above. Therefore, all of the inputs of production (K, L and M) are *endogenous* and will be correlated with productivity (TFP), which invalidates least squares estimation techniques run in two steps, where one first estimates TFP and then runs a regression of TFP on IC variables. This endogeneity problem of the three inputs also invalidates recent alternative estimation techniques based on Olley and Pakes (1996) and Levinsohn and Petrin (2003) procedures, when applied to annual observations of IC variables. To overcome this endogeneity problem of the inputs, Escribano and Guasch (2004) propose a structural estimation approach which allows for several sources of simultaneity associated with the IC variables. They also discuss the conditions required to estimate the rate of growth of TFP, based on the rates of growth of the production function variables, and the conditions required to estimate TFP based on its levels (logs). The conclusion is that due to the characteristics of this dataset — based on the 2003 Investment Climate Surveys (ICS) of Guatemala, Honduras and Nicaragua — it is more appropriate to use the level (logs) of TFP and the levels (logs) of the other variables which enter the production function, rather than their corresponding rates of growth.

There is no universally accepted measure of *productivity* or total factor productivity (TFP). The analysis followed in this report seeks to measure the impact of different investment climate (IC) variables on (log) productivity, controlling for other (firm, industry, country, etc.) characteristics. Inevitably, any empirical evaluation of the impact of the IC variables will be contingent upon the productivity measure used. This methodology aims to obtain robust and consistent conclusions from all productivity measures, providing a consistent range of productivity gains and losses due to IC variables. The empirical analysis of this report relies on twelve different productivity measures, but we only report in Table 1-1 and Table 1-2 the results based on six productivity measures, since the results based on the other six are very similar (see Annex).

Escribano and Guasch (2004) make clear that the 2-step approach should only be used when we either have good instrumental variables (IV) for the inputs (L,M and K), or when we obtain the input-output elasticities by "growth accounting techniques" (using the cost shares of the inputs) to get the Solow residuals (TFP), Solow (1957). The Solow approach is one of the procedures that we apply in this report. In the second general approach (1-step approach) that we apply we estimate the parameters of the inputs (L, M and K) in an extended production function where we simultaneously estimate the impact of the IC variables while controlling for other firm, industry and country characteristics. This 1-step estimation approach is applied to a Cobb-Douglas and a Translog production function under different aggregation conditions. We consider a *restricted estimation* case, where we assume that the input coefficients are the same for all industries; and *an unrestricted* estimation case, where we allow the input coefficients to vary across different industries. Under the restricted estimations, the average cost shares are calculated as the average share of each input (K, L and M) across the whole sample of manufacturing firms over the years 2001 and 2002; under the unrestricted estimation the cost shares are calculated as the average industry cost share of each input across all firms of the three countries belonging to the same industry over the last two years (i.e. a separate cost share of each of the three factor inputs (K, L and M) is calculated for each of the nine industries covered by the ICS).

To reduce the least squares simultaneity bias associated with the fact that the IC variables may be correlated with the error of the extended production function, we use averages of the IC_{it} variables taken at the region-industry cells ($\overline{IC}_{jt}$) for each country. The coefficients on the investment climate variables ($\overline{IC}_{it}$) and the firm-specific characteristics (C_{it}) are usually estimated at the same level of aggregation, i.e. one coefficient per $\overline{IC}_{it}$ and per C_{it} for the whole pool sample while, as we said before, the input coefficients (input-output elasticities) of the production functions are estimated at two different levels of aggregation. In Table 1-1, we presented the results of six (out of the twelve) different measures of productivity obtained: two measures based on Solow residuals, using ordinary least squares (OLS) in the second step, and four productivity measures based on OLS estimation in a 1-step estimation. Furthermore, we also applied random effects (RE) estimation, instead of OLS, getting another set of six productivity results, (see Annex C in Volume II). All the different regression specifications include industry dummies, country dummies and a year dummy to control for differences in firm productivity due to industry-specific, country-specific and time-specific effects. For a more detailed technical discussion of the main estimation techniques see Annex C in Volume II.

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