

APPENDIX

Lists of Central America's Structural and Aspirational Peers and Report Methodology

Table 1.1. Costa Rica

Structural Peers

The criteria and filters for selection were the following:

- (i) GDP per capita between US\$5,500 and US\$15,500, as Costa Rica is an upper-middle-income country,
- (ii) Population between 2.5 million and 20 million people,
- (iii) CO₂ emissions: Costa Rica is one of the most environmentally sustainable countries in the world, and only countries with less than 5 CO₂ metric tons emissions (the world average) per capita were included in the selection process,
- (iv) Geography, which often determines comparative advantage and, in some cases, historical similarities; landlocked economies and small island states were excluded, while several Central American countries were included, and
- (v) Only non-fragile states were selected.

The use of these criteria resulted in the following set of countries: Chile, Croatia, Dominican Republic, Lithuania, Panama, and Uruguay.

<i>Country</i>	<i>GDP per capita (US \$)</i>	<i>Population in 2014 (million)</i>	<i>CO₂ emissions (metric tons per capita)</i>
Costa Rica	9722	4.86	1.7
Chile	15205	17.71	4.2
Croatia	13638	4.28	4.7
Dominican Republic	5710	10.6	2.1
Lithuania	14801	2.96	4.4
Panama	9798	3.79	2.6
Uruguay	15054	3.40	2.0

Aspirational Peers

Organization for Economic Co-operation and Development (OECD) countries are used as **aspirational peers** given Costa Rica's ongoing accession talks to the OECD.

Note: Structural peers include countries that provide appropriate benchmarks for answering SCD-relevant questions such as whether or not certain conditions, policies, or economic performances in Costa Rica are adequate.
Source: Find my Friends Tool 2014. World Economic Outlook database.

Table 1.2. El Salvador

Structural peers

The criteria and filters for selection were the following:

- Population between 3 and 12 million (El Salvador’s population is 6.4 million),
- GDP per capita between \$2,500 and \$6,000 (El Salvador’s GDP per capita is \$3,800), and
- Positive net outmigration and remittance inflows at least 3 percent of GDP.

The use of these criteria resulted in the following set of countries: Armenia, Bosnia and Herzegovina, the Dominican Republic, Georgia, Serbia, and Tunisia.

Aspirational peers

The criteria for the selection was:

- Aspirational peer of Honduras and Guatemala (See how peers were selected for these two countries for details).

This classification delivers the following group of countries, Chile, Latvia, Lithuania, Peru and Panama.

Source: Own elaboration using data from World Economic Outlook.

Table 1.3. Guatemala**Structural Peers**

The criteria and filters for selection were the following:

- (i) Lower-middle-income countries,
- (ii) Population between 5 million and 25 million people,
- (iii) Agriculture value added (as percent of GDP) less than 20 percent, and
- (iv) Small island states were excluded.

The use of these criteria resulted in the following set of countries: Bolivia, El Salvador, Honduras, Nicaragua, Paraguay, and Senegal.

<i>Country</i>	<i>Nominal GDP per capita (US \$), 2013</i>	<i>Population (millions), 2014</i>	<i>Agriculture, value added (% of GDP), 2001-13</i>
Guatemala	3512	15.9	13.0
Bolivia	2700	11.2	14.0
El Salvador	3875	6.4	11.1
Honduras	2323	8.3	13.4
Nicaragua	1840	6.2	18.1
Paraguay	4170	6.9	19.3
Senegal	1073	14.5	16.3

Aspirational Peers

The criteria and filters for the selection in the period 2001 – 2013 were:

- (i) Lower middle income and upper middle-income countries,
- (ii) GDP per capita growth higher than 3 percent,
- (iii) Inflation below 5 percent,
- (iv) Maternal mortality ratio (per 100,000 live births) less than 100; and
- (v) Population below 35 million.
- (vi) Countries that are “natural intensive”, landlocked, or islands were excluded.

This classification delivers the following group of countries: Albania, Chile, Jordan, Latvia, Lithuania, Panama, and Peru.

<i>Country</i>	<i>Nominal GDP per capita (US \$), 2013</i>	<i>Population (millions), 2014</i>	<i>GDP per capita growth (%), 2001-13</i>	<i>Inflation (%), 2001-13</i>	<i>Maternal mortality ratio, latest data point</i>
Guatemala	3512	15.9	0.9	6.3	140
Albania	4610	2.8	5.4	2.9	21
Chile	15776	17.7	3.3	3.1	22
Jordan	5174	6.7	3.1	4.3	50
Latvia	15205	2.0	5.5	4.7	13
Lithuania	16003	3.0	5.9	3.0	11
Panama	10839	3.8	5.3	3.2	85
Peru	6674	314	4.1	2.6	89

Note: The group of structural peers includes countries that provide appropriate benchmarks for answering SCD-relevant questions such as whether or not certain conditions, policies, or economic performances in Guatemala are adequate. The group of aspirational peers are countries with characteristics similar to Guatemala, and with results that can be emulated.

Source: Find my Friends Tool 2014. World Economic Outlook database.

Table 1.4. Honduras**Structural Peers**

The criteria and filters for selection were the following:

- (i) Lower middle-income countries,
- (ii) Population between 3.0 and 15.0 million,
- (iii) No land-locked,
- (iv) No fragile state and,
- (v) Manufacturing share higher than 10 percent.

This classification delivers the following group of countries: EL Salvador, Georgia, Moldova, Nicaragua, and Senegal.

<i>Country</i>	<i>Population (million), 2001-13</i>	<i>GDP per capita PPP (US\$), 2001-13</i>	<i>Manufacturing share (%), 2001-13</i>
Honduras	8.3	3152	19.1
El Salvador	6.4	4992	20.4
Georgia	4.5	2411	14.1
Moldova	3.6	1608	13.6
Nicaragua	6.2	2846	16.4
Senegal	14.5	1395	14.2

Aspirational Peers

The criteria and filters for the selection in the period 2001 – 2013 were:

- (i) Lower middle income and upper middle-income countries,
- (ii) GDP per capita growth higher than 3.0 percent,
- (iii) Inflation below 5.0 percent,
- (iv) Credit risk rating better than B+, and
- (v) Population below 35 million.

This classification delivers the following group of countries: Armenia, Chile, Latvia, Lithuania, Morocco, Panama, and Peru.

<i>Country</i>	<i>Population (million), 2001-13</i>	<i>GDP per capita PPP (US \$), 2001- 13</i>	<i>Real GDP per capita growth (%), 2001-13</i>	<i>Inflation (%), 2001- 13</i>	<i>Credit risk rating, 2001-13</i>
Honduras	8.3	3152	1.9	7.2	B+
Armenia	3.3	4471	7.5	4.6	Ba2
Chile	17.7	14244	3.3	3.1	AA-
Latvia	2.0	14448	5.5	4.7	BBB+
Lithuania	3.0	16385	5.9	3.0	BBB-
Morocco	33.2	4118	3.6	1.7	BBB-
Panama	3.8	10632	5.3	3.2	BBB
Peru	31.4	7806	4.1	2.6	BBB

Note: Structural peers are countries with similar characteristics to Honduras identified using the above criteria for the period 2001-2013. Aspirational peers aggregate countries that may be used as good examples of development for Honduras using the period 2001–13.

Source: World Economic Outlook.

Table 1.5. Nicaragua

Structural peers:

The criteria and filters for selection were the following:

- Population between 4 and 10 million (population of Nicaragua is 6.5 million),
- Lower middle income countries.

This classification delivers the following group of countries: Congo, El Salvador, Honduras, Kyrgyz Republic, Lao PDR and Tajikistan.

Aspirational peers:

The criteria for the selection was:

- Aspirational peer of Honduras and Guatemala (See how peers were selected for these two countries for details).

This classification delivers the following group of countries, Chile, Latvia, Lithuania, Peru and Panama.

Source: Own elaboration using data from World Economic Outlook.

Table 1.6. Panama

Structural Peers

The criteria and filters for selection were the following:

- (i) Population between one million and 12 million,
- (ii) Not landlocked,
- (iii) Not a fragile state,
- (iv) Gross domestic product (GDP) per capita between US\$4,000 and US\$13,000,
- (v) Foreign Direct investment as a share of GDP higher than 3.5 percent and,
- (vi) Credit rating higher than BBB-.

This classification delivers the following group of countries: Bulgaria, Costa Rica, Croatia, Dominican Republic, and Uruguay.

<i>Country</i>	<i>Population (million), 2001-13</i>	<i>GDP per capita (in US \$), 2001-13</i>	<i>Direct investment (% of GDP), 2001-13</i>	<i>Credit rating, 2001-13</i>
Panama	3.79	6407	7.8	BBB
Bulgaria	7.20	4975	10.3	BBB
Costa Rica	4.86	6438	4.6	BB
Croatia	4.28	11542	3.9	BB+
Dominican Republic	10.60	4228	4.0	B+
Uruguay	3.40	8566	4.6	BBB-

Aspirational Peers

The criteria and filters for the selection in the period 2001 – 2013 were:

- (i) GDP per capita higher than US\$8,000,
- (ii) GDP growth higher than 3.5 percent,
- (iii) Inflation below 4.5 percent,
- (iv) Investment to GDP higher than 20 percent,
- (v) Non-commodity exporter, and
- (vi) Not landlocked.

This classification delivers the following group of countries: Hong Kong SAR China, Estonia, Korea, Lithuania, Panama, Singapore, Taiwan China, and United Arab Emirates.

<i>Country</i>	<i>GDP per capita (in US \$), 2001-13</i>	<i>GDP growth (% change), 2001-13</i>	<i>Inflation (% change, CPI), 2001-13</i>	<i>Investment to GDP (%), 2001-13</i>
Panama	6407	7.2	3.2	21.5
Hong Kong SAR, China	29810	3.9	1.4	22.4
Estonia	12702	4.0	4.3	28.2
Korea	18145	3.9	3.0	28.4
Lithuania	10089	4.6	3.0	21.0
Singapore	36840	5.4	2.2	24.3
Taiwan, China	16796	3.6	1.0	20.8
United Arab Emirates	38693	4.1	4.4	21.9

Note: Structural peers are countries with similar characteristics to Panama in the period 2001–2013. Aspirational peers are countries that provide good examples of development for Panama. These countries were aggregated for the period 2001–2013.

Source: Find my Friends Tool 2014. World Economic Outlook database.

I. What Is Productivity and How Do We Measure It?

The growth of productivity—the efficiency with which societies combine their people, resources, and tools—is the main driver of the development process. Typically, productivity is a measure that captures how economic units (countries, sectors, or firms) use measured inputs to generate an output, in other words, it is a measure of efficiency in production. There are many different productivity measures, but typically in empirical analysis two measures are standard: labor productivity and total factor productivity (TFP).

- Labor productivity is typically the amount of goods and services that a group of workers produce. The amount of output can be computed using value added or gross value of production. In this report, we will typically refer to labor productivity to value added divided by workers. Variation of labor productivity are determined by the amount of capital and other factors available to workers (e.g, quality of education and efficiency gains).
- TFP is computed as the ratio of output to aggregate inputs, such as labor (adjusted by the quality of human capital) and capital (machinery, computers, buildings, intangibles, etc). TFP is often considered the primary contributor to GDP growth, but in practice, since it is residual measure it also reflects economies of scale, variations in capacity utilization and measurement errors. As noted in Loayza et al (2005), “a failure to account for improvements in the quality composition of capital stocks or the labor force, for instance, will lead to an overestimation of the TFP component”. A second limitation is that this methodology is just an accounting approach and, therefore does not provide the drivers underlying the growth in TFP. Although most economists tend to think of TFP as a measure of technological change, TFP may also reflect the role played by economies of scale and externalities in many of the new growth models or even changes in the sectoral composition of output. Additional limitations can be found in Klenow and Rodriguez-Clare (1997) and Hsieh and Klenow (2010).

It is important to highlight that these two measures are closely related, since efficiency gains through TFP will make also increase labor productivity. However, increases in labor productivity can be obtained without changes in total factor productivity: the level of labor productivity is affected by the intensity of use of the excluded factors (for example, capital). Two producers may have quite different labor productivity levels even though they have the same production technology if one happens to use capital much more intensively, say because they face different factor prices.

II. A Description of the Long-term Growth Model and Calibration

The Long-Term Growth Model Public Capital extension (LTGM-PC) is an Excel-based tool building on the celebrated Solow-Swan growth model, but adapted for growth analysis in developing countries.¹ Relative to the main LTGM, the total capital stock is divided into public and private portions, and the public component is adjusted for quality using an Infrastructure Efficiency Index (IEI). Investment (public and private), savings, and productivity are key growth drivers, but the model includes other factors important for developing and emerging countries, like human capital, demographics and labor market participation (especially for women). The LTGM-PC also allows for an analysis of the effects of growth (and inequality) on poverty, based on a log-normal approximation of the income distribution. In the model, public investment generates a larger boost to growth if existing stocks of public capital are low (relative to GDP), or if public capital is particularly important in the production function. Increases in the quality of public

¹ See Devadas and Pennings (2018) [[link](#)] for a full model description. The LTGM-PC spreadsheet is available for download at www.worldbank.org/LTGM. The LTGM builds on earlier work by Hevia and Loayza (2012).

investment can also boost growth. Quantitatively, a permanent 1ppt GDP increase in public investment boosts growth by around 0.1-0.2ppts over the following few years (depending on the parameters), with the effect declining over time due to declining marginal returns to public capital.

The LTGM-PC economy consists of a single sector that produces GDP using private capital (K_t^P), measured public capital (K_t^{Gm}) (e.g. infrastructure) and effective labor ($h_t L_t$), which can be further decomposed into human capital per worker (h_t) and the number of workers (L_t) (Equation 1). $\theta_t \leq 1$ denotes the quality of installed public capital, such that $G_t = \theta_t K_t^{Gm}$ is the efficient public capital stock used in production, which can be smaller than measured stock of public capital due to poor quality public capital (e.g. corruption, white elephant projects etc). A_t denotes total factor productivity (TFP) which determines the aggregate efficiency of the economy. β is the labor share of income, ϕ denotes the usefulness of public capital for production (which is higher for essential infrastructure), and ζ denotes congestion, where if $\zeta = 1$ more private capital makes public capital congested (if not $\zeta = 0$).²

$$(1) \quad Y_t = A_t (\theta_t K_t^{Gm})^\phi (K_t^P)^{1-\beta-\zeta\phi} (h_t L_t)^\beta$$

The total number of workers can be written as:

$$(2) \quad L_t = \rho_t \omega_t N_t$$

where ρ_t is the participation rate, ω_t is the working age to total population ratio and N_t is the total population. Private capital next period (K_{t+1}^P) is formed by undepreciated private capital $(1 - \delta^P)K_t^P$ and new private investment I_t^P :

$$(3) \quad K_{t+1}^P = (1 - \delta^P)K_t^P + I_t^P$$

Efficiency-adjusted public capital $G_t = \theta_t K_t^{Gm}$ evolves in a similar way, where θ_t^N is the efficiency of new public investment, and I_t^G is public investment:

$$(4) \quad \theta_{t+1} K_{t+1}^{Gm} = (1 - \delta^G)\theta_t K_t^{Gm} + \theta_t^N I_t^G$$

Headline GDP growth ($g_{y,t+1}$) can be decomposed using a log-linear approximation into different growth fundamentals as Equation 4, (where $g_{x,t+1}$ is the growth rate of factor x from t to t+1):³

$$(4) \quad g_{y,t+1} \approx g_{A,t+1} + \beta(g_{\theta,t+1} + g_{\omega,t+1} + g_{h,t+1} + g_{N,t+1}) \\ + \phi \left[\theta_t^N \frac{I_t^G/Y_t}{\theta_t K_t^{Gm}/Y_t} - \delta^G \right] + (1 - \beta - \zeta\phi) \left(\frac{I_t^P/Y_t}{K_t^P/Y_t} - \delta^P \right)$$

The last two terms in Equation 4 determine the effect on growth of an extra unit of public investment as a share of GDP (I_t^G/Y_t), or an extra unit of private investment as a share of GDP (I_t^P/Y_t) (respectively).

$\phi \frac{\theta_t^N}{\theta_t K_t^{Gm}/Y_t}$ is the marginal product of public capital, which is decreasing the measured public capital-to-output ratio K_t^{Gm}/Y_t . If measured public capital grows faster than GDP – for example, in an economy with high rates of public investment and sluggish TFP growth – then K_t^{Gm}/Y_t will rise over time and so the growth dividend from public investment will fall.⁴ If efficiency is constant, $\theta_t^N = \theta_t = \theta_{t+1}$, then it drops out of Equation 4 and does not affect GDP growth, as in Berg et al. (2015) -- though it will still effect the level of GDP. Increases in quality $\theta_t^N > \theta_t$, have a larger effect on growth in economies with high rates of public investment.

² For example, public roads become more congested the more private cars use them.

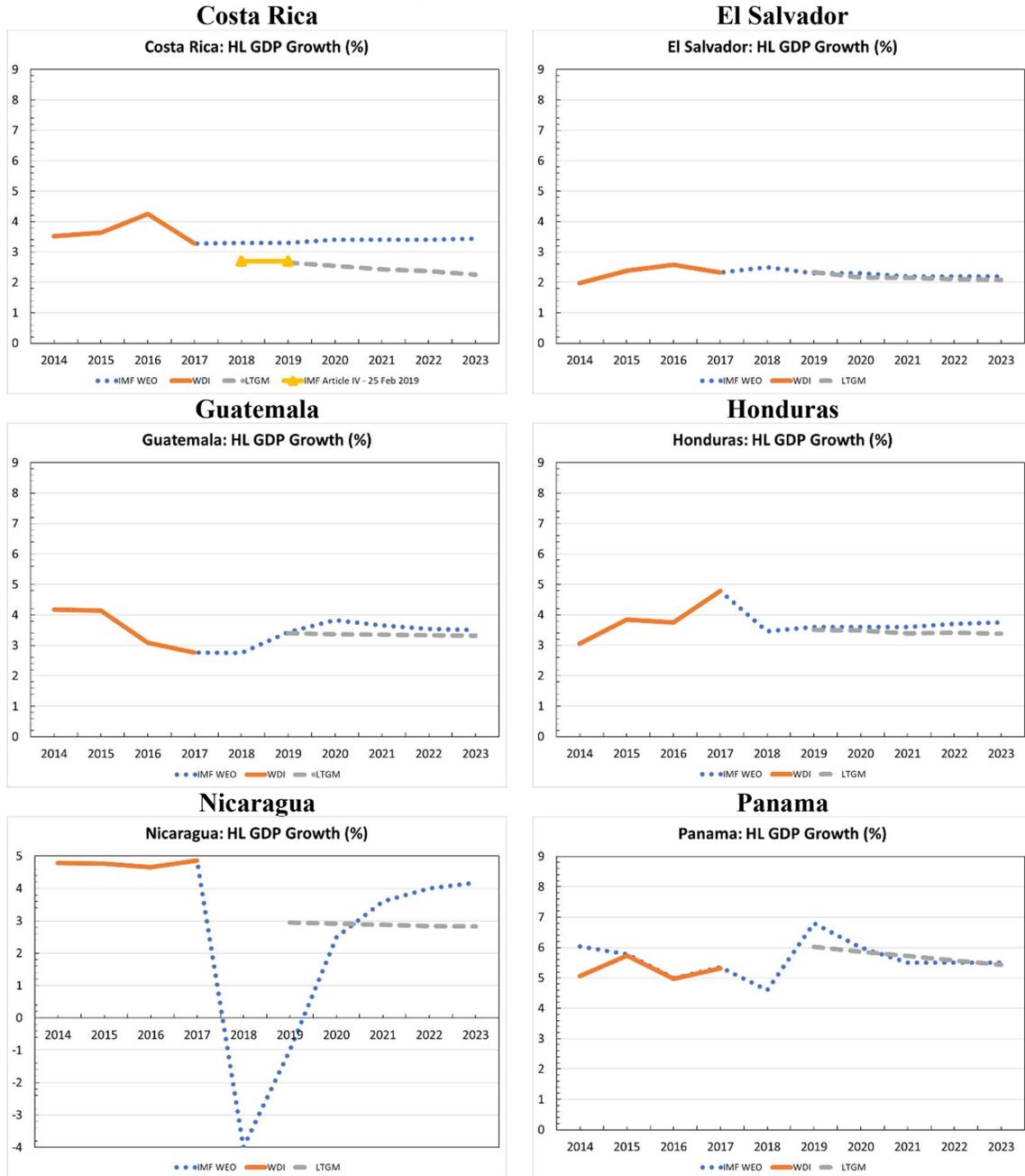
³ Here $g_{A,t+1}$, $g_{\theta,t+1}$, $g_{\omega,t+1}$, $g_{h,t+1}$, and $g_{N,t+1}$ denote the growth rates of TFP, participation, working age to total population, human capital and population (respectively).

⁴ A similar principle applies to the effect of private investment, but with the private capital-to-output ratio K_t^P/Y_t

Calibration of the baseline model

The LTGM-PC calibrated to historical trends in growth fundamentals (Table 3.1) for a “business as usual” baseline. The LTGM-PC growth path over 2019-23 is usually similar to the path in the IMF WEO (Oct 2018)/Article IV, and often is similar to historical growth rates (from WDI). (But the LTGM can’t capture the recent growth volatility in Nicaragua). Headline growth is expected to be the fastest in Panama (5.5-6%), then 3-4% in Guatemala and Honduras and 2-3% in Costa Rica, El Salvador and Nicaragua.

Figure 3.1: Calibration



Commentary: The baseline for each country is based on growth rates using PWT9 data averaged over 2000-14 (flows) or the most recent data (stocks). Investment data is from WDI (also over 2000-14), but the split into public and private is based on the most recent data from the IMF FAD public capital dataset. Exceptions are in black:

- We use the most recent 10 years of investment data for Panama because of the rapid growth in investment there.
- Costa Rica uses the K/Y ratio from PWT8.1, as the PWT9 value was a too high, which dampened growth.⁵
- El Salvador had negative TFP growth historically, which we round up to zero, and impute its labor share.⁶

Summary of growth drivers:

- The investment rates are usually around 20% of GDP, except for Panama with 35% (2008-17 average) due to the high-investment in the Canal. Investment can definitely be increase in CRI, SLV and GTM.
- TFP growth is 0-0.5% in all countries, which is low by international standard and should be 1% (or higher).
- Human capital growth is usually around 0.5-1%. The lower rates are for the two richest members (CRI and PAN), which already have higher levels of human capita. HC growth rates in the north are relatively good.

Table 3.1: Growth Outcomes and Growth Fundamentals used in the LTGM Simulations

	<i>Costa Rica</i>	<i>El Salvador</i>	<i>Guatemala</i>	<i>Honduras</i>	<i>Nicaragua</i>	<i>Panama</i>
<i>Panel A: Growth Outcomes</i>						
Growth PC 2019	1.7%	1.8%	1.4%	1.9%	1.9%	4.4%
Growth PC 2020-30	1.3%	1.6%	1.6%	1.9%	1.8%	3.8%
Growth HL 2019	2.6%	2.3%	3.4%	3.5%	2.9%	6.0%
Growth HL 2020-30	2.1%	2.1%	3.3%	3.3%	2.8%	5.2%
<i>Panel B: Growth Fundamentals</i>						
TFP Growth (15-year av. 2000-14 PWT 9)	0.2%	0% (imputed)	0.5%	0.5%	0.2%	0.5%
HC Growth (15-year av. 2000-14)	0.5%	1.0%	0.8%	1.2%	1.0%	0.6%
Labor Share (av. LS1-LS4 from 2014 PWT 9)	68%	50 % (imputed)	50%	65%	67%	42%
Capital-to-Output Ratio (2014 PWT 9)	1.93 (2010 PWT 8.1)	2.17	2.55	3.24	3.15	2.58
Public K/Y	0.48	0.69	0.68	1.03	1.08	0.57
Private K/Y	1.45	1.48	1.87	2.21	2.06	2.02
IMF FAD Public Capital Share (2015)	25%	32%	27%	32%	34%	22%

⁵ High K/Y ratios above 3 for Honduras and Nicaragua reflect their higher investment rates ($\approx 25\%$ GDP), but modest growth.

⁶ We calibrate the labor share, β , to be around 0.42-0.68 by averaging the available labor shares from PWT 9

Table 3.1: Growth Outcomes and Growth Fundamentals used in the LTGM Simulations

	<i>Costa Rica</i>	<i>El Salvador</i>	<i>Guatemala</i>	<i>Honduras</i>	<i>Nicaragua</i>	<i>Panama</i>
Investment-to-GDP Ratio (15-year av. 2000-14 WDI)	20.0%	17.0%	17.0%	25.0%	25.0%	35.2% (2008-17 av.)
Public Inv. Share of Total Inv. (FAD 2001-15 av.)	18%	17%	17%	16%	22%	19.1% (WDI 2008-17 av)
Public Investment-to-GDP Ratio	3.5%	2.8%	2.9%	4.0%	5.4%	6.7%
Private Investment-to-GDP Ratio	16.5%	14.2%	14.1%	21.0%	19.6%	28.5%
Pop Growth in 2018...2050	0.96%...0.10%	0.54%...-0.043%	1.96%...0.94%	1.64...0.60%	1.08...0.318%	1.57%...0.66%
Poverty Rate (headcount) Ntl Poverty Line	20%	38%	59%	61%	25%	22%
Gini Coefficient	0.487	0.400	0.483	0.500	0.462	0.504
Depreciation Rate (2014 PWT 9)	5.8%	4.8%	4.5%	5.7%	4.1%	5.7%
GDP PC Level US\$ 2010 (year 2017)	9 792	3 464	3 124	2 211	2 016	11 513

Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).

Total Factor Productivity Extension (LTGM-TFP)

Table 3.2. TFP Fundamentals used in Simulations for Costa Rica

	Costa Rica	Aspirational Average	U.S.	Structural Average
Innovation	8.0	48.5	65.6	11.5
R&D expenditure, public and private (% of GDP)	0.6	2.2	2.8	0.5
Number of patents (/100 people)	0.0	0.1	0.4	0.0
Number of scientific and technical journals published (/100 people)	0.0	0.2	0.1	0.0
Education	54.9	71.7	84.5	51.2
Government expenditure on education (% of GDP)	7.0	5.6	5.5	3.6
Secondary completion rate (% of relevant population)	20.3	38.6	34.8	39.5
Tertiary completion rate (% of population aged 25 and above)	18.3	19.1	32.3	11.4
PISA score, average across math, science, and reading	419.1	502.4	489.1	447.8
Market efficiency	60.8	94.8	97.6	69.4
Goods market:				
World Bank Doing Business scores	62.9	77.9	83.1	66.6
Financial market:				
IMF Financial Development Index	0.3	0.8	0.9	0.3
Labor market:				
Minimum wage (ratio to value added per worker)	0.5	0.3	0.2	0.3

Table 3.2. TFP Fundamentals used in Simulations for Costa Rica

	Costa Rica	Aspirational Average	U.S.	Structural Average
Severance pay for redundancy dismissal (weeks of salary)	14.4	4.3	0.0	17.9
Women in wage employment in the nonagricultural sector (% of total nonagricultural employment)	43.4	48.7	48.0	45.4
Infrastructure	52.4	73.6	78.6	53.0
Fixed telephone (per 100 persons)	17.8	41.5	39.8	22.3
Mobile subscription (per 100 persons)	142.2	120.0	110.2	129.5
Electricity production (kw per 100 persons)	224745.0	937910.3	1400000.0	275239.8
Paved road (km per 100 persons)	0.2	1.2	1.4	0.4
Access to improved sanitation facilities (% of population)	94.5	98.9	100.0	90.4
Access to improved water source (% of population)	97.7	99.9	99.2	95.7
Institutions	55.3	85.4	84.1	53.2
Voice and accountability	1.1	1.3	1.1	0.7
Control of corruption	0.7	1.5	1.3	0.4
Government effectiveness	0.4	1.5	1.5	0.5
Political stability	0.6	0.9	0.6	0.5
Regulatory quality	0.5	1.4	1.3	0.7
Rule of law	0.5	1.6	1.6	0.5

Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).

Table 3.3. TFP Fundamentals used in Simulations for EL Salvador

	EL Salvador	Aspirational Average	U.S.	Structural Average
Innovation	2.2	8.9	65.6	8.2
R&D expenditure, public and private (% of GDP)	0.1	0.4	2.8	0.4
Number of patents (/100 people)	0.0	0.0	0.4	0.0
Number of scientific and technical journals published (/100 people)	0.0	0.0	0.1	0.0
Education	32.2	54.9	84.5	50.0
Government expenditure on education (% of GDP)	3.8	4.0	5.5	3.4
Secondary completion rate (% of relevant population)	25.3	43.5	34.8	46.2
Tertiary completion rate (% of population aged 25 and above)	4.7	13.1	32.3	11.2
PISA score, average across math, science, and reading	409.4	439.5	489.1	419.1
Market efficiency	52.7	72.2	97.6	65.8
Goods market:				
World Bank Doing Business scores	59.3	70.0	83.1	66.2
Financial market:				
IMF Financial Development Index	0.2	0.3	0.9	0.2
Labor market:				
Minimum wage (ratio to value added per worker)	0.4	0.3	0.2	0.4

Table 3.3. TFP Fundamentals used in Simulations for EL Salvador

	EL Salvador	Aspirational Average	U.S.	Structural Average
Severance pay for redundancy dismissal (weeks of salary)	22.9	14.7	0.0	9.0
Women in wage employment in the nonagricultural sector (% of total nonagricultural employment)	33.4	44.4	48.0	40.8
Infrastructure	45.2	49.9	78.6	51.1
Fixed telephone (per 100 persons)	14.9	15.1	39.8	20.7
Mobile subscription (per 100 persons)	144.0	126.5	110.2	110.3
Electricity production (kw per 100 persons)	98567.1	241750.8	1400000.0	281397.5
Paved road (km per 100 persons)	0.1	0.4	1.4	0.3
Access to improved sanitation facilities (% of population)	74.2	86.9	100.0	90.5
Access to improved water source (% of population)	93.1	95.1	99.2	96.9
Institutions	30.3	51.4	84.1	40.0
Voice and accountability	0.1	0.6	1.1	0.0
Control of corruption	-0.4	0.1	1.3	-0.2
Government effectiveness	0.0	0.5	1.5	-0.1
Political stability	-0.1	0.3	0.6	-0.2
Regulatory quality	0.3	0.8	1.3	0.1
Rule of law	-0.5	0.4	1.6	-0.2
Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).				

Table 3.4. TFP Fundamentals used in Simulations for Guatemala

	Guatemala	Aspirational Average	U.S.	Structural Average
Innovation	1.7	8.9	65.6	2.9
R&D expenditure, public and private (% of GDP)	0.1	0.4	2.8	0.2
Number of patents (/100 people)	0.0	0.0	0.4	0.0
Number of scientific and technical journals published (/100 people)	0.0	0.0	0.1	0.0
Education	20.4	53.0	84.5	34.15
Government expenditure on education (% of GDP)	2.9	4.6	5.5	5.2
Secondary completion rate (% of relevant population)	16.1	41.5	34.8	18.2
Tertiary completion rate (% of population aged 25 and above)	0.0	11.9	32.3	7.0
PISA score, average across math, science, and reading	409.4	433.7	489.1	403.1
Market efficiency	51.1	71.2	97.6	52.17
Goods market:				
World Bank Doing Business scores	61.7	68.3	83.1	53.8
Financial market:				
IMF Financial Development Index	0.2	0.4	0.9	0.2
Labor market:				

Table 3.4. TFP Fundamentals used in Simulations for Guatemala

	Guatemala	Aspirational Average	U.S.	Structural Average
Minimum wage (ratio to value added per worker)	0.7	0.3	0.2	0.8
Severance pay for redundancy dismissal (weeks of salary)	27.0	12.6	0.0	18.8
Women in wage employment in the nonagricultural sector (% of total nonagricultural employment)	37.6	40.6	48.0	37.5
Infrastructure	39.8	49.8	78.6	39.29
Fixed telephone (per 100 persons)	10.8	13.7	39.8	7.1
Mobile subscription (per 100 persons)	106.6	129.5	110.2	108.8
Electricity production (kw per 100 persons)	64485.0	241654.0	1400000.0	257752.3
Paved road (km per 100 persons)	0.1	0.3	1.4	0.1
Access to improved sanitation facilities (% of population)	63.7	88.6	100.0	68.3
Access to improved water source (% of population)	92.7	95.4	99.2	89.2
Institutions	45.6	49.8	84.1	32.88
Voice and accountability	-0.4	0.4	1.1	-0.1
Control of corruption	-0.7	0.1	1.3	-0.6
Government effectiveness	-0.7	0.5	1.5	-0.6
Political stability	-0.7	0.2	0.6	-0.2
Regulatory quality	-0.2	0.7	1.3	-0.3
Rule of law	-1.0	0.4	1.6	-0.7

Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).

Table 3.5. TFP Fundamentals used in Simulations for Honduras

	Honduras	Aspirational Average	U.S.	Structural Average
Innovation	1.9	9.2	65.6	3.8
R&D expenditure, public and private (% of GDP)	0.0	0.4	2.8	0.2
Number of patents (/100 people)	0.0	0.0	0.4	0.0
Number of scientific and technical journals published (/100 people)	0.0	0.0	0.1	0.0
Education	31.2	55.1	84.5	41.0
Government expenditure on education (% of GDP)	5.5	4.0	5.5	4.6
Secondary completion rate (% of relevant population)	19.2	41.1	34.8	32.5
Tertiary completion rate (% of population aged 25 and above)	3.0	14.3	32.3	8.7
PISA score, average across math, science, and reading	409.4	437.0	489.1	401.8
Market efficiency	44.7	71.7	97.6	60.4
Goods market:				
World Bank Doing Business scores	58.0	70.4	83.1	60.4
Financial market:				
IMF Financial Development Index	0.2	0.4	0.9	0.2
Labor market:				

Table 3.5. TFP Fundamentals used in Simulations for Honduras

	Honduras	Aspirational Average	U.S.	Structural Average
Minimum wage (ratio to value added per worker)	1.5	0.3	0.2	0.5
Severance pay for redundancy dismissal (weeks of salary)	23.1	13.7	0.0	13.3
Women in wage employment in the nonagricultural sector (% of total nonagricultural employment)	42.0	40.7	48.0	41.1
Infrastructure	40.2	49.2	78.6	41.9
Fixed telephone (per 100 persons)	6.4	15.7	39.8	16.6
Mobile subscription (per 100 persons)	93.5	128.7	110.2	118.1
Electricity production (kw per 100 persons)	95831.9	221483.0	1400000.0	98653.3
Paved road (km per 100 persons)	0.0	0.4	1.4	0.1
Access to improved sanitation facilities (% of population)	82.6	84.9	100.0	70.5
Access to improved water source (% of population)	90.6	94.4	99.2	89.2
Institutions	28.0	48.5	84.1	39.1
Voice and accountability	-0.4	0.3	1.1	0.1
Control of corruption	-0.8	0.1	1.3	-0.3
Government effectiveness	-0.8	0.4	1.5	-0.2
Political stability	-0.5	0.1	0.6	-0.1
Regulatory quality	-0.4	0.7	1.3	0.1
Rule of law	-1.0	0.3	1.6	-0.3

Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).

Table 3.6. TFP Fundamentals used in Simulations for Nicaragua

	Nicaragua	Aspirational Average	U.S.	Structural Average
Innovation	1.8	9.5	65.6	2.4
R&D expenditure, public and private (% of GDP)	0.1	0.4	2.8	0.1
Number of patents (/100 people)	0.0	0.0	0.4	0.0
Number of scientific and technical journals published (/100 people)	0.0	0.0	0.1	0.0
Education	36.6	59.0	84.5	32.8
Government expenditure on education (% of GDP)	3.4	3.9	5.5	4.4
Secondary completion rate (% of relevant population)	16.7	46.0	34.8	33.9
Tertiary completion rate (% of population aged 25 and above)	12.0	15.6	32.3	3.8
PISA score, average across math, science, and reading	409.4	440.8	489.1	382.8
Market efficiency	48.0	73.4	97.6	52.5
Goods market:				
World Bank Doing Business scores	54.1	71.5	83.1	52.6

Table 3.6. TFP Fundamentals used in Simulations for Nicaragua

	Nicaragua	Aspirational Average	U.S.	Structural Average
Financial market:				
IMF Financial Development Index	0.1	0.4	0.9	0.2
Labor market:				
Minimum wage (ratio to value added per worker)	0.6	0.3	0.2	0.5
Severance pay for redundancy dismissal (weeks of salary)	14.9	13.7	0.0	18.9
Women in wage employment in the nonagricultural sector (% of total nonagricultural employment)	39.7	44.5	48.0	37.1
Infrastructure	38.2	50.6	78.6	38.6
Fixed telephone (per 100 persons)	5.5	17.1	39.8	8.0
Mobile subscription (per 100 persons)	114.6	128.2	110.2	107.0
Electricity production (kw per 100 persons)	63215.6	245954.2	1400000.0	123099.8
Paved road (km per 100 persons)	0.1	0.4	1.4	0.1
Access to improved sanitation facilities (% of population)	67.8	86.3	100.0	71.7
Access to improved water source (% of population)	86.9	95.9	99.2	83.1
Institutions	30.3	50.6	84.1	27.0
Voice and accountability	-0.4	0.5	1.1	-0.8
Control of corruption	-0.9	0.2	1.3	-0.9
Government effectiveness	-0.8	0.5	1.5	-0.7
Political stability	0.0	0.2	0.6	-0.3
Regulatory quality	-0.4	0.8	1.3	-0.6
Rule of law	-0.7	0.4	1.6	-0.9

Source: World Bank staff elaboration following the methodology in Kim and Loayza (2019).

III. CGE Model: Regions and Sectors

Table 4.1. Countries and Regions

1	CRI	Costa Rica
2	GTM	Guatemala
3	HND	Honduras
4	NIC	Nicaragua
5	PAN	Panama
6	SLV	El Salvador
7	USA	United States
8	MEX	Mexico
9	ARG	Argentina
10	BRA	Brazil
11	COL	Colombia
12	LAC	Rest of Lat America
13	EU28	EU28

14	CHN	China
15	RoW	Rest of the World

Table 4.2. Sectors in the Simulation		
1	v_f	Vegetables and fruits
2	oag	Other agriculture
3	energy	Energy
4	cmt	Meat
5	ofood	Other food
6	b_t	Beverages and tobacco
7	tex	Textiles
8	wap	Wearing apparel
9	mvh	Motor vehicle
10	mach	Machinery
11	omanuf	Other manufactures
12	cns	Construction
13	trd	Trade
14	transp	Transportation
15	osg	Public administration
16	busserv	Business services
17	oserv	Other services

IV. List of Indicators Used in the Growth Diagnostics Analysis

Each indicator is first normalized to range between 0 and 100 using the following formula:

$$\text{Index of } xi = [(min(xi) - x(i)) / (min(xi) - max(xi))] * 100$$

where xi refers to the indicator of interest, min is the minimum value and max is the maximum value of xi indicator. In cases where maximum or minimum values of an indicator are extreme outliers, they are not included in the computation of the index.

Indicators that take on higher value for worse outcomes, (for example Public Service index taking on 0 for best public service and 10 for worst), are rescaled by subtracting the index scores from 100. Table 5.1 below provides the full list of indicators used to construct each of the 18 areas used in the growth diagnostics analysis, as well as the sources and definitions of those indicators.

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
Infrastructure	Broadband internet subscribers per 100 people	The International Telecommunication Union	Fixed broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s. This includes cable modem, DSL, fiber-to-the-home/building, other fixed (wired)-broadband

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			subscriptions, satellite broadband and terrestrial fixed wireless broadband. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks. It should include fixed WiMAX and any other fixed wireless technologies. It includes both residential subscriptions and subscriptions for organizations.
Infrastructure	Mobile phone subscribers per 100 people	The International Telecommunication Union	Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service that provide access to the PSTN using cellular technology. The indicator includes (and is split into) the number of postpaid subscriptions, and the number of active prepaid accounts (i.e. that have been used during the last three months). The indicator applies to all mobile cellular subscriptions that offer voice communications. It excludes subscriptions via data cards or USB modems, subscriptions to public mobile data services, private trunked mobile radio, telepoint, radio paging and telemetry services.
Infrastructure	Fixed broadband internet subscribers per 100 people"	The International Telecommunication Union	Fixed broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 kbit/s. This includes cable modem, DSL, fiber-to-the-home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks. It should include fixed WiMAX and any other fixed wireless technologies. It includes both residential subscriptions and subscriptions for organizations.
Infrastructure	Internet users percent of population	The World Bank	Internet users are individuals who have used the Internet (from any location) in the last 3 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc.
Infrastructure	Quality of port infrastructure 1(low) - 7(high)	World Economic Forum	The Quality of port infrastructure indicator is one of the components of the Global Competitiveness Index published annually by the World Economic Forum (WEF). It represents an assessment of the quality of port facilities in a given country based on data from the WEF Executive Opinion Survey, a long-running and extensive survey tapping the opinions of over 14,000 business leaders in 144 countries. The score for port infrastructure quality is based on only one question. The respondents are asked to rate the port facilities and inland waterways in their country of operation on a scale from 1 (underdeveloped) to 7 (extensive and efficient by international standards). For landlocked countries, the respondents are asked to rate the access to port facilities and inland waterways on a scale from 1 (impossible) to 7 (easy). The individual responses are aggregated to produce a country score.

Area	Description	Source	Definition
Infrastructure	International Internet bandwidth per Internet user kb/s	International Telecommunication Union	International Internet bandwidth is the sum of the capacity of all Internet exchanges offering international bandwidth measured in kilobits per second (kb/s).
Infrastructure	Quality of air transport infrastructure 1(low) - 7(high)	World Economic Forum	The Quality of air transport infrastructure indicator is one of the components of the Global Competitiveness Index published annually by the World Economic Forum (WEF). It represents an assessment of the quality of airports in a given country based on data from the WEF Executive Opinion Survey, a long-running and extensive survey tapping the opinions of over 14,000 business leaders in 144 countries. The score for air transport infrastructure quality is based on only one question. The respondents are asked to rate the passenger air transport in their country of operation on a scale from 1 (underdeveloped) to 7 (extensive and efficient by international standards). The individual responses are aggregated to produce a country score.
Infrastructure	Mobile network coverage percent of the population	International Telecommunication Union	Mobile network coverage measures the percentage of inhabitants who are within range of a mobile cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants within range of a mobile cellular signal by the total population.
Infrastructure	Quality of roads 1(low) - 7(high) - WEF	World Economic Forum	The Road quality indicator is one of the components of the Global Competitiveness Index published annually by the World Economic Forum (WEF). It represents an assessment of the quality of roads in a given country based on data from the WEF Executive Opinion Survey, a long-running and extensive survey tapping the opinions of over 14,000 business leaders in 144 countries. The road quality indicator score is based on only one question. The respondents are asked to rate the roads in their country of operation on a scale from 1 (underdeveloped) to 7 (extensive and efficient by international standards). The individual responses are aggregated to produce a country score.
Infrastructure	Percent rural population with access to drinking water	WHO/UNICEF	The percentage of people using drinking water from an improved source that is accessible on premises, available when needed and free from fecal and priority chemical contamination. Improved water sources include piped water, boreholes or tube wells, protected dug wells, protected springs, and packaged or delivered water.
Infrastructure	Public services index 0 (high) - 10 (low)	Fund for Peace	The Public services indicator refers to the presence of basic state functions that serve the people. This may include the provision of essential services, such as health, education, water and sanitation, transport infrastructure, electricity and power, and internet and connectivity. On the other hand, it may include the state's ability to protect its citizens, such as from terrorism and violence, through perceived effective policing. The higher the value of the indicator, the worse the public services in the country.
Infrastructure	Quality of railroad infrastructure 1(low) - 7(high) - WEF	World Economic Forum	The Quality of railroad infrastructure indicator is one of the components of the Global Competitiveness Index published annually by the World Economic Forum (WEF). It represents an assessment of the quality of the railroad

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			system in a given country based on data from the WEF Executive Opinion Survey, a long-running and extensive survey tapping the opinions of over 14,000 business leaders in 144 countries. The score for railroad infrastructure quality is based on only one question. The respondents are asked to rate the railroads in their country of operation on a scale from 1 (underdeveloped) to 7 (extensive and efficient by international standards). The individual responses are aggregated to produce a country score.
Infrastructure	Percent urban population with access to drinking water	WHO/UNICEF	Access to an improved water source, urban, refers to the percentage of the urban population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the users' dwelling, plot or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection).
Infrastructure	Access to electricity percentage of population	The World Bank	Access to electricity is the percentage of population with access to electricity. Electrification data are collected from industry, national surveys and international sources.
Human capital	Youth literacy rate ages 15-24	UNESCO	Youth literacy rate is the percentage of people ages 15-24 who can both read and write with understanding a short simple statement about their everyday life.
Human capital	Women in parliament percent	The World Bank	Women in parliaments are the percentage of parliamentary seats in a single or lower chamber held by women.
Human capital	Health spending per capita	The World Bank	Current expenditures on health per capita in current US dollars. Estimates of current health expenditures include healthcare goods and services consumed during each year.
Human capital	Health spending as percent of GDP	The World Bank	Level of current health expenditure expressed as a percentage of GDP. Estimates of current health expenditures include healthcare goods and services consumed during each year. This indicator does not include capital health expenditures such as buildings, machinery, IT and stocks of vaccines for emergency or outbreaks.
Human capital	Life expectancy in years	The World Bank	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
Human capital	Public spending on education percent of GDP	UNESCO	General government expenditure on education (current, capital, and transfers) is expressed as a percentage of GDP. It includes expenditure funded by transfers from international sources to government. General government usually refers to local, regional and central governments.
Human capital	Public spending on education percent of public spending	UNESCO	General government expenditure on education (current, capital, and transfers) is expressed as a percentage of total general government expenditure on all sectors (including health, education, social services, etc.). It includes expenditure funded by transfers from international sources to government. General government usually refers to local, regional and central governments.
Human capital	Literacy rate	UNESCO	Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life.

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
Human capital	Student teacher ratio primary school	UNESCO	Primary school pupil-teacher ratio is the average number of pupils per teacher in primary school.
Human capital	Primary school completion rate	UNESCO	Primary completion rate, or gross intake ratio to the last grade of primary education, is the number of new entrants (enrollments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education. Data limitations preclude adjusting for students who drop out during the final year of primary education.
Human capital	Ratio of female to male pupils in primary school	UNESCO	Gender parity index for gross enrollment ratio in primary education is the ratio of girls to boys enrolled at primary level in public and private schools.
Human capital	Preprimary school enrollment percent of all eligible children	UNESCO	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Preprimary education refers to programs at the initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment and to provide a bridge between home and school.
Human capital	Primary school enrollment percent of all eligible children	UNESCO	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.
Human capital	Secondary school enrollment percent of all eligible children	UNESCO	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Secondary education completes the provision of basic education that began at the primary level and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.
Human capital	Tertiary school enrollment percent of all eligible children	UNESCO	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.
Human capital	Trained teachers in primary education percent of total	UNESCO	Trained teachers in primary education are the percentage of primary school teachers who have received the minimum organized teacher training (pre-service or in-service) required for teaching in a given country.
Human capital	Human flight and brain drain index 0 (low) - 10 (high)	Fund for Peace	The Human flight and brain drain indicator considers the economic impact of human displacement (for economic or political reasons) and the consequences this may have on a country's development. The higher the index, the greater the human displacement.
Human capital	Human Development Index (0 - 1)	The United Nations	The Human Development Index measures three basic dimensions of human development: long and healthy life, knowledge, and a decent standard of living. Four indicators

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			are used to calculate the index: life expectancy at birth, mean years of schooling, expected years of schooling, and gross national income per capita.
Human capital	HCI Sub-index: Probability of Survival to Age 5	World Bank HCI	Probability of Survival to Age 5 is calculated by subtracting the under-5 mortality rate from 1. Most recent estimates are used. Year of most recent estimate shown in data notes.
Human capital	HCI Sub-index: Expected Years of School	World Bank HCI	Expected Years of School is calculated as the sum of age-specific enrollment rates between ages 4 and 17. Age-specific enrollment rates are approximated using school enrollment rates at different levels: pre-primary enrollment rates approximate the age-specific enrollment rates for 4 and 5 year-olds; the primary rate approximates for 6-11 year-olds; the lower-secondary rate approximates for 12-14 year-olds; and the upper-secondary approximates for 15-17 year-olds. Most recent estimates are used. Year of most recent primary enrollment rate used is shown in data notes.
Human capital	HCI Sub-index: Harmonized Test Scores	World Bank HCI	Harmonized Test Scores from major international student achievement testing programs. They are measured in TIMSS-equivalent units, where 300 is minimal attainment and 625 is advanced attainment. Most recent estimates are used. The year of the most recent estimate is shown in the data notes. Test scores from the following testing programs are included: (i) TIMSS/PIRLS: Refers to the average of test scores from TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study), both carried out by the International Association for the Evaluation of Educational Achievement. Data from each PIRLS round is moved to the year of the nearest TIMSS round and averaged with the TIMSS data; (ii) PISA: Refers to test scores from the Programme for International Student Assessment; (iii) PISA+TIMSS/PIRLS: Refers to the average of these programs for countries and years where both are available; (iv) SACMEQ: Refers to test scores from the Southern and Eastern Africa Consortium for Monitoring Educational Quality; (iv) PASEC: Refers to test scores from the Program of Analysis of Education Systems; (v) LLECE: Refers to test scores from the Latin American Laboratory for Assessment of the Quality of Education; (vi) EGRA: Refers to test scores from Early Grade Reading Assessments.
Human capital	HCI Sub-index: Survival Rate from Age 15-60	World Bank HCI	Adult Survival Rate is calculated by subtracting the mortality rate for 15-60 year-olds from 1. Most recent estimates are used. Year of most recent estimate shown in data notes.
Human capital	HCI Sub-index: Fraction of Children Under 5 Not Stunted	World Bank HCI	Fraction of Children Under 5 Not Stunted is calculated by subtracting stunting rates from 1. Most recent estimates are used. Year of most recent estimate shown in data notes.
Human capital	HCI Sub-index: Learning-Adjusted Years of School	World Bank HCI	Learning-Adjusted Years of School are calculated by multiplying the estimates of Expected Years of School by the ratio of most recent Harmonized Test Score to 625, where 625 corresponds to advancement attainment on the

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			TIMSS (Trends in International Mathematics and Science Study) test.
Corruption	Corruption Perceptions Index 100 = no corruption	Transparency International	The Corruption Perceptions Index is an indicator of perceptions of public sector corruption, i.e. administrative and political corruption. The indicator values are determined by using information from surveys and assessments of corruption, collected by a variety of reputable institutions.
Corruption	Freedom from corruption index (0-100)	The Heritage Foundation	The score for the Freedom of corruption index is derived primarily from Transparency International's Corruption Perceptions Index. For countries that are not covered in the CPI the freedom from corruption score is determined by using information from internationally recognized and reliable sources. Higher index values denote lower level of corruption.
Corruption	Control of corruption (-2.5 weak; 2.5 strong)	The World Bank	The index for Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests.
Regulation	Cost of starting a business % of income per capita	The World Bank	The indicator includes all official fees and fees for legal or professional services if such services are required by law. The company law, the commercial code, and specific regulations and fee schedules are used as sources for calculating costs. The indicator excludes bribes.
Regulation	The number of documents required for exporting activity	The World Bank	The number of documents to export records the number of documents required by law or common practice by relevant agencies per export shipment. All documents required by law or common practice by relevant agencies—including government ministries, customs authorities, port authorities and other control agencies—per export shipment are taken into account. For landlocked economies, documents required by authorities in the transit economy are also included. Since payment is by letter of credit, all documents required by banks for the issuance or securing of a letter of credit are also taken into account. Documents that are requested at the time of clearance but that are valid for a year or longer or do not require renewal per shipment (for example, an annual tax clearance certificate) are not included. Documents that are required by customs authorities purely for purposes of preferential treatment but are not required for any other purpose by any of the authorities in the process of trading are not included. The component indicator is computed based on the methodology in the DB06-15 studies.
Regulation	The number of documents needed for importing goods	The World Bank	The number of documents to import records the number of documents required by law or common practice by relevant agencies per import shipment. All documents required by law or common practice by relevant agencies—including government ministries, customs authorities, port authorities and other control agencies—per import shipment are taken into account. For landlocked economies, documents required by authorities in the transit economy are also included. Since payment is by letter of credit, all documents

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			required by banks for the issuance or securing of a letter of credit are also taken into account. Documents that are requested at the time of clearance but that are valid for a year or longer or do not require renewal per shipment (for example, an annual tax clearance certificate) are not included. Documents that are required by customs authorities purely for purposes of preferential treatment but are not required for any other purpose by any of the authorities in the process of trading are not included. The component indicator is computed based on the methodology in the DB06-15 studies.
Regulation	Shadow economy percent of GDP	Medina and Schneider (2018)	The shadow economy as percent of total annual GDP. Detailed methodology of the estimations can be obtained from the following International Monetary Fund working paper by Leandro Medina and Friedrich Schneider (2018): Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?
Regulation	Business freedom index (0-100)	The Heritage Foundation	The Business freedom index is based on 10 indicators, using data from the World Bank's Doing Business study: Starting a business—procedures (number), time (days), cost (% of income per capita), and minimum capital (% of income per capita); Obtaining a license—procedures (number), time (days), and cost (% of income per capita); Closing a business—time (years), cost (% of estate), and recovery rate (cents on the dollar).
Regulation	Labor freedom index (0-100)	The Heritage Foundation	The Labor freedom index is composed of six quantitative factors: ratio of minimum wage to the average value added per worker, hindrance to hiring additional workers, rigidity of hours, difficulty of firing redundant employees, legally mandated notice period, and mandatory severance pay. The index is based on data collected in connection with the World Bank's Doing Business study.
Regulation	Trade freedom index (0-100)	The Heritage Foundation	The Trade freedom index is based on two indicators: the trade-weighted average tariff rate and non-tariff barriers (including quantity, price, regulatory, customs and investment restrictions, and direct government intervention).
Regulation	Investment freedom index (0-100)	The Heritage Foundation	The Investment freedom index evaluates a variety of investment restrictions (burdensome bureaucracy, restrictions on land ownership, expropriation of investments without fair compensation, foreign exchange controls, capital control, security problems, a lack of basic investment infrastructure, etc.). Points are deducted from the ideal score of 100 for each of the restrictions found in a country's investment regime.
Regulation	Regulatory quality index (-2.5 weak; 2.5 strong)	The World Bank	The index of Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
Regulation	Corporate tax rate	KPMG	The highest statutory corporate tax rate at central government level. Rates are provided by KPMG member firms

Area	Description	Source	Definition
Regulation	Personal income tax rate	KPMG	The highest statutory marginal tax rate applied to the taxable income of individuals. Rates are provided by KPMG member firms.
Regulation	Indirect tax rate	KPMG	Statutory VAT rates or consumption taxes similar to a VAT. Rates are provided by KPMG member firms.
Regulation	Tax rate percent of commercial profits	The World Bank (doing business survey)	Total tax rate measures the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions as a share of commercial profits. Taxes withheld (such as personal income tax) or collected and remitted to tax authorities (such as value added taxes, sales taxes or goods and service taxes) are excluded.
Regulation	Tax preparation time in hours	The World Bank (doing business survey)	Time to prepare and pay taxes is the time, in hours per year, it takes to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, the value added or sales tax, and labor taxes, including payroll taxes and social security contributions.
Regulation	Number of taxes paid by businesses	The World Bank (doing business survey)	Tax payments by businesses are the total number of taxes paid by businesses, including electronic filing. The tax is counted as paid once a year even if payments are more frequent.
Regulation	Fiscal freedom index (0-100)	The Heritage Foundation	The Fiscal freedom index measures the tax burden imposed by government. It is composed of three quantitative factors: the top marginal tax rate on individual income, the top marginal tax rate on corporate income, and the total tax burden as a percentage of GDP.
Governance	Government effectiveness index (-2.5 weak; 2.5 strong)	The World Bank	The index of Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Governance	Voice and accountability index (-2.5 weak; 2.5 strong)	The World Bank	The index for Voice and Accountability captures perceptions of the extent to which the citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
Governance	Political stability index (-2.5 weak; 2.5 strong)	The World Bank	The index of Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The index is an average of several other indexes from the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others.
Governance	Political rights index 7 (weak) - 1 (strong)	The Freedom House	The Political Rights ratings from the Freedom House evaluate three categories: electoral process, political pluralism and participation, and the functioning of government. The index ranges from 1 (strong rights) to 7 (weak rights).
Governance	Civil liberties index 7 (weak) - 1 (strong)	The Freedom House	The Civil Liberties index from the Freedom House evaluate the following: freedom of expression and belief, associational and organizational rights, rule of law, and

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			personal autonomy and individual rights. The rating ranges from 1 (strong liberties) to 7 (no liberties).
Governance	Short-term political risk (1=low 7=high)	Credendo Group	The short-term political risk classification measures the likelihood of a risk caused by political and assimilated events connected to cross-border transactions with a risk horizon of up to 1 year. In order to assess this risk, Credendo uses a quantitative model, essentially focusing on the evolution of the liquidity situation of the debtor/obligor countries. The aim is to assess the capacity of a country to honour its short-term payment obligations. The model closely follows any deterioration or improvement in the situation of the debtor countries. Countries are classified into seven categories: from 1 (low risk) to 7 (high risk).
Governance	Medium/long-term political risk (1=low 7=high)	Credendo Group	The medium-/long-term political risk classification measures the likelihood of a risk caused by political and assimilated events connected to cross-border transactions with a risk horizon beyond 1 year. Credendo developed a quantitative model measuring especially the countries' solvency. It combines an assessment of the economic and financial situation, an assessment of the political situation and a payment experience analysis for each country. Countries are classified into seven categories: from 1 (low risk) to 7 (high risk).
Governance	State legitimacy index 0 (high) - 10 (low)	Fund for Peace	The State legitimacy indicator considers the representativeness and openness of government and its relationship with its citizenry. The indicator looks at the population's level of confidence in state institutions and processes, and assesses the effects where that confidence is absent, manifested through mass public demonstrations, sustained civil disobedience, or the rise of armed insurgencies. The higher the value of the index, the lower the country's legitimacy.
Governance	Political violence risk (1=low 7=high)	Credendo Group	Political Violence includes all violent act(s) undertaken with a political objective; this concept is broader than 'war' and includes: terrorism (political, religious and ideological objectives) and political violence damage (damage to material assets as a result of political violence); for the purposes of analysing the political violence risk, types of business interruption as a result of political violence damage are included. In order to assess the political violence risk, Credendo looks at the actual levels of internal violence in and external conflict with a country, but also at the conflict potential that arises from (lingering) internal and external tensions, frustration and dissatisfaction. Countries are classified into seven categories (from 1-low risk to 7-high risk).
Governance	Factionalized elites index 0 (low) - 10 (high)	Fund for Peace	The Factionalized elites indicator considers the fragmentation of state institutions along ethnic, class, clan, racial or religious lines, as well as and brinkmanship and gridlock between ruling elites. The higher the value, the more fragmented are the institutions in the country

Area	Description	Source	Definition
Governance	Group grievance index 0 (low) - 10 (high)	Fund for Peace	The Group Grievance Indicator focuses on divisions and schisms between different groups in society – particularly divisions based on social or political characteristics – and their role in access to services or resources, and inclusion in the political process. The higher the value of the indicator, the higher the division of the societal groups in the country.
Governance	Human rights and rule of law index 0 (high) - 10 (low)	Fund for Peace; 0 (high) - 10 (low)	The Human rights and rule of law indicator considers the relationship between the state and its population insofar as fundamental human rights are protected and freedoms are observed and respected. The higher the indicator's value, the less protected are the human rights and the rule of law in the country.
Property rights	Property rights index (0-100)	Heritage Foundation, 0 low 100 high	The property rights index measures the degree to which a country's laws protect private property rights and the degree to which its government enforces those laws. It also assesses the likelihood that private property will be expropriated and analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts. Higher index values denote more certain legal protection of property.
Property rights	Expropriation risk (1=low 7=high)	Measure: index points; Source: Credendo Group	The risk of expropriation encompasses all discriminatory measures taken by a host government which deprive the investor of its investment without any adequate compensation; for the purpose of analysing the expropriation risk, events of embargo, change of (legal) regime and denial of justice are included. In order to assess the expropriation risk Credendo not only assesses the risk attached to expropriation as such, but also the functioning of legal institutions in the host country and the probability of a negative change in attitude towards foreign investments. Countries are classified into seven categories: from 1 (low risk) to 7 (high risk).
Property rights	Rule of law index (-2.5 weak; 2.5 strong)	World Bank; Rule of law index (-2.5 weak; 2.5 strong)	The index for Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
Security	Homicides per 100000 people	The UN office on drugs and crime; Measure: homicides per 100,000 people.	Homicides per 100,000 people, 2017 - Country rankings: The average for 2017 was 7.4 homicides per 100,000 people. The highest value was in El Salvador: 61.8 homicides per 100,000 people and the lowest value was in Japan: 0.2 homicides per 100,000 people. Below is a chart for all countries where data are available.
Security	Fragile state index 0 (low) - 120 (high)	Measure: index points; Source: Fund for Peace	The Fragile States Index measures the vulnerability in pre-conflict, active conflict and post-conflict situations. The index comprises twelve conflict risk indicators that are used to measure the condition of a state at any given moment: security apparatus, factionalized elites, group grievance, economic decline, uneven economic development, human flight and brain drain, state legitimacy, public services, human rights and rule of law, demographic pressures,

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			refugees and IDPs, and external intervention. The higher the value of the index, the more "fragile" the country is.
Security	Security threats index 0 (low) - 120 (high)	Measure: index points; Fragile state index, 0 (low) - 120 (high); Source: Fund for Peace	The Security apparatus indicator considers the security threats to a state, such as bombings, attacks and battle-related deaths, rebel movements, mutinies, coups, or terrorism. The Security apparatus also takes into account serious criminal factors, such as organized crime and homicides, and perceived trust of citizens in domestic security. The higher the value of the indicator, the more the threats in the state.
International financial stability	Maturity on new external debt	The World Bank	Maturity is the number of years to original maturity date, which is the sum of grace and repayment periods. Grace period for principal is the period from the date of signature of the loan or the issue of the financial instrument to the first repayment of principal. The repayment period is the period from the first to last repayment of principal. To obtain the average, the maturity for all public and publicly guaranteed loans have been weighted by the amounts of the loans. Public debt is an external obligation of a public debtor, including the national government, a political subdivision (or an agency of either), and autonomous public bodies. Publicly guaranteed debt is an external obligation of a private debtor that is guaranteed for repayment by a public entity.
International financial stability	Special transactions risk (1=low 7=high)	Credendo Group	The premium category set for political risk related to (special) cash transactions is based on Credendo's classification for respectively short-term and medium-/long-term political risks related to credit transactions. Countries are classified into seven categories: from 1 (low risk) to 7 (high risk).
International financial stability	Currency inconvertibility and transfer risk (1=low 7=high)	Credendo Group	The currency inconvertibility and transfer restriction risk refers to the inability to convert and transfer out of the host country any funds related to the investment. Countries are classified into seven categories: from 1 (low risk) to 7 (high risk)
International financial stability	FDI Confidence Index from A.T. Kearney (0-3)	A.T. Kearney	The FDI Confidence Index is an indicator created by A.T. Kearney, a global management consulting firm operating in 40 countries across the world. The index ranks countries on a scale from 0 to 3 based on their attractiveness for foreign direct investments. A score of 3 represents the highest level of confidence. The index is constructed using data from a survey capturing the opinions of senior executives and regional and business leaders from 27 countries with high FDI out word flows. Within the survey, the respondents are asked what is the likelihood to make a direct investment in a given country over the next three years: high, medium, low or "no interest". The individual responses are aggregated to produce a country score
International financial stability	Real effective exchange rate index (2010 = 100)	World Development Indicators	Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
International financial stability	External debt stocks, private nonguaranteed/GDP - WDI	World Development Indicators	Private nonguaranteed external debt comprises long-term external obligations of private debtors that are not guaranteed for repayment by a public entity
International financial stability	External debt serv minus debt service on public and publicly guaranteed ext debt /GNI	World Development Indicators	See definitions for external debt service and debt service on public and publicly guaranteed external debt
International financial stability	Interest rate on new external debt	The World Bank	Interest represents the average interest rate on all new public and publicly guaranteed loans contracted during the year. To obtain the average, the interest rates for all public and publicly guaranteed loans have been weighted by the amounts of the loans. Public debt is an external obligation of a public debtor, including the national government, a political subdivision (or an agency of either), and autonomous public bodies. Publicly guaranteed debt is an external obligation of a private debtor that is guaranteed for repayment by a public entity.
International financial stability	Current account balance % GDP	The World Bank	Current account is all transactions other than those in financial and capital items. The major classifications are goods and services, income and current transfers. The focus of the BOP is on transactions (between an economy and the rest of the world) in goods, services, and income. Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income.
Fiscal stability	Primary Budget: Government primary net lending/borrowing-WEO	World Economic Outlook	Primary net lending/borrowing is net lending (+)/borrowing (?) plus net interest payable/paid (interest expense minus interest revenue).
Fiscal stability	General Budget: Government net lending/borrowing-WEO	World Economic Outlook	Net lending (+)/ borrowing (–) is calculated as revenue minus total expenditure. This is a core GFS balance that measures the extent to which general government is either putting financial resources at the disposal of other sectors in the economy and nonresidents (net lending), or utilizing the financial resources generated by other sectors and nonresidents (net borrowing). This balance may be viewed as an indicator of the financial impact of general government activity on the rest of the economy and nonresidents (GFSM 2001, paragraph 4.17). Note: Net lending (+)/borrowing (–) is also equal to net acquisition of financial assets minus net incurrence of liabilities.
Fiscal stability	General government gross debt/GDP - WEO	World Economic Outlook	Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus, all liabilities in the GFSM 2001 system are debt, except for equity and investment fund shares and financial derivatives and employee stock options. Debt can be valued at current

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			market, nominal, or face values (GFSM 2001, paragraph 7.110).
Fiscal stability	Tax revenue percent of GDP	World Development Indicators	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.
Fiscal stability	Short-term debt, percent of total external debt	World Development Indicators	Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. Total external debt is debt owed to nonresidents repayable in currency, goods, or services. Total external debt is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt.
Fiscal stability	Short-term external debt, percent of international reserves	World Development Indicators	Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. Total reserves includes gold.
Fiscal stability	External debt stocks, public debt /GDP	World Development Indicators	Difference between total and private external debt stock (Total Ext DSt -Priv Ext Dst).
Fiscal stability	Debt service on external debt, public and publicly guaranteed (PPG) /GNI	The World Bank	Public and publicly guaranteed debt service is the sum of principal repayments and interest actually paid in currency, goods, or services on long-term obligations of public debtors and long-term private obligations guaranteed by a public entity.
Fiscal stability	Total debt service (% of GNI) - External Debt Service/GNI	The World Bank	Total debt service is the sum of principal repayments and interest actually paid in currency, goods, or services on long-term debt, interest paid on short-term debt, and repayments (repurchases and charges) to the IMF.
Fiscal stability	Total debt service (% of GNI)	The World Bank	Total debt service is the sum of principal repayments and interest actually paid in foreign currency, goods, or services on long-term debt, interest paid on short-term debt, and repayments (repurchases and charges) to the IMF.
Monetary stability	Monetary freedom index (0-100)	The Heritage Foundation	The score for the Monetary freedom index is based on two factors: the weighted average inflation rate for the most recent three years and price controls. Higher index values denote price stability without microeconomic intervention.
Monetary stability	Inflation: percent change in the Consumer Price Index	The World Bank	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.
Monetary stability	Exchange rate: local currency units per U.S. dollar	The International Monetary Fund	Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).
Innovation	Patent applications by residents	The World Intellectual Property Organization	Patent applications are worldwide patent applications filed through the Patent Cooperation Treaty procedure or with a national patent office for exclusive rights for an invention-- a product or process that provides a new way of doing

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			something or offers a new technical solution to a problem. A patent provides protection for the invention to the owner of the patent for a limited period, generally 20 years.
Innovation	Research and development expenditure percent of GDP	The United Nations	Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development.
Innovation	Innovations index (0-100)	Cornell University, INSEAD, and the WIPO	The Global Innovation Index includes two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index. The first sub-index is based on five pillars: Institutions, Human capital and research, Infrastructure, Market sophistication, and Business sophistication. The second sub-index is based on two pillars: Knowledge and technology outputs and Creative outputs. Each pillar is divided into sub-pillars and each sub-pillar is composed of individual indicators.
Access to bank	ATMs per 100000 adults	World Bank	Number of ATMs per 100,000 adults. Automated teller machines are computerized telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place.
Access to bank	Bank accounts per 1000 adults	IMF Bank accounts per 1000 adults, 2017	Number of depositors with commercial banks per 1,000 adults.
Access to bank	Bank branches per 100000 people	Measure: bank branches; Source: The International Monetary Fund	Number of commercial bank branches per 100,000 adults.
Access to bank	Percent of people aged 15+ who have a credit card	World Bank	The percentage of respondents with a credit card (% age 15+). The data are from the World bank Global Financial Inclusion survey.
Access to bank	Percent of people aged 15+ who have a debit card	The World Bank	The percentage of respondents with a debit card (% age 15+). Data are from the World Bank Global Financial Inclusion survey.
Saving and credit	Savings as percent of GDP	World Bank	Gross savings are calculated as gross national income less total consumption, plus net transfers.
Saving and credit	Bank credit as percent of bank deposits	The International Monetary Fund	The financial resources provided to the private sector by domestic money banks as a share of total deposits. Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits. Total deposits include demand, time and saving deposits in deposit money banks.
Saving and credit	Domestic credit to the private sector percent of GDP	The World Bank	Domestic credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises.
Saving and credit	Bank credit to the private sector as percent of GDP	World Bank	Domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises.
Saving and credit	Small firms with bank credit percent of all small firms	World Bank	Percentage of small firms (5-19 workers) in the formal sector with a line of credit or a loan from a (formal) financial institution, such as a bank, credit union, microfinance institution, or cooperative.
Saving and credit	Firms using bank credit to finance investment percent of all firms	The World Bank	Percentage of firms using banks to finance purchases of fixed assets.
Financial depth	Domestic credit to the private sector percent of GDP	The World Bank	Domestic credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises.
Financial depth	Financial system deposits percent of GDP	IMF - Financial System Deposits as percent of GDP	Demand, time and saving deposits in deposit money banks and other financial institutions as a share of GDP.
Financial depth	Stock market capitalization as percent of GDP	The World Bank	Market capitalization (also known as market value) is the share price times the number of shares outstanding (including their several classes) for listed domestic companies. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies are excluded. Data are end of year values.
Financial depth	Stock market turnover ratio	The World Bank	Turnover ratio is the value of domestic shares traded divided by their market capitalization. The value is annualized by multiplying the monthly average by 12.
Financial depth	Stock market value traded percent of GDP	The World Federation of Exchanges	The value of shares traded is the total number of shares traded, both domestic and foreign, multiplied by their respective matching prices. Figures are single counted (only one side of the transaction is considered). Companies admitted to listing and admitted to trading are included in the data. Data are end of year values.
Financial depth	Investment financed with equity or stock sales percent of total investment	The World Bank	The estimated proportion of purchases of fixed assets that was financed by the owners' contribution or issue of new equity shares.
Financial depth	Insurance company assets percent of GDP	The World Bank	Ratio of assets of insurance companies to GDP. Data taken from a variety of sources such as AXCO and national sources.
Financial depth	Liquid liabilities percent of GDP	The International Monetary Fund	Ratio of liquid liabilities to GDP. Liquid liabilities are also known as broad money, or M3. They are the sum of currency and deposits in the central bank (M0), plus transferable deposits and electronic currency (M1), plus time and savings deposits, foreign currency transferable deposits, certificates of deposit, and securities repurchase agreements (M2), plus travelers checks, foreign currency time deposits, commercial paper, and shares of mutual funds or market funds held by residents.
Financial depth	Bank assets percent of GDP	The International Monetary Fund	Total assets held by deposit money banks as a share of GDP. Assets include claims on domestic real nonfinancial

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			sector which includes central, state and local governments, nonfinancial public enterprises and private sector. Deposit money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.
Financial depth	Bank credit to government and public enterprises percent of GDP	The International Monetary Fund	Bank credit is the amount of credit available to the government sector. It consists of the total amount of combined funds that are provided to the government by the bank sector.
International financial flows	Remittance inflows % of GDP	The World Bank	Personal remittances comprise personal transfers and compensation of employees. Personal transfers consist of all current transfers in cash or in kind made or received by resident households to or from nonresident households. Personal transfers thus include all current transfers between resident and nonresident individuals. Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by nonresident entities. Data are the sum of two items defined in the sixth edition of the IMF's Balance of Payments Manual: personal transfers and compensation of employees.
International financial flows	Foreign Direct Investment percent of GDP	The World Bank	Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.
International financial flows	Foreign exchange reserves including gold % of imports	The World Bank	Total reserves comprise holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued at year-end (December 31) London prices. Data are in current U.S. dollars.
International financial flows	Net portfolio equity inflows, % of GDP	The International Monetary Fund	Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.
International financial flows	Portfolio equity, net inflows (BoP, % of GDP)	The International Monetary Fund	Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. Data are in current U.S. dollars.
Banking competition	Financial freedom index (0-100)	The Heritage Foundation	The Financial freedom index evaluates: the extent of government regulation of financial services, the degree of state intervention in banks and other financial firms through direct and indirect ownership, the extent of financial and capital market development, government influence on the allocation of credit and openness to foreign competition. Higher index values denote banking efficiency and

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			independence from government control and interference in the financial sector.
Banking competition	Foreign bank assets as percent of the total bank assets	Global Financial Development Database	Percentage of the total banking assets that are held by foreign banks. A foreign bank is a bank where 50 percent or more of its shares are owned by foreigners.
Banking competition	Bank concentration: percent of bank assets held by top three banks	Bankscope.	Raw data are from Bankscope. $(\text{Sum}(\text{data}_{2025}) \text{ for three largest banks in Bankscope}) / (\text{Sum}(\text{data}_{2025}) \text{ for all banks in Bankscope})$. Only reported if number of banks in Bankscope is 3 or more. Calculated from underlying bank-by-bank unconsolidated data from Bankscope.
Banking sector stability	Banking system z-scores	Bankscope	The index captures the probability of default of a country's banking system. Z-score compares the buffer of a country's banking system (capitalization and returns) with the volatility of those returns. It is estimated as $(\text{ROA} + (\text{equity}/\text{assets})) / \text{sd}(\text{ROA})$; $\text{sd}(\text{ROA})$ is the standard deviation of ROA. ROA, equity, and assets are country-level aggregate figures. Calculated from underlying bank-by-bank unconsolidated data from Bankscope
Banking sector stability	Non-performing loans as percent of all bank loans	The World Bank	Bank nonperforming loans to total gross loans are the value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the deduction of specific loan-loss provisions). The loan amount recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the amount that is overdue.
Banking sector stability	Banking system capital percent of assets	The International Monetary Fund	Ratio of bank capital and reserves to total assets. Capital and reserves include funds contributed by owners, retained earnings, general and special reserves, provisions, and valuation adjustments. Capital includes tier 1 capital (paid-up shares and common stock), which is a common feature in all countries' banking systems, and total regulatory capital, which includes several specified types of subordinated debt instruments that need not be repaid if the funds are required to maintain minimum capital levels (these comprise tier 2 and tier 3 capital). Total assets include all nonfinancial and financial assets. Reported by IMF staff. Note that due to differences in national accounting, taxation, and supervisory regimes, these data are not strictly comparable across countries
Banking sector stability	Banking system regulatory capital to risk-weighted assets	The International Monetary Fund	The capital adequacy of deposit takers. It is a ratio of total regulatory capital to its assets held, weighted according to the risk of those assets.
Banking sector stability	Bank assets percent of GDP	The International Monetary Fund	Total assets held by deposit money banks as a share of GDP. Assets include claims on domestic real nonfinancial sector which includes central, state and local governments, nonfinancial public enterprises and private sector. Deposit money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.
Banking sector stability	Bank liquid assets to deposits and short-term funding	Bankscope	The ratio of the value of liquid assets (easily converted to cash) to short-term funding plus total deposits. Liquid assets include cash and due from banks, trading securities and at fair value through income, loans and advances to

Table 5.1. Variables used in the Growth Diagnostics Section			
Area	Description	Source	Definition
			banks, reverse repos and cash collaterals. Deposits and short term funding includes total customer deposits (current, savings and term) and short term borrowing (money market instruments, CDs and other deposits).
Banking cost	Bank overhead costs percent of total assets	Bankscope	Operating expenses of a bank as a share of the value of all assets held. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets. The numerator and denominator are first aggregated on the country level before division. Note that banks used in the calculation might differ between indicators. Calculated from underlying bank-by-bank unconsolidated data from Bankscope.
Banking cost	Bank cost to income ratio in percent	Bankscope	Operating expenses of a bank as a share of the sum of net-interest revenue and other operating income. The numerator and denominator are first aggregated on the country level before division. Note that banks used in the calculation might differ between indicators. Calculated from underlying bank-by-bank unconsolidated data from Bankscope.
Banking cost	Interest rates on bank credit to the private sector	The World Bank	Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability.
Banking cost	Real interest rate: Bank lending rate minus inflation	The International Monetary Fund	Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The terms and conditions attached to lending rates differ by country, however, limiting their comparability.
Banking cost	Bank lending-deposit interest rate spread	The International Monetary Fund	Difference between the lending rate and the deposit rate. The lending rate is the rate charged by banks on loans to the private sector and the deposit interest rate is the rate offered by commercial banks on three-month deposits.

V. Benefits of Economic Diversification

The literature distinguishes between two dimensions of economic diversification. The first of these dimensions is *trade diversification*, which entails exporting of new or quality-upgraded products (goods and services) or exporting to new markets. The second dimension is *domestic production diversification*, involving the reallocation of production towards more productive industries, and to more productive firms within industries. Empirical evidence suggests that structural transformation at early stages of development involves economic and trade diversification.⁷

⁷ Papageorgiou, C., et al. (2012).

Empirical evidence suggests that as countries develop, they tend to reallocate production towards sectors with lower intrinsic volatility.⁸ In contrast, the poorest countries in the world tend to have concentrated economic structures that are often highly dependent on primary agricultural products or minerals. A lack of economic diversification in these countries is often associated with increased vulnerability to external shocks that can affect economic growth and increased economic uncertainty. Diversification can help to reduce volatility and increase the number and quality of jobs, providing the base for sustained poverty-reducing growth. Trade is a key factor for economic diversification, as export diversification can reduce vulnerability to adverse terms of trade shocks and stabilize export revenues, as well as driving output diversification.

Empirical analysis suggests that the complexity of production and exports is relevant for economic growth and that diversification is path dependent.⁹ In particular, countries may diversify their economies and exports building upon existing competencies and productive capacities.¹⁰ Mishra, Lundstrom and Anand (2011) explore whether diversification of services exports and their sophistication can be a driver of economic growth. Service exports activities can now be fragmented and done separately across different geographic locations, providing prospects for specialization. The competitiveness of service exporting countries can be boosted through factors such as low relative transport costs, less susceptibility to trade barriers, less capital intensity and certain regulations. This in turn may drive specialization and sophistication in service exports. Their results indicate that increasing sophistication of services is positively associated with growth performance, even when controlling for several variables across different samples (income per capita, skills, the size of domestic service sector, goods sophistication, financial development, rule of law, and country time invariant factors). Though they have not proved causality, their results are an indication of a new path, export diversification, for economic growth that may be of significance for developing countries.

However, promoting economic diversification in countries with political polarization and weak institutions is particularly challenging. Although there is more than one path to a successful diversification, there are key elements that can help developing countries find the right path, including reforms to favor competition, business investment and trade; investment in infrastructure (such as uninterrupted electricity supply, transportation infrastructure including ports, airports and roads), policies that facilitate the reallocation of resources to new productive activities, through access to finance or labor market policies and; government interventions to address specific market, political and institutional failures via, for example, exports and investment promotion agencies. Furthermore, structural transformation requires integrating into the global economic and building coalitions towards reforms that contribute to stimulate economic activities in the private sector to, ultimately, generate employment and reduce poverty.

VI. Economic Complexity Analysis and Definitions

This report uses different measures of economic complexity to analyze growth prospects in Central America. In this appendix, such measures and related methodology are explained. Raw data and indicators are developed by Harvard's Growth Lab and accessible at <http://atlas.cid.harvard.edu/data-downloads> (last visited on September 19th, 2019). For more detail on the how these indicators are calculated see the Atlas of Economic Complexity (Hausmann *et al*, 2013), from which the definitions in this appendix are borrowed.

⁸ Koren and Tenreyro, (2007)

⁹ McMillan et al. (2017)

¹⁰ Klinger et al. (2007), and OECD/WTO (2019) for a further discussion of the related literature.

The first two indicators used in this report are diversity and ubiquity of exports. Diversity measures the number of products a country effectively exports. By effectively we meant the number of products for which the country has revealed comparative advantage as measure by the Balassa index (Balassa, 1965). Ubiquity refers to the number of countries that effectively export a product. Behind this measure lies the assumption that countries only export those products for which they have the required knowledge. Thus, as a first raw measure, products with higher ubiquity are assumed to require little knowledge. Products that are export by few countries, i.e. with low ubiquity, are assumed to have embed more knowledge. In the same vein, diversity approximates the variety of capabilities available in a country.

However, each of these measures has to be corrected by each other. Following Hausmann *et al* (2013), take for example a country that exports a rare mineral product. This rare mineral has low ubiquity since few countries will export it, by this does mean that it requires high amounts of knowledge to be extracted. To correct for this low ubiquity, the degree of diversity has to be taken into account. If the production of a rare mineral required a vast number of capabilities, the countries that export this product should be highly diverse, i.e., these countries should be able to export a high number of products. Thus, products that are exported for few countries that at the same time export few products might not require high levels of capabilities. In contrast, products that are export for few countries that export a vast basket of products, presumable require a more ample set of capabilities.

A similar case can be done with respect to the degree of diversity of a country. A country that specializes in few complex products has low ubiquity, but it probably has a wide range of capabilities, in order to produce complex products. If these products are indeed complex, we would expect to find only a small set of countries exporting them. Therefore, we would expect these products to have low ubiquity. Even more, if we go one step further and measure that diversity of the countries producing these low ubiquity products, we would expect these countries to be very diverse. Thus, how much capabilities a country has not only depends on its diversity but also on the ubiquity of the product it exports and on the diversity of the countries that export the same goods, and so on. By the same token, the knowledge embedded in a product no only depends on its ubiquity, but also on the diversity of the countries that export this product and on the ubiquity of the products exported by these countries, and so on.

For each country the Economic Complexity Index represents the result of interacting the above steps infinitively, beginning with its diversity. Similarly, for each product, the Product Complexity Index (PCI) measures the result of similar interactions beginning with the ubiquity of the product. A more technical discussion can be found [here](#).

It is assumed that if two products share most of the required capabilities, countries that export one will also export the other. Under this assumption, proximity can be measured using the conditional probability that a country exporting product p also exports product p' . A desirable property of a proximity index is symmetry. Since the conditional probability is not symmetric, the minimum between the probability of exporting product p given p' , and the reverse, is used. As before, we refer the reader to the above link for technical details

In order to analyze country-product pairs a measure of distance is calculated. Distance intents to measure how far a product is from the set of current capabilities of country c . Distance in this sense measures the proportion of knowledge relevant to the product that the country does not have. It is captured by the proximity between a particular product p and the basket of products currently not being export by the country c . Distance is defined by the sum of the proximities between a particular good p and all the products that country c is currently not exporting normalized by the sum of proximities between all products and product p . If country c exports most of the goods connected to product p , then the distance will be short,

close to 0. But if country only exports a small proportion of the products that are related to product p then the distance will be large (close to 1)” (Hausmann *et al* 2013).

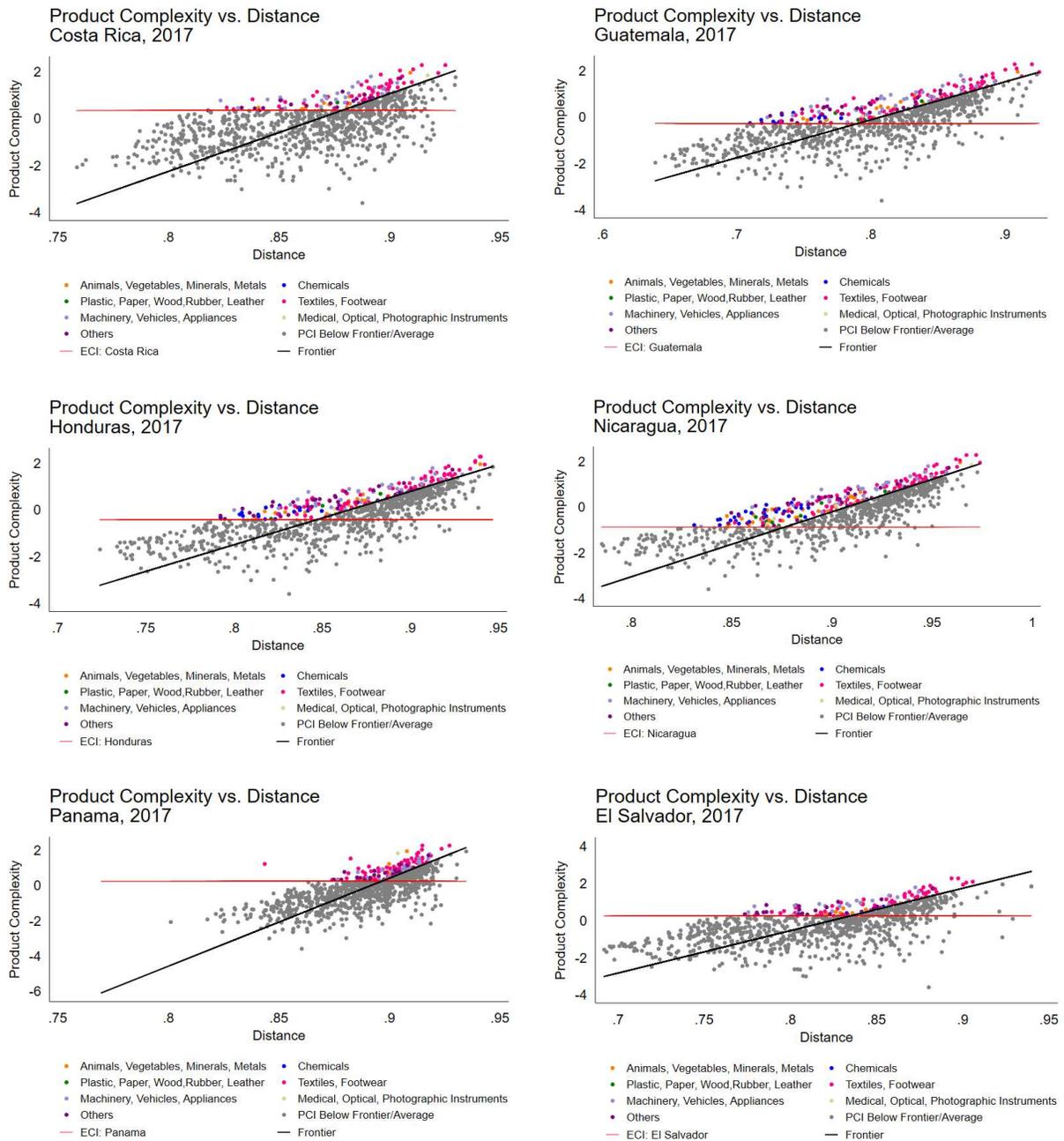
Furthermore, this measure of distance can be used to construct a measure of the opportunities a country has based on its position in the product space. Basically, this measure is calculated according to how close a product the country is not effectively exporting is from the country’s current export basket. Products close to the current export basket of a country will need similar capabilities to be exported than those of already exported products by the country, and therefore, they represent an opportunity. Even more, we should give more weight to more complex products (that are associated with higher income). This measure can be thought as the value of the option of moving into other products. “Hence, to quantify the ‘Complexity Outlook’ of a country’s unexploited prospects we sum the ‘closeness’, i.e. 1 minus the distance, to the products that the country is not currently making weighted by the level of complexity of these products. Higher Complexity Outlook implies being in the vicinity of more products and/or of products that are more complex.

Finally, this complexity outlook measure can be used to assess the potential benefit to a country if it were to effectively export a new product. The Complexity Outlook Gain (COG) measures this benefit. It measures the potential gain a country c would obtain from effectively exporting a new product p . “This is calculated as the change in Complexity Outlook that would come as a consequence of developing product p . Opportunity gain quantifies the contribution of a new product in terms of opening the doors to more, and more complex products.

Following Hausmann *et al* (2014), these measures of distance, complexity, and opportunity gain can be combined to derive an efficiency frontier. For each country, products can be plotted in the complexity-distance plane. In other words, given a country, one can plot the product complexity in the y-axis against the distance of the product from the productive knowledge of the country in the x-axis. Similarly, one can graph in the y-axis the opportunity gain -against distance in the x-axis. In both cases, the preferred products are those situated up and to the left on the graph. These products represent those with the highest complexity (or opportunity gain) and that are closer to those currently exported by the country. However, for Central America countries and most developing countries, it is usually the case that more complex products and those with the highest gain are relatively far from the current knowledge set.

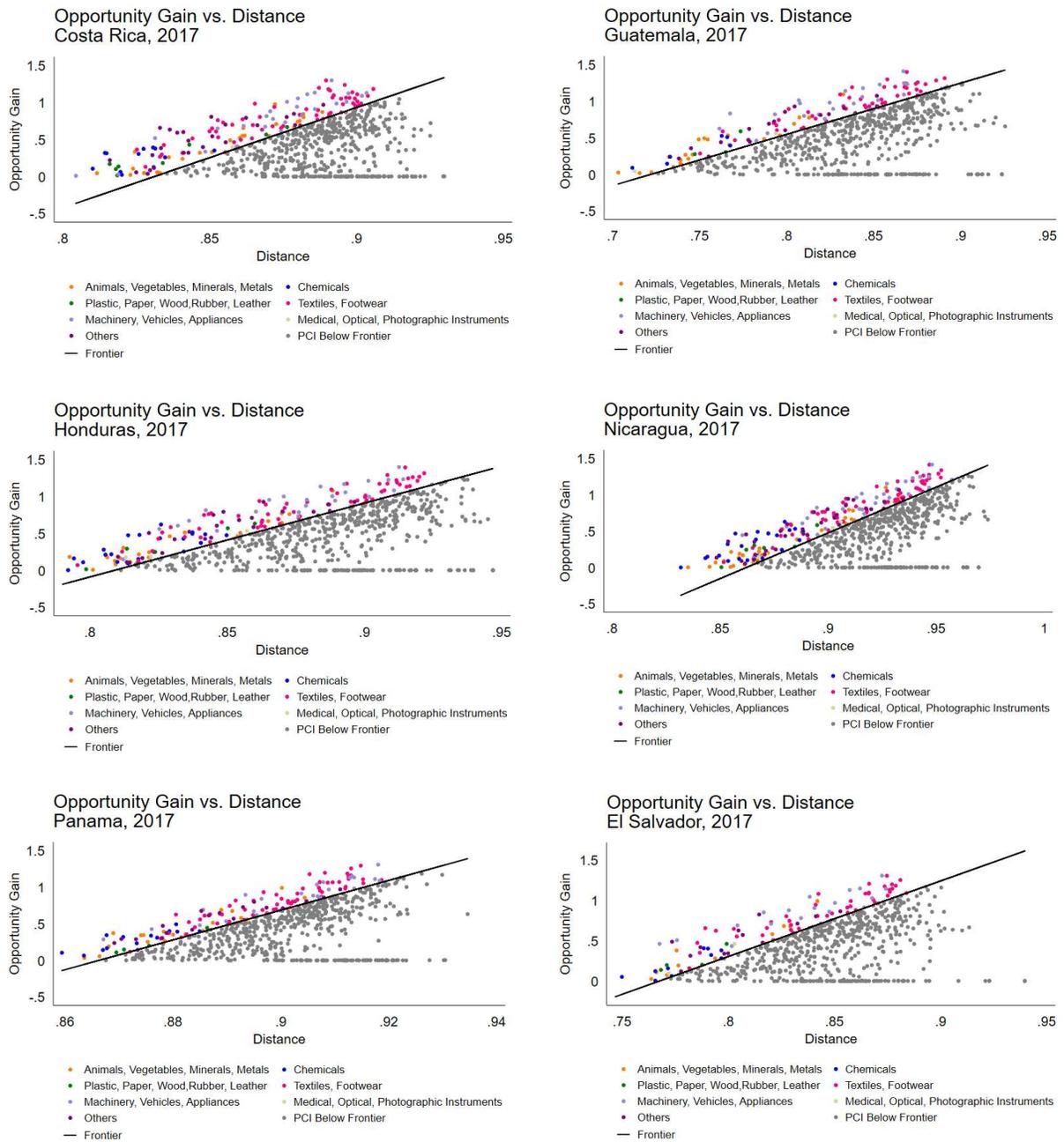
As a first step in analyzing the set of products that represent an opportunity for Central America countries, one can create a diagonal line that considers the objectives of high gain (or high complexity) and lower distance. One way to construct this line is by connecting the points in the 25th percentile in product complexity and the 25th percentile in distance, with the points associated with the respective 75th percentiles. We call this line complexity frontier. Additionally, when opportunity gain is considered, those products with negative opportunity gain can be omitted. Similarly, those products with PCI below the average level of economic complexity of the country can be omitted, when product complexity is plotted. The results from this exercise are shown in Figures 7.1 and 7.2.

Figure 7.1. Product Complexity Index vs Distance



Source: Own elaboration based on Hausmann *et al* (2014).

Figure 7.2. Complexity Opportunity Gain vs Distance



Source: Own elaboration based on Hausmann *et al* (2014).

Hausmann *et al* (2014) following the same logic -of choosing those products that are close to the current set of capabilities of the country and have high complexity and opportunity gain- proposed an index combining distance, PCI, and COG. Following this methodology, we first calculated closeness as 1-

distance. Then, we keep only those products located above and to the left of the country's complexity frontier, and that -at the same time- present a positive complexity gain for the country. Using this sample, the three main measures of complexity (closeness, PCI, and COG) were normalized to have mean zero and standard deviation of one. Using this data set, two indices were calculated combining the normalized measures of closeness (1- distance), PCI, and COG. The first index puts more weight on those products that are close to the export basket of the country, and less weight to products with larger potential opportunity gain. Specifically, this index weights closeness by 0.6, while PCI and COG have a weight of 0.2 each. This index is called the "feasible approach" since it emphasizes those products that are close to the current set of capabilities of the country. A second index weighting the complexity opportunity gain by 0.6 -and the other two variables by 0.2- was also calculated. This second index is referred as to "complex approach" since it puts more weight in the complexity gain than in the closeness to the current export basket. The main products identify by these two approaches are presented in Tables 7.1. to 7.10.

Part 2: Details on the construction of the combined indexes

To identify the three sectors which provide the better feasible opportunities, information on the number of top-50 products in each sector and the sectorial average strategic value is used.

Specifically, we combine information on the number of top-50 products in each sector k , N_k , as well as the average feasibility-index value of these products, F_k . We rank the sectors according to a feasible opportunity index, FO, that equally weights N_k and F_k after normalization. Formally, let \tilde{X} be the normalization of variable X , $\tilde{X}_k = (X_k - \bar{X})/Std(X)$, where \bar{X} and $Std(X)$ are, respectively, the mean and the standard deviation of X . Then the value of the FO index corresponding to sector k is given by

$$FO_k = 0.5 * \tilde{N}_k + 0.5 * \tilde{F}_k$$

The determine the sector with better strategic opportunities, an analogous approach was followed.

Table 7.1. Costa Rica: Feasible Opportunity Index, Fifty Main Products			
<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Foodstuffs	Beer	2203	0.94
Foodstuffs	Soups and broths	2104	0.91
Wood	Other printed matter	4911	0.87
Metals, Stone, Glass	Cullet and other scraps of glass	7001	0.84
Foodstuffs	Spirits < 80% alcohol	2208	0.83
Plastics and Rubbers	Other plates of plastics, noncellular and not reinforced	3920	0.82
Wood	Strips and other pieces of wood	4404	0.82
Plastics and Rubbers	Plastic waste	3915	0.80
Chemical and Allied Inds	Hair products	3305	0.78
Wood	Corrugated paper and paperboard	4808	0.73
Mineral Products	Electrical energy	2716	0.73
Animal and Vegetable Products	Cheese	0406	0.72
Metals, Stone, Glass	Zinc waste and scrap	7902	0.71
Foodstuffs	Other prepared or preserved meat	1602	0.69
Metals, Stone, Glass	Tanks etc. > 300 liters, iron or steel	7309	0.68

Table 7.1. Costa Rica: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Foodstuffs	Malt extract	1901	0.68
Wood	Letterstock	4817	0.68
Animal and Vegetable Products	Bovine	0102	0.67
Machinery, Electrical, Transportation	Dairy machinery	8434	0.67
Metals, Stone, Glass	Aluminum structures (bridges, towers etc)	7610	0.67
Foodstuffs	Chocolates	1806	0.66
Machinery, Electrical, Transportation	Trailers and semi-trailers	8716	0.65
Mineral Products	Quicklime	2522	0.64
Wood	Newspapers, journals and periodicals	4902	0.62
Wood	Books, brochures etc.	4901	0.60
Metals, Stone, Glass	Other tubes, pipes and hollow profiles of iron or steel	7306	0.60
Foodstuffs	Other fermented beverages	2206	0.60
Chemical and Allied Inds	Other paints and varnishes	3210	0.60
Wood	Wood carpentry for construction	4418	0.59
Machinery, Electrical, Transportation	Central heating boilers	8403	0.58
Machinery, Electrical, Transportation	Refrigerators, freezers	8418	0.57
Metals, Stone, Glass	Angles of iron or nonalloy steel	7216	0.57
Mineral Products	Slag, ash and residues containing metals	2620	0.57
Metals, Stone, Glass	Structures and their parts, of iron or steel	7308	0.57
Textiles and Footwear	Used clothes and textiles	6309	0.57
Metals, Stone, Glass	Mineral wools and insulating materials	6806	0.56
Machinery, Electrical, Transportation	Radar	8526	0.56
Plastics and Rubbers	Plastic household articles	3924	0.56
Foodstuffs	Yeasts	2102	0.56
Chemical and Allied Inds	Toiletries	3307	0.55
Miscellaneous	Other parts for machines and appliances	9033	0.55
Miscellaneous	Prefabricated buildings	9406	0.55
Metals, Stone, Glass	Wire etc. used for welding	8311	0.54
Foodstuffs	Coffee extracts	2101	0.53
Wood	Bobbins, spools, cops of paper	4822	0.52
Textiles and Footwear	Waste of man-made fibers	5505	0.52
Machinery, Electrical, Transportation	Harvesting or agricultural machinery	8433	0.52
Chemical and Allied Inds	Medicaments, packaged	3004	0.52
Metals, Stone, Glass	Other articles of iron or steel	7326	0.51
Wood	Densified wood	4413	0.51

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.2. Costa Rica: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Machines n.e.c.	8479	1.38
Miscellaneous	Drafting tables and machines	9017	1.26
Plastics and Rubbers	Polyamides	3908	1.20
Miscellaneous	Instruments for physical or chemical analysis	9027	1.19
Machinery, Electrical, Transportation	Calendering or other rolling machines, other than for metals	8420	1.17
Chemical and Allied Inds	Pickling preparations for metal surfaces	3810	1.13
Machinery, Electrical, Transportation	Machining centers for working metal	8457	1.13
Machinery, Electrical, Transportation	Parts and accessories for metal working machines	8466	1.12
Machinery, Electrical, Transportation	Machines for assembling electric lamps	8475	1.12
Chemical and Allied Inds	Lubricants	3403	1.09
Machinery, Electrical, Transportation	Lathes for removing metal	8458	1.08
Metals, Stone, Glass	Interchangeable tools for hand tools	8207	1.06
Machinery, Electrical, Transportation	Appliances for thermostatically controlled valves	8481	1.05
Metals, Stone, Glass	Cermets	8113	1.04
Metals, Stone, Glass	Articles for utensils, of cermet	8209	1.02
Metals, Stone, Glass	Knives and blades for machines	8208	1.02
Machinery, Electrical, Transportation	Tools for hand working, pneumatic, hydraulic motors	8467	1.01
Machinery, Electrical, Transportation	Transmission shafts	8483	1.00
Machinery, Electrical, Transportation	Electric soldering machines	8515	1.00
Machinery, Electrical, Transportation	Machinery for working rubber or plastics	8477	1.00
Chemical and Allied Inds	Photographic film, developed	3705	0.99
Machinery, Electrical, Transportation	Industrial electric furnaces	8514	0.97
Machinery, Electrical, Transportation	Compression-ignition internal combustion piston engines	8408	0.97
Metals, Stone, Glass	Screws and similar articles of iron or steel	7318	0.95
Miscellaneous	X-ray machines	9022	0.95
Chemical and Allied Inds	Esters of other inorganic acids of nonmetals	2920	0.95
Machinery, Electrical, Transportation	Other machine tools for planing and cutting metals	8461	0.93
Machinery, Electrical, Transportation	Self-propelled railway coaches	8603	0.92
Metals, Stone, Glass	Tungsten (wolfram)	8101	0.91
Miscellaneous	Machines for testing the mechanical properties of materials	9024	0.91
Metals, Stone, Glass	Laboratory, hygienic or pharmaceutical glassware	7017	0.90
Chemical and Allied Inds	Prepared culture media for micro-organisms	3821	0.90
Plastics and Rubbers	Acrylic polymers	3906	0.90
Miscellaneous	Measuring instruments	9031	0.90
Machinery, Electrical, Transportation	Machinery parts, not containing electrical features, n.e.c.	8485	0.87
Miscellaneous	Parts of musical instruments	9209	0.85
Machinery, Electrical, Transportation	Gaskets and similar joints of metal sheeting	8484	0.83
Machinery, Electrical, Transportation	Pumps for liquids	8413	0.83
Miscellaneous	Microscopes, other than optical	9012	0.83
Chemical and Allied Inds	Phenols, phenol-alcohols	2907	0.81
Chemical and Allied Inds	Other salts of acids	2842	0.80
Plastics and Rubbers	Amino-resins	3909	0.78
Metals, Stone, Glass	Flat-rolled products of other alloy steel, width < 600 mm	7226	0.78
Chemical and Allied Inds	Diagnostic or laboratory reagents	3822	0.78

Table 7.2. Costa Rica: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Sprays and powder dispersers	8424	0.78
Machinery, Electrical, Transportation	Fork-lift trucks	8427	0.76
Chemical and Allied Inds	Artificial graphite	3801	0.76
Machinery, Electrical, Transportation	Pumps, compressors, fans, etc.	8414	0.76
Machinery, Electrical, Transportation	Sound storage media	8523	0.76
Metals, Stone, Glass	Flat-rolled products of other alloy steel, width > 600 mm	7225	0.75

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.3. El Salvador: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Plastics and Rubbers	Plastic tubes and fittings	3917	0.93
Wood	Packing boxes	4415	0.92
Metals, Stone, Glass	Tanks etc. < 300 liters, iron or steel	7310	0.86
Plastics and Rubbers	Plastic builders' ware	3925	0.85
Metals, Stone, Glass	Aluminum structures (bridges, towers etc)	7610	0.85
Textiles and Footwear	Activewear, knit	6112	0.83
Foodstuffs	Jams, jellies and marmalades	2007	0.83
Textiles and Footwear	Articles of yarn, rope etc not elsewhere classified	5609	0.78
Chemical and Allied Inds	Glaziers' putty	3214	0.76
Metals, Stone, Glass	Structures and their parts, of iron or steel	7308	0.72
Miscellaneous	Prefabricated buildings	9406	0.69
Machinery, Electrical, Transportation	Refrigerators, freezers	8418	0.67
Animal and Vegetable Products	Milk	0401	0.67
Metals, Stone, Glass	Other articles of iron or steel	7326	0.66
Chemical and Allied Inds	Polishes and creams	3405	0.63
Chemical and Allied Inds	Other paints and varnishes	3210	0.63
Foodstuffs	Spirits < 80% alcohol	2208	0.61
Animal and Vegetable Products	Eggs, in shell	0407	0.58
Metals, Stone, Glass	Wire etc. used for welding	8311	0.58
Metals, Stone, Glass	Aluminum containers, <300 liters	7612	0.58
Mineral Products	Quicklime	2522	0.58
Machinery, Electrical, Transportation	Parts for use with electric generators	8503	0.56
Mineral Products	Electrical energy	2716	0.56
Metals, Stone, Glass	Glass containers for conveyance	7010	0.56
Wood	Wood carpentry for construction	4418	0.56
Miscellaneous	Seats	9401	0.56
Metals, Stone, Glass	Ferrous waste and scrap	7204	0.56
Foodstuffs	Waters	2201	0.54
Chemical and Allied Inds	Toiletries	3307	0.54
Machinery, Electrical, Transportation	Central heating boilers	8403	0.54

Table 7.3. El Salvador: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Foodstuffs	Chocolates	1806	0.52
Textiles and Footwear	Quilted textile products	5811	0.52
Metals, Stone, Glass	Stoppers, caps and lids of metal	8309	0.50
Animal and Vegetable Products	Carrots & turnips	0706	0.50
Animal and Vegetable Products	Worked cereal grains	1104	0.49
Plastics and Rubbers	Other articles of vulcanized rubber	4016	0.49
Plastics and Rubbers	Baths, sinks etc.	3922	0.49
Wood	Densified wood	4413	0.49
Chemical and Allied Inds	Candles	3406	0.49
Foodstuffs	Other manufactured tobacco	2403	0.49
Metals, Stone, Glass	Other articles of aluminum	7616	0.48
Machinery, Electrical, Transportation	Trailers and semi-trailers	8716	0.48
Miscellaneous	Other parts for machines and appliances	9033	0.48
Machinery, Electrical, Transportation	Dairy machinery	8434	0.47
Foodstuffs	Yeasts	2102	0.45
Foodstuffs	Other fermented beverages	2206	0.45
Textiles and Footwear	Nets	5608	0.43
Machinery, Electrical, Transportation	Equipment for temperature change of materials	8419	0.43
Textiles and Footwear	Used clothes and textiles	6309	0.43
Metals, Stone, Glass	Ceramic sinks, washbasins, and similar sanitary fixtures	6910	0.43

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.4. El Salvador: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Machines n.e.c.	8479	1.25
Miscellaneous	Drafting tables and machines	9017	1.23
Machinery, Electrical, Transportation	Calendering or other rolling machines, other than for metals	8420	1.13
Plastics and Rubbers	Polyamides	3908	1.11
Machinery, Electrical, Transportation	Machining centers for working metal	8457	1.09
Machinery, Electrical, Transportation	Parts and accessories for metal working machines	8466	1.08
Machinery, Electrical, Transportation	Lathes for removing metal	8458	1.08
Metals, Stone, Glass	Interchangeable tools for hand tools	8207	1.08
Machinery, Electrical, Transportation	Machines for assembling electric lamps	8475	1.05
Chemical and Allied Inds	Pickling preparations for metal surfaces	3810	1.04
Machinery, Electrical, Transportation	Appliances for thermostatically controlled valves	8481	1.03
Miscellaneous	Instruments for physical or chemical analysis	9027	1.02
Machinery, Electrical, Transportation	Machinery for working rubber or plastics	8477	1.00

Table 7.4. El Salvador: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Tools for hand working, pneumatic, hydraulic motors	8467	0.97
Chemical and Allied Inds	Lubricants	3403	0.97
Metals, Stone, Glass	Cermets	8113	0.97
Metals, Stone, Glass	Screws and similar articles of iron or steel	7318	0.96
Chemical and Allied Inds	Esters of other inorganic acids of nonmetals	2920	0.95
Machinery, Electrical, Transportation	Transmission shafts	8483	0.94
Metals, Stone, Glass	Knives and blades for machines	8208	0.94
Metals, Stone, Glass	Tungsten (wolfram)	8101	0.94
Machinery, Electrical, Transportation	Other machine tools for planing and cutting metals	8461	0.93
Chemical and Allied Inds	Photographic film, developed	3705	0.93
Machinery, Electrical, Transportation	Electric soldering machines	8515	0.92
Machinery, Electrical, Transportation	Self-propelled railway coaches	8603	0.90
Metals, Stone, Glass	Articles for utensils, of cermet	8209	0.89
Machinery, Electrical, Transportation	Industrial electric furnaces	8514	0.87
Machinery, Electrical, Transportation	Compression-ignition internal combustion piston engines	8408	0.87
Miscellaneous	Parts of musical instruments	9209	0.84
Miscellaneous	Machines for testing the mechanical properties of materials	9024	0.83
Machinery, Electrical, Transportation	Machinery parts, not containing electrical features, n.e.c.	8485	0.83
Chemical and Allied Inds	Prepared culture media for micro-organisms	3821	0.81
Machinery, Electrical, Transportation	Gaskets and similar joints of metal sheeting	8484	0.80
Metals, Stone, Glass	Laboratory, hygienic or pharmaceutical glassware	7017	0.79
Machinery, Electrical, Transportation	Molding boxes for metal foundry	8480	0.79
Chemical and Allied Inds	Phenols, phenol-alcohols	2907	0.78
Metals, Stone, Glass	Natural or artificial abrasive powder	6805	0.77
Miscellaneous	Measuring instruments	9031	0.77
Miscellaneous	X-ray machines	9022	0.77
Machinery, Electrical, Transportation	Pumps for liquids	8413	0.76
Metals, Stone, Glass	Bars of stainless steel, hot-rolled	7221	0.76
Plastics and Rubbers	Acrylic polymers	3906	0.75
Machinery, Electrical, Transportation	Equipment for temperature change of materials	8419	0.75
Machinery, Electrical, Transportation	Pumps, compressors, fans, etc.	8414	0.75
Metals, Stone, Glass	Springs of iron or steel	7320	0.74
Plastics and Rubbers	Amino-resins	3909	0.73
Chemical and Allied Inds	Other salts of acids	2842	0.73
Machinery, Electrical, Transportation	Machines for working materials by laser and similar means	8456	0.72
Metals, Stone, Glass	Wire of other alloy steel	7229	0.72
Metals, Stone, Glass	Handsaws	8202	0.71

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.5. Guatemala: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Plastics and Rubbers	Other plastic plates, sheets etc.	3921	0.82
Machinery, Electrical, Transportation	Insulated electrical wire	8544	0.77
Metals, Stone, Glass	Barbed wire of iron or steel	7313	0.71
Foodstuffs	Cigars and cigarettes	2402	0.70
Textiles and Footwear	Brassieres	6212	0.65
Textiles and Footwear	Socks, stockings, etc., knit	6115	0.64
Plastics and Rubbers	Plastic builders' ware	3925	0.63
Metals, Stone, Glass	Tanks etc. > 300 liters, iron or steel	7309	0.62
Animal and Vegetable Products	Fermented milk products	0403	0.62
Animal and Vegetable Products	Other live animals	0106	0.62
Raw Hides, Skins, Leather, Furs	Tanned hides of bovines or equines	4104	0.59
Animal and Vegetable Products	Eggs, in shell	0407	0.59
Metals, Stone, Glass	Aluminum structures (bridges, towers etc)	7610	0.57
Animal and Vegetable Products	Milk	0401	0.57
Textiles and Footwear	Women's shirts	6206	0.56
Chemical and Allied Inds	Other paints and varnishes	3210	0.56
Wood	Strips and other pieces of wood	4404	0.56
Foodstuffs	Coffee extracts	2101	0.55
Miscellaneous	Prefabricated buildings	9406	0.55
Animal and Vegetable Products	Cheese	0406	0.55
Metals, Stone, Glass	Structures and their parts, of iron or steel	7308	0.54
Miscellaneous	Other furniture and parts	9403	0.54
Metals, Stone, Glass	Aluminum bars	7604	0.53
Textiles and Footwear	Leather footwear	6403	0.53
Foodstuffs	Chocolates	1806	0.52
Wood	Tissue	4803	0.51
Foodstuffs	Other manufactured tobacco	2403	0.51
Textiles and Footwear	Activewear, knit	6112	0.51
Textiles and Footwear	Other footwear	6405	0.51
Metals, Stone, Glass	Scrap of precious metal	7112	0.48
Metals, Stone, Glass	Other articles of iron or steel	7326	0.47
Wood	Bobbins, spools, cops of paper	4822	0.47
Metals, Stone, Glass	Nails and similar articles of iron or steel	7317	0.46
Metals, Stone, Glass	Ferrous waste and scrap	7204	0.45
Animal and Vegetable Products	Fish fillets	0304	0.45
Metals, Stone, Glass	Articles of cement, of concrete or of artificial stone	6810	0.45
Foodstuffs	Other fermented beverages	2206	0.44
Mineral Products	Chalk	2509	0.44
Machinery, Electrical, Transportation	Dairy machinery	8434	0.44
Animal and Vegetable Products	Vegetables, provisionally preserved	0711	0.43
Metals, Stone, Glass	Plaster articles	6809	0.43
Metals, Stone, Glass	Glass fibers	7019	0.43
Animal and Vegetable Products	Fowl	0105	0.42
Plastics and Rubbers	Other articles of plastic	3926	0.42

Table 7.5. Guatemala: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Animal and Vegetable Products	Cereal meals	1103	0.42
Animal and Vegetable Products	Bovine	0102	0.41
Plastics and Rubbers	Other articles of vulcanized rubber	4016	0.41
Animal and Vegetable Products	Fruits, dried	0813	0.40
Miscellaneous	Other parts for machines and appliances	9033	0.40
Chemical and Allied Inds	Medicaments, packaged	3004	0.40

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.6. Guatemala: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Machines n.e.c.	8479	1.19
Miscellaneous	Drafting tables and machines	9017	1.11
Plastics and Rubbers	Polyamides	3908	1.09
Machinery, Electrical, Transportation	Calendering or other rolling machines, other than for metals	8420	1.02
Metals, Stone, Glass	Interchangeable tools for hand tools	8207	0.99
Machinery, Electrical, Transportation	Lathes for removing metal	8458	0.99
Machinery, Electrical, Transportation	Parts and accessories for metal working machines	8466	0.99
Machinery, Electrical, Transportation	Machines for assembling electric lamps	8475	0.97
Machinery, Electrical, Transportation	Machining centers for working metal	8457	0.97
Miscellaneous	Instruments for physical or chemical analysis	9027	0.97
Chemical and Allied Inds	Lubricants	3403	0.96
Machinery, Electrical, Transportation	Appliances for thermostatically controlled valves	8481	0.95
Chemical and Allied Inds	Pickling preparations for metal surfaces	3810	0.93
Machinery, Electrical, Transportation	Machinery for working rubber or plastics	8477	0.89
Machinery, Electrical, Transportation	Tools for hand working, pneumatic, hydraulic motors	8467	0.88
Machinery, Electrical, Transportation	Transmission shafts	8483	0.88
Chemical and Allied Inds	Esters of other inorganic acids of nonmetals	2920	0.88
Metals, Stone, Glass	Knives and blades for machines	8208	0.86
Metals, Stone, Glass	Tungsten (wolfram)	8101	0.86
Metals, Stone, Glass	Screws and similar articles of iron or steel	7318	0.86
Machinery, Electrical, Transportation	Compression-ignition internal combustion piston engines	8408	0.86
Machinery, Electrical, Transportation	Industrial electric furnaces	8514	0.84
Chemical and Allied Inds	Photographic film, developed	3705	0.83
Metals, Stone, Glass	Articles for utensils, of cermet	8209	0.83
Machinery, Electrical, Transportation	Electric soldering machines	8515	0.83
Chemical and Allied Inds	Prepared culture media for micro-organisms	3821	0.81
Metals, Stone, Glass	Cermets	8113	0.80
Machinery, Electrical, Transportation	Other machine tools for planing and cutting metals	8461	0.80
Machinery, Electrical, Transportation	Self-propelled railway coaches	8603	0.80
Chemical and Allied Inds	Phenols, phenol-alcohols	2907	0.78

Table 7.6. Guatemala: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Miscellaneous	Parts of musical instruments	9209	0.78
Miscellaneous	Machines for testing the mechanical properties of materials	9024	0.77
Machinery, Electrical, Transportation	Gaskets and similar joints of metal sheeting	8484	0.76
Machinery, Electrical, Transportation	Machinery parts, not containing electrical features, n.e.c.	8485	0.76
Metals, Stone, Glass	Laboratory, hygienic or pharmaceutical glassware	7017	0.76
Miscellaneous	X-ray machines	9022	0.75
Plastics and Rubbers	Acrylic polymers	3906	0.75
Miscellaneous	Measuring instruments	9031	0.73
Metals, Stone, Glass	Natural or artificial abrasive powder	6805	0.72
Plastics and Rubbers	Amino-resins	3909	0.70
Machinery, Electrical, Transportation	Pumps for liquids	8413	0.70
Metals, Stone, Glass	Bars of stainless steel, hot-rolled	7221	0.69
Chemical and Allied Inds	Other salts of acids	2842	0.68
Machinery, Electrical, Transportation	Pumps, compressors, fans, etc.	8414	0.68
Metals, Stone, Glass	Flat-rolled products of stainless steel of a width < 600 mm	7220	0.68
Metals, Stone, Glass	Springs of iron or steel	7320	0.68
Textiles and Footwear	Textile articles for technical use	5911	0.67
Metals, Stone, Glass	Handsaws	8202	0.67
Machinery, Electrical, Transportation	Equipment for temperature change of materials	8419	0.67
Machinery, Electrical, Transportation	Sprays and powder dispersers	8424	0.66

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.7. Honduras: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Animal and Vegetable Products	Fruits and nuts, frozen	0811	0.81
Foodstuffs	Jams, jellies and marmalades	2007	0.72
Foodstuffs	Sauces and seasonings	2103	0.69
Foodstuffs	Food preparations n.e.c.	2106	0.68
Textiles and Footwear	Leather footwear	6403	0.67
Wood	Toilet paper	4818	0.65
Foodstuffs	Sausages	1601	0.65
Foodstuffs	Ice cream	2105	0.64
Plastics and Rubbers	Other plastic plates, sheets etc.	3921	0.64
Chemical and Allied Inds	Mixed fertilizers	3105	0.62
Textiles and Footwear	Activewear, knit	6112	0.62
Textiles and Footwear	Parts of footwear	6406	0.61
Metals, Stone, Glass	Zinc waste and scrap	7902	0.60
Plastics and Rubbers	Plastic tubes and fittings	3917	0.59
Plastics and Rubbers	Other plates of plastics, noncellular and not reinforced	3920	0.57
Metals, Stone, Glass	Tanks etc. < 300 liters, iron or steel	7310	0.57

Table 7.7. Honduras: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Animal and Vegetable Products	Eggs, in shell	0407	0.57
Animal and Vegetable Products	Worked cereal grains	1104	0.57
Foodstuffs	Spirits < 80% alcohol	2208	0.56
Chemical and Allied Inds	Hair products	3305	0.56
Foodstuffs	Coffee extracts	2101	0.55
Plastics and Rubbers	Plastic builders' ware	3925	0.55
Textiles and Footwear	Other footwear	6405	0.54
Chemical and Allied Inds	Cleaning products	3402	0.54
Foodstuffs	Pasta	1902	0.53
Metals, Stone, Glass	Tanks etc. > 300 liters, iron or steel	7309	0.52
Textiles and Footwear	Twine and ropes of baste fibers	5607	0.51
Mineral Products	Electrical energy	2716	0.51
Miscellaneous	Mattresses and bedding	9404	0.50
Animal and Vegetable Products	Frozen vegetables	0710	0.50
Chemical and Allied Inds	Glaziers' putty	3214	0.50
Chemical and Allied Inds	Hypochlorites	2828	0.50
Miscellaneous	Other furniture and parts	9403	0.50
Miscellaneous	Fishing and hunting equipment	9507	0.49
Wood	Tissue	4803	0.49
Textiles and Footwear	Garments knit with impregnated fibers	6113	0.49
Chemical and Allied Inds	Paints and varnishes, nonaqueous	3208	0.48
Metals, Stone, Glass	Aluminum containers, <300 liters	7612	0.47
Metals, Stone, Glass	Cloth of iron or steel wire	7314	0.47
Foodstuffs	Ethyl alcohol > 80%	2207	0.47
Metals, Stone, Glass	Aluminum structures (bridges, towers etc)	7610	0.47
Wood	Letterstock	4817	0.46
Chemical and Allied Inds	Organic composite solvents and thinners	3814	0.46
Foodstuffs	Beer	2203	0.45
Wood	Other printed matter	4911	0.43
Plastics and Rubbers	Plastic household articles	3924	0.43
Animal and Vegetable Products	Cheese	0406	0.43
Machinery, Electrical, Transportation	Refrigerators, freezers	8418	0.42
Miscellaneous	Prefabricated buildings	9406	0.41
Foodstuffs	Other manufactured tobacco	2403	0.41

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.8. Honduras: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Machines n.e.c.	8479	1.25
Miscellaneous	Drafting tables and machines	9017	1.18
Plastics and Rubbers	Polyamides	3908	1.13
Machinery, Electrical, Transportation	Calendering or other rolling machines, other than for metals	8420	1.07
Machinery, Electrical, Transportation	Lathes for removing metal	8458	1.06
Machinery, Electrical, Transportation	Parts and accessories for metal working machines	8466	1.05
Machinery, Electrical, Transportation	Machines for assembling electric lamps	8475	1.04
Chemical and Allied Inds	Pickling preparations for metal surfaces	3810	1.03
Miscellaneous	Instruments for physical or chemical analysis	9027	1.03
Metals, Stone, Glass	Interchangeable tools for hand tools	8207	1.03
Machinery, Electrical, Transportation	Machining centers for working metal	8457	1.03
Chemical and Allied Inds	Lubricants	3403	1.00
Machinery, Electrical, Transportation	Appliances for thermostatically controlled valves	8481	0.98
Machinery, Electrical, Transportation	Machinery for working rubber or plastics	8477	0.95
Machinery, Electrical, Transportation	Tools for hand working, pneumatic, hydraulic motors	8467	0.95
Chemical and Allied Inds	Esters of other inorganic acids of nonmetals	2920	0.95
Machinery, Electrical, Transportation	Transmission shafts	8483	0.95
Metals, Stone, Glass	Knives and blades for machines	8208	0.92
Metals, Stone, Glass	Screws and similar articles of iron or steel	7318	0.92
Metals, Stone, Glass	Cermets	8113	0.92
Machinery, Electrical, Transportation	Electric soldering machines	8515	0.91
Metals, Stone, Glass	Tungsten (wolfram)	8101	0.91
Machinery, Electrical, Transportation	Compression-ignition internal combustion piston engines	8408	0.91
Chemical and Allied Inds	Photographic film, developed	3705	0.90
Metals, Stone, Glass	Articles for utensils, of cermet	8209	0.90
Machinery, Electrical, Transportation	Industrial electric furnaces	8514	0.89
Machinery, Electrical, Transportation	Self-propelled railway coaches	8603	0.87
Machinery, Electrical, Transportation	Other machine tools for planing and cutting metals	8461	0.87
Chemical and Allied Inds	Phenols, phenol-alcohols	2907	0.85
Chemical and Allied Inds	Prepared culture media for micro-organisms	3821	0.85
Miscellaneous	Parts of musical instruments	9209	0.84
Metals, Stone, Glass	Laboratory, hygienic or pharmaceutical glassware	7017	0.83
Miscellaneous	Machines for testing the mechanical properties of materials	9024	0.82
Machinery, Electrical, Transportation	Gaskets and similar joints of metal sheeting	8484	0.82
Miscellaneous	X-ray machines	9022	0.81
Machinery, Electrical, Transportation	Machinery parts, not containing electrical features, n.e.c.	8485	0.81
Plastics and Rubbers	Acrylic polymers	3906	0.81
Miscellaneous	Measuring instruments	9031	0.79
Machinery, Electrical, Transportation	Pumps for liquids	8413	0.78
Metals, Stone, Glass	Natural or artificial abrasive powder	6805	0.77
Metals, Stone, Glass	Bars of stainless steel, hot-rolled	7221	0.77
Plastics and Rubbers	Amino-resins	3909	0.75
Metals, Stone, Glass	Flat-rolled products of stainless steel of a width < 600 mm	7220	0.75
Machinery, Electrical, Transportation	Pumps, compressors, fans, etc.	8414	0.75

Table 7.8. Honduras: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Chemical and Allied Inds	Other salts of acids	2842	0.74
Textiles and Footwear	Textile articles for technical use	5911	0.73
Metals, Stone, Glass	Springs of iron or steel	7320	0.73
Metals, Stone, Glass	Handsaws	8202	0.73
Metals, Stone, Glass	Flat-rolled products of other alloy steel, width > 600 mm	7225	0.73
Machinery, Electrical, Transportation	Molding boxes for metal foundry	8480	0.73

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.9. Nicaragua: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Foodstuffs	Fruit juices	2009	0.80
Foodstuffs	Animal feed	2309	0.76
Foodstuffs	Confectionery sugar	1704	0.76
Plastics and Rubbers	Packing lids	3923	0.73
Textiles and Footwear	Waterproof footwear	6401	0.73
Wood	Paper labels	4821	0.72
Foodstuffs	Bakery products	1905	0.72
Wood	Cardboard packing containers	4819	0.72
Foodstuffs	Other vegetables, prepared or preserved	2005	0.69
Foodstuffs	Food preparations n.e.c.	2106	0.65
Animal and Vegetable Products	Other live animals	0106	0.65
Foodstuffs	Jams, jellies and marmalades	2007	0.65
Textiles and Footwear	Waste of man-made fibers	5505	0.63
Textiles and Footwear	Leather footwear	6403	0.63
Metals, Stone, Glass	Zinc waste and scrap	7902	0.62
Wood	Notebooks	4820	0.62
Foodstuffs	Sauces and seasonings	2103	0.60
Textiles and Footwear	Activewear, knit	6112	0.60
Textiles and Footwear	Socks, stockings, etc., knit	6115	0.59
Animal and Vegetable Products	Eggs, in shell	0407	0.58
Animal and Vegetable Products	Margarine	1517	0.56
Foodstuffs	Cereal foods	1904	0.55
Textiles and Footwear	Parts of footwear	6406	0.54
Chemical and Allied Inds	Mixed fertilizers	3105	0.53
Metals, Stone, Glass	Other tubes, pipes and hollow profiles of iron or steel	7306	0.53
Wood	Strips and other pieces of wood	4404	0.52
Animal and Vegetable Products	Fermented milk products	0403	0.51
Wood	Packing boxes	4415	0.51
Foodstuffs	Sausages	1601	0.50
Foodstuffs	Pickled fruits and vegetables	2001	0.49

Table 7.9. Nicaragua: Feasible Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Feasible Opportunity Index</i>
Mineral Products	Quicklime	2522	0.49
Textiles and Footwear	Other footwear	6405	0.48
Metals, Stone, Glass	Tanks etc. < 300 liters, iron or steel	7310	0.47
Plastics and Rubbers	Other plastic plates, sheets etc.	3921	0.47
Wood	Toilet paper	4818	0.47
Foodstuffs	Soups and broths	2104	0.47
Chemical and Allied Inds	Hair products	3305	0.46
Textiles and Footwear	Articles of yarn, rope etc not elsewhere clasified	5609	0.45
Textiles and Footwear	Cotton yarn for retail sale	5207	0.45
Mineral Products	Electrical energy	2716	0.44
Foodstuffs	Other manufactured tobacco	2403	0.43
Plastics and Rubbers	Plastic tubes and fittings	3917	0.43
Chemical and Allied Inds	Hypochlorites	2828	0.43
Textiles and Footwear	Other made up articles	6307	0.42
Animal and Vegetable Products	Live Fish	0301	0.42
Textiles and Footwear	Twine and ropes of baste fibers	5607	0.42
Animal and Vegetable Products	Frozen vegetables	0710	0.42
Textiles and Footwear	Garments knit with impregnated fibers	6113	0.42
Chemical and Allied Inds	Other paints and varnishes	3210	0.41
Animal and Vegetable Products	Coral and shells	0508	0.41

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

Table 7.10. Nicaragua: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Machines n.e.c.	8479	1.24
Miscellaneous	Drafting tables and machines	9017	1.18
Plastics and Rubbers	Polyamides	3908	1.12
Machinery, Electrical, Transportation	Calendering or other rolling machines, other than for metals	8420	1.08
Chemical and Allied Inds	Pickling preparations for metal surfaces	3810	1.06
Miscellaneous	Instruments for physical or chemical analysis	9027	1.06
Machinery, Electrical, Transportation	Lathes for removing metal	8458	1.05
Machinery, Electrical, Transportation	Parts and accessories for metal working machines	8466	1.05
Machinery, Electrical, Transportation	Machining centers for working metal	8457	1.04
Machinery, Electrical, Transportation	Machines for assembling electric lamps	8475	1.04
Metals, Stone, Glass	Interchangeable tools for hand tools	8207	1.03
Chemical and Allied Inds	Lubricants	3403	1.03
Machinery, Electrical, Transportation	Appliances for thermostatically controlled valves	8481	1.01
Chemical and Allied Inds	Esters of other inorganic acids of nonmetals	2920	0.98
Machinery, Electrical, Transportation	Machinery for working rubber or plastics	8477	0.97

Table 7.10. Nicaragua: Strategic Opportunity Index, Fifty Main Products

<i>Major Group</i>	<i>Product Short Description</i>	<i>HS Code</i>	<i>Strategic Opportunity Index</i>
Machinery, Electrical, Transportation	Tools for hand working, pneumatic, hydraulic motors	8467	0.95
Machinery, Electrical, Transportation	Transmission shafts	8483	0.95
Metals, Stone, Glass	Tungsten (wolfram)	8101	0.94
Metals, Stone, Glass	Cermets	8113	0.93
Chemical and Allied Inds	Photographic film, developed	3705	0.93
Metals, Stone, Glass	Knives and blades for machines	8208	0.92
Metals, Stone, Glass	Screws and similar articles of iron or steel	7318	0.92
Machinery, Electrical, Transportation	Compression-ignition internal combustion piston engines	8408	0.92
Metals, Stone, Glass	Articles for utensils, of cermet	8209	0.92
Machinery, Electrical, Transportation	Electric soldering machines	8515	0.91
Machinery, Electrical, Transportation	Industrial electric furnaces	8514	0.90
Chemical and Allied Inds	Prepared culture media for micro-organisms	3821	0.88
Machinery, Electrical, Transportation	Self-propelled railway coaches	8603	0.87
Machinery, Electrical, Transportation	Other machine tools for planing and cutting metals	8461	0.87
Metals, Stone, Glass	Laboratory, hygienic or pharmaceutical glassware	7017	0.87
Miscellaneous	X-ray machines	9022	0.86
Miscellaneous	Machines for testing the mechanical properties of materials	9024	0.86
Chemical and Allied Inds	Phenols, phenol-alcohols	2907	0.85
Machinery, Electrical, Transportation	Machinery parts, not containing electrical features, n.e.c.	8485	0.85
Machinery, Electrical, Transportation	Gaskets and similar joints of metal sheeting	8484	0.83
Miscellaneous	Parts of musical instruments	9209	0.83
Plastics and Rubbers	Acrylic polymers	3906	0.83
Miscellaneous	Measuring instruments	9031	0.83
Machinery, Electrical, Transportation	Pumps for liquids	8413	0.79
Metals, Stone, Glass	Bars of stainless steel, hot-rolled	7221	0.78
Chemical and Allied Inds	Other salts of acids	2842	0.77
Metals, Stone, Glass	Natural or artificial abrasive powder	6805	0.77
Plastics and Rubbers	Amino-resins	3909	0.77
Metals, Stone, Glass	Flat-rolled products of stainless steel of a width < 600 mm	7220	0.75
Chemical and Allied Inds	Artificial graphite	3801	0.75
Machinery, Electrical, Transportation	Pumps, compressors, fans, etc.	8414	0.74
Chemical and Allied Inds	Serums and vaccines	3002	0.74
Chemical and Allied Inds	Diagnostic or laboratory reagents	3822	0.74
Textiles and Footwear	Textile articles for technical use	5911	0.74
Metals, Stone, Glass	Flat-rolled products of other alloy steel, width > 600 mm	7225	0.74

Source: World Bank staff calculations using data from COMTRADE and Atlas of Economic Complexity.

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