Report No.

Better Jobs in Central America

The Role of Human Capital

May, 2012

Human Development Department
Latin America and the Caribbean Region

Document of the World Bank

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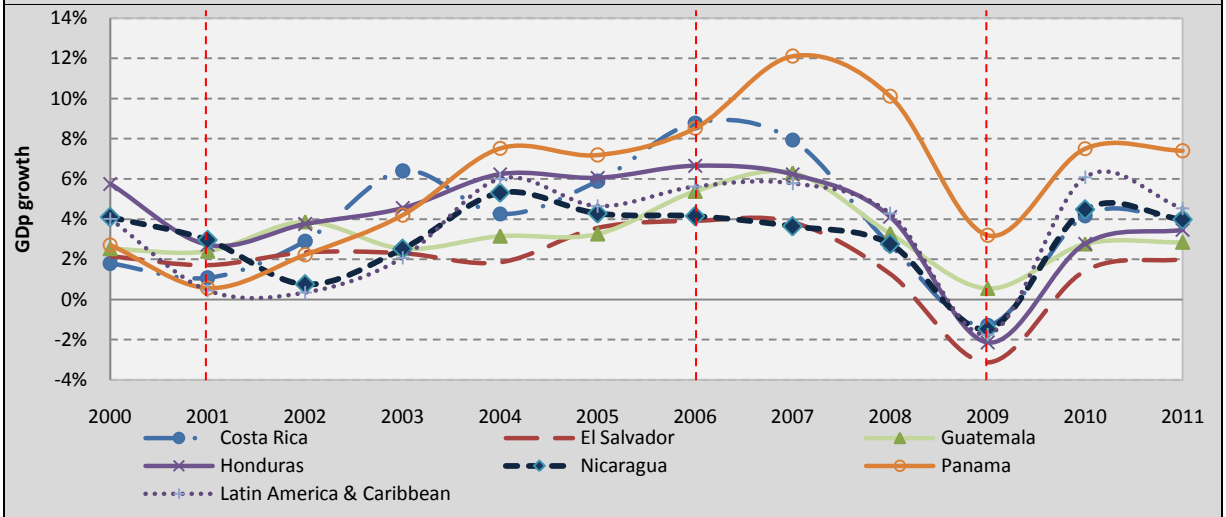
By Sajitha Bashir, T. H. Gindling and Ana Maria Oviedo[1]

25 April 2012

1. WHAT IS THE JOBS CHALLENGE IN CENTRAL AMERICA?

During the past decade, following a long period of political turmoil and civil conflict, most Central American countries achieved moderate economic growth, low rates of inflation, and an increase in foreign direct investment (Figure 1 and Table 1).[2] These positive developments are the result of sound macro-economic and fiscal policies and trade reforms. Of particular importance, the Dominican Republic Central American Free Trade Agreement (DR-CAFTA) substantially reduced barriers to trade and foreign direct investment between the Dominican Republic, the countries of Central America, and the United States (US).

Figure 1: GDP growth in Central America (%)



Source: World Economic Outlook (2010).

[1] This note was prepared on the basis of the Central American regional study *Turning Crisis into Opportunity: Human Capital and Social Policies to Promote Good Quality Job Creation in Central America* led by Sajitha Bashir and Ana Maria Oviedo and including Pablo Acosta and Javier Luque. The team is grateful to Mansoora Rashid for comments on earlier versions of this draft.

[2] Economic growth rates fell during the economic crisis of 2008-2009 but recovered to near pre-crisis levels relatively quickly (Figure 1).

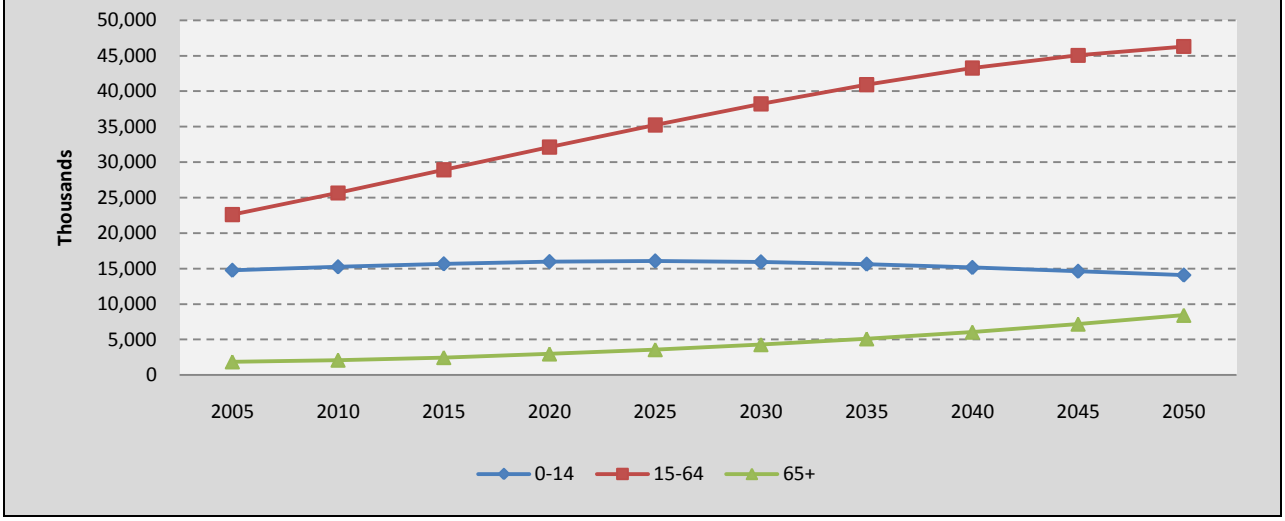
Table 1: Macroeconomic and trade indicators in Central America, 1995-2005												
Indicator	**Country**	**1995**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Inflation, GDP deflator (annual %)[1]	Costa Rica	22.2	7.0	8.6	9.2	8.3	11.8	10.6	11.0	9.3	12.1	8.9
	El Salvador	10.4	3.2	3.4	1.2	2.8	3.1	4.8	4.9	4.4	5.9	-1.0
	Guatemala	8.7	6.8	-4.1	6.4	4.5	6.1	5.6	5.0	7.1	9.4	3.4
	Honduras	24.9	30.8	8.1	5.1	5.8	6.5	7.3	5.3	6.8	8.5	4.4
	Nicaragua	13.4	8.6	7.2	3.2	5.3	9.1	9.9	8.2	9.7	15.0	3.9
	Panama	0.5	-1.2	1.0	1.7	1.1	2.0	1.7	2.1	3.0	5.5	1.4
Exports per person (US$)[3]	Costa Rica		1409	1180	1215	1397	1406	1542	1774	1987	2053	1850
	El Salvador		212	190	190	189	219	241	274	307	364	315
	Guatemala		241	210	209	218	236	266	286	339	393	357
	Honduras		212	206	182	200	242	285	328	381	433	359
	Nicaragua		123	103	107	114	135	151	184	213	262	242
	Panama		262	270	261	257	281	299	312	336	338	177
Net foreign direct investment - investment flows (US$ millions)[3]	Costa Rica		409	461	659	576	795	861	1469	1897	2021	1322
	El Salvador		173	280	209	129	407	512	228	1447	539	294
	Guatemala		146	456	111	131	296	509	600	745	754	600
	Honduras		356	296	246	380	506	586	630	910	901	500
	Nicaragua		255	150	204	200	240	242	187	382	594	424
	Panama		624	467	98	735	1101	935	2557	1776	2156	1772
GDP per capita growth (annual %)[1]	Costa Rica	1.4	-0.5	-1.0	0.9	4.4	2.4	4.1	7.0	6.1	1.0	-3.0
	El Salvador	5.1	1.7	1.3	2.0	2.0	1.5	2.7	3.8	4.2	2.0	-4.0
	Guatemala	2.6	1.2	-0.1	1.3	0.0	0.6	0.7	2.8	3.7	0.8	-1.9
	Honduras	1.6	3.6	0.6	1.7	2.5	4.1	4.0	4.5	4.2	1.9	-3.8
	Nicaragua	3.6	2.5	1.5	-0.6	1.2	4.0	3.0	2.8	2.3	1.4	-2.8
	Panama	-0.3	0.8	-1.3	0.3	2.3	5.6	5.3	6.7	10.2	8.3	1.5
Unemployment Rate (annual %)[2]	Costa Rica	5.2	5.2	6.1	6.4	6.7	6.5	6.6	6.0	4.6	4.9	8.4
	El Salvador	7.6	6.9	7.0	6.2	6.9	6.8	7.2	6.6	6.3	5.9	8.1
	Guatemala											
	Honduras	3.2	4.0	4.2	3.8	5.1	5.9	4.0	3.9	3.9	3.9	4.4
	Nicaragua	16.9	9.8	10.7	10.7	11.7	11.0	5.6	5.2	5.9	6.1	8.2
	Panama	14.0	13.5	14.7	14.1	13.7	12.4	10.3	9.1	6.8	5.8	5.0

Sources: 1. World Bank World Development Indicators; 2. International Monetary Fund World Economic Outlook Database; 3. *Instituto Centroamericano de Administración de Empresas*, 2010 (except for net foreign direct investment for Guatemala which is from World Bank World Development Indicators).

Despite these successes, Central American countries, except Panama and Costa Rica, have yet to achieve high productivity led growth. In Panama and Costa Rica, exports have gradually shifted to high technology-based exports and knowledge-intensive services. In the rest of the region (El Salvador, Guatemala, Honduras and Nicaragua) the main driver of economic growth has been the agriculture sector, boosted by high global commodity prices. Manufacturing and services have also contributed to growth in these countries, but their overall economic contribution remains small relative to agriculture. As a result, in most of Central America growth continues to depend on agriculture, which remains hostage to commodity price volatility.

Economic growth and migration have maintained low unemployment rates so far. The agricultural sector and the labor intensive share of the services sector have absorbed most of the region's largely unskilled labor base; and while employment in manufacturing has also grown, the share of employment in manufacturing has fallen in most countries. Furthermore, the emigration of young unskilled workers, both to the United States and within the region, has also been critical for absorbing labor and generating remittances. Both factors have played a role in keeping average unemployment rates relatively stable and low by Latin American standards. However, unemployment rates among youth remain high, a worrisome trend given that the labor force will continue to grow in the coming decades (Figure 2).

Figure 2: Central America Population Projections



The creation of more jobs, particularly of jobs that can break the poverty cycle and contribute to sustained economic growth is high on the region's policy agenda, for several reasons.[3] First, there is evidence that high youth unemployment, a factor that contributes to inequality, is associated with high rates of violent crime— which in turn has an adverse effect on economic growth.[4] Violent crime also undermines social cohesion. Second, job creation proved to be vulnerable to shocks in global commodity prices and to the global economic crisis, therefore the need to bring employment growth to its pre-crisis trend (and possibly above). Finally, most job creation so far has been in low productivity and low technology sectors, which explains why aggregate productivity and real wages have stagnated over the past decade. Thus, more important than the creation of employment per se, is the creation of employment in higher value added activities, which will be critical for increasing the rate of economic growth in Central

[3] Although there is no clear consensus on the definition of "job quality," it is reasonable to argue that a "good job" should at least be able to provide sufficient income for the individual and her dependents to live above poverty, and provide a certain financial stability that will reduce the household's vulnerability in case of unforeseen shocks.
[4] See Fajnzylber, P., Lederman, D., Loayza, N. (2002). "Inequality and Violent Crime," Journal of Law and Economics, vol. XLV; and World Bank (2008). "Local Gains from Global Opportunities: Improving Central America's Investment Climate."

America and for improving real wages and the overall standard of living of the regional population.[5]

Given this environment, the major jobs challenge in Central America is to create better conditions to stimulate the creation of more productive employment in the context of a fast-growing labor force. Addressing this challenge will contribute to reducing poverty, inequality and social exclusion that have been pervasive in most Central American countries. To achieve this objective, Central America will need a two pronged policy approach. First, the region will need to implement policies that help producers and workers to move up the value chain, which implies in some cases diversifying the production structure by increasing the share of manufacturing and services, and in other cases to improve the technological and knowledge content of the activities that exist already to make them more productive (for instance in agriculture).

Second, the region will need to push for a major improvement the region's largely unskilled human capital base. In particular, the access to and quality of secondary and higher education—currently of very low quality—will need to be improved. Also critical will be developing a labor force with minimum levels of scientific and technical skills to facilitate the adoption and adaptation of new technologies. Finally, the region will need to ensure that its labor force (and its human capital) is protected against income shocks and chronic poverty through an effective social protection system, which implies that current programs need to be assessed and governments need to improve coordination, reduce fragmentation, and increase coverage.

While the goals of stimulating productive investment and improving the skill base are equally important and necessary to generate sustained economic growth and better jobs in Central America, this paper focuses on the human capital policy challenge facing the region. Aside from its intrinsic importance, this area has received less attention as a key driver of productivity and growth and as such, merits particular focus.

The rest of the paper is organized as follows: Section II describes the sources of recent growth in the region and its impact on the labor market. Section III discusses the human capital challenges facing the region, and Sections IV and V provide policy options for the consideration of regional governments.

2. RECENT TRENDS

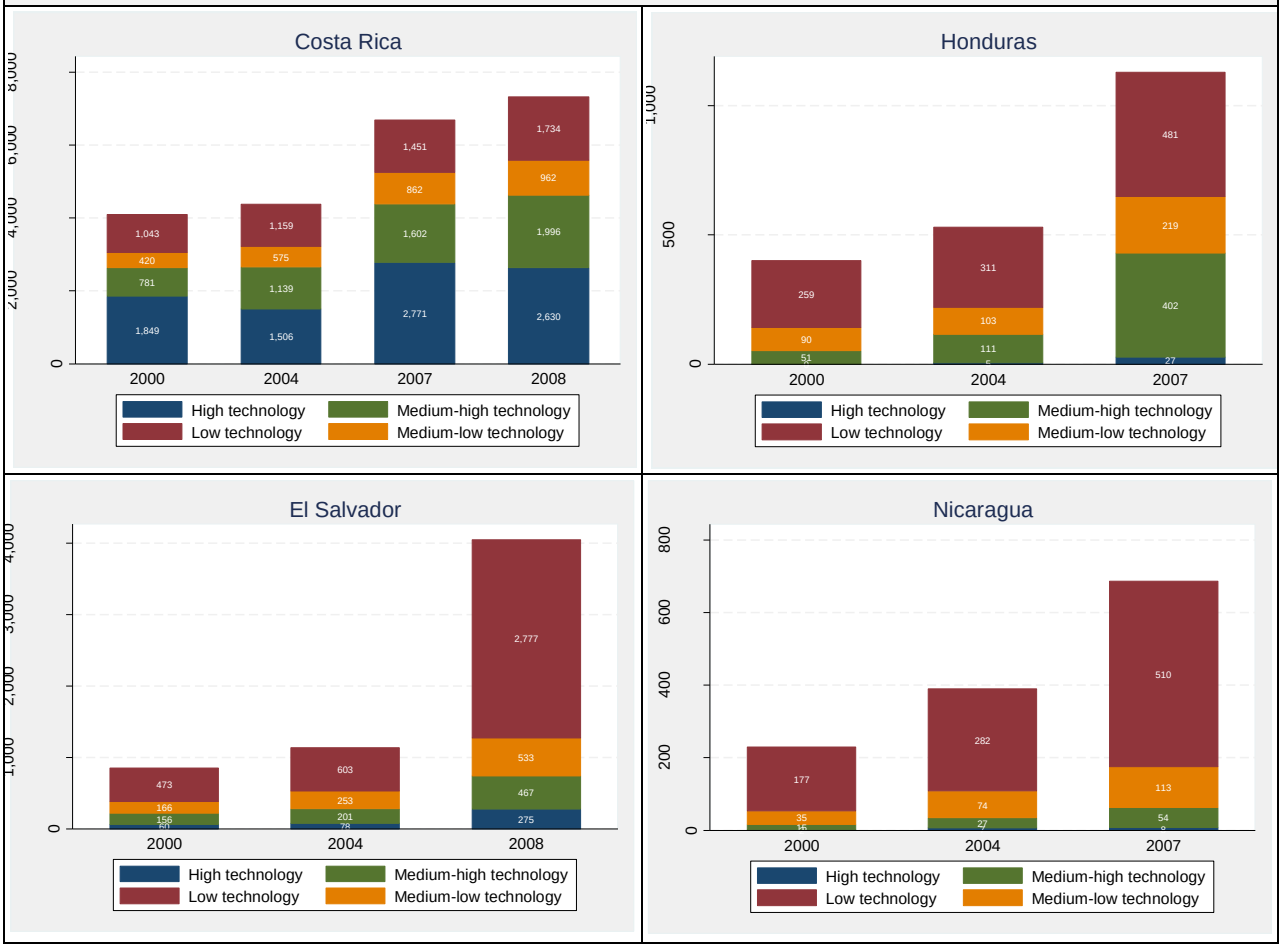
Growth driven mostly by commodity prices, except in Costa Rica and Panama

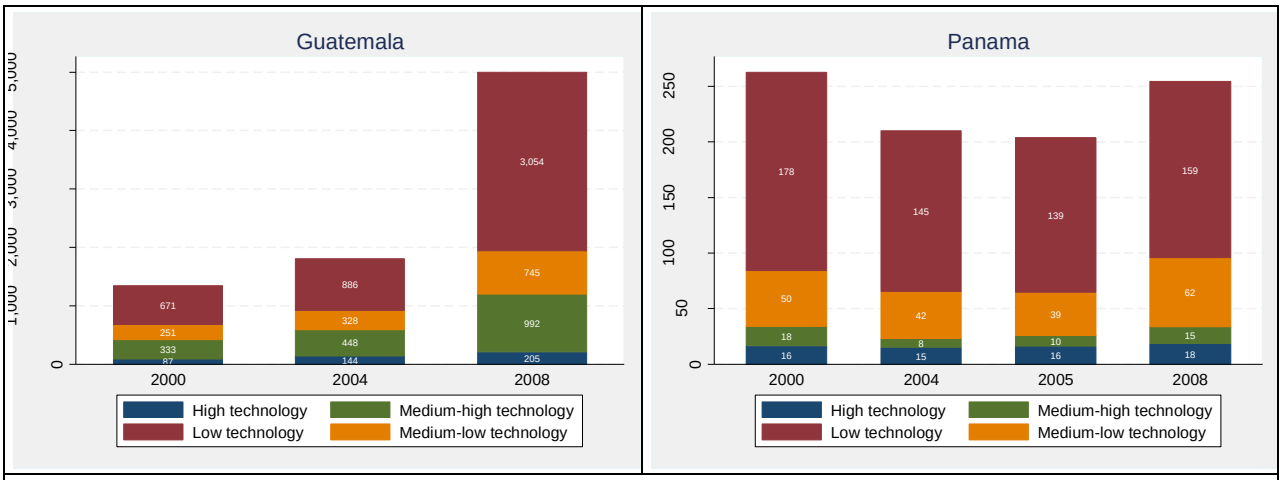
As noted above, the region has realized a decade of economic growth, derived in large part from increased exports of agricultural products –a response to higher commodity prices. However, this pattern of growth differs across countries, most notably in the cases of Panama and Costa

[5] Another important priority is improvement of citizen security by reducing the high levels of violence and crimes prevalent in several countries.

Rica, where exports of high technology based manufacturing and/or knowledge intensive services have grown significantly (Figure 3 and Figure 4). Costa Rica stands out as the superior performer in Central America, both in the level and type of exports. Exports per person in Costa Rica are more than five times the rate in the next best Central American country (Table 1). Costa Rica also stands out as the one country in the region where high-technology manufacturing makes up a significant proportion of manufacturing exports (Figure 3). Costa Rica is one of the largest exporters of microchips in the world, and the fourth largest exporter of medical devices. High-technology manufacturing exports from Costa Rica result largely from the country's success in attracting high-technology foreign direct investment (e.g. an Intel microchip production facility, which is responsible for 20% of all Costa Rican exports).

Figure 3: Manufacturing exports (US$ millions)

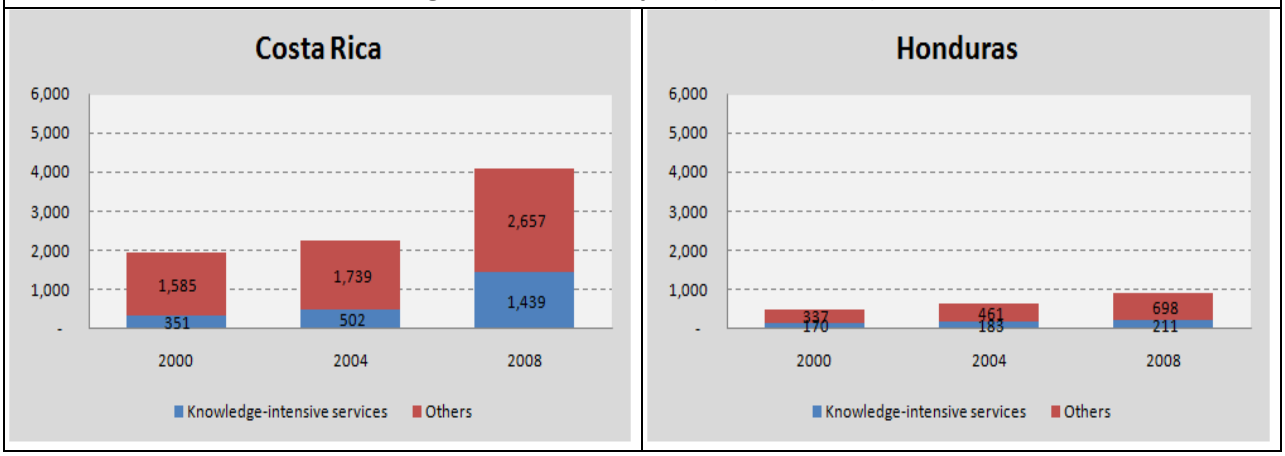


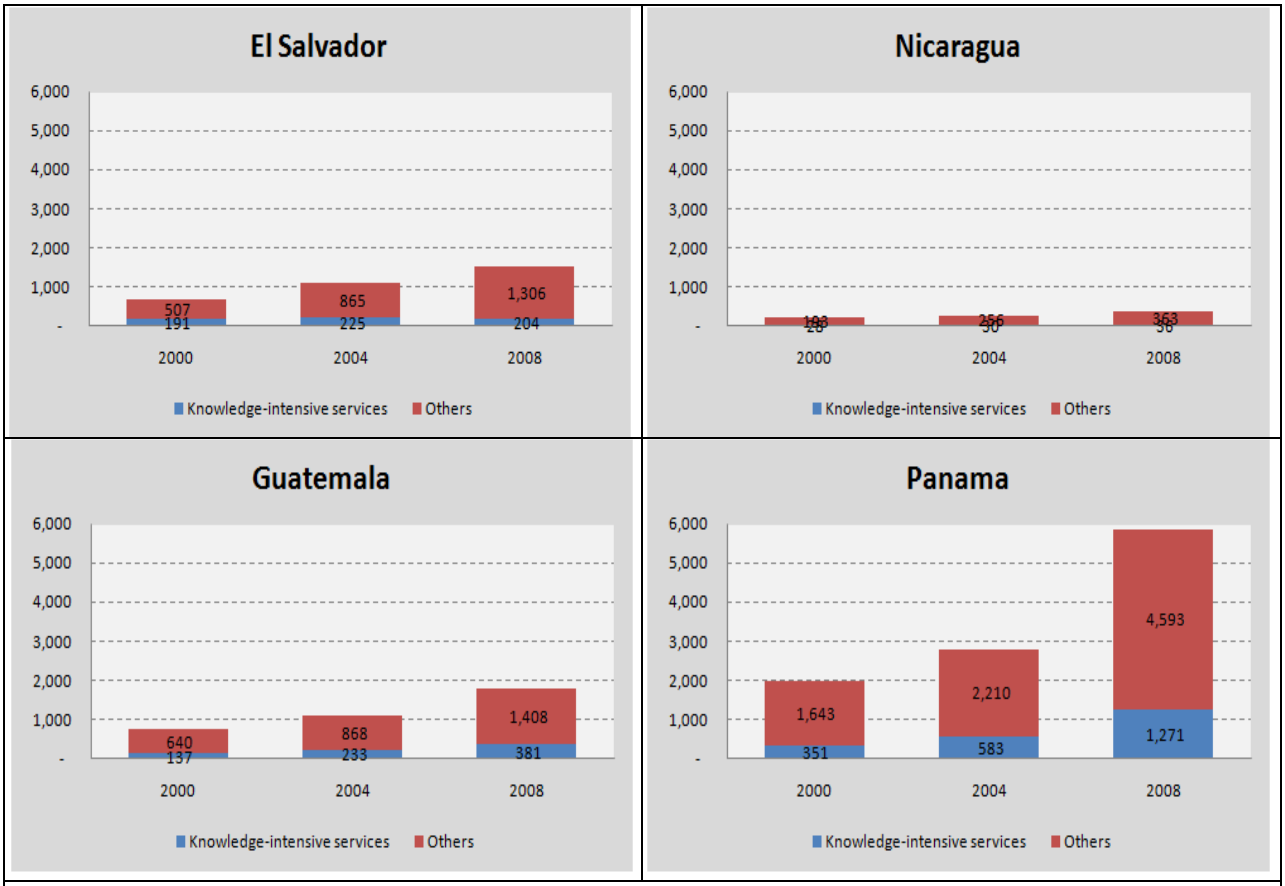


Source: Instituto Centroamericano de Administracion de Empresas (2010).

Costa Rica and also Panama have also been successful in increasing knowledge-intensive service exports (Figure 4). Knowledge-intensive services include finance, insurance, business, real estate, communications, community, social and personal services and computer and information technology services. The distinction between high-technology manufacturing and knowledge-based service exports is important: high-technology manufacturing exports tend to be less labor-intensive and lead to the creation of relatively few jobs, whereas knowledge-intensive services tend to be labor-intensive and, as such, may be a possible source of many good, high-technology, high-productivity export jobs (INCAE, 2011). In Costa Rica, knowledge-intensive service export growth has been strong in financial services, communications and information technology; in Panama, it has been in financial services and in services related to renovation of the canal.

Figure 4: Service exports (US$ millions)





Note: Knowledge-intensive services include finance, insurance, business, communications, community, social and personal services and computer and information services,

Source: *Instituto* Centroamericano de Administración de Empresas (2010).

Agriculture and services dominate in production and employment

Economic growth has resulted in increased agricultural employment. However, the growth in manufacturing exports has not been accompanied by similar growth in employment in manufacturing. Table 2 shows that, in every Central American country except for Panama, output elasticity of employment in manufacturing is below 0.25.[6]

[6] A low output elasticity of employment is what we would expect if labor productivity in manufacturing were growing. A low output elasticity of employment is therefore not a bad thing in itself, especially if increasing productivity leads to a large increase in manufacturing output, which will in turn lead to employment growth. However, if the rate of growth in manufacturing output is moderate, then a low output elasticity of employment will limit the ability of manufacturing output growth to address the jobs challenge in Central America.

Table 2: Elasticity of employment with regard to output, by sector, 2001-2009					
	Costa Rica	**El Salvador**	**Honduras**	**Nicaragua**	**Panama**
	%Δemployment / %ΔGDP	%Δemployment / %ΔGDP	%Δemployment / %ΔGDP	%Δemployment / %ΔGDP	%Δemployment / %ΔGDP
Agriculture	-0.17	0.31	1.74	2.84	2.4
Manufacturing	0.00	-0.54	0.23	0.24	1.9
Construction	0.28	N/A	59.87	-6.58	-0.1
Utilities	1.22	-0.94	0.98		1.6
Retail, restaurants and hotels	1.19	0.86	1.26	1.17	0.5
Transport and communications	0.66	-0.10	0.34	1.03	0.3
Real estate and financial services	0.64	1.71	0.33	0.76	1.4
Other services[1]	2.00	1.84	-3.15	0.99	-0.7
Note: 1. Includes public sector, education, health and others. **Source: Country studies.**					

Error! Reference source not found. shows that, while manufacturing has been a large part of the growth in output in Central America in every country except Panama, in no Central American country has manufacturing been an important source of job growth. On the other hand, in all Central American countries there has been substantial employment growth in services. In all countries, employment has grown substantially in retail, restaurant and hotel services. In Costa Rica, Panama and El Salvador, there has also been substantial growth in employment in business services and other knowledge-intensive services (education, medicine, public sector, etc.).

Table 3: Contribution of each industry sector to total change in output and employment, 2001-2009

	Costa Rica		El Salvador		Guatemala		Honduras		Nicaragua		Panama	
	GDP	Emp.	GDP	Emp.	GDP	Emp.	GDP	Emp.	GDP	Emp.	GDP	Emp.
Agriculture	5.3	-3	20	24	11.7		7.9	47	16.3	49.9	1	6
Mining	0.0	0	0	-1	0.5		-0.3	0	1.5	1.2	3	0
Manufacturing	20.6	0	18	-16	11.7		13.7	6	24.9	3.6	2	6
Construction	6.8	5	0	-1.2	1.8		0.1	5	-2.2	10.2	11	17
Utilities	2.4	2	1	-1.5	2.3		2.8	1			3	0
Retail, restaurants and hotels	9.3	29	19	48	7.1		5.7	20	15.4	16.9	23	24
Transport and communications	25.9	16	16	-2	24.8		20.0	3	14.3	4.1	52	8
Real estate and financial services	12.4	14	5	11	18.4		33.9	4	9.2	4.1	26	13
Other services[1]	17.2	25	21	32	21.8		16.2	14	20.5	9.9	-10	20
	100	88	100	93.3	100		100	100	100	99.8	101	94

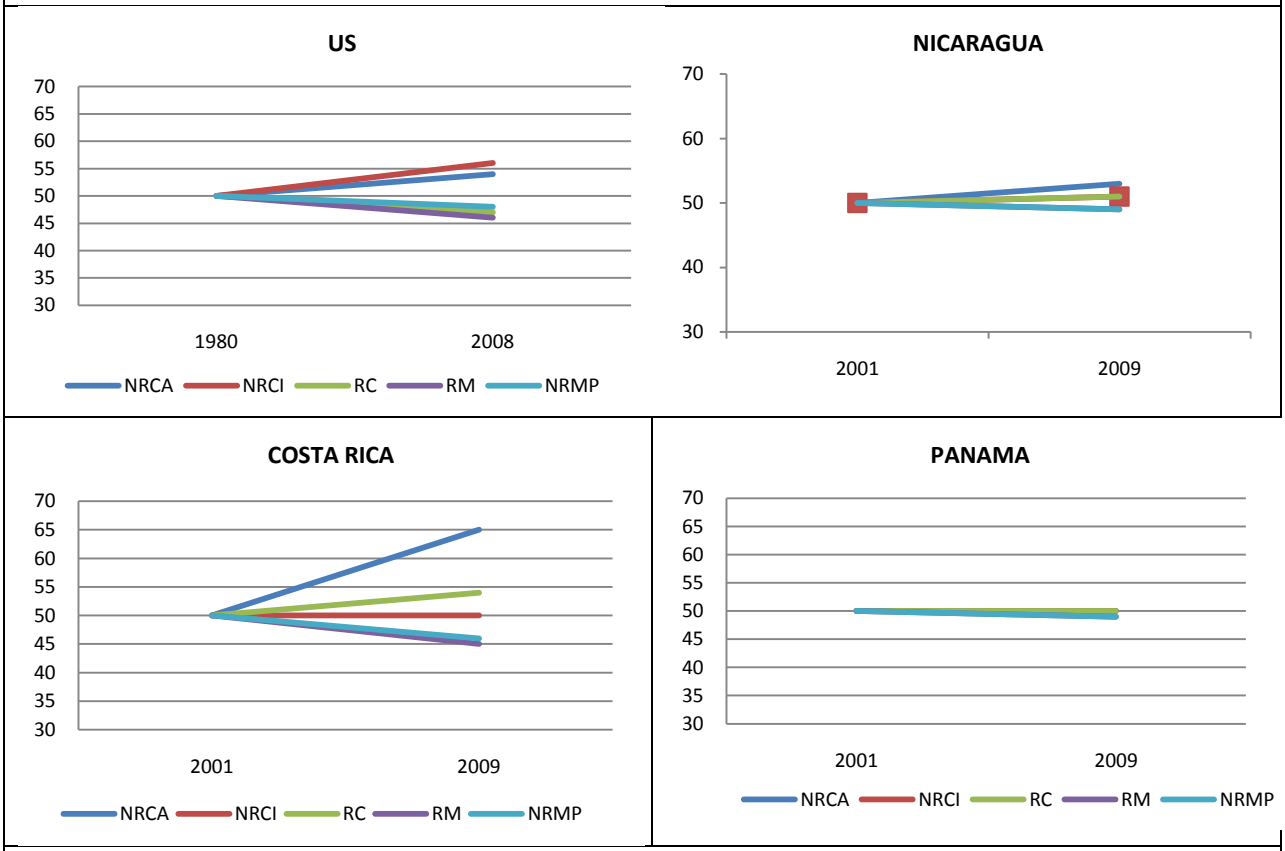
Note: 1. Includes public sector, education, health and others.

Source: Country studies.

Employment is predominantly low-skilled

These differences in growth patterns across Costa Rica and other countries are also reflected in the types of jobs that were created in the region. Figure 5 presents evidence that in the 2000s job growth in most countries in Central America was concentrated in low-skill, "old economy" occupations (Luque and Moreno, 2011). Using the methodology developed in Autor et al. (2003), the panels of Figure 5 divide the evolution of jobs in Costa Rica, Panama and Nicaragua (and for comparison the U.S.) into five categories of occupations: three higher-skill, "new economy" occupations (non-routine cognitive analytical, non-routine cognitive interpersonal and routine cognitive) and two lower-skill, old economy occupations (routine manual and non-routine physical).[7]

Figure 5: Evolution of occupations by skill level in Central America and the US



3. Note: NRCA: Non Routine Cognitive Analytical, NRCI: Non Routine Cognitive Interpersonal,

4. RC: Routine Cognitive, RM: Routine Manual NRMP: Non Routine Manual Physical

Source: Luque and Moreno (2011).

[7] Examples of occupations using new economy non-routine cognitive skills are teachers, medical professionals, lawyers, programmers and training and development managers. Examples of occupations using new economy routine cognitive skills are telephone operators, bus drivers, bookkeepers, accountants, auditing clerks, meter readers and cashiers. Examples of occupations using low-technology manual and physical skills are construction carpenters, industrial truck operators, show machine operators and tenders, cutting and slicing machine setters, operators and tenders and food cooking machine operators and tenders (Luque and Moreno, 2011).

The study finds that in Nicaragua and Panama there was almost no growth in higher-skill, new economy occupations. Costa Rica shows a different pattern. The panels in Figure 5 show that Costa Rica has achieved impressive growth in higher-skill, new economy occupations that use non-routine cognitive analytical and routine cognitive analytical skills (although, unlike in the US, there has been no growth in Costa Rica in other new economy occupations that use non-routine cognitive interpersonal skills).

The lack of growth in new economy occupations in Panama in contrast to Costa Rica is surprising, given its high growth rate and the increase in knowledge-intensive service exports.[8] This may be because knowledge-intensive service growth in Panama has been concentrated in finance and services related to the canal, which have traditionally been a large part of the Panamanian economy (and therefore have not represented a change in the occupational structure). On the other hand, the growth of exports in Costa Rica has been in industries and services that were previously not important in the country and that are intensive in the use of new economy skills, such as microchip manufacturing, information technology, medical devices and communications. These differences may also be related to the differences in education and the stock of human capital, as will be discussed later.

The labor force is also low-skilled

The skill mix of exports and occupations reflect in part the skill mix of the labor force. Most Central American countries have populations with low levels of educational attainment compared with other countries at similar levels of development (Table 4). Only Panama and Costa Rica have levels of educational attainment above the Latin American average, and only Panama has levels above other countries at a similar level of development.[9] With the exceptions of Costa Rica and Panama, Central American countries specialize in exporting products that are unskilled labor-intensive. As noted above, and shown in Figure 3 and Figure 4, although exports have grown dramatically in all Central American countries, with the exceptions of Costa Rica and Panama the bulk of export growth has been in unskilled labor-intensive products. Costa Rica and Panama are the only two Central American countries where skill- and knowledge-intensive goods and services are a noticeable proportion of exports.

[8] The Panama country study notes that growth in employment in Panama has been concentrated in jobs that require mid-level skills.

[9] Further, in Panama, part of the reason for high education levels is the country's success in attracting workers with high levels of human capital from abroad – not domestic educational expansion.

Table 4: Educational attainment of population 25 years and older				
	% of population with			
	Mean years of	Incomplete secondary	Complete	Tertiary
Costa Rica (upper-middle-income)	8.3	63.3	19.4	17.3
El Salvador (lower-middle-income)	7.5	71.6	16.8	11.5
Guatemala (lower-middle-income)	4.1	87.3	9.7	2.9
Honduras (lower-middle-income)	6.5	80.3	13.4	6.3
Nicaragua (lower-middle-income)	5.8	72.5	11.6	15.9
Panama (upper-middle-income)	9.4	52.7	24.6	22.7
Latin America and Caribbean*	7.8	64.7	23.3	11.9
By income group				
Low-income	4.5	85.8	10.6	3.6
Lower-middle-income	6.3	70.1	22.8	7.1
Upper-middle-income	8.7	54.4	25.9	19.6
High-income	11.5	33.9	33.8	32.3

Note: 1. Population weighted averages.

Source: Barro and Lee (2010).

Is export specialization in products that primarily use unskilled labor a sustainable strategy for the region? The emergence of China and other low-cost producers in the world market and the slowdown of demand in the U.S. are driving down the prices of low-skilled labor-intensive goods. The future success of Central America in expanding exports and attracting foreign direct investment will depend on the ability of the region to foster investment in new export activities in high value-added manufacturing and services.

The experiences of Costa Rica and Panama may provide some optimism that exports can promote growth in high-technology employment.[10] Aside from their higher education levels, mentioned earlier, this shift may also be related to the type of exports from both countries. As noted, the experience of Central America in the 1990s and 2000s has been that high-technology manufacturing has a low employment elasticity of output, so that even large increases in

[10] Although, as noted below, in Panama the causality may run the other way. That is, high demand for skilled labor has led Panama to attract a large number of workers with high levels of human capital from abroad.

production and exports lead to relatively few high-quality jobs. On the other hand, knowledge-intensive service exports from Costa Rica and Panama have generally been labor-intensive.[11] The three sectors that include knowledge-intensive services (transport and communications, financial services and other services) have accounted for more employment growth than manufacturing in every Central America country except for Nicaragua (Table 3).

What is the lesson from the growth and employment experience of Central American countries? For small, export-oriented economies such as those in Central America, labor-intensive, knowledge-intensive services may be a way to grow the number of good jobs, may be a way to increase demand for high-skilled labor and therefore may be a path out of unsustainable, unskilled labor-intensive manufacturing exports. It is also important to remember that success in knowledge-intensive services will not develop unless a country first develops an educated labor force and adequate communications and information technology infrastructure (both of which exist in Costa Rica and Panama).

Emigration as a source of jobs and as a safety net

Aside from the growth of employment, emigration has been another important source of labor force absorption over the past decades. A large fraction of the population of El Salvador, Honduras, Guatemala and Nicaragua has emigrated, generally in search of better jobs and mostly to the U.S. (Table 5). While emigration has led to a substantial increase in remittances that has reduced poverty and provides a buffer against shocks, emigration from Central America may affect the long-term growth potential by reducing the human capital available in migrant-sending countries in several ways. Docquier and Marfouk (2006) and Échevin (2010a; 2010b) show that Central American emigrants are, on average, more highly skilled than those who stay behind. Thus, emigration can result in a "brain drain," reducing the average human capital levels of the labor force in Central America.

[11] Costa Rica has had success in increasing demand for high-skilled labor through exports since it attracted an Intel microchip manufacturing plant, which now represents over 20% of Costa Rican exports. However, it is not likely that other Central American countries will be able to attract such large, high-technology plants.

Table 5: Stock of emigrants from Central America as a proportion of the population, 2010			
Country	**Emigrants (thousands)**	**% of population**	**Emigration rate of population with tertiary education (%)**
Costa Rica	125.3	2.7	7.2%
El Salvador	1269.1	20.5	31.0%
Guatemala	871.9	6.1	24.2%
Honduras	569.7	7.5	24.4%
Nicaragua	728.7	12.5	29.6%
Panama	121.1	4.0	16.0%
Latin America and Caribbean	30.2 million	5.2	N/A
All developing countries	171.6 million	3.0	N/A
Source: World Bank Migration and Remittances Factbook 2011.			

Emigration also appears to have negatively affected investments in education on the part of youth left behind. The reasons for this are related both to incentives to invest in education and to the negative impact of parental migration. Échevin (2010a; 2010b) presents evidence that, although returns to education are high in El Salvador and Guatemala, returns to education in the U.S. among Salvadoran and Guatemalan immigrants are low (much lower than for those born and educated in the US); educated Central American immigrants often end up in low-skilled jobs in the US.[12] This may be because of the low quality of education in Central America, or because incompatibilities in the education systems mean that employers in the U.S. do not value the education immigrants have received in their home country. On top of this, wages for low-skilled labor in the U.S. are often higher than those for high-skilled labor in the home country (ibid.). The combination of these factors means that emigrating and working in a low-skilled job in the U.S. can lead to higher earnings than an investment in higher education in Central America, and that a higher education received in Central America will not contribute very much to increasing the incomes of immigrants after they arrive in the U.S. In this context, there is clear evidence from research for El Salvador and Guatemala that emigration has reduced private investment in education due to the low incentives for Central American children to stay in the education system, even though returns to education are high within the region.

In addition to this lack of incentives, the absence of parents because of emigration, especially during children's adolescent years, can have a negative effect on the behavior of children left behind (Antman, 2012; Lahaie et al., 2009; McKenzie and Rapoport, 2006; Miranda, 2007),

[12] Two background papers on migration in El Salvador and Guatemala were prepared for this regional study (Echevin 2012a and 2010b). We use data on Salvadorian migrants to the U.S. from the American Community Survey (ACS) conducted between 2006 and 2008 on a census sample and the El Salvador household survey for 2008, which contains data on migration.

leaving them vulnerable to dropping out of school and to the attractions of the lucrative and growing drug trafficking economy.[13]

Despite these costs, emigration clearly has positive impacts. The experience acquired by return migrants spills over to the country by fostering entrepreneurial and other skills valuable in employment. Remittances help families to overcome poverty conditions and can also help to invest in education and health (Acosta, 2011; Orozco, 2009).

Will migration continue to absorb labor in the future? There are two trends that are likely to change the patterns of migration observed so far in Central America. First, the U.S. may no longer be able to absorb new migrants on the scale of the last two decades. The number of deportations now exceeds the annual inflow. For example, since reaching a peak in 2006, the number of new permanent residencies in the U.S. for Honduras has declined steadily. In parallel, in the past decade, the number of deportations of Hondurans has increased five-fold, from 5,000 per year in 2002 to 25,000 a year in 2010. Although the existing stock of Central American migrants will continue to provide remittances, new labor market entrants will find this avenue increasingly blocked.

The second trend is the one of increasing intra-regional migration, which although significantly lower in absolute size than the migration to the U.S., is growing much more rapidly. This trend will become more pronounced as entry into the U.S. becomes more restrictive and as the economies and demographic structure of the Central American countries diverge. It is estimated that nowadays nearly 800,000 Central Americans (about 15% of total migrants) legally migrate within the region, even though this number is probably underestimated due to the high flows of unregistered migrants. Intra-regional migration flows in the 2000s increased by 40 percent over those recorded in the 1990s.[14]

Until recently, the main intra-regional migration consisted of the flow of agricultural laborers from Nicaragua to Costa Rica, a large part of which is seasonal. Today, however, Costa Rica

[13] Negative effects of the emigration of a family member on the education of children left behind have also been found in Mexico and Haiti. McKenzie and Rapaport (2006), Miranda (2007) and Sawyer et al. (2008) all find that, while remittances tend to promote education in those who have not emigrated (controlling for whether or not the immigrant is a close family member), the emigration of a close family member discourages the education of those left behind (controlling for remittances). Similarly, Amuedo-Dorantes (2008) finds evidence that, in some communities in Haiti, while remittances raise school attendance in some households, they do so only for children from households that do not have a close family member who has migrated. The negative educational impact of parental migration on children left behind continues even if children are reunited with parents in the US. Gindling and Poggio (2010a; 2010b) show that children of Central American immigrants who have been separated from parents during migration enter the educational system in the U.S. at a lower grade than they have completed in their home country, and are more likely than other immigrant children to drop out before finishing secondary school. Evidence is presented that this happens because of incompatibilities between education systems in the U.S. and Central America and because education received in Central America is perceived by those in the U.S. to be of low quality.

[14] Acosta (2012), "Intra-regional Migration in Central America: Recent Trends and Human Development Challenges", World Bank.

and Panama face labor shortages, partly due to the decline in birth rates, and partly due to changing labor demand. In both countries, shortages are most acute in highly skilled professions. Projections show that if growth continues or accelerate in fast growing sectors, skill shortages will become acute over the next 20 years.[15]

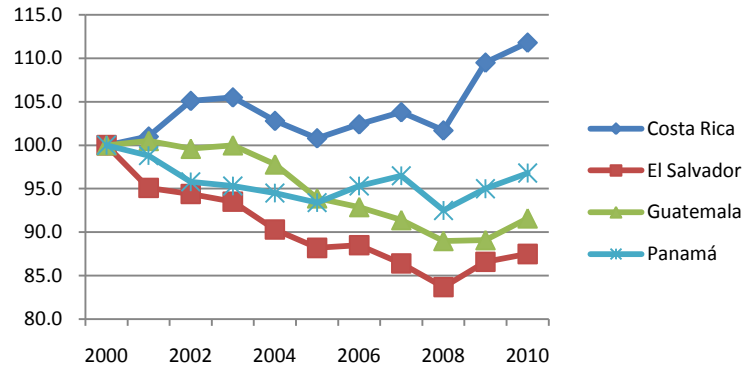
Although migration to the U.S. is declining, it still represents a the main receiving country for migrants from the poorer Central American countries, accounting for 70 percent of them, depriving the region of valuable prime-age workers, and also discouraging them from getting more educated. A significant part of the problem that emigration poses to human capital accumulation in Central America is that education in Central America is not valued in the U.S. This is a further argument for improving the quality of education in Central America. It also suggests that it would help both the sending and the receiving countries if there were greater consistency and portability of education systems across Central America and between Central America and the U.S. However, improving educational quality may also present policymakers with a dilemma. If they invest in public education and make it more "compatible" with the U.S., there is a chance of more emigration. On the other hand, not doing so may trap people in low-quality jobs and constrain the growth of the domestic economies.

A worrisome trend: the decline in real earnings

Figure 6 shows that mean real formal sector earnings declined from 2000 to 2010 in El Salvador, Guatemala and Panama.[16] In Honduras and Nicaragua, mean real earnings have increased, but only because public sector wages have been rising; in both countries, formal private sector earnings have stagnated (see Panel B of Figure 6 and the Nicaragua country study).

Figure 6: Real wages in Central America, 2000-2010

Panel A: Index of mean real earnings in the formal sector (2000=100)

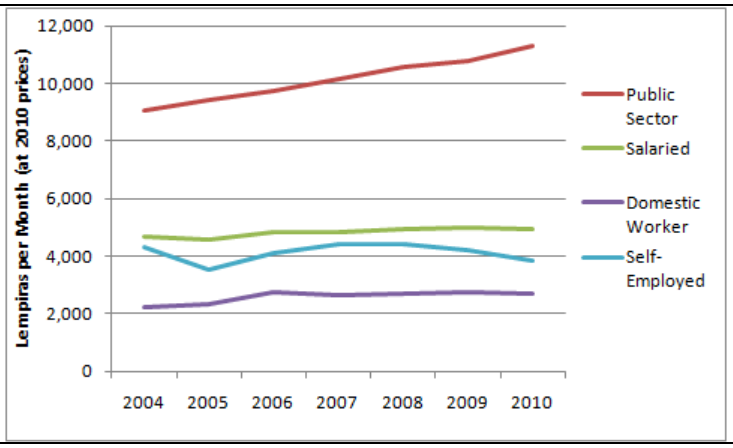


Source: Economic Commission for Latin America and the Caribbean *CEPALSTAT: Estadísticas e Indicadores Sociale,* mean labor earnings for workers with social security.

[15] See Better Jobs in Costa Rica (2010).

[16] Mean real formal sector earnings declined in all countries from 2000 to 2008, and then recovered somewhat in 2009 and 2010 in El Salvador and Panama.

Panel B: Real average wages by type of job in Honduras, 2001-2010 (Lempiras per month)



Source: Honduras study based on data from the *Instituto Nacional de Estadistica.*

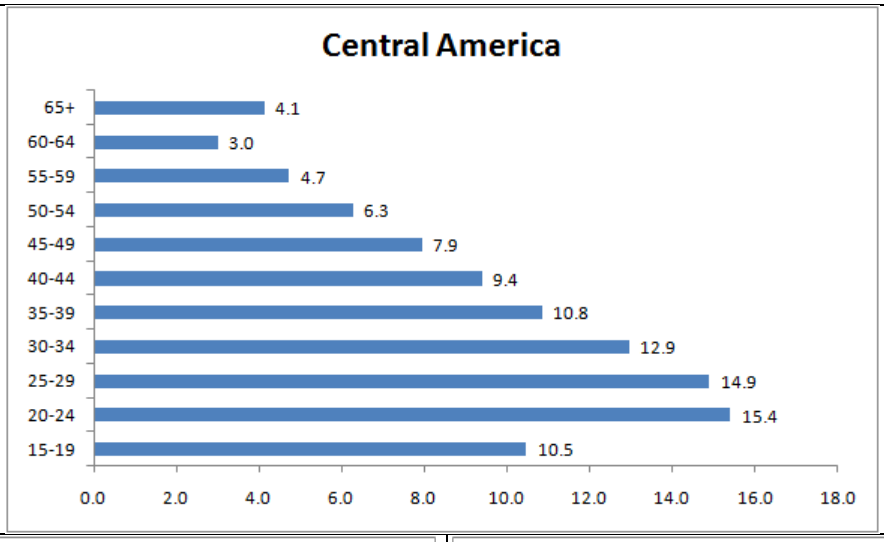
5. HUMAN CAPITAL CHALLENGES TO THE CREATION OF BETTER JOBS.

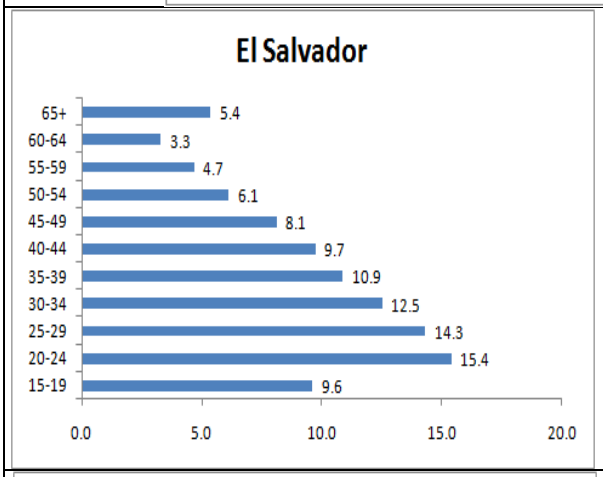
While the creation of an investment climate conducive to better job creation through sound macroeconomic, trade, investment, and fiscal policies is a sine qua non for the region, achieving this goal will require broadening the production structure to increase the share of high-value added manufacturing and especially services. To achieve this objective, Central American countries can no longer afford to neglect the creation of high quality human capital or policies to protect workers in an increasingly competitive world. For countries like Costa Rica and Panama, with a relatively elevated skill base and a small pool of highly skilled people, the challenge is to move to a broad-based improvement in the knowledge base of the labor force and to enlarge the pool of specialized skills. For the other countries, the challenges and trade-offs are even more dramatic. Specifically, Central American countries have to take into account the following challenges:

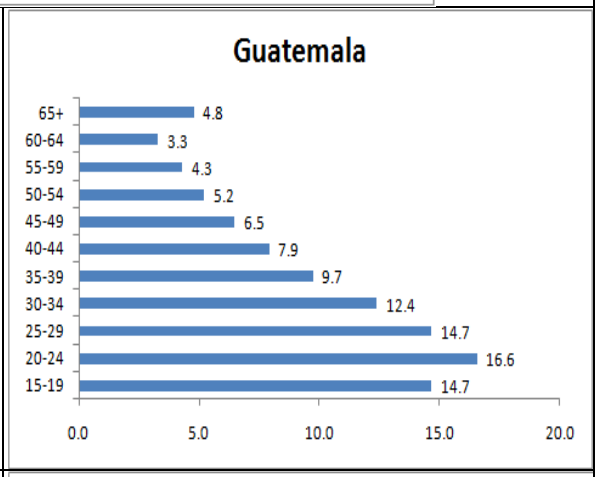
a. Large share of youth in the population

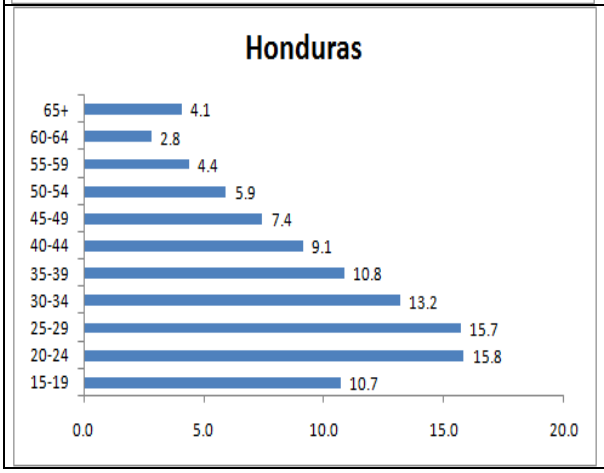
In 2010, 54% of the labor force in Central America was under 35 years old (Figure 7). In all Central American countries, unemployment rates are highest among youth in urban areas, and around 30% of young people between 15 and 24 years old neither study nor work (Figure 8). Youth who are not working or studying, typically women with low levels of education and a small proportion of men, may end up dropping out of the labor force and are potential recruits for gang violence and for the lucrative economy based on trafficking in illegal drugs (World Bank, 2011).

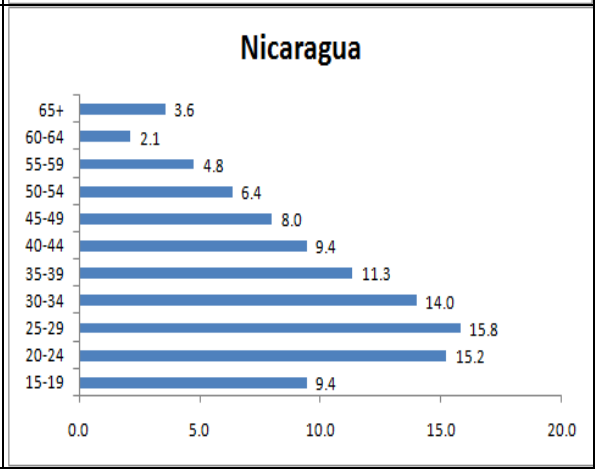
Figure 7 : Age structure of labor force in Central America, 2010

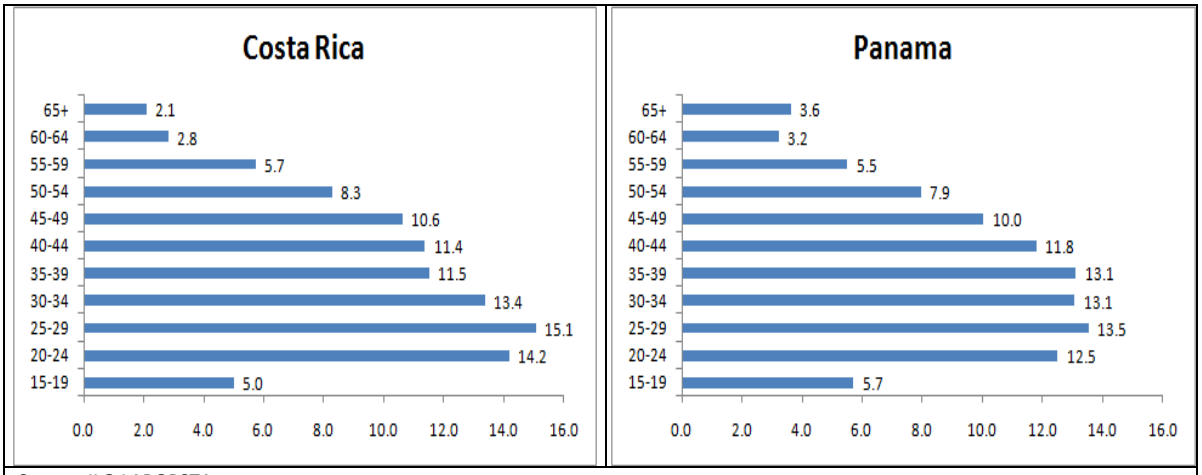








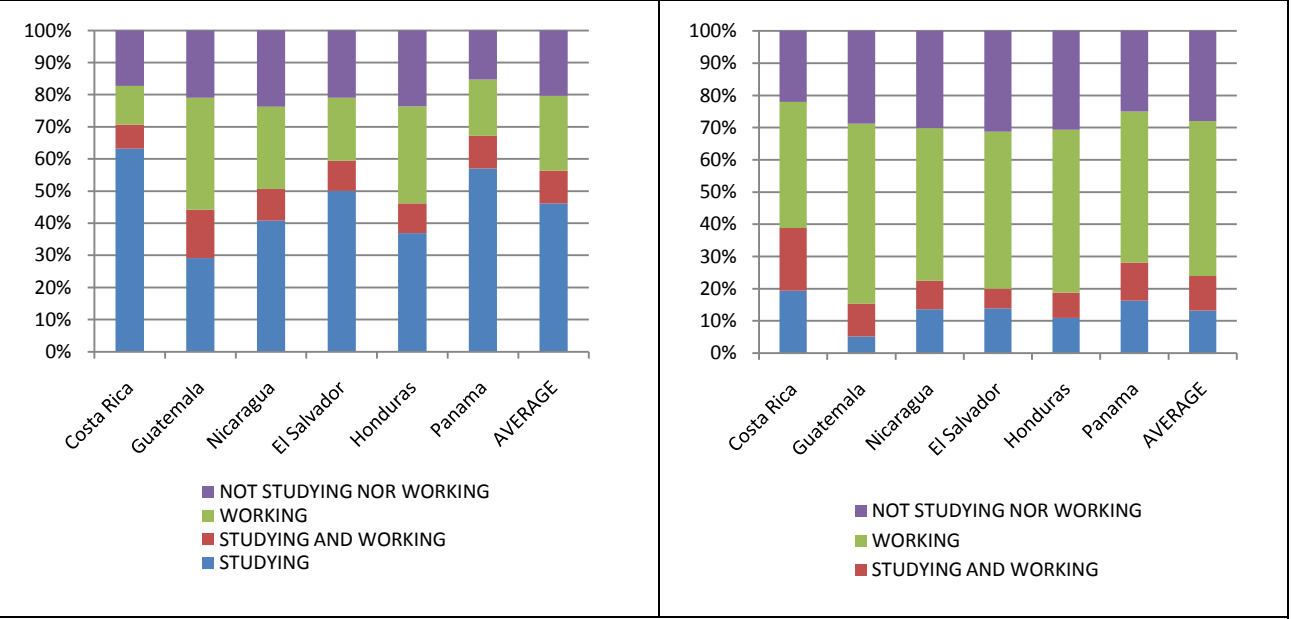




Source: ILO LABORSTA.

Youth employment will continue to be a major challenge in the near future. Between 2010 and 2020, the working age population will grow by 25 percent; by 2020, about 20 percent of the working age population in Central America will be workers 15-24 years old who entered the labor force between 2010 and 2020. Promoting labor market insertion for youth and ensuring they are well-prepared to access better jobs will be a key part of the jobs challenge in Central America in the next decade.

Figure 8: Structure of the youth population by activity and country, 2010 (%)



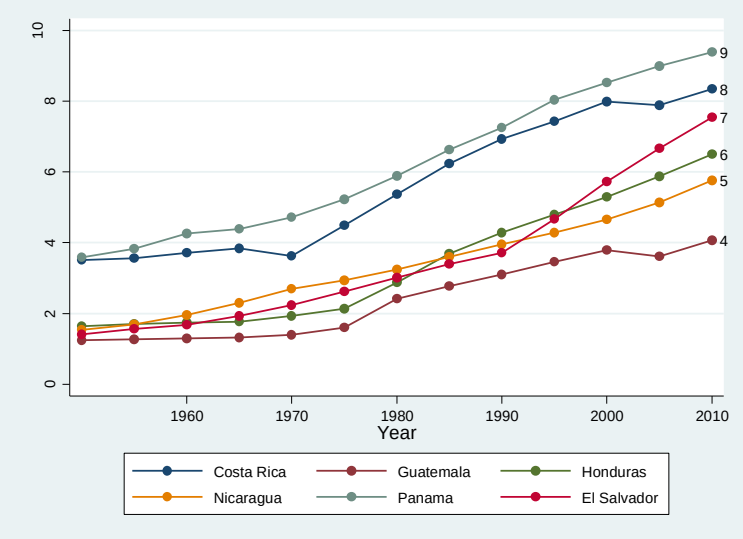
Note: Guatemala is 2006.

Source: Household surveys in Central America.

b. Poor education of the labor force, in years and quality, and high inequality in access

The **average education attainment** in Central America varies from 4.1 years in Guatemala to 9.4 years in Panama (Figure 9). Educational attainment has increased at a modest rate of about 1 year per decade. The most rapid increase has been in El Salvador, where average attainment is now close to Costa Rica. However, compared with the top performers in Latin America, educational expansion in Central America is less than impressive; for example, educational expansion in Brazil during the same time period (1995-2010) was much more rapid, and average education levels in Chile remain much higher than even those in Panama or Costa Rica (**Figure** 10). Korea, which in 1960 had only a year's edge over Central America, rapidly increased its average educational attainment consistently over 5 decades, and widened its edge to over 5 years.

Figure 9: Average educational attainment, population 25+



Source: Barro and Lee (2010)

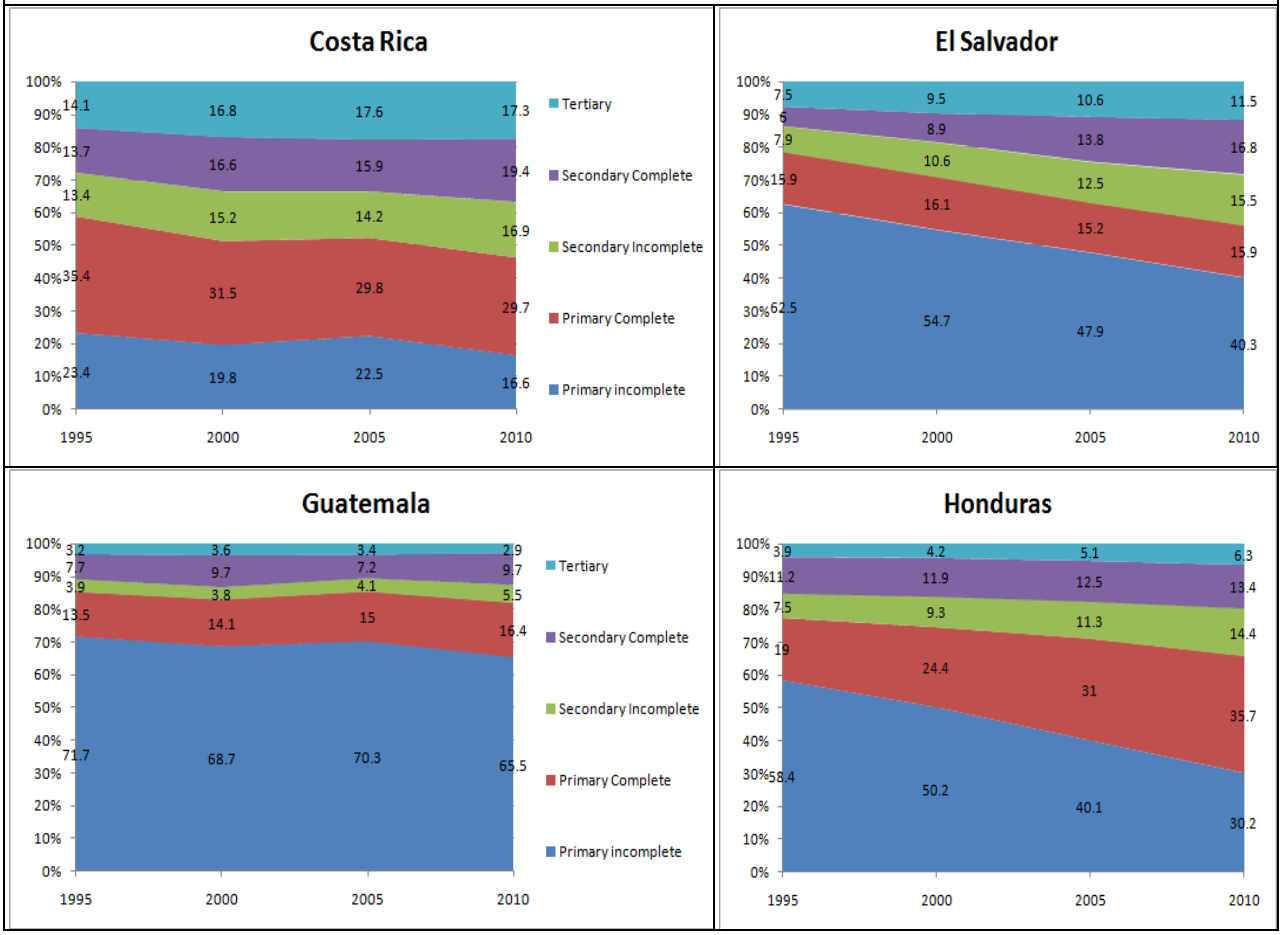
The **composition of this stock of human capital** varies widely across the countries due to the differences in completion of different levels of education. Central American countries have been largely successful in boosting **primary enrollment rates**, although completion is significantly lower than 100 percent in Guatemala, Honduras and Nicaragua. Except in Guatemala, most students today in Central America begin secondary school. **Low secondary school completion**, due to high dropout rates within the secondary cycle, is a common problem in Central American countries, including Costa Rica, where in 2009 less than 50 percent of those who started secondary school completed it.[17] The **gross enrollment rate in tertiary education** varies from close to 15 percent in Guatemala and Honduras to close to 50 percent in Costa Rica and Panama.

[17] This represents the percentage of the 21-25 year-old cohort that has completed secondary education.

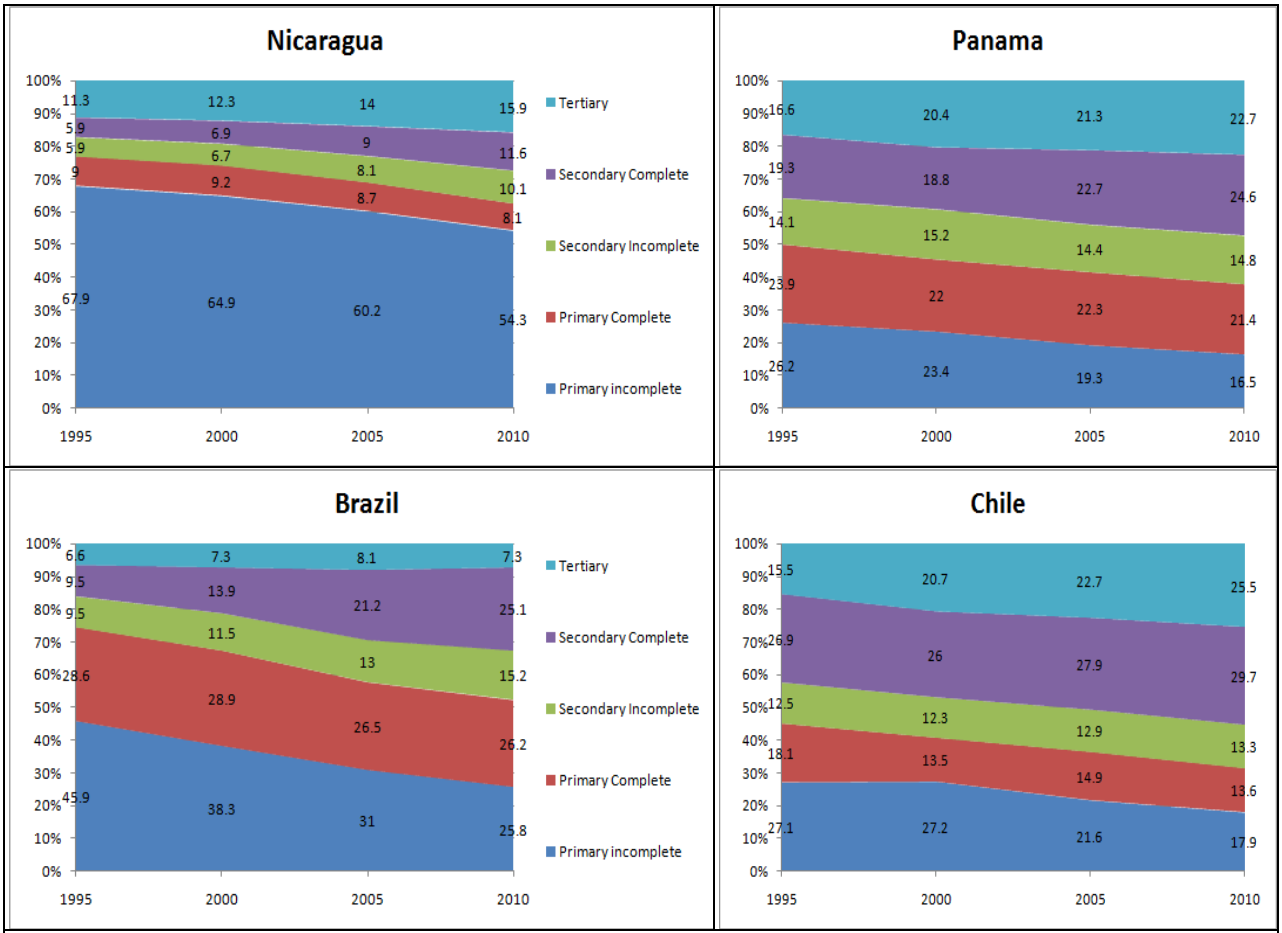
However, across the board, the **tertiary completion rate** is low, with nearly half of those starting not completing it.

Hence, while across the region the proportion of the population with an incomplete primary education has fallen rapidly in the past 15 years, the proportions with secondary education and tertiary education have not improved significantly over several decades (Figure 10). Looking at the youngest eligible cohort that could have completed tertiary education, in Panama, just over 20 percent has attained at least 15 years of education,[18] but this proportion is only slightly higher than for the 40-49 year age group. In Costa Rica, the proportion is even lower, at 15 percent and, again, has stagnated. Surprisingly, El Salvador and Nicaragua, with lower levels of average attainment, have similar proportions of tertiary attainment as Costa Rica. In Guatemala and Honduras, only about 5 percent of the youngest cohort attains higher education.

Figure 10: Educational Expansion in Central America, Brazil and Chile, 1995-2010



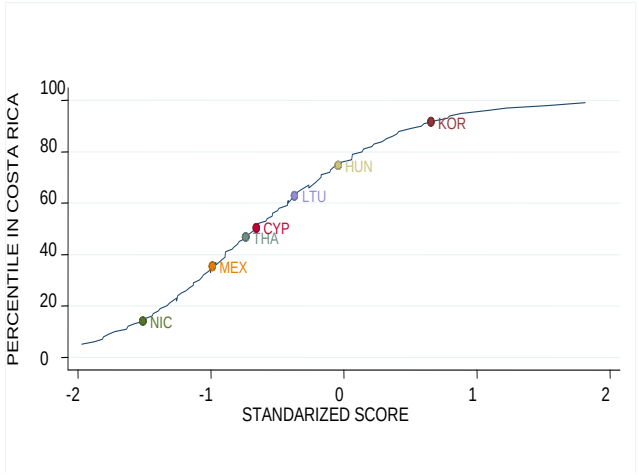
[18] The analysis is based on household survey data, which collect information on years of education. We take 15 years to be equivalent to the first level of tertiary education.



Source: Barro and Lee (2010).

In addition to low levels of educational attainment, **the quality of schooling** is lower than expected in Central America. Student performance on international standardized tests is below that of students in other countries at similar levels of per capita gross national income in all Central American countries except Costa Rica. Even in Costa Rica, which has among the highest average levels of education quality in Latin America, there is significant inequality in access to high-quality education, resulting in a significant fraction of students in low-quality education (Figure 11).

Figure 11: Distribution of Achievement in Costa Rica in relation to World



Source: Authors' calculations with UNESCO data.

A comparison of Costa Rica with Panama illustrates the importance of maintaining and improving quality as access to education expands. There has been impressive educational expansion in Panama in the past three decades. Yet, while Panamanians currently leaving the education system have on average 11 years of education (higher than in Costa Rica), a quality-adjusted measure of educational attainment suggests an effective average attainment of only 8 years by Organization for Economic Co-operation and Development (OECD) standards.

Quality in tertiary education is difficult to measure, but indirect evidence suggests that quality in public universities has been maintained in Costa Rica largely through restricting access and generous public funding, while it has not been maintained in others as tertiary education systems have expanded. The number of students at public universities in Costa Rica has increased relatively slowly in the 1990s and 2000s, whereas the number of students at often costly private universities (many newly opened in the 1990s and 2000s) has increased dramatically. The higher quality of tertiary graduates in Costa Rica may have partly facilitated the changing skill content of occupations. Panama and Nicaragua (which in the 1990s and 2000s experienced the largest increase in the proportion of the population with a tertiary education in the region due to its open access policies) have also undergone dramatic expansion at the tertiary level. However, in both countries the increase in tertiary education graduates has not led to a change in the occupational structure. Another proximate indicator of quality, the per student expenditure, also suggests low quality in all countries except Costa Rica. In Panama, per student expenditure is only about US $ 3000 and in El Salvador, Guatemala, Honduras and Nicaragua, it lies between $ 1000 and $

2000. [19] In Costa Rica, on the other hand, per student spending average about $ 5000 before 2005 and is currently at $ 7500.[20]

Inequality in access to quality education is a major challenge for the education systems in Central America and is likely to perpetuate income inequality. In all countries except for Nicaragua, educational attainment is related strongly to the socioeconomic background of the student's family, and this has not diminished over time. For example, evidence presented in the country studies suggests that, except in Nicaragua, students whose parents have less education and income are more likely to repeat primary and secondary grades, are more likely to drop out of secondary school and are less likely to have any tertiary education. In Costa Rica, high dropout rates from secondary school create a two-tier educational system that results in a "dual track" of low-wage, low-technology jobs for those who do not complete secondary education and high-wage, high-technology jobs for those who complete secondary technical or tertiary education. In several countries, returns to education are influenced strongly by the socioeconomic condition of the student's household, and these differences may reflect the quality of the education received by the student.[21] Even in Nicaragua, the Central American country where education is distributed most equally, there are significant enrollment gaps between urban and rural areas (as in all Central American countries). Furthermore, differences in educational attainment widen once quality measures are taken into account. For example, where standardized test scores are reported, econometric analysis shows that these are also related strongly to socioeconomic background.

Access to tertiary education is very limited for students from lower socioeconomic backgrounds, which in part reflects gaps in cognitive achievement resulting from differing quality education at lower levels.

c. Limited pool of technologically skilled labor

With their relatively low educational attainment, Central American countries have understandably a small share of highly qualified people who can help to adopt and adapt new technologies in the production process. Costa Rica has increased the number of scientists and engineers working in Research and Development – from 291 per million of population in 2002 to 741 in 2008; but given the small population of Costa Rica, this growth is much less impressive in absolute terms. Generally speaking, small countries striving to become knowledge-based economies have to aim for much higher shares of scientists and engineers in their populations in order to achieve the necessary concentration – the 'critical mass' of researchers in at least a few selected areas. Compare for example over 7,000 of researchers per million in Finland and over

[19] In 2005 US $ PPP.

[20] The rapid increase in per student spending in Costa Rica in recent years is likely to indicate a rise in costs, rather than quality.

[21] As indicated in the country notes, another possible explanation for differential returns to the same level of education could be the existence of social networks that determine access to better paying jobs.

6,000 in Singapore with 'only' about 4,600 in USA and 2,800 in the UK. The same logic applies to the share of R&D expenditure in GDP, where small knowledge-based economies need to make "more effort" compared to larger countries. Costa Rica spends about 0.4 percent of GDP on R& D, compared to Finland (3.5 percent) and Israel (4.7 percent of GDP).

In other Central American countries, the situation is even more dire. In El Salvador, almost all the enrollment in Applied Science, Engineering and Technology courses (ASET) is at the undergraduate level. At the postgraduate level (Masters), the absolute enrollment was 57 in 2008 and there were no doctorates. Although, over the last decade, the number of researchers has about doubled to 83 per million of population and the total R&D expenditure increased to 0.11 percent of GDP, these levels are far below the minimum threshold for making the transition to more technologically sophisticated products and processes.

The lack of technological skills does not affect merely the high end of the skilled workforce or just the manufacturing sectors. The core of knowledge and competencies demanded in economies adopting a wide range of technologies is much greater across a range of occupations, from what were earlier considered low skilled "vocational occupations" to the traditional "professional occupations". Naturally, different occupations require relatively more or less of two important education dimensions: theoretical knowledge and analytical skills, on the one hand, and technological skills and competencies on the other. With the increasing importance of technology in raising productivity across all sectors, science and technology skills are required across a broad range of sectors, including service sectors such as construction, transportation, logistics, leisure and healthcare.

In Central American countries, the lack of a technologically skilled workforce for the "middle" and "vocational" occupations is also an important constraint to moving up the technological ladder, especially in the non-export sectors. The high technology intensity of Costa Rican exports contrasts with much lower technological level of activities prevailing in its manufacturing sector. Despite high degree of openness and FDI, the share of high- and medium-technology products in manufacturing value added has not changed much in El Salvador.

Improving the scale and quality of the science and technology education and training system will not automatically create more and better jobs and, as stressed earlier, many complementary economic policies are required. Nonetheless, unless there is a policy focus on improving the quality of science and technology education, Central American countries run the risk of falling behind other comparator countries, especially as these investments have a long gestation period and require a supportive institutional structure. However, the current structure of the economy implies that current labor market demand for science and technology skills is relatively small. Because educating and training a highly qualified professional inevitably takes many years, the structure of science and technology education should reflect not only today's labor market situation, but also possible scenarios for the future. Optimally balancing the interests of today

with the interests of long-term national economic development, and avoiding wasteful investments in science and technology, is a critical challenge for Central American governments.

d. Lack of adequate social protection for the labor market

The challenges present in Central American labor markets – people working in largely unskilled, informal and low-paying jobs, few opportunities for educated people outside of the public sector and few job opportunities for young people in general – require specific policy actions to facilitate workers' access/reentry to better jobs, by providing them with better skills, better information about the market. These more active programs that facilitate re-entry to the labor market need to be complemented by social assistance programs that help individuals cope with poverty and income shocks. Most Central American countries lack an integrated approach to these programs; where such programs exist, they are fragmented across institutions and cover only a fraction of actual demand.

Active Labor Market Programs

In the case of **vocational training**, most countries have large, employer-financed training institutions that cater mostly to formal sector employees.[22] They offer only one type of labor market program (training or re-training) and are restricted in their client base. Although these programs do offer some training to unemployed or self-employed workers, these workers still make up a very small fraction of trainees. Moreover, despite having a governance structure that includes private sector representatives, most training institutions' curricula are not directly linked to the needs of the labor market, and especially to high-skilled, labor-intensive sectors.

Some countries have created specific programs for **out-of-school youth** (also called "second chance" programs), which have shown positive results in some cases.[23] The objective of these programs is to provide youth (in particular more at-risk groups, such as secondary school dropouts) with basic skills that will enhance their employability. In most cases, the programs include on-the-job training and classroom training with a mix of vocational and basic skills. Table 6 shows the impact of a few programs that have been evaluated in Latin America and the Caribbean (mostly *ex-post* evaluation with quasi-experimental methods, except for in the Dominican Republic and Colombia, where randomized evaluations took place). They suggest that youth training programs increase employment opportunities, earnings and, to a lesser extent, the probability of having a formal job. It is important to note, however, that most jobs created by

[22] Formal government training institutes include the *Instituto Nacional de Aprendizaje* (INA, Costa Rica), the *Instituto Salvadoreno para la Formación Professional* (INSAFORP, El Salvador), the *Instituto Nacional de Formación Profesional* (INFOP, Honduras), the *El Instituto Técnico de Capacitación y Productividad* (INTECAP, Guatemala), the *Instituto Nacional Tecnológico* (INATEC, Nicaragua) and the *Instituto Nacional de Formación Profesional y Capacitación para el Desarrollo Humano* (INADHE, Panama).

[23] For example, in Nicaragua, while more than one-fifth of social assistance spending is directed to training programs, the large majority covers training for workers who have completed secondary education, while out-of-school youth receive only marginal support (see Nicaragua country study). In Costa Rica in 2007, only 1.4% of those trained by the INA were adolescents (see Costa Rica country study).

these programs are likely to be in the informal sector and that these programs do not operate on a large scale in Central America. Still, these programs have challenges: they are costly, the success rate (measured in terms of job placement or income) tends to be modest and countries have not been successful in scaling them up to cover actual demand.

Table 6: Impact of selected youth training programs in Latin America and the Caribbean

Dominican Republic	Positive, not significant	Positive (+17%), marginally significant, larger for males under 19 years old	Positive for men (9% more have health insurance)
Colombia	Positive and significant only for women	Positive (+22% for women, +10% for men)	Positive and significant (5-9% for men, 6-7% for women)
Panama	Positive and significant only for women, especially in Panama City	Positive for women (+38%) and in Panama City (%)	Not significant
Peru	Positive and significant only for women	Positive (+12 % to 30%)	14% for women, 5% for men
Argentina	Positive effects for those younger than 21	Not significant	Positive for youngest
Mexico	Only on-the-job training has positive effects	Not significant	Positive (since 2002)
Chile	Positive for youngest groups	Not significant	Positive for youngest

Source: Ibarrán and Rosas (2008), from Costa Rica country study.

Intermediation programs include job counseling and job search assistance programs that are geared to assist workers in obtaining information about potential job opportunities are largely absent in the region; where they do exist, they are very small in scale. In addition, these programs are designed to serve mostly skilled (tertiary educated) workers, but are generally managed by the Ministry of Labor with no links with local tertiary institutions and few links with the private sector. Some countries have "activation-style" programs which seek to improve the productivity of self-employed workers or to integrate inactive workers into the labor market, through microcredit and training. These programs are mostly rural and have very low coverage.

Other labor market programs

In Central America, one significant **income protection mechanism**, specifically for formal sector workers who lose their jobs, is in the form of **severance pay**, which varies between an average of 14.4 weeks (in Costa Rica) and 27 weeks of salary (in Guatemala) for workers with full time jobs that are laid off after at least 1 year of tenure. These averages are higher than the the average in other Latin American countries (13.9 weeks), and significantly above OECD averages (5.7 weeks). High severance payment partly explains the existence of such a small formal employment sector in Central America. Moreover, no country has implemented unemployment insurance or individual savings accounts for the unemployed. In certain cases (e.g. after natural disasters), workfare programs have been created to provide temporary income

support to affected populations (and to help with reconstruction efforts), but these have been limited interventions and their impact is not well known.

Table 7: Protection against dismissals in Central America, 2011

	Notification & approval of a third party required if 1-9 workers dismissed?	Notice period for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in salary weeks)	Severance pay for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in salary weeks)
Costa Rica	No	4.3	14.4
El Salvador	No	0.0	22.9
Guatemala	No	0.0	27.0
Honduras	Yes	7.2	23.1
Nicaragua	No	0.0	14.9
Panama	Yes	0.0	19.0

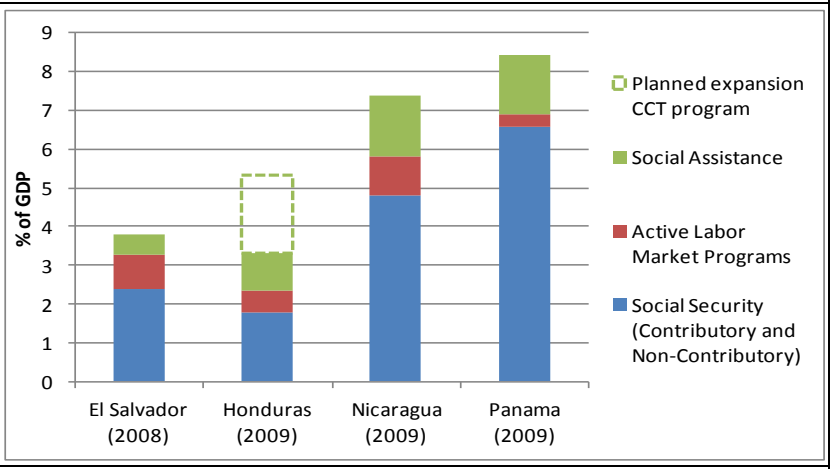
Source: Doing Business 2011

Another important protection for workers is the **minimum wage**, which again largely applies in practice to formal sector workers. While the minimum wage regulations (as well as legal provisions regarding employment security) can play an important role in stabilizing employment and protecting workers, there can be negative impacts on employment. For example, labor markets in Honduras are highly regulated compared with other countries in the region, especially in terms of pay legislation. The country has a relatively high legal minimum wage, at around $213 per month in rural areas and $290 per month in urban areas – both of which are much higher than the mean wage of workers in Honduras. Strict labor regulations have likely contributed to the creation of a two-tier labor market, where a large majority of workers (80%) are in the informal, unprotected and low-paid sector (where most are paid less than the legal minimum wage), and a high-skilled, high-wage minority works in protected formal public and private sectors. In 2009, the minimum wage in Honduras nearly doubled, despite the economic crisis and inflation rates in the low single digits. Previous research had shown that real minimum wage increases in Honduras have had negative effects on formal sector employment (Gindling and Terrell, 2010). Consistent with this research, the 2009 minimum wage increase in Honduras was followed by falling formal sector employment, increasing informality rates and increasing unemployment rates (see Honduras country study).

Social Assistance

Finally, most countries have created relatively **large social assistance programs** for poor households with seniors and young children, especially in rural areas. There are two main types of programs. Seniors are protected by contributory and non-contributory pension programs, which exist in all Central American countries, and, combined, absorb the largest share of social spending (Figure 12). Conditional cash transfer (CCT) programs, which exist in virtually all Central American countries, provide money to poor families with children whose parents keep them in school and take them regularly to health clinics.[24]However, these programs are largely restricted to primary school students, though as noted above, some countries are extending them to secondary school students. These programs also have the potential to help protect workers who may fall into abject poverty as a result of economic crisis or other disasters, though their ability to do so varies across countries.[25]

Figure 12: Social protection spending in Central America, latest year available (% of GDP)



Source: Marquez (2010); El Salvador Public Expenditure Review (2010).

e. Weak policy levers – low social spending and government revenues and poor quality of public spending

The ability of Central American governments to provide quality public education, construct safety nets and engage in active labor market policies is limited by low levels of public spending and revenues. With the exception of Costa Rica, social spending by governments is lower in Central America than in the largest Latin American countries, both in terms of absolute spending per capita and as a percent of GDP (Table 8). For example, in the largest country in Central America, Guatemala, public social spending was $121 per person in 2007 (7% of GDP), compared with $1,068 per person (25% of GDP) in Brazil, $2,173 per person (23% of GDP) in Argentina and $820 per person (12% of GDP) in Mexico. Even in Costa Rica, which has the

[24] In the case of Nicaragua, conditions are not related to school attendance or health visits but to attendance at parent education seminars.

[25] Examples of CCTs are *Red Solidaria* in El Salvador (since 2006), *Avancemos* in Costa Rica (since 2006), *Mi Familia Progresa* in Guatemala (since 2008), *Red de Oportunidades* in Panama and *Bono 10,000* in Honduras.

highest social spending in the region, at $898 per person (17% of GDP), social spending is below that in Argentina or Brazil.[26]

Table 8: Social spending in Latin America, 2007		
	2000 US$ per person	As % of GDP
Central America		
Costa Rica	894	17.44
El Salvador	290	11.07
Guatemala	121	7.24
Nicaragua	103	11.72
Panama	491	9.44
Argentina	2 173	23.23
Brazil	1 068	25.00
Chile	756	12.38
Colombia	375	12.68
Cuba	1 542	36.92
Dominican Republic	288	8.11
Mexico	820	11.63
Paraguay	194	13.23
Peru	219	8.14
Trinidad and Tobago	950	8.88
Uruguay	1 652	21.98
Source: Economic Commission for Latin America and the Caribbean, CEPALSTAT.		

Low government revenue to GDP ratios in Central America limit the ability of governments to finance public services, infrastructure and safety nets. As a percentage of GDP, government revenues in all Central American countries are well below the Latin American and OECD averages (Barreix et al., 2009). On average, government revenues in Central America represents less than 18% of GDP, compared with 28% of GDP in the seven largest Latin American economies, 30% of GDP in Common Market of the South (MERCOSUR) countries and over 41% of GDP in OECD countries (Table 9). Government revenues are low despite tax to GDP ratios in Central America that are similar to tax to GDP ratios in the rest of Latin America; in both regions, average tax to GDP ratios are around 15% (ibid.).[27] The difference between government revenues in Central America and government revenues in the seven largest Latin American economies owes primarily to revenues from non-renewable natural resources, which are very small in Central America (ibid.).

[26] In all countries, social expenditures include country's total public current and investment expenditure on education (including preschool, primary, secondary and higher levels), health and nutrition, social security and welfare, housing, water and sanitation.

[27] Although tax to GDP ratios in Central America are low compared with OECD averages.

Table 9: Total government revenue, 2009 (% of GDP)	
	% of GDP
Costa Rica	17.9
El Salvador	14.5
Guatemala	12.7
Honduras	16.1
Nicaragua	22.7
Panama	21.8
MERCOSUR	29.8
OECD	41.5
Source: Barreix et al. (2009), Table 15, based on ECLAC and OECD statistics.	

The relatively low level of public spending is only one aspect of the problem. Another aspect is the quality of public spending. A good example is Honduras, where expenditure on education is close to 7 percent of GDP, a ratio which is higher than in Costa Rica (6 percent), the star education performer in Central America and close to the top in Latin America as whole. However, all indicators of education achievement show that Honduras performs very poorly. The poor quality of teachers, teacher absenteeism and strikes reduce the effectiveness of public spending dramatically.

6. WHAT ARE GOOD JOBS POLICIES IN CENTRAL AMERICA?

The following policy recommendations are limited to human capital and social protection policies, which are within the scope of the analysis in this note. Although we discuss certain common areas of policy that are relevant throughout Central America, country-specific policies will clearly present certain differences given the heterogeneity present across countries.

(i)Improving human capital of youth: New, young labor market entrants will be the fastest-growing segment of the labor market in Central America in the next few decades. One focus of jobs policies throughout Central America should be to enhance the opportunities of new, young labor market entrants to obtain high-productivity, high-wage jobs. As high-productivity, high-wage jobs will drive the long term growth of the economy, increasing the ability of graduates to meet future labor market needs will be important. Youth-friendly employment and growth policies include the following:

Ensure completion of a quality secondary education: This is the single biggest problem facing the countries and an integrated approach is needed that combines measures to expand and improve the supply as well as to stimulate demand. Reforms of secondary education to improve labor market skills for secondary school leavers, particularly those not planning to attend tertiary education, are likely to improve the labor market premium of secondary education and therefore provide the right incentives to finish secondary school. On the supply side these include reforms to (a) improve the relevance of the curricula and adapt it to the needs and interests of a diverse young population, while

strengthening the core language, mathematics, science and technology subjects (b) strengthen the quality of teaching, in particular the knowledge and pedagogical skills of teachers, combined with reforms in hiring, promotion and accountability of teachers (c) enhance the learning environment with appropriate materials and technology (d) strengthen monitoring and learning assessments to track and provide support to students and (e) reforms in the governance of secondary schools. On the demand side, financial incentives to encourage adolescents from poor backgrounds to stay in school would also be appropriate.

Several countries are introducing reforms in these directions. Costa Rica has introduced a CCT for secondary school students. Panama recently implemented a bold program to promote student performance by paying students a monetary transfer for good performance at school. The program is operating for Grades 4 through 12 (from the second cycle of primary education to upper secondary education). El Salvador has launched the "Full Time School Model" for lower secondary education, which lengthens the school day, restructures the curriculum and teaching practices and offers extra curricular activities. These programs need to be carefully evaluated to provide good practice lessons for other countries.

Increase efficiency, quality and equity in access to tertiary education: For most of the Central American countries, expanding overall tertiary education enrollment rates is not the immediate priority. However, the output of graduates could be increased by improving completion rates. More importantly, the quality and relevance of tertiary education courses need to be improved by linking them up with labor market needs. And finally, enabling more students from poor households to participate in tertiary education should be a priority, in order to break the cycle of inequality. This would require measures not only at the stage of entry into tertiary education, but also in earlier stages of education.

World wide experience in reforming tertiary education systems shows that reforms of governance and financing are critical for improving quality and relevance so that tertiary institutions can adapt to changing labor market conditions. This will be a difficult challenge for Central American countries, where universities have traditionally been guaranteed public financing with complete autonomy in decision-making and there are few mechanisms to introduce policy changes. Nevertheless, public policy and resources can provide strategic leadership to initiate change and build consensus on the kinds of reforms that are required in this vital sector.

Build technological and scientific skills of secondary and tertiary education students: International experience suggests that the following factors are most critical : (a) high level of preparation of secondary education graduates in the core mathematics and

science competencies, (b) effective articulation of programs and move towards standard duration for different types of programs, (c) secondary schools and tertiary institutions with strong links to employers and the labor market. Specifically, in tertiary institutions, reforms need to focus on: (d) ensuring on-going professional development of faculty, (e) promoting undergraduate applied research and development, (f) developing a cooperative, modular program framework which combines learning from work situations together with study in the university to reinforce theoretical concepts through practical experience acquired in real world situations, (g) competency-based evaluation of learning outcomes and (h) a credible system of quality assurance and accreditation.

(ii) Redesigning activation policies and programs

An integrated set of affordable and effective active labor market programs that combine the various individual set of activation programs offered by different institutions in Central American countries today should be a priority for the region. As noted above, current programs are fragmented and limited in service provision. Offering an integrated active labor market system, which draws on existing institutions, will allow countries to make programs affordable within existing budget constraints.

An integrated Active Labor Market program could serve a range of clientele: youth who do not complete secondary education, workers who change jobs or migrate, and those in the informal sector (particularly as these sections of the population will constitute a major share of the workforce for many years to come). This system could provide a range of programs including, inter alia, intermediation services, training/re-training, micro-enterprise skills and workfare. The latter program, if well designed, can also serve as an unemployment insurance program in times of crisis. A focus on evaluation, given that program impact is not well known, will be critical to design and select the most effective and affordable labor market responsive programs.

Going forward, it will be important to review the range of services provided by the many institutions engaged in the provision of active labor market programs (training institutes, the Ministries of Labor, other public organizations) and to assess how these services might best be financed, coordinated, governed and designed to make them flexible and relevant to the needs of the labor market. Drawing from international experience and regional experience will be critical to inform program design and learn from both successful and unsuccessful models of service provision in similar country contexts.

***(*iii) Promote Regional Collaboration**

Create greater consistency and portability of education, and possibly training, systems across Central America and between Central America and the US: It is clear that a significant part of the problem that emigration poses to human capital accumulation in Central America is that education received in one country is not fully valued in others. This suggests it would help both

sending and receiving countries if there were greater consistency and portability of education systems across Central America and between Central America and the US.[28]

Greater regional collaboration would be even more appropriate at the tertiary education level and especially in building scientific and technological skills. The small size of the economies means that each individual country will find it difficult to build up the critical mass of skills in several disciplines. Fostering partnerships, mutual recognition of degrees and certificates, and promoting exchange of students would help to build a common higher education area that can produce the skills required for good quality jobs.

7. CONCLUSIONS: CAN LESSONS LEARNED IN CENTRAL AMERICA BE RELEVANT IN OTHER AREAS OF THE WORLD?

(i) The experience of Central America strongly suggests that, unless the population has substantial human capital (especially education), even the "right" macroeconomic policies and structural reforms will not be sufficient to create the necessary number of "good" jobs. Complementary policies that improve the quantity and quality of human capital and a strengthened social protection system are also necessary.

(ii) A consistent commitment to improving the quality and quantity of human capital can affect the path an economy is likely to take. That is, it can affect the type of products likely to be produced and the type of jobs likely to be created. For example, Costa Rica's consistent long-term commitment to maintaining the quality of tertiary and technical secondary education has contributed to a change in the structure of production and employment towards more sophisticated, skilled labor-intensive products. In Panama, where tertiary education has expanded more rapidly than in Costa Rica but there has not been the same commitment to maintaining quality, the structure of production and employment has changed very little. Guatemala has not had a consistent policy to provide basic education, and its production and employment structure has remained agricultural and low-skill. On the other hand, El Salvador has had a consistent commitment to providing universal basic education, and output and employment have become more skills-intensive when compared with Guatemala.

(iii) Social protection mechanisms are important even for poor countries with large informal sectors. Not everyone will gain from changes in the economy; some will be temporarily disadvantaged by macroeconomic shocks and others will lack the capacity to obtain the skills needed to prosper in a new, knowledge-intensive economy. It is important to protect those who lose through no fault of their own, especially those who lose as a result of policies that are, overall, beneficial to the economy.

[28] An example of such coordination occurs in the countries of the Organization of Eastern Caribbean States which have a common exam, administered by the Caribbean Examination Council (CXC), to certify primary and secondary school graduates.

(iv) High rates of emigration can create disincentives to invest in education. In countries where the probability of emigration is high, even high domestic returns to education may not be enough to incentivize children to invest in education – especially when wages for low-skilled labor in the destination country (i.e. the U.S.) are high relative to those for high-skilled labor in the home country (i.e. El Salvador, Guatemala, Honduras or Nicaragua). Low returns to education for Central American immigrants in the U.S. create further disincentives to invest in education. Returns to education for Central American migrants may be low in the U.S. because of the low quality of education in Central America, or because incompatibilities in education systems mean that employers in the U.S. do not value the education immigrants have received in Central America.

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