Guatemala Economic DNA
Harnessing Growth
With a special focus on Jobs

WORLD BANK GROUP
Guatemala Economic DNA

Harnessing Growth

With a special focus on Jobs

August 2014

First Edition
Executive Summary

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Abbreviations and Acronyms

ANADIE  National Agency for the Development Partnership in Infrastructure
DB      Doing Business
FDI     Foreign Direct Investment
GDP     Gross Domestic Product
HDI     Human Development Index
IES     Informal Enterprise Surveys
ILO     International Labor Organization
IMF     International Monetary Fund
ISCV    Tax on the Circulation of Motor Vehicle
ISIC    International Standard Industrial Classification
ISR     Income Tax (Impuesto Sobre la Renta)
LAC     Latin American and the Caribbean
MIC     Middle Income Countries
OECD    Organization for Economic Co-operation and Development
PPP     Public-Private Partnerships
REER    Real Effective Exchange Rate
SAT     Superintendence of Tax Administration
SMEs    Small and Medium Enterprises
TCI     Technological Capabilities Index
TFP     Total Factor Productivity
VAR     Vector Autoregressive Model
VAT     Value Added Tax
WBES    World Bank Enterprise Surveys
WDI     World Development Indicators
WEO     World Economic Outlook
It is a great pleasure to present this first edition of the Guatemala Economic DNA (Diagnostic for National Action) prepared by the World Bank. For those of us that have had the privilege of working with Guatemala over the years, it is clear that there many Guatemalan development experiences that are worth sharing with the global community. For example, if we think of macroeconomic stability (an element that should be at the center of any development plan) Guatemala is an example to follow, and therefore for the World Bank analyzing and sharing the country's track record on this front is of great interest. At the same time, there are experiences from other countries that we also believe could be of use to Guatemala. This would include experiences of countries that have managed to sustain high economic growth over the years and move to upper middle income and even high income status, or countries with a good track record of job creation that has helped translate economic growth into welfare gains for the whole society. The global community has now a renewed emphasis to eradicate extreme poverty by 2030 and promote shared prosperity and we believe that the World Bank can contribute to these objectives by promoting an exchange of development experiences, taking those where Guatemala excels to the rest of the world and bringing to Guatemala those where other countries have been recognized.

Indeed this first edition of the Guatemala Economic DNA brings together, in a compelling way, the important achievements of Guatemala on the macroeconomic stability front. It also argues that these achievements will need to be secured and makes the case for an increased focus on accelerating economic growth. For example, this edition highlights that in 2013 the country's economic activity expanded by 3.7 percent in 2013, and is projected to grow around 3.6 percent in the near-term, in line with the growth of Central American economies but below the growth rate in emerging markets. Meanwhile, inflation has been managed and the authorities deserve to be recognized for their commitment to maintain macroeconomic stability.

A typical Economic DNA will be published every six months and will (i) review the most recent developments in the Guatemalan economy; (ii) reflect about future economic prospects; and (iii) analyze development topics of interest. In this first edition the focus is on jobs. This is a key linkage between performance at the macroeconomic level and prosperity at the microeconomic level. We find this topic particularly relevant in Guatemala given that even though the economy grew continuously in the past decade, the country created fewer jobs than other countries with the same level of income. Moreover, employment growth fell sharply in the years following the global financial crisis, more so than in other countries, and therefore there is a need to revert this trend.

I hope you will enjoy this new report series which reflects the best analysis and knowledge of the World Bank for Guatemala.

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The Guatemala Economic DNA (Diagnostic for National Action) evaluates the implications of economic trends and policy reforms in terms of the government’s stated development objectives, and reviews challenges and opportunities currently facing the Guatemalan economy. The Guatemala Economic DNA is intended for a wide audience, including policymakers, business leaders, civil society organizations, academics, and the community of analysts and partners engaged in Guatemala’s evolving economy.

The findings, interpretations, and conclusions expressed herein are those of the authors, and do not necessarily reflect the views of the World Bank’s Board of Executive Directors or the countries they represent. The cut-off date for the data in this report was July 8, 2014.

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Guatemala's economy has recovered at a modest but consistent pace since the global financial crisis of 2008-09. The country avoided falling into a recession during the global financial crisis, and grew on average by 2.8 percent during 2008-12, compared to 4.4 percent during the pre-crisis period (2005-07). Growth in the post-crisis period has remained less volatile than the regional average despite the natural disasters that struck in 2010.

Guatemala's macroeconomic resilience is due to prudent macroeconomic policies and a more diversified economy in comparison to other Central American countries, which has helped cushion the impact of shocks. Sound macroeconomic management has kept public debt sustainable and inflation within the band established by the Central Bank (4 percent ± 1 percentage point). Meanwhile, terms of trade shocks in certain sectors have been offset by growth in other sectors. For instance, in 2013 the impact of the “coffee rust” on agricultural production was countered by the strong performance of sugar and cardamom. As a small open economy this resilience is an asset to Guatemala at the macro level. However, shocks can have devastating effects at the household level that are not clearly reflected in macroeconomic statistics. For example, when there is a shock in the coffee industry, coffee producers (many of whom live in poverty) do not necessarily benefit from the success of other agricultural subsectors.

In 2013 real GDP grew by 3.7 percent, up from 3.0 percent in 2012, and during 2014-2016 the country is projected to grow on average by 3.6 percent. Domestic consumption is expected to drive economic activity, while the contributions of both public and private investment will recede. Growth will also be supported by the ongoing recovery in the United States, which is expected to drive higher remittances inflows. Nonetheless, the medium-term outlook is vulnerable to uncertain global market conditions. In particular weaker growth in the United States could reduce remittances inflows to Guatemala. Simulation analysis suggests that a slowdown in remittances inflows would significantly affect GDP growth.

Accelerating growth could substantially reduce poverty in Guatemala, but this would require improvements in economy-wide productivity. Guatemala has the second lowest human development index score in the Latin America and the Caribbean (LAC) region and is also one of the poorest countries in the region, with more than ½ of the population living in poverty. Pro-poor policies could yield marginal improvements, but higher growth rates would be necessary to significantly improve living standards. According to World Bank staff simulations, if Guatemala’s rate of growth were to rise to 5 percent over the next three years, by 2016 the poverty rate could fall by an additional 1 percentage point (from a projected poverty rate of 49.7 percent in 2016 under the baseline scenario), thereby allowing 160,000 more Guatemalans to escape poverty.

Public investment is essential to achieving Guatemala’s development goals, yet it remains tightly constrained by a lack of resources, and the government continues to collect the lowest share of public revenues in the world relative to the size of its economy. Private investment is hindered by a lack of complementary public investment, especially in infrastructure. Without an increase in domestic revenues public investment (currently at 3 percent of GDP) will remain inadequate to address Guatemala’s infrastructure deficit, enhance its economic competitiveness, or boost growth. In 2013, lower-than-expected tax revenues forced significant cuts to public investment, underscoring the importance
of strengthening tax enforcement and enhancing the quality of spending.

Tax reforms adopted in 2012 represent an important milestone in the government’s efforts to mobilize revenues. The reform simplified the tax code and streamlined tax administration. Notably, the new tax legislation withstood legal challenges, unlike previous efforts to increase revenues which had been rolled back. It also increased the effective progressivity of the tax system, as income tax collection rose by 20 percent in 2013. However, this increase in income tax revenue was offset by a simultaneous decline in the collection of value-added taxes (VAT) on imports. As the volume of taxable trade increased during the period, the shortfall in customs duties and import VAT revenue appears to be the result of deteriorating enforcement. Consequently, net gains in revenue collection have been modest, though significant, and without the reforms tax revenues would have declined.

Advancing the structural reform agenda remains critical; in this regard, recent efforts to improve the business climate are encouraging. Guatemala was one of the countries that reformed the most in order to improve the business climate, according to the 2014 Doing Business ranking. Guatemala improved its ranking from 93rd in the world (out of 189 countries) in 2013 to 79th in 2014. In the past year Guatemala has made it easier to start a business, deal with construction permits, and pay taxes. However, challenges remain in a number of key areas, including enforcing contracts, trading across borders, and protecting investors. Maintaining the reform momentum to improve the investment climate is vital, as foreign direct investment (FDI) in Guatemala is relatively low and volatile in terms of both country of origin and target sector. Increasing FDI would boost growth and reinforce Guatemala’s resilience to external shocks because FDI represents a non-debt-creating source of foreign exchange.

Focus Section: Job Creation in Guatemala

An examination of employment dynamics and their implications for income generation and firm growth, presented as the Focus Section of this report, underscores the extent to which structural constraints on enterprise development slow hiring rates, discourage technology transfer and promote informality. These constraints include an inadequate and unevenly distributed supply of infrastructure and essential public goods, regulatory burdens that discourage informal firms from entering the formal sector, and the prevalence of crime and corruption, which both compound perverse incentives and slow the pace of firm growth across the economy. Because addressing these challenges will require well-informed policymaking, the issue of job creation was selected as the Focus Section of the first Guatemala Economic DNA.

Employment growth in Guatemala has lagged behind that of comparable countries, both in the LAC region and worldwide. The rate of job creation has closely followed the country’s rate of economic growth, both during the global expansion of the late 2000s and in the economic slowdown that followed the financial crisis of 2008-09. In the wake of the financial crisis, however, Guatemala’s rate of employment growth was lower than other countries with a similar level of income.

Exporting firms, foreign firms, and smaller firms in Guatemala performed better than others in terms of job creation. On average, export-oriented and foreign-owned firms based in Guatemala City with ready access to finance, for example, exhibited the strongest rates of job creation. For instance, the rate of employment growth in exporting firms was twice the size in comparison to non-exporting firms; we see a similar pattern when comparing employment creation across foreign versus domestic firms. Smaller firms also experienced higher levels of employment growth.
than larger firms. This pattern may be expected as the initial starting point for employment in small firms is, by definition, lower. However, it is worth noting that smaller firms in Guatemala exhibited positive employment growth in the years following the 2008-09 crisis, while larger firms experienced a contraction in employment.

In addition, Guatemalan firms that adopt new technologies are not only more productive, but also create more jobs. For instance, manufacturing firms that collaborate with other firms, suppliers, clients and research institutions tend to be more efficient, which in turn contributes to making them more competitive and expanding their ability to generate new employment opportunities. The analysis in this report reveals that a 10 percent improvement in a firm’s “technology capability index” score (which measures the extent to which firms use different types of technologies) is associated with a 1 percentage point increase in employment growth.

Several cross-cutting factors are also closely correlated with job creation in Guatemala, including financial depth, exposure to corruption, and informality. There is a strong correlation between access to finance and employment growth, while exposure to bribery and other forms of corruption constrains firm growth and slows job creation. Asymmetric competition from the informal sector also correlates with slower employment growth. While causation cannot be definitely established, measures to promote formalization and leveling the playing field between the formal and informal sectors are likely to have a significant impact on employment in the formal sector. Indeed, over ¼ of informal businesses in Guatemala report that they would like to become formal, and many of them are willing to pay to do so.

Ultimately, the extent to which Guatemala’s economy will be able to capitalize on an incipient global recovery will depend less on the government’s ability to pass further reforms than on its capacity to enforce existing legislation. Strengthening the rule of law and streamlining regulatory systems will be essential to facilitating firm growth, fostering greater competitiveness, and boosting the returns to both labor and capital. Bringing informal firms into the formal sector is an especially critical objective due to implications for expanding the public revenue base and boosting firm productivity. Due to their cross-cutting nature, employment-oriented reforms have the potential to greatly advance the government’s objectives of economic development and poverty reduction.
Recent Economic Developments
Guatemala’s Economy:
Steady Growth and Remaining Challenges for Shared Prosperity in the Face of Continued Global Uncertainty

Guatemala’s economy has recovered at a modest but consistent pace since the global financial crisis of 2008-09. GDP growth increased from 3.0 percent in 2012 to 3.7 percent in 2013, driven by rebounding domestic demand, higher remittances and generally favorable monetary conditions, all of which occurred against the backdrop of a recovery in the United States, Guatemala’s main trading partner. At the sector level, growth was led by services, which contributed to about half of economic growth, followed by manufacturing. Banking, telecoms and transportation drove the expansion of the tertiary sector as domestic consumption continued to rise. The textile and food & beverage industries led the secondary sector, spurred by a mix of external and domestic demand. In the primary sector, agricultural production targeted for the domestic market also contributed to growth, while agricultural exports (particularly coffee) suffered from a combination of exogenous shocks and adverse price changes in global export markets. Building upon Guatemala’s recent macroeconomic resilience, the coming years present an opportunity to reduce poverty through more rapid economic growth. Indeed, Guatemala’s per capita GDP increased by less than 1 percent per year over the past decade. Achieving higher growth will depend upon continued reforms to mobilize greater private investment, while building upon recent tax reforms to improve revenue mobilization to fund important growth-enhancing investments in infrastructure and human capital.

Economic growth in 2013 was driven by domestic consumption. The growth rate of private consumption, which accounts for over 80 percent of GDP, accelerated from 3.1 to 3.9 percent between 2012 and 2013. Rising incomes and remittances—around 50 percent of which go to consumption—as well as expanding consumer credit fueled the increase in consumption. Meanwhile, both public and private investment weakened significantly. The growth rate of private investment fell from 8.8 percent in 2012 to 3.6 percent in 2013. After contracting by 11.9 percent in 2012 public investment declined by an additional 4.7 percent in 2013. Cuts in capital spending were prompted by weaker-than-expected public revenues and growing current expenditures. Meanwhile increases in exports were offset by rising imports (Figure 1).

Figure 1: Guatemala’s growth remained resilient during the global financial crisis, but on average has been below that of peer economies.
(Real GDP growth, %, year-on-year)

Source: Guatemalan authorities and World Bank staff estimates.
Guatemala’s economic activity in 2013 was led by services, manufacturing, and agriculture. Services accounts for 45 percent of GDP and grew by 3.8 percent, slightly above the 2012 rate, while manufacturing grew by 3.4 percent, up from 2.7 percent in 2012. Growth in the services sector represented almost half of total GDP growth, or 1.7 percentage points. Manufacturing contributed with 0.6 percentage points (Figure 2). In the primary sector, agriculture and fishing grew by 4.5 percent, below its 4.7 percent growth rate in 2012. Increasing yields of crops for the domestic market and certain exports such as banana and cardamom partially compensated for the weak performance of coffee, and the sector as a whole contributed 0.6 percentage points to GDP.

Financial services, transportation and communications led growth in the tertiary sector. Financial services grew by 12.2 percent in 2013, reflecting the ongoing deepening of the financial sector and the continued growth of credit to the private sector, with a 11.3 percent increase in quetzal-denominated credit and a 25.8 percent increase in foreign-currency credit. Meanwhile, the deepening of the financial sector is illustrated by the spread of banking facilities across the country, with the total number of bank branches rising from 3,275 in 2012 to 3,396 in 2013 (Figure 5).
Agricultural production suffered in 2013 as the coffee industry was hit by a combination of exogenous shocks including worsening global market conditions. “Coffee rust” (or “roya”), a parasitic fungus, negatively affected coffee production throughout the region. The coffee rust is estimated to impact over two-thirds of coffee plantations in Guatemala, albeit to varying degrees (Figure 6). Although coffee rust can be managed with pesticide, its spread will likely have a significant long-term effect on production (by cutting marginal yields in infected areas) and structural costs (by requiring a re-plantation of coffee plants and consistent pesticide use). For example, the majority of coffee growers needed to replace coffee plants, which will in turn affect production for the coming 3 years. The coffee rust has added extra pressures to Guatemala’s coffee sector, which has seen little growth in yields over the past decade (see Box 1).

Domestic-oriented agriculture (two-thirds of total production) was boosted by rising yields of corn, beans, mango, sesame and tobacco, and by the introduction of new crops such as snow peas. This subsector grew by 4.7 percent in 2013, similar to the rate of 4.8 percent for the sector as a whole. Meanwhile, growth in export-oriented agriculture slowed from 8.0 percent in 2012 to 5.0 percent in 2013 primarily due to the decline in coffee production described above, though this was partially offset by a strong sugarcane and banana harvest.

Manufacturing continued to grow at a steady pace of 3.4 percent in 2013, with food and beverages and textile production leading the sector. The food and beverages industry accounts for about 45 percent of total manufacturing activity. It grew by 4.6 percent, slowing modestly from 6.3 percent in 2012. Favorable weather conditions contributed to strong sugarcane harvests in 2012 and 2013, which generated a 15 percent increase in sugar production (Figure 10). Around 70 percent of Guatemalan sugar is exported. Textile production expanded by 3.7 percent in 2013, as rising foreign demand boosted exports by around 25 percent over the previous year, reversing the contraction that occurred during 2011-12. Nevertheless, the overall development of manufacturing continues to be hampered by a large informal sector and rigidities in the formal labor market. These issues are discussed further in the Special Focus Section of this report.
Box 1

Coffee and Poverty
Improving the Performance of Coffee Producers Could Substantially Reduce Poverty

Beyond the immediate challenges of coffee rust disease, there is substantial scope for improving yields through greater investment in the coffee sector. Over the last decade, yields in Guatemala have remained relative stagnant, while productivity in other major coffee exporters has improved significantly driven by investments in new technologies (Figure 8). For instance, Brazil (the world’s leading coffee producer) increased its yields by 4 times in the last 15 years. A lack of investments in new technology had constrained improvements in productivity in the coffee sector. Investing in new technologies could increase yields in Guatemala, particularly in a context of the renovation of coffee plantations (some plantations had not been renovated since the 1980s).

Greater productivity in the coffee sector could substantially reduce rural poverty. While coffee accounts for only 1.6 percent of GDP in Guatemala—a smaller share than other major coffee producers—the coffee industry has important implications for poverty and household consumption. The sector generates 500,000 jobs, employing almost 9 percent of the active labor force, and accounts for 11 percent of Guatemalan exports. The majority of coffee producers are smallholders in rural areas. Seven out of every ten households in coffee-producing regions live in poverty, and two out of ten live in extreme poverty (Figure 9). Coffee accounts for over two-thirds of agricultural production in the 50 municipalities with the highest level of extreme poverty.

Figure 8: Productivity in Guatemala’s coffee sector has remained stagnant in the past decade.
(Coffee yield per hectare)

Source: Guatemalan authorities and World Bank staff calculations.

Figure 9: Developments in the coffee sector have direct implications for poverty in Guatemala.
(Intensity of the coffee rust and extreme poverty)

Source: World Bank staff estimates based on the 2011 National Survey of Quality of Life (ENCIOVI).
Construction continues to underperform, reflecting weak residential and non-residential investment, despite strong growth in remittances and credit growth. In 2013 construction activity grew by just 1.7 percent, up slightly from 2012. The sector was hit hard during the global financial crisis; construction activity fell by 10.8 percent in 2009 and by a further 11.5 percent in 2010. Despite its recent growth construction has yet to recover to its pre-crisis level. The construction sector accounts for a small percentage of GDP, below the average of Central America (see Figure 11). There are two possible explanations for the weak performance of the construction sector. First, weaker rural incomes from declining coffee production, especially in the north and west of the country, may have weighed on self-construction activity, which accounts for half of total construction activity. Second, the Guatemalan Chamber of Construction determined that the sector’s poor performance was due in part to uncertainty regarding Articles 34 and 35 of the Actualizacion Tributaria Law, which stated that the total income tax on construction projects should be paid in advance at the beginning of the project. These articles were nullified in November 2013.

**Figure 10:** Manufacturing growth was led by food and beverages and a recovering textile industry. (Contributions to non-primary manufacturing growth, percentage points)

**Figure 11:** Guatemala’s construction sector represents a relatively small share of GDP. (Share of annual GDP in 2013, %)

<table>
<thead>
<tr>
<th>Sector</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and beverage</td>
<td>3.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Textiles</td>
<td>0.1</td>
<td>-0.5</td>
</tr>
<tr>
<td>Wood and furniture</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Rubber and plastic</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Guatemalan authorities, Regional Organization of Chambers of the Construction in Central America and the Caribbean, and World Bank staff estimates.
Guatemala’s well-diversified economy has proven resilient to shocks, but its growth has been weaker than its regional peers. Since 2000 real per capita GDP growth has averaged about 0.9 percent, roughly three-quarters of a percentage point less than the rest of Latin America and the Caribbean (LAC) and significantly less than other middle-income countries. Shared prosperity, as measured by income growth among the poorest 40 percent of the population, has lagged behind the region. Shared prosperity in LAC increased by 5 percent over the past decade, yet in Guatemala it declined by 1 percent between 2001 and 2011. Guatemala endured the 2008-09 global financial crisis better than all Central American countries except Panama, but in the last 4 years its per capita GDP growth was slower than that of most countries in LAC. Moreover, Guatemala’s recent growth has not been necessarily less volatile than that of other regional economies, yet it continues to lag the average. As shown in Figure 12, seven LAC countries have achieved higher growth rates than Guatemala while maintaining similarly low or even lower levels of volatility.

**Figure 12**: Guatemala’s economic growth lags behind its regional peers, many of which have low volatility; meanwhile Guatemala’s HDI is one of the lowest. (Real GDP growth, volatility)

Slow growth is the result of low productivity growth, which has lagged regional peers. A comparison of total factor productivity reveals that Guatemala’s productivity is lower than in other peer economies, as Guatemala failed to keep pace with most Latin American countries that boosted total factor productivity (TFP) during the 2000s. During the 1990s productive efficiency was a major contributor to Guatemalan growth, boosting the real GDP growth rate by an average of 1.5 percentage points over the decade. But during the 2000s productive efficiency declined, cutting annual GDP growth by an average of 0.2 percentage points. Although this trend has since reversed, with an increase in TFP adding around 0.7 percentage points to annual GDP growth since 2011, Guatemala’s TFP growth rate remains well below the regional average.

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1 TFP is a measure of the efficiency with which an economy uses productive factors to generate goods and services; it is obtained by subtracting changes in the stock of labor and capital from GDP growth.
for LAC countries. The gap in TFP between Guatemala and the “LAC7” (the 7 largest economies in the region) is widening. Overall growth in Guatemala continues to be driven by the country’s rising labor force, with capital formation making only a modest and diminishing contribution to real GDP growth in recent years.

**Raising growth could have remarkable impacts on poverty reduction.** Guatemala is one of the poorest countries in LAC. Its poverty headcount rate is over 50 percent; in rural areas seven out of every ten people are poor, and poverty is most pervasive and extreme in areas that are home to indigenous groups. While pro-poor policy reforms could yield marginal improvements, accelerating growth will be crucial to achieving its medium-term poverty and social objectives. According to World Bank staff simulations in a context of partial equilibrium, if Guatemala grows at 5.0 percent (the average growth rate in 2010-2013 in LAC) over the next 3 years and the growth does not come at the expense of the poor, the marginal impact on poverty and equity will be significant. The poverty headcount rate would fall by an additional 1.0 percent, by the end of 2016, allowing over 160,000 more people to escape poverty.

**Inflation:**
Food Inflation Accelerated but Headline Inflation Remains within the Central Bank’s Target Band

Guatemala’s headline inflation rate picked up modestly in 2013 as a result of higher food prices, but remained within the Central Bank’s target band for the second consecutive year. Core inflation continued to decline over the course of 2013, consistent with the moderate pace of growth in domestic demand.
Inflation picked up in 2013 on the back of supply shocks that drove domestic food prices higher, but headline inflation remained within the target of 4 percent +/- 1 percentage point set by the Central Bank of Guatemala. Inflation accelerated from 3.4 percent in 2012 to 4.4 percent in 2013, but remains below the 2006-2012 average of 5.5 percent. Headline inflation accelerated in the first half of 2013 to 4.8 percent, but eased in the second half of the year as seasonal factors related to agricultural production provided relief to domestic food prices. In 2013, the food component of inflation (representing 29 percent of the consumer price basket) increased by 8.8 percent, led by higher prices for meat, eggs and milk, while rising prices for fruits and vegetables in the first half of 2013 eased in the second half of the year as a strong harvest boosted supply. Relatively high food-price inflation was mitigated by low inflation rates in food service, healthcare, transportation, clothing, recreation, furniture, and education, each of which grew by less than 3 percent in 2013.

Core inflation remained subdued during 2013, but inflation expectations are anticipated to accelerate in 2014 toward the 5 percent upper bound of the target band. Core inflation slowed from 3.4 percent in 2012 to 2.6 percent in 2013 even as headline inflation rose, suggesting that overall demand pressures remain contained. Yet according to surveys conducted by the Central Bank, inflation expectations for 2014 ticked up over the course of 2013 as headline inflation rose during the first half of the year.

**Figure 15:** Headline inflation picked up in 2013, while core inflation moderated.
(Inflation, % year-on-year)

![Figure 15](image1.png)

**Figure 16:** Guatemala’s inflation remains relatively low compared to its regional peers.
(Inflation in selected countries, 2013)

![Figure 16](image2.png)

*Source: Central Bank of Guatemala, Guatemala National Institute of Statistics, and World Bank staff estimates.*

Low and stable inflation remains a pillar of macroeconomic stability, underscoring the success of Guatemala’s inflation-targeting framework. Though it remains sensitive to domestic food prices, Guatemala’s inflation rate is lower than that of other Latin American countries, and its performance compares favorably with that of other countries that use inflation-target bands.
Fiscal Policy: Fiscal Stability and a Partially Successful Tax Reform

Guatemala’s public finances are characterized by a low tax burden relative to the size of the economy, and without the luxury of significant non-tax revenue sources. As part of its fiscal pact, in 2012 the government pushed through a comprehensive tax reform, which took full effect in January 2013. The reform was initially expected to raise tax revenues by around 1 percentage point of GDP. Yet, by end-2013 tax revenues increased only modestly by 0.2 percent of GDP. Although the reform increased income taxes collection, this strong growth was offset by unexpectedly weak collections of the Value Added Tax (VAT) on foreign trade and the derogation of a tax on motor vehicles in 2013. Yet, without the tax reform, Guatemala’s tax take in 2013 would have been even lower. Despite weak revenues, fiscal consolidation continues apace, with Guatemala recording the smallest fiscal deficit since the 2008-09 financial crisis, albeit at the cost of cuts to public investment and the lowest social expenditure as a share of GDP in Central America. Without a substantial and sustained increase in domestic revenue collection public investment will remain inadequate to address Guatemala’s infrastructure deficit and boost its economic competitiveness. Public debt remains low, although the growing ratio of interest payments to tax revenues further highlights the importance of mobilizing revenues.

Guatemala collects the least public revenues in the world relative to the size of its economy. Currently government revenues totaled less than 12 percent of GDP, well below the average of 26 percent in Latin America and the world average of 32 percent. In contrast to other countries with low tax-to-GDP ratios, including Mexico and Panama, Guatemala lacks significant non-tax revenue sources. Indeed, tax revenues represent over 94 of total government revenues. While tax revenues recovered modestly from 10.3 percent of GDP in 2009 to 11 percent in 2013, they remain below pre-crisis levels of 12.1 percent of GDP in 2007. This low level of resources constrains public expenditures. Notably, Guatemala is also the country with the lowest level of public spending in the world relative to the size of the economy.

Guatemala has managed to maintain fiscal stability despite its limited resources (Table 1). Government finances were severely affected by the 2008-09 crisis, with major revenue streams remaining closely tied to developments abroad, especially in the United States. Following the crisis, lower collection on income tax and value-added tax (VAT) receipts and taxes on foreign trade, together with counter-cyclical spending, led the fiscal deficit to peak at 3.3 percent of GDP in 2010. Since then, the deficit has been gradually narrowing and reached 2.1 percent in 2013. It is worth noting that recent steps towards fiscal consolidation have resulted predominately from reductions in already low levels of public expenditure, allowing Guatemala to maintain a solid fiscal position but at the cost of important growth-enhancing expenditures in infrastructure and investment in human capital.
Table 1: Guatemala has managed to maintain fiscal stability despite its limited resources
(Fiscal indicators, % of GDP)

| Source: Guatemalan authorities and World Bank staff estimates. |

<table>
<thead>
<tr>
<th>Fiscal operations of the Central Government</th>
<th>2009</th>
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<th>2011</th>
<th>2012</th>
<th>2013</th>
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<td>2.1</td>
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<td>0.7</td>
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<td>3.8</td>
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<td>2.4</td>
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<td>1.0</td>
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<td>2.1</td>
<td>2.3</td>
<td>2.1</td>
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<tr>
<td>Domestic</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
<td>1.0</td>
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<tr>
<td>External</td>
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<td>-2.1</td>
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<td>24.6</td>
<td>23.9</td>
<td>24.4</td>
<td>24.8</td>
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</tbody>
</table>

In order to increase tax revenues, in 2012 the Guatemalan Congress approved a comprehensive tax reform, which largely took full effect in 2013 (see Box 3). The tax reform, which comprised two laws—Ley de Actualización Tributaria and Ley Antievasión II—was considered a major milestone, since similar reform efforts over the past two decades had been reversed, on occasions after being challenged at the Constitutional Court. The tax reform aimed to modernize the income tax system by expanding the tax base and eliminating tax exemptions through more effective controls on deductions and an elimination of the payroll tax credit. Furthermore, the reform sought to improve tax administration efforts to improve monitoring, control and management of records.
In 2012 the Guatemalan Government launched a tax reform in order to broaden the revenue base and strengthen tax administration, which came into effect over 2012-13 (Figure 17). The reform comprised two decrees: 04-2012 (Provisions for Strengthening the Tax System and Combating Fraud and Smuggling) and 10-2012 (Updated Tax Act). These decrees aimed to modernize income tax collection by increasing the tax base and eliminating tax exemptions through controls on deductions and elimination of the payroll tax credit. The reform also eliminated several Value Added Tax (VAT) exemptions and strengthened tax administration efforts.

Following passage by Congress, several unconstitutional claims against the tax reform were made. In summary, about one of every three articles saw challenges (or 68 articles out of the 258 articles in the tax reform laws), of which only 9 were amended by the Constitutional Court, at the time of writing. Importantly, none of the amended articles affected the technical structure of the tax reform. However, the Government did reverse reforms to the tax on the circulation of motor vehicles (ISCV), foregoing revenues representing 0.1 percent of GDP (the original Law envisaged a doubling of the ISCV, but in mid-2013 Congress granted a 50 percent discount on this tax).

Among its most significant aspects, the reform aimed to improve the progressivity of the tax system by increasing the share of income taxes. Key features of the new tax law included the simplification of income tax structure, the introduction of a 5 percent tax on capital gains; increases in income tax rates for the simplified...
regime from 5 to 6 percent in 2013 and from 6 to 7 percent in 2014; changes in the frequency of income tax payments for the general regime; and an increase in the single deduction for personal expenses to Q.150,000 annually while eliminating the VAT tax credit for salaried workers and small taxpayers. Formerly, a VAT tax credit allowed salaried workers to offset VAT payments against income taxes by presenting receipts gathered during the year. This practice was considered to allow for tax evasion, in addition to being regressive, since higher income earners that paid more in VAT taxes received the greatest benefits from the exemptions.

Reforms to indirect taxes focused on implementing the First Registration Tax on Vehicles (Impuesto a la Primera Matrícula). This tax was created in order to replace tariffs on vehicle imports and the regular VAT on imported goods, while providing an overall lower tax rate for imported vehicles.

Overall, tax revenues rose in 2013 following the reform but by less than initially expected. The 2013 Budget foresaw an increase in tax revenues of about 1 percentage point of GDP. Ultimately, however, revenues rose by only 0.2 percentage points, from 10.8 percent of GDP in 2012 to 11 percent in 2013 (Figure 18). Income tax collections, which account for around a quarter of government revenues, came in 16 percent below the projections set out in the 2013 Budget. Income taxes were expected to increase to 3.6 percent of GDP in 2013, but total collections amounted to 3 percent of GDP. Meanwhile value-added taxes (VAT), which account for around 45 percent of government revenues, came in marginally below expectations. VAT collections as a whole decreased from 5.3 to 5.2 percent of GDP between 2012 and 2013.

Despite falling below expectations, the reform averted a sharp fall in tax collections in 2013. Despite a smaller than anticipated expansion in tax collections following the reform, it is estimated that overall tax revenues would have in fact decreased by 0.4 percent of GDP from 2012 levels had the reform not been enacted, or have been 0.6 percent of GDP lower than the actual outcome for 2013. As a result, the reform helped to safeguard the government’s revenue base, and provides an important first step towards developing a more effective tax system in Guatemala.

The tax reform supported an increase in income tax collections in 2013. Following the implementation of the reform, income tax revenues jumped by 20.6 percent in 2013, well above the 5.3 percent growth rate recorded in 2012. This development was led by the increase in collections from companies (personas jurídicas) due to the change in date of declaration of the tax returns for the general regime and the increase in the tax rate from 5 to 6 percent for the simplified regime. On the other hand, tax collection from individuals (personas naturales) decreased due to the devolution of the fiscal credit generated in 2012 and executed in 2013. Therefore, the full effect of the reform for the latter category will be discernible at the

![Figure 18: Government revenues in 2013 were lower than initially expected, but would have been even lower without the tax reform. (Fiscal revenues: Budget, actual and simulated, % of GDP)](image-url)
end of 2014. As a percent of GDP, income tax collections rose from 2.7 percent in 2012 to 3 percent in 2013. Poor collections on foreign trade taxes undermined increases in income tax revenues, reflecting challenges in tax administration and the decision to reverse some aspects of the tax reform (see Box 4). Had VAT collections on imports performed as anticipated in 2013, overall tax revenues would have been higher by an estimated 0.2 percent of GDP in 2013. Furthermore, the decision to reverse an increase in the tax rate for the circulation of vehicles (ISCV), also contributed to weaker tax revenues estimated at around 0.2-0.3 percent of GDP in 2013. Originally part of the tax reform adopted in 2012, Congress and the President derogated the increase in the ISCV in June 2013, while halving the expected tax rate. Moreover, those taxpayers who paid the ISCV in 2013 could use the excess of the tax as fiscal credit for future ISCV payments.

The government responded to lower than expected revenues by cutting spending, with public investment suffering the most. The 2013 Budget included projected expenditures of Q64 billion, equivalent to 15 percent of GDP. However, weaker-than-expected tax revenues prompted cuts to planned spending, leading to only 90 percent of approved budget spending being executed. Despite coming in below budget, current expenditures rose slightly by 7.4 percent, reflecting rigidities in current expenditures, such as wages, which increased from 3.8 percent of GDP in 2012 to 4 percent in 2013. Instead, the reduction in the fiscal deficit in 2013 was mainly explained by a 2.3 percent cut in capital expenditures, equivalent to 0.3 percent of GDP in real terms.

While supportive of fiscal consolidation, recent lower capital expenditures present risks to Guatemala’s long-term growth prospects, particularly given the country’s already low levels of public investment as a share of GDP. For example, in recent years Guatemala’s scores in international comparisons of the quality of road networks have suffered in comparison to many Central American and Latin American countries.

According to the World Economic Forum, Guatemala fell to 90th place in 2013, down from 55th in 2009 on this measure, while Guatemala’s overall infrastructure has fallen 10 places in the past 5 years.

Reflecting its limited resources, Guatemala has the lowest social expenditure as share of GDP in Central America. In addition, the lack of clear prioritization in the allocation of public resources in social sectors reduces the benefits of public spending for the most vulnerable parts of the population. For example, while some education programs are targeted at poorer areas, such as the government’s school meal program, others such as the provision of textbooks are concentrated in urban and semi-urban areas. Moreover, there is not a strong link between spending on health and education and the outcomes in these sectors. For example, immunization rates do not show a clear-cut relationship either with public spending on health or with poverty levels across departments. Similarly, there is not a strong relationship between the level of spending and student achievement across municipalities, with some municipalities reporting far worse 9th grade completion levels despite higher spending levels, compared to other municipalities with similar levels of adult literacy and malnutrition, and much lower levels of public spending.

In terms of financing, the government continued to fund the budget deficit through bond issuances and loans from multilateral agencies, albeit at higher average costs. Guatemala has been able to access to international markets at lower rates than other Central American countries, but debt costs have increased as the government comes to rely less on concessional loans. Government bonds accounted for 60 percent of government debt in 2013, up from 54 percent in 2012, with loans from multilateral organizations accounted for 37 percent in 2013. However, recent tightening in financing conditions for emerging markets debt following the onset of tapering in quantitative easing by the US Federal Reserve in late 2013 may weigh on Guatemalan debt financing costs going forward.

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3 In 2013 the Guatemalan government issued US$700 million in Eurobonds at a rate of 4.875 percent in February down from a rate of 5.75 percent for the same operation in 2012, at a time when many other Latin American governments were experiencing higher financing costs.
In Search of the Lost Tax
Assessing the 2013 Performance of Taxes Related to Foreign Trade

Despite growth in imports, **VAT collection on imported goods remained flat in 2013.** Imports grew by 4.9 percent in 2013, led by higher spending on consumption goods, raw materials and capital goods. A closer look at those imports not exempted under a Free Trade Agreement or a special regime shows that almost all import categories increased (except fuels and lubricants, which fell by 11.6 percent), which should have accorded with higher customs revenues. Instead, however, VAT collections on imports remained broadly unchanged in nominal terms.

This disconnection points to inefficiencies in customs administration, amid rising concern about tax evasion (Figure 19). Anecdotal reports point to a significant increase in tax evasion during the course of 2013, with media outlets reporting numerous allegations of corruption and bribery at Customs Checkpoints. To alleviate these concerns, the government dispatched army units to key customs checkpoints in late 2013 to oversee customs procedures, which led to an initial reported increase in SAT customs collections from around USD 7.7 million to USD 8.5 million per day. However, the overall effect of army intervention appears negligible and customs collection decreased in the last quarter of 2013.

**Tax evasion in customs may have risen in the last years.** For instance, the volume of imported oil (almost 20 percent of total imports) rose between 2012 and 2013. Meanwhile, the international price of oil rose during this period. According to the Guatemalan Association of Oil Retailers, tax evasion on oil and derivatives increased by 40 percent in the last two years and could be equivalent to Q400 million. On the other hand, the total volume carried by containers grew by 10.3 percent in 2013.

**Improving on current weak tax administration of taxes on foreign trade could generate a significant boost to government revenue.** In November 2013 the Government approved a comprehensive reform package aimed at improving public financial and debt management, internal and external audit systems, and tax administration. In particular, the Government has set down implanting regulations for the National Customs Law that define customs infringements and related sanctions and procedures to combat fraud and contraband, while also establishing an international taxation unit with the Ministry of Public Finance. If successful, recent reforms could support a significant increase in collections from foreign trade taxes. For example, if VAT collections on imported goods in 2013 had grown at the same pace as overall imports, as seen in previous years, and had customs duties reflected their historical trend rate of growth, less the changes made to duties on motor vehicles, government revenues would have been higher by 0.2 percent of GDP in 2013.
Public debt as share of GDP remains low, but the ratio of public debt to tax revenues continues to grow, reflecting low government revenues. Guatemala’s debt-to-GDP ratio in 2013 remains stable around 25 percent, having risen by 2 percentage points of GDP since 2009. Nonetheless, the government’s ability to finance debt commitments from tax revenues continues to weaken. Measured as a percentage of annual tax revenues, Guatemala’s public debt rose from 178 percent of annual taxes in 2008 to 227 percent of tax revenues in 2013. Further, with capital expenditures trending down in recent years, it is clear that rising public debt has been directed to consumption rather than investment.

**External Sector:**
Reliance on External Savings in a Context of Rising Domestic Demand and Deteriorating Terms of Trade

The current account deficit widened as the consequence of a larger trade balance deficit, explained by exogenous shocks to coffee price and production and by rising import demand. Remittances remain an important source of financing consumption and investment for Guatemalans. Private capital inflows continue to finance the bulk of the current-account deficit, supported by a continued inflow of foreign direct investment and the issuance of Central Government debt. As of end-2013 net international reserves were sufficient to cover close to 5 months of imports.
In 2013 the balance of payments remained broadly sound despite a widening current account deficit on the back of strong capital inflows. The current account deteriorated modestly in 2013 as a consequence of a higher deficit in the trade balance of goods and services, amid stronger remittances. However, this was offset by capital inflows from foreign direct investment and public external financing, and resulted in an overall balance of payments surplus. Although the external accounts may appear solid, Guatemala remains vulnerable to shocks to global commodity prices, the performance of major trading partners and access to offshore financing.

Guatemala is becoming more reliant on external savings. The current-account deficit stood at 2.7 percent of GDP in 2013, similar to the share in 2012, and was driven by rising domestic demand and deteriorating terms of trade. The widening current-account deficit was exacerbated by a drop in domestic savings, particularly in the private sector. While the public savings-investment gap has narrowed over the last few years, the former surplus in private savings over private investment has reversed in recent years, reflecting robust consumption amid increasing remittances from abroad, causing the overall external gap to expand since 2010 (Table 2).

Table 2: Current account pressures were offset by a financing surplus. (Percent of GDP)

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<tr>
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<th>2010</th>
<th>2011</th>
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<td>-0.5</td>
<td>-1.6</td>
<td>-0.6</td>
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<tr>
<td>Overall Balance</td>
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<td>1.6</td>
<td>0.4</td>
<td>1.0</td>
<td>1.3</td>
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<tr>
<td>Export prices (XPI - 2001 = 100)</td>
<td>144.8</td>
<td>162.1</td>
<td>188.0</td>
<td>182.2</td>
<td>175.0</td>
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<tr>
<td>Import prices (MPI - 2001 = 100)</td>
<td>152.9</td>
<td>169.7</td>
<td>196.0</td>
<td>197.8</td>
<td>197.4</td>
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<td>Terms of Trade (XPI/MPI)</td>
<td>94.7</td>
<td>95.6</td>
<td>95.9</td>
<td>92.1</td>
<td>88.6</td>
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<td>International Reserves (months of imports)</td>
<td>4.9</td>
<td>4.7</td>
<td>4.1</td>
<td>4.4</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: Guatemalan authorities and World Bank staff estimates.

Exports were affected by adverse conditions but the diversity of Guatemala’s export mix compared to other Central American economies, helped mitigate the effect of product-specific supply-side shocks. Coffee exports fell sharply by 22 percent in 2013 due to a combination of lower production volumes as a result of coffee rust disease, and falling global prices following record harvests in Brazil, India and Vietnam. In addition, cardamom prices declined by 14 percent, as a result of higher world inventories following strong production in India and Guatemala. However, the strong performance of banana, sugar and non-traditional exports (especially textiles) limited the damage arising from...
lower coffee exports to the trade balance. Higher sugar and banana exports reflected higher global prices for these products, especially following weaker banana exports from Ecuador, the world’s largest producer. Overall, however, Guatemalan exports remain highly concentrated among primary agricultural commodities, and thus prone to shifts in global prices for these commodities.

**Figure 20**: Recent current-account developments reflect a decline in domestic savings. (Guatemala’s investment-savings gap, % of GDP)

Imports increased in line with rising domestic demand. Imports grew by an estimated 3.3 percent in 2013, up from 2.3 percent in 2012. Higher demand for consumer goods, raw materials, capital goods and fuels and lubricants bolstered import growth over the year. Even though private investment decelerated, imports of investment goods remained solid. Stronger imports were led by capital-goods imports, which account for almost 20 percent of all imported goods. Raw materials imports, which account for almost one third of total imports, grew by 3.2 percent in 2013, after contracting in 2012, while consumption goods imports (28 percent of total imports) slowed to grow by 4.2 percent, down from 6.7 percent in 2012.

**Figure 21**: Sugar and banana exports mitigated the decline in coffee and cardamom exports. (Annual change, %)

**Figure 22**: Imports of capital goods and raw materials led the growth of the imports. (Annual change, %)

Source: Guatemalan authorities and World Bank staff estimates.
BOX 5

Sending Money Home
What Determines Remittance Levels in Guatemala?

Roughly 1.2 million Guatemalans—over 75 percent of the country’s migrant community—live and work in the United States. Yet Guatemalans make up just 2.3 percent of the Hispanic population in the US, the sixth largest share. Mexicans, by contrast, account for 64.6 percent. Guatemalan migrants tend to be younger, poorer, and less educated than other US Hispanics. In addition, many Guatemalans work undocumented in the US, and deportations are not uncommon; in 2013, 47,769 Guatemalans were deported. Guatemalan migrant populations are largest in California, Florida and New York.

Remittances play a major role in household consumption and in the Guatemalan economy as a whole (Figure 23). As noted above, remittances to Guatemala equaled almost 10 percent of Guatemala’s GDP in 2013. Household surveys indicate that remittances are critical not just to consumption, but also to investment in human and physical capital. The majority of recipients are female, relatively young and living in rural areas. In about 60 percent of cases remittances support family members who are unemployed. At least half of all recipients have no more than a primary education. Guatemalan migrants and their families tend to be among the country’s less well off. However, migrant families are not among the poorest in the country.

Developments in the US labor market have a strong impact on remittances to Guatemala, and rising unemployment among the Hispanic community in the US is associated with weaker remittances flows. Since the Guatemalan diaspora is highly concentrated in a few US states, closely examining trends in these states reveals the impact of local labor-market dynamics on remittances. Wage data from California and Florida, which are home to the largest Guatemalan migrant communities, show a close relationship between wage rates and remittances. The data also suggest that changes in wage rates impact remittances for at least the next three quarters. Data from California on mass layoffs of Hispanics in the non-farm private sector shows that such layoffs are associated with a temporary increase in remittance flows to Guatemala. This is likely the result of migrant workers anticipating imminent layoffs (and perhaps subsequent deportation) and liquidating and remitting their entire wealth stock.

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Remittance flows are not solely dependent on the labor markets where they originate; the inflation rate in Guatemala also significantly affects remittance flows. Econometric analysis suggests a strong correlation between remittance flows and inflation in Guatemala. Inflation reduces households’ purchasing power, diminishing the real value of remittances and increasing demand for them. This effect is associated mainly with consumer-price inflation, and not so much with food prices.

**Based on these observations an econometric model can be developed using US economic growth, Guatemalan inflation, remittance lags, and interest rate differentials to predict changes in remittance flows in Guatemala (see Figure 24).** We calculated the correlation between remittance flows and 30 different variables related to economic activity, prices, labor market indicators, and exchange rates. Under different specifications of the model, we select a group of key variables that exhibit the highest forecast accuracy (Guatemala exchange rate, interest rate differentials, Guatemalan inflation, remittance lags, and US growth). To estimate the contribution of these variables, we consider both the contemporaneous and lagged effect for each variable. The chosen specification follows the standard Vector Autoregressive Model (VAR) specification in the literature, as in Vargas-Silva and Huang (2006), Magnusson (2009), and Ruiz and Vargas-Silva (2011). Even though an omitted-variable problem may arise, Guatemalan inflation seems a more robust predictor than Guatemalan growth.

**Figure 24: US growth, Guatemalan inflation and the past behavior of remittances are key predictors of remittances in the short-run.** (Estimated determinants of remittances in Guatemala)

Source: World Bank staff estimates.

**Remittances registered strong growth as the US economic recovery continued.** Remittances amounted to US$5.2 billion in 2013, equivalent to almost 10 percent of GDP and nearly half of total goods exports, and almost offset the trade balance deficit. Over 90 percent of Guatemala’s remittances come from the US. This important flow of resources has been boosting consumption (both in durable and non-durable goods) and investment in physical and human capital. Even though the high dependence on remittances raises questions regarding Guatemala’s external vulnerabilities, Guatemala’s remittances have proved especially resilient during the global financial crisis compared to those of other Central American countries because most Guatemalan workers in the United States are employed in the relatively stable agricultural and service sectors (see Box 5).

**The growth in foreign direct investment, the issuance of Treasury bonds in the international markets and disbursements of loans contracted by the Central Government increased overall capital inflows in 2013.** The agricultural sector accounted for about one third of all FDI, followed by the financial and the energy sectors; and by origin the main flows of foreign investment came from Canada, United States, Russia and Colombia. In 2013 the Government issued US$ 400 million in bonds, lower than the US$ 700 million issued in 2012, which in turn reduced the flow of financing associated to net portfolio investment. However, other investment flows increased due to the disbursement of loans to the Central Government and to commercial banks.
The international reserve position has been strengthening as the Central Bank accumulated reserves. Reserves grew by US$580 million and reached 13.5% of GDP as a consequence of net investment related to bonds in US$ dollars, net disbursements of external public debt and the yields over the reserves invested in the foreign markets. Reserves in months of imports are close to five months, and are enough to cover 6 times the short-term debt of the country. It is worthy to mention that even though the Central Bank intervenes in the foreign exchange market, the net purchases of the Central Bank only account for 7 percent of the increase in reserves.

**Monetary Policy and the Financial Sector: Credit Growth Accelerates**

In 2013 the Central Bank of Guatemala lowered the center of its headline inflation targeting band by 0.5 percent in a context of anchored expectations, setting the new band at 4 percent +/- 1 percentage points. Monetary policy was tightened in April 2013 with a 25 basis-point hike in interest rates, which was reversed in November 2013 as inflationary pressures receded, and subsequently reduced in March 2014. The quetzal remained stable in nominal terms during 2013, but the real effective exchange rate continued to depreciate as Guatemala’s inflation rate exceeded those of its major trading partners. Conditions in the financial sector remained generally positive, and private-sector credit has grown at a robust pace. Nevertheless, a recent increase in foreign-currency lending merits close monitoring.

In 2013 the Central Bank of Guatemala (BdG) continued to adjust its inflation-targeting framework (Figure 25). The BdG reduced the target band from 4.5% +/- 1 percent to 4 percent +/- 1 percent, and during the year it adjusted interest rates in the interbank market in line with its policy rate. Following resurgent domestic food prices through early 2013, the BdG raised the policy rate by 25 basis points to 5.25 percent in April 2013, having left the rate unchanged since June 2012. With lower food prices over the second half of 2013 helping to anchor inflation expectations, the policy rate was returned to 5 percent in November following a 25 basis point cut.

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**Figure 25:** In 2013 the Central Bank tightened interest rates in April, before easing them again in November as inflationary pressures receded. (Nominal interest rate, %)

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Guatemala remains the only Central American country with an inflation-targeting framework; other inflation-targeting countries in LAC include Brazil, Chile, Colombia, Mexico and Peru.
The quetzal remained stable in nominal terms against the US dollar throughout 2013 (Figure 26). The average exchange rate was 7.86 quetzals to the US dollar, broadly unchanged from 2012. During 2013, net foreign currency purchases by the BdG amounted to US$49.3 million – compared to US$140.3 million sales in 2012, equivalent to 0.3 percent of the total traded volume on the foreign exchange market.

Since December 2013, the BdG has permitted greater flexibility in daily exchange rate movements, yet exchange rate volatility during 2013 remained relatively low. The BdG defines a band for movements in the exchange rate, and intervenes when the nominal exchange rate moves outside that target band. In 2013 the band was initially set at 0.65 standard deviations either side of the moving average of the exchange rate over the previous five days. By end-2013, the band was widened to 0.7 standard deviations, in order to reduce the size of central bank interventions and provide greater flexibility to the quetzal. Overall, in 2013 the volatility of the nominal exchange rate declined relative to 2012 despite the BdG’s more relaxed policy stance.

Although the nominal exchange rate remained stable in 2013, the ongoing depreciation of the real effective exchange rate (REER) is boosting Guatemala’s export competitiveness (Figure 27). The REER continued the downward trend that began in 2010, depreciating by 11.6 percent in 2013. Although the Central Bank has kept inflation within the target band, Guatemala’s inflation rate persistently exceeds that of the United States and its other key trading partners. This differential is driving the depreciation of the REER, which is a positive development for Guatemala’s export industries and for domestic sectors that compete with imports. Over the near term the Central Bank’s inflation-targeting regime could help to stabilize the REER, but close monitoring of the relationship between the inflation and exchange rates would be important.

**Figure 26:** The nominal exchange rate remained stable through 2013. (Nominal exchange rate, quetzals to US$; Central bank net daily purchases, US$ million)

**Figure 27:** The real effective exchange rate (REER) depreciated as inflation in Guatemala persistently exceeded inflation in the United States. (REER index, 2010 average=100; and Guatemala-US inflation differential, %)

Guatemala’s financial sector remains sound and is among the healthiest in the region. Banks are profitable, liquid, well-capitalized and domestically funded. Guatemala’s robust financial sector is reflected in its reliably strong performance in recent years on key financial-soundness indicators. For example, the ratio of non-performing loans has continued to fall and remains below that of similar countries in the region. In addition, 60 percent of loans have a remaining maturity of more than one year due to steady growth in the residential mortgage market.
The expansion of domestic credit is having a positive impact on economic growth, but the rapid expansion of foreign-currency lending has raised concerns. Nominal credit growth slowed modestly in 2013 but remains robust at 11.4 percent, down from 18.8 percent in 2012.

Consumer credit rose by 14.8 percent in 2013, spurred by increased demand for credit cards, and now accounts for 40 percent of outstanding bank loans. Corporate lending also saw strong growth, rising from 12.4 percent in 2013 and accounting for 35 percent of bank lending. Foreign-currency-denominated loans increased by 17.6 percent in 2013, and despite slowing modestly since 2012, the growth of foreign-currency lending has begun to draw attention (Figure 29). US$-denominated loans now account for around one third of total outstanding loans, encouraging further financial dollarization, and underscoring the importance of strong macro-prudential policies to limit risks to financial stability.

**Figure 28:** Provinces’ share of credit is growing, but lending is concentrated in Guatemala City. (Shares of outstanding bank loans, %)

**Figure 29:** Credit to the private sector grew at a robust pace, led by foreign-currency lending... (Credit growth, %)

**Figure 30:** ... and is diversified among economic sectors. (Shares of outstanding bank loans, %)

Source: Guatemala’s Superintendence of Banks and World Bank staff estimates.

Source: Guatemala’s Superintendence of Banks and World Bank staff estimates.

Source: Central Bank of Guatemala and Guatemala’s Superintendence of Banks.
There is considerable scope for further financial deepening and the continued strengthening of domestic capital markets. Private sector credit as a share of GDP reached 32 percent in 2012, yet it remains below the levels observed in other countries in the region, including Panama (90 percent), Honduras (52 percent) and Costa Rica (49 percent). Domestic capital markets remain relatively shallow, with a highly concentrated investor base and a virtually nonexistent secondary government-debt market. Moreover, domestic interest-rate spreads on loans denominated in local currency have widened despite the growth of the financial sector, while spreads on foreign-currency-denominated loans have narrowed. Finally, despite the expansion of credit access in the provinces supported by the government’s financial-deepening agenda, Guatemala City still accounts for over 60 percent of outstanding loans.

It should be noted that in some cases loans may be recorded by bank branches in Guatemala City even if they finance investments in the provinces; e.g., loans contracted by firms with head offices in Guatemala City may be used to fund operations elsewhere in the country.
Economic Outlook and Risks
Guatemala’s main trading partners are expected to experience a pickup in growth over 2014-2016. Current projections anticipate a gradual return to normalcy in international financial markets as the US and other advanced economies continue to scale back their monetary stimulus policies. Emerging economies are projected to grow at a more moderate pace, with China and India rebalancing growth towards domestic consumption. Increasing supply of key commodities is expected to partly offset the increase in global demand, leading to a slight increase in global prices in year-average terms.

After remaining at a sluggish 2.6 percent in 2013, Guatemala’s primary trading partners are projected to grow by an average of 2.9 percent in 2014 and 3.6 percent in 2015-2016. The US economy is projected to grow by 2.1 percent in 2014 and by 3.0 percent in 2015-2016, with low inflation, a declining unemployment rate, and a stabilizing real estate market, all of which are expected to drive robust consumption growth in Guatemala’s major export market. Economic activity in Mexico, El Salvador, Honduras and Costa Rica—which together account for one-third of Guatemala’s trade—is also expected to recover over 2014-2016 thanks to their strong trade ties with the US. Mexico, Guatemala’s main regional trading partner, is expected to grow at 3.4 percent in 2014, almost double the rate in 2013, driven by the construction sector and supported by recently adopted reforms in the energy, education and telecom sectors. On average, Central American economies are projected to grow by between 3.1 and 3.5 percent over 2014-2016. The Euro Zone is also projected to recover gradually during 2014-2016. Although the Euro Zone represents a small share of Guatemala’s trade, developments in the region are relevant via flow on impacts to Guatemala’s main trading partners.

Guatemala’s terms of trade are projected to improve slightly beginning in 2015, with coffee and sugar prices expected to remain broadly stable. A decline of 1.2 percent in the terms-of-trade is estimated for 2014, as commodity exporters sell down current inventories. However, by 2015 the stabilization of the Chinese economy and accelerated growth rates in advanced economies are expected to boost global commodity prices, improving Guatemala’s terms of trade. On the one hand, prices for Guatemala’s exports are expected to remain relatively stable. In 2013 coffee prices fell to their lowest level since 2009, as global markets responded to an excess of supply. In 2014-2016, robust coffee production in several major exporting countries and high levels of inventories worldwide is projected to continue to exert downward pressure on coffee prices. Meanwhile, global sugar output may slow in the coming years as large producers including Brazil struggle to cover increasing financing costs. Combined with rising

**Figure 31:** Growth among Guatemala’s main trading partners is expected to accelerate over 2014-16
(Annual growth, percent)

Source: Global Economic Prospects and World Bank staff estimates.
demand from large sugar importers including India and China, on the whole sugar prices are projected to remain broadly flat over the near term. On the other hand, prices for Guatemala’s imports are expected to decline slightly, with oil prices expected to ease over the forecast horizon due to increasing global stocks.

A gradual increase in global long-term interest rates is projected as the US Federal Reserve slows the pace of its bond purchases (also known as “tapering”). In recent years, a combination of high commodity prices and favorable global financing conditions has supported the growth of many developing and emerging economies. However, since January 2014 the Federal Reserve began to reduce the size of its bond purchases, indicating an important shift in US monetary policy. During 2014-2016, investors are expected to continue restructuring their portfolios and migrating toward less risky markets. This in turn will increase financing costs in emerging markets and slow capital inflows to Latin America and the Caribbean.

Guatemala’s Outlook: Is Steady Growth Enough?

Guatemala’s economic is forecast to grow by 3.5 percent in 2014 and by 3.6 percent during 2015-2016, driven by rising private consumption, and export and remittances growth. Inflation is projected to remain stable over the forecast horizon. Consumption will remain the leading component of domestic demand while the contributions of both public and private investment will recede. All sectors are projected to grow, with services, agriculture and manufacturing contributing the most to growth. Net capital inflows are expected to keep international reserves broadly stable. Guatemala’s economic outlook is vulnerable to uncertain global market conditions; global developments may impact detrimentally or helpfully upon Guatemalan export prices and remittances. Yet, steady growth at 3.5 percent may not lead to significant poverty reduction.
The Guatemalan economy is projected to continue growing at a stable pace, with positive growth forecast in all economic sectors. The scenario for 2014-2016 envisages a gradual increase in the growth rate of the manufacturing sector supported by rising domestic demand and recoveries in developed economies, particularly the US and Europe, as well as more integrated supply chains and productivity improvements, particularly in clothing and textiles, beverages, paper products and the furniture industry (Table 3). Growth of manufacturing is projected to create jobs and expand exports. The services sector will continue to grow at similar rates to those of the last two years rates (averaging 3.6 percent), while the small but growing service-export sector will also benefit from further expected expansion in information technology, international call centers and tourism. As all of these sectors are relatively labor intensive, future growth is expected to generate new employment opportunities for Guatemalan workers, albeit at rates insufficient to significantly improve real per capita incomes of poorer Guatemalans.

Table 3: Economic growth is expected to keep its pace.  
(Forecast of Key Economic Indicators for Guatemala)

<table>
<thead>
<tr>
<th>Real Economy</th>
<th>2012</th>
<th>2013e</th>
<th>2014f</th>
<th>2015f</th>
<th>2016f</th>
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<td>(Percent of GDP)</td>
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<td>Trade Balance (Billions US$)</td>
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<td>Trade Balance (Percent of GDP)</td>
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<td>-11.5</td>
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<td>Terms of trade (Percent Change)</td>
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<td>Current Account Balance (Percent of GDP)</td>
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<td>-2.7</td>
<td>-3.3</td>
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<tr>
<td>International Reserves (Percent of GDP)</td>
<td>13.3</td>
<td>13.5</td>
<td>12.6</td>
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</tr>
</tbody>
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e: estimates; f: forecasts

Source: Guatemalan authorities and World Bank staff estimates.
Agricultural production growth in 2014-16 is expected to be stable, with a gradual recovery in agro-export activities, although pests and diseases will continue to threaten the outlook. Ongoing programs to control rust leaf disease and the renewal of the bushes will eventually reduce its impact and coffee production. In addition to the coffee rust, a number of other pests could threaten Guatemala’s agricultural sector. These include Thrips, Huanglongbing and Ralstonia, which could negatively impact yields of cardamom, citrus fruits, tomato and mango. However, rising production of sugar and bananas, combined with higher prices for these commodities, are expected to partially offset lower yields in other crops.

Mining activity’s contribution to GDP is expected to remain at current low levels, reflecting challenges in developing projects despite Guatemala’s potential. The country has proven reserves of gold, tin and nickel, among other minerals, but few new projects are expected to proceed over 2014-2016, with the government announcing a suspension on the issuance of new licenses for two years from mid-2013 in order to reform the licensing process. Moreover, the lack of an adequate regulatory and legal structure which distributes the benefits of this activity amongst the main stakeholders will represent a bottleneck for future developments.

Construction activity is expected to pick up, albeit at a modest pace. As is described in the Focus Section, construction is a key employment-generating sector. Despite increasing domestic demand, the deepening of financial services and the growing flow of remittances, growth in the construction sector has not caught up with the wider economy. The sector was severely affected by the crisis, and exogenous factors constrained its development, delaying investments and widening housing deficit. As domestic demand and the housing deficit continue to grow over 2014-2016, the sector is expected to expand due to greater issuance in building permits and a recovery in self-construction activity.

Guatemala’s economic growth in the near term will be driven by consumption while the share of private investment is projected to shrink. According to World Bank projections, private investment’s contribution to growth during 2014-2016 will be just half the level recorded between 2010 and 2013. Further, public investment is expected to decline as a share of GDP from 2.9 to 2.8 percent between 2014 and 2016. Private investment growth will depend on continued efforts to reduce the costs of doing business and promote foreign investment, as well as improving domestic security conditions (see Box 6). Meanwhile government efforts to pursue its public investment management reform agenda remain critical. Indeed, projected levels public investment will not be sufficient to accelerate long-run growth unless the efficiency of the investment process is significantly improved.

Reversing the recent downward trend in investment levels presents a clear pathway towards higher economic growth. Guatemala’s investment-to-GDP ratio is lower now than at any time in the past decade (Figure 33). Public investment as a share of GDP fell by almost 6 points from 2000-04 to 2009-13, while consumer spending increased by more than 3 percentage points of GDP. This contrasts with the experience of countries such as Bolivia, Peru, Colombia, Indonesia, and India, among others, which saw an expansion in investment as a share of GDP. With investment projected to grow slower than overall GDP over 2014-16, the investment share of GDP is expected to fall further over the forecast period. Over the longer term, addressing Guatemala’s substantial gaps in human capital and essential economic infrastructure will likely require a significant increase in the quantity of public investment to complement sustained improvements in investment quality (see Box 6).
The baseline scenario projects that the fiscal deficit will total 2.1 percent of GDP in 2014 before falling to 1.9 percent by 2016. The fiscal deficit will continue to be driven by low levels of public revenues combined with a conservative fiscal policy. Tax revenues are expected to remain at 11 percent of GDP in 2016, the same level as in 2013. Generating fiscal space for much needed development expenditures will largely depend on the government’s ability to strengthen tax administration.

With limited fiscal space, it will be critical to improve the quality of spending. Better targeting of social spending would help enhance social outcomes as well as long-term competitiveness, while releasing funds for other development priorities. Stronger evaluation and controls on public investment will be especially important to ensure higher rates of return on public investments.

The current-account deficit is projected to narrow slightly to 3 percent of GDP between 2014 and 2016. The trade-balance forecast assumes that current supply-side shocks to coffee production will gradually diminish through 2016, as current measures to mitigate the spread of the disease lessen its impact, while the global economy continues its slow recovery and domestic demand increases modestly. On balance, these factors are expected to widen the trade deficit from US$6.2 billion in 2013 to US$7.4 billion in 2016 (Table 1). Although increasing in absolute terms, the current account deficit as a share of GDP will decline in the following years, and will continue to be effectively financed by inflows such as remittances, which are projected to grow above 9 percent annually over 2014-2016.

The degree of vulnerability of Guatemala’s external accounts to sudden capital outflows is relatively low. Long-term private capital flows will not be sufficient to finance the current-account deficit during 2014-2016. However, World Bank staff estimates indicate that if Guatemala were to face a reversal in capital flows—such as due to short-term liabilities—net international reserves would account for 12 to 13 percent of GDP between 2014 and 2016, or equivalent to more than 5 times short-term liabilities during the period.
Guatemala exhibits one of the lowest levels of investment in the world. Guatemala’s total investment rate is currently about 14 percent of GDP, well below the 21 percent average for Latin America. This low level of investment negatively affects Guatemala’s productivity, constraining the pace of economic growth and weakening the competitiveness of Guatemalan firms. Low levels of investment hinder Guatemala’s long-run potential GDP, underscoring the urgency of the structural reform agenda as a means to build long-term productivity. For example, Swiston and Barrot (2011) suggest that raising investment in physical and human capital to the average level of Brazil, Mexico and Peru (i.e., to around 25 percent of GDP) would raise Guatemala’s economic growth by more than 1 percentage point per year. In order to raise investment levels, both public and private, the quality of the undergoing and future projects should be enhanced to widen their social returns, public-private partnerships should be strengthened, and reforms in the investment environment ought to be sustained to attract domestic and foreign investment.

Improving Guatemala’s public investment management system would improve the effectiveness of public investments and ensure that any increases in investment spending would translate into improved development outcomes for Guatemalan citizens. Raising the quantity of investment, especially public investment, without improving its quality would result in only limited improvements in Guatemala’s growth prospects. Building the necessary administrative and institutional capacity to effectively scale up investment spending will help to ensure that financing is directed to projects that further the government’s development goals, that these projects are executed efficiently and transparently, and that monitoring and evaluation mechanisms are in place to review performance and incorporate lessons learned into the design of subsequent projects.

Public-private partnerships (PPPs) could provide an important avenue to raise investment levels in Guatemala without placing greater pressure on public finances (Figure 34). Provided that they are well regulated, public-private partnerships provide the opportunity to leverage private sector capital and expertise to deliver major investment projects, such as by addressing Guatemala’s infrastructure needs. The Government has already established the National Agency for the Development Partnerships in Infrastructure (ANADIE) to boost investment levels through public-private partnerships. ANADIE has identified more than USD 1.7 billion in private investment for thirteen infrastructure projects, which are currently at the study stage (Figure 35). Moreover, greater use of public-private partnerships would require investment in the processes for assessing and regulating PPPs, for example to ensure that PPP tenders are awarded transparently, and that contract terms are effectively specified and regulated.

Improving the overall investment climate would help encourage greater private investment in Guatemala, particularly via increased foreign direct investment. Private investment levels remain low in Guatemala, despite macroeconomic stability, while Guatemala has made strong progress in improving the investment climate as noted in the 2014 World Bank’s Doing Business report. However, challenges remain, in particular in areas such as “starting a business” and “protecting investors.” Moreover, the investment climate is constantly threatened by the high rates of crime and security issues, which increase companies’ operational costs.
Further increasing exchange-rate flexibility could enhance external resilience, though any move toward a less active policy stance would have to be carefully managed. A more flexible exchange rate would facilitate adjustments in the domestic economy in response to external shocks, and it could buttress the Central Bank’s inflation-targeting framework. Indeed, greater flexibility would support Guatemala’s international competitiveness in the face of weakening global commodity prices, which have been trending downward since 2011. However, efforts to increase nominal flexibility would have to be undertaken with caution given the significant dollarization of the domestic economy, as a more flexible exchange rate would affect individuals and firms with incomes, savings and liabilities denominated in US dollars.

Risk Scenario:
Guatemala’s Sensitivity to a Remittance Shock

Global economic conditions remain the principal source of risk for Guatemala. As a small developing economy with close ties to global markets, Guatemala’s reliance on the performance of its trade and development partners is a persistent source of external risk. The still-fragile recovery of key export markets and uncertainty regarding the pace and impact of monetary policy decisions in developed economies continue to affect Guatemala’s economic outlook. Emerging economies are projected to benefit from rising demand in developed countries as global growth picks up. However, a shift in global capital markets in favor of low-risk securities in advanced economies and consequently tighter financial conditions in developing countries could put considerable stress on Guatemala and its regional trading partners.
What could happen if remittances were to stagnate for one year?

What could generate a slowdown in remittances flows to Guatemala?

Guatemala remains vulnerable to a slowdown in private remittances flows, which currently provide substantial support to the domestic economy. As noted in Box 5, remittances to Guatemala equaled almost 10 percent of Guatemala’s GDP in 2013. Remittances depend upon the capacity of migrants in the host country to generate income to send back to their families at home. Since most migrants work as waged employees, remittances are closely linked to the opportunities available to migrants in the host-economy labor market. As such, the flow of remittances would decrease in the event of a slowdown in economic activity in the host economy, especially one which causes weakness in the domestic labor market.

For Guatemala, a downturn in the US labor market or higher deportations of undocumented Guatemalan workers present sources of risk for remittance flows into Guatemala. The United States accounts for over 90 percent of all remittances sent by Guatemalan migrants. For example, over 2008-09, the US recession resulted in a sharply weaker labor market, with US unemployment rising from 7.3 percent in 2008 to 9.9 percent in 2009. A weaker US labor market, together with turbulence in the global financial system, resulted in a sharp decline in remittances to Guatemala. Although more resilient compared to other Central American countries, Guatemalan remittances fell by around 10 percent in nominal terms in 2009, and remittances inflows did not recover to 2008 levels until 2011. Similarly, changes in US immigration policy that affect Guatemalan migrants’ access to labor income could also have a significant impact on remittances flows.

This risk scenario simulates the potential effects of a relatively modest remittance shock. As detailed below, a fall in remittances could significantly reduce the disposable income of Guatemalan households, thereby weakening economic activity through lower consumption and investment. The simulation illustrates what would happen in remittances were to stop growing for one year (i.e., the scenario assumes that remittances will remain constant in nominal terms between 2013 and 2014). Moreover, the simulation assumes that at the beginning, Guatemalan households would initially attempt to smooth consumption using personal savings, but if the shock continues over a full year, households will be forced to curtail consumption. The effects of this demand contraction would extend through the following 2 years. Meanwhile, the shock is assumed to recede, and the level of remittances is expected to go back to normal. As household income recovers, so too would demand, but gradually, as households attempt to rebuild their savings.

How would a shock to remittances get transmitted to the Guatemalan economy?

As shown in Figure 35, lower remittances flows would primarily impact on economic activity via lower consumption, while also reducing private investment. Lower remittance flows reduce the disposable income of recipient households, thereby reducing the funds available to spend on consumer goods—both durables and non-durables. In the case of Guatemala, as noted in Box 5, remittances primarily support rural households with relatively little formal education. Weaker remittances would also be expected to reduce private investment, since household surveys suggest that income from remittances is also used to finance investments in human and physical capital, such as via education, or provide the capital to establish new

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9This shock is relatively modest in comparison to the 10-percent decline in annual remittances inflows in 2009, in the aftermath of the global financial crisis.
businesses. Further, lower remittances would likely weaken construction activity, since many household use remittances income to finance new homes, or renovations to existing homes. Overall, fewer remittances would translate into slower economic activity via weaker consumption and investment.\textsuperscript{10} 

The balance of payments would deteriorate in response to a shock to remittances, despite an improving trade balance from lower imports; meanwhile, the fiscal deficit would widen on lower tax revenues. Lower remittances would be expected to weaken Guatemala’s current account balance by reducing the size of current transfers, which play an important role in financing Guatemala’s trade deficit. Weaker domestic consumption would result in declining imports, with a positive offsetting impact on the trade balance, but this would be insufficient to alleviate the impact of declining remittances on the current account balance, with remittances in 2013 equivalent to around 50 percent of Guatemalan export earnings. Such deterioration in the current account balance could also generate depreciation pressures on the quetzal, prompting intervention from the Central Bank to support the value of the quetzal, with expected negative impacts on Guatemala’s reserve position. Meanwhile lower remittances would prompt a weakening of Guatemala’s budget deficit in the absence of any response by the government to cut expenditure, since lower economic activity—especially for imports—would lead to weaker tax revenues.

\textbf{What would be the economic impact if remittances were to stop growing for one year?}

As shown in Figure 36, a shock to remittances would weaken economic activity, especially via lower consumption and, to a lesser extent, lower investment. The simulation shows that lower aggregate demand would cut demand for imports and, in turn, tax revenues. If remittances were to remain stable in nominal terms between 2013 and 2014\textsuperscript{11} (at US$5.25 billion), this would lead to a decrease in GDP growth over the next three years, with growth dropping by 0.2 percentage points in 2014 (relative to the “no shock” scenario) and by 1

\textsuperscript{10} Since few recipients of remittances are employed, changes in remittance flows would not be expected to have a significant impact on the labor market, possibly with the exception of the construction sector.

\textsuperscript{11} In 2009, remittances inflows fell by 10 percent relative to 2008 (a drop of US$452 million).
percentage point during 2015-2016. Per capita private consumption would fall in the three years after the shock. Meanwhile, Guatemala’s external accounts would remain sustainable following this shock.

**Flexible fiscal and monetary policies would be critical to managing a shock to remittances.** With weaker domestic demand, tax revenues would be expected to decrease, especially with lower taxes on imports. Following the shock to remittances, the fiscal deficit would be expected to rise on average by 0.2 percentage points of GDP during 2014-2016. However, without the assumed government efforts to aim to mediate the macroeconomic impacts of the shock (e.g., counter-cyclical fiscal policy measures that raise expenditures), this impact would in fact be larger. Meanwhile, monetary policy is assumed to remain flexible.

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*Figure 36:* If remittance inflows were to stop growing for one year, this could significantly impact GDP growth and other macroeconomic indicators in Guatemala.

(Macroeconomic impacts of a remittances shock: Baseline and Shock Scenarios)

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Source: World Bank staff estimates.
Focus Section: Jobs in Guatemala
Focus Section: Jobs in Guatemala

Introduction

Jobs are the main source of income for the majority of citizens, while also giving people meaning and purpose in their lives. Supporting new job creation can increase individuals’ returns and help them move from unemployment or low-return occupations to higher-productivity jobs. Generating better employment opportunities for a growing labor force is central to improving household incomes and alleviating poverty. As noted in the World Bank’s 2013 World Development Report on “Jobs”, the private sector’s role is critical in creating jobs and spurring a virtuous cycle in development. Like many developing countries, Guatemala faces a serious and persistent challenge in creating new, more productive and more remunerative jobs for its labor force, a challenge which is complicated by the prevalence of a large informal sector. Over the past decade the pace of job creation in Guatemala—like the growth of the broader economy—has lagged behind other economies at a similar level of income, while underemployment has increased. Furthermore, Guatemala’s labor market is dominated by informal employment, with around 70 percent of workers nationwide employed in the informal sector. Informal employment is even more prevalent among indigenous groups and rural workers, and labor in the informal sector tends to suffer from lower rates of productivity and earn lower incomes. Meanwhile, despite overall improvements in the education of the workforce, many firms report that they have difficulty finding qualified workers to fill more highly skilled positions.

The following focus section analyzes employment trends in Guatemala using both macroeconomic and firm-level data. It begins by describing employment dynamics over the past decade and situating them in the context of an evolving economic environment, both domestic and international. It then attempts to determine what drives employment growth in Guatemala by identifying the key characteristics of job-creating enterprises, by analyzing the relationship between the technological sophistication of Guatemalan manufacturing firms and the pace of job creation, and by examining the unique characteristics of Guatemala’s informal sector and its impact on the growth of formal enterprises. Finally, the Focus Section concludes with an evaluation of policy options designed to contribute to the ongoing discourse on job creation in Guatemala.

The rate of job creation in Guatemala has closely followed the country’s rate of economic growth, both during the global expansion of the late 2000s, during the economic slowdown that followed the financial crisis of 2008-09, and through the recovery to date.

However, the Guatemalan economy’s overall performance in creating jobs masks heterogeneity at the micro level, as firms with certain characteristics have performed better than others. On average, larger, foreign-owned, export-oriented firms based on Guatemala City with ready access to finance have exhibited the strongest rates of job creation. Meanwhile, crime, corruption and asymmetric competition from the informal sector continue to present the most serious constraints to firm growth and job creation. Reforms that promote formalization and level the playing field between the formal and informal sectors are likely to have an especially significant impact on employment. In addition, more technologically capable firms in Guatemala have seen more rapid employment growth, indicating that significant gains could be realized by improving the technological capabilities of Guatemalan firms, especially in terms of human capital.  

The World Development Report on “Jobs” can be downloaded at: http://go.worldbank.org/TM7GTEB8U0
Over the past decade employment growth has broadly tracked the pace of economic growth. According to data from the International Labor Organization (ILO), employment grew on average at an annual rate of 3.1 percent over the period between 2000 and 2010, while GDP growth averaged 3.3 percent during the same period. The pace of employment growth in Guatemala during the past decade was slightly below that of Costa Rica, Panama and Honduras, but still faster than that of the Dominican Republic, El Salvador and Nicaragua.

Guatemala’s headline unemployment rate is below the regional average, while the labor force participation rate is around the regional average. Guatemala’s unemployment rate increased slightly from an average of 3.4 percent during 2002-2004 to an average of 3.6 percent over 2010-2012. Today, Guatemala’s unemployment rate is lower than that of all other Central American economies. Unemployment is higher in densely populated metropolitan centers (6.2 percent in 2013) than in smaller urban areas (2.3 percent) and low in rural areas (2.4 percent).

Table 4: Guatemala’s headline employment and unemployment rates are below the regional average, while labor force participation is around the regional average. (Selected labor market indicators in Guatemala and peers)

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<th>Guatemala</th>
<th>LAC</th>
<th>MIC</th>
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<tr>
<td></td>
<td>2002-04</td>
<td>2010-12</td>
<td>2002-04</td>
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<tr>
<td>Labor force participation rate (% of total population 15+ years)</td>
<td>66.3</td>
<td>63.2</td>
<td>64.6</td>
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<tr>
<td>Unemployment rate (% of total labor force)</td>
<td>3.4</td>
<td>3.6</td>
<td>8.7</td>
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<tr>
<td>Employment rate (% of total population 15+ years)</td>
<td>57.5</td>
<td>58.4</td>
<td>59.0</td>
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While unemployment has remained broadly stable, the rate of under-employment—which measures the extent to which employment is insufficient for the worker, relative to some standard, as a share of the total labor force—appears to be on the rise in Guatemala13. According to national authorities, Guatemala’s underemployment rate stood at around 17 percent at end-2013, down from 21 percent at end-201014. By comparison, of those Central American economies with data available, Costa Rica reported an underemployment rate of 13.8 percent in 2012, whereas the Dominican Republic saw underemployment of 17.2 percent of the labor force.

Figure 37: Unemployment has remained stable over the past decade, but under-employment has risen. (Under-employment as a % of total labor force)

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<tbody>
<tr>
<td>Rural</td>
<td>15.6</td>
<td>18.4</td>
<td>17.2</td>
<td>18.0</td>
<td>16.9</td>
<td>18.6</td>
<td>16.0</td>
<td>16.3</td>
<td>16.3</td>
<td>17.1</td>
<td>14</td>
<td>16.3</td>
<td>17.1</td>
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13 For example, workers may report that they work fewer hours than they would like, or where the employee has education, experience, or skills beyond the requirements of the job.

14 Guatemala’s underemployment rate refers to metropolitan areas only. Under-employment rates for comparator economies may refer to nationwide data (urban and rural areas).
Consistent with the general trend for developing economies, the share of the labor force employed in the commercial and service sectors has increased, while the share of workers in agriculture has decreased. The commerce and services sector combined currently employ about 50 percent of the Guatemalan workforce, up from 42 percent in 2004. While employment in the agricultural sector fell over the same period, agriculture remains the country’s single largest employment sector (Figure 38).

Guatemala’s labor force has experienced weak marginal productivity growth over the past decade. Guatemala’s annual real per capita GDP grew just 0.8 percent during the 2000s. As noted earlier, the bulk of real GDP growth has been generated by increases in the size of the labor force rather than improvements in marginal labor productivity. In fact, ILO estimates indicate that Guatemala’s labor productivity diminished over the six years prior to 2008, whereas most Central American economies experienced positive labor productivity growth (Figure 39). If this trend continues, the incomes of Guatemalan workers are likely to stagnate or even decline.

Figure 38: More Guatemalans are now employed in commerce and services, while the share of workers employed in the agricultural sector has decreased.
(Employment by sector, % of total employment)

Figure 39: Guatemala’s labor productivity growth lags that of regional peers.
(Annual growth in GDP per person employed, %)

Moreover, workers in Guatemala have fewer years of schooling than workers in peer economies. Data from the World Bank Enterprise Surveys (WBES) indicates that business owners in Guatemala tend to be less educated than their counterparts both in the LAC region and in other middle-income countries worldwide (Figure 40). These differences are statistically significant. In particular, Guatemala has fewer specialists in areas most crucial to entrepreneurship and innovation, such as engineering skills and scientific training.

Figure 40: Workers in Guatemalan firms tend to be less educated than in peer economies.
(Education level, % of total labor force)
Guatemala’s Private Sector Employment in Comparative Perspective

The World Bank Enterprise Surveys (WBES) used in this Focus Section presents a valuable tool for microeconomic research in Guatemala (Box 7). The WBES is a unique survey of private firms that describes economic conditions and constraints from the perspective of Guatemalan firms themselves. It covers a broad range of topics across dozens of indicators, which together provide an in-depth look at the challenges facing Guatemalan firms. In Guatemala, the WBES covered a total of 568 firms in the 2010 survey, and 497 firms in the 2006 survey. The surveys include a nationally-representative sample of firms in the formal sector (later we present evidence on the informal sector).

The growth rate of sales by firms in Guatemala lagged behind peer economies in LAC and other economies with a similar level of income (Figure 43). Firms in Guatemala reported higher sales growth in Guatemala than firms in a few selected countries (for example, Mexico and some Central American economies). Overall, however, enterprise sales growth was below both the regional average and the average for middle-income countries (MIC)\(^\text{15}\).

Employment growth slowed down between the 2006 and 2010 surveys across middle-income countries, but the slowdown in job creation was acute in Guatemala (Figure 44). Positive sales growth did not translate into better employment growth overall. Indeed, average employment growth in Guatemala fell significantly from 5.5 percent among those firms surveyed in the 2006 wave (firms were asked to self-report on employment growth over the 2002-2005 period), a period in which the Guatemalan economy was growing relatively robustly, down to employment growth of 0.3 percent for firms surveyed in the 2010 wave (reporting on the 2007-2009 period)\(^\text{16}\).

\(^{15}\) LAC15 refers to Argentina, Bolivia, Chile, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. The MIC average includes 69 middle-income economies for which WBES data are available.

\(^{16}\) While WBES allows for a diagnostic assessment of employment creation by Guatemalan firms, further analysis would be necessary to establish clear causal relationships in order to understand the reasons that explain job creation. Conclusions presented in this report thus represent important opportunities for additional investigation. Nevertheless, we have made an effort to rule out “endogeneity” by controlling for a series of factors and variables of interest. This is evidenced later in the Focus Section. For instance, when examining how bribes may drive down firm growth, as presented later in this Focus Section, it could be that growth “explains” bribery, such as when growing firms are able to hire more skilled managers who are able to navigate a difficult business environment and avoid paying bribes.
To date, two waves of the World Bank Enterprise Survey (2006 and 2010) have been completed for Guatemala. These surveys have expanded the possibilities for microeconomic analysis in Guatemala by providing data on a sample of firms broken down by a number of key characteristics, including the firm’s economic sector, its size, location, and ownership type, among others. As noted in Guatemala’s 2010 WBES, “the Enterprise Surveys collect information from a representative sample of the non-agricultural formal private economy. In addition to collecting information on the business environment the surveys collect information on the characteristics of the firms interviewed. Consequently, the data collected provides a description of the representative private firm in the country and also an estimate of how some of the attributes of the average firm are distributed across the population of firms.” For more information on the WBES, including the raw datasets and a description of its methodology, see [www.enterprisesurveys.org](http://www.enterprisesurveys.org).

The WBES surveys provide valuable information from the perspective of private firms—the principal sources of job growth in the economy—but important data limitations should be noted. While the survey sample is designed to be representative of the economy as a whole, the samples used in the two previous WBES are not sufficiently large to guarantee accuracy. In addition, although the WBES includes sample weights, these weights may not fully reflect the diversity of firms in Guatemala. In this Focus Section we use medium sample weights to ensure that the data are as representative as possible. An expanded WBES with larger samples and more comprehensive content would strengthen the quality of future analysis of Guatemala’s business environment and the challenges facing local firms.
What Drives Job Creation in Guatemala?

While job growth in Guatemala has been positive over the last decade, the pace of job creation has varied significantly across groups of firms. While national economic statistics provide a broad overview of trends in job creation, the WBES is a key source for firm-level information on employment patterns, revealing which types of firms are adding jobs in Guatemala and which are shedding them.

In the 2006 survey employment grew across all economic sectors, but in the 2010 survey job-creation rates became much more heterogeneous across sectors. Averages\(^2\) indicate that in 2006 the manufacturing sector led job creation with an employment growth rate of 5.5 percent. Meanwhile, employment in services and in construction and transportation grew by 5.7 percent. The slowdown in employment growth resulting from the global financial crisis, affected all sectors, with employment rates across sectors generally stagnating and some even declining. For example, employment growth in manufacturing turned negative in the 2010 survey, while employment growth in the service sector remained positive, but fell from 5.7 percent in the 2006 survey to 1.3 percent in the 2010 survey.

An analysis of the data provided in the WBES suggests that firms with specific characteristics did measurably better than other firms during pre-crisis expansion. In general, exporting firms, foreign-owned firms, newer firms and smaller firms grew faster and generated more employment than their counterparts. These patterns are described more fully below. They are based on the regression analysis of (geometric) employment growth rates for the 2006 and 2010 WBES surveys across three models: a model with all economic sectors pooled together, one for the manufacturing sample alone, and one for the 2010 sample alone. The patterns described below hold across these models, even when controlling for other firm characteristics simultaneously.

Exporting firms enjoyed especially strong growth during the pre-crisis period, as did foreign-owned firms in the manufacturing sector. On average, during the pre-crisis expansion exporting firms and foreign-owned firms grew by 7.8 percent and 9.1 percent, respectively. However, as the global financial crisis began to impact Guatemala these firms ceased to perform measurably better than their domestically owned, non-exporting peers, possibly reflecting their greater international exposure and consequent vulnerability to global economic shocks. On average, the employment growth rates of foreign-owned firms and exporters remained slightly higher even during the crisis, but these differences were not statistically significant.

\(^2\) Averages may differ depending on whether or not employment growth rates are calculated geometrically or through the Davis-Haltiwanger (1992, 1999) method. In the latter, employment growth rates are defined as the change in employment over a given period divided by the average employment level during the period. The use of sampling weights may also impact the result. For the purposes of this analysis the geometric employment growth without sampling weights is preferable due to the relatively small sample size, which increases sensitivity to outliers. The patterns reported here, however, are generally robust regardless of the analytical technique or sampling weights used.
Figure 46: Exporting firms, foreign firms, and smaller firms led job creation in Guatemala. (Employment growth by firm characteristic in Guatemala, %, geometric average, 2006 versus 2010)

Source: World Bank staff estimates based on the 2006/2010 WBES. Note: No sampling weights.

Young firms led job creation in Guatemala and in comparable countries. In Guatemala the rate of employment growth among young firms (fewer than five years old) was significantly higher than that of mature firms (more than 10 years old), particularly during the pre-crisis expansion. In 2006 young firms created jobs at a rate almost 5 times higher than that of mature firms. This pattern was similar in LAC and in middle-income countries worldwide (Figure 48), but more visible in Guatemala. In the LAC15, for example, employment growth in young firms was twice the rate of mature firms during the same period.

Smaller firms also consistently outperformed medium-sized and larger firms in terms of job growth. In 2006 employment in small firms (fewer

Figure 47: Relative to peer economies, exporting firms in Guatemala created more jobs in the 2006 survey, but in the 2010 survey employment creation in these firms had slowed significantly. (Employment growth by exporting status, %, geometric average)

Source: World Bank staff estimates based on the WBES 2006 and 2010 surveys. Note: Figures for sales growth use sample weights to take out outliers from the sample. Figures for employment creation do not use sample weights as further described in the text. For comparisons with other countries, the available data closest to 2006 and 2010 is used.

Figure 48: Young firms led job creation in Guatemala and peer economies. (Employment growth by exporting status, %, geometric average)
than 20 employees) grew at a rate of 8.6 percent, while medium-sized firms (20-99 employees) and large firms (more than 100 employees) each grew at a rate of roughly 3 percent. In 2010, however, employment growth in small firms slowed to an average of 2 percent, while all other firms posted net job losses in 2010. Similar patterns were observed across comparison countries and regions, with smaller firms leading job creation in 2006 and 2010. All else equal, smaller firms should be expected to grow more quickly, in percentage terms, than medium or large firms, as their initial starting point for employment is, by definition, lower. Nevertheless, patterns of job creation by size reveal important differences in the pre-crisis and crisis periods. In 2006 small and medium-sized enterprises together account for 25 percent of all jobs created; however, in 2010 all of the jobs created were created by small enterprises.

In addition to the importance of firm-level characteristics, two cross-cutting factors stand out as key determinants of job creation: financial depth and exposure to corruption. The former shows a strong positive correlation with employment growth, while the latter presents a binding constraint.

Financial depth is consistently associated with higher rates of firm employment growth\(^{18}\). While it is not possible to confirm a causal relationship, firms with greater financial depth scores tend to be the strongest job creators. It is possible that firms with greater financial access are able to mobilize resources and seize new opportunities to scale-up their business. If this were the case, expanding financial access would tend to accelerate job creation. However, it is also possible that firms that are already rapidly expanding are more willing and able to access financing than their slower-growing peers. It is also possible that both financial access and employment growth are

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**Table 5:** Financial depth is associated with employment creation.  
(Financial characteristics and employment growth, %)

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<tr>
<th></th>
<th>Guatemala</th>
<th>LAC15</th>
<th>MIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking Account? Yes</td>
<td>84.4</td>
<td>57.9</td>
<td>89.4</td>
</tr>
<tr>
<td>Access to Credit? Yes</td>
<td>71.3</td>
<td>72.9</td>
<td>77.5</td>
</tr>
<tr>
<td>Is Access to Finance an Obstacle? Yes</td>
<td>52.5</td>
<td>44.7</td>
<td>39.2</td>
</tr>
<tr>
<td>Financial Access Index</td>
<td>0.649</td>
<td>0.633</td>
<td>0.636</td>
</tr>
<tr>
<td>Financial Depth Index</td>
<td>0.263</td>
<td>0.302</td>
<td>0.309</td>
</tr>
</tbody>
</table>

Source: World Bank staff estimates based on the 2006/2010 WBES. Note: No sampling weights. For comparisons, the available data closest to 2006 and 2010 is used.

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\(^{18}\)The measure of financial depth used in this analysis is based on Love (2009). It tallies the number of credit products reported by a firm, giving one point for each of the following: an overdraft provision, a loan or credit line, bank credit for working capital, bank credit for investment, and traded stock. The total number of financial products, up to a maximum of 5 products, is then divided by 5, yielding an index of financial depth ranging from 0 to 1.
Bribe payments are measured as a variable that equals one in either of these three instances: (1) a firm responds with a percentage greater than zero to the question: “It is said that establishments are sometimes required to make gifts or informal payments to public officials to ‘get things done’ with regard to customs, taxes, licenses, regulations, services etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?”; (2) a firm responds with a percentage greater than zero to the question: “When establishments like this one do business with the government, what percentage of the contract value would typically be paid in additional or informal payments or gifts to secure the contract?”; and lastly, (3) a firm answers affirmatively to any of the following questions in reference to a electricity, water, or telephone connection; a construction permit; tax inspections; and an import or operating license: “Was an informal gift or payment expected or requested to obtain the [public service]?”. Bribe payments equals zero if the manager answers “zero” to the first two questions and “no” to the final set of questions (public services).

Guatemalan firms were more likely than firms in other LAC countries to identify corruption as the most serious constraint to doing business. Corruption can manifests in any number of ways, but among Guatemalan firms bribery appears to be the most significant. For example, in the 2010 WBES more than 30 percent of business owners in the informal sector noted the prospect of being forced to pay bribes as a major obstacle to business formalization. In the formal sector exposure to bribery is associated with poor enterprise performance and slower employment growth) across all sectors and in all time periods.

Econometric analysis suggests a strong negative correlation between bribery and employment growth. In order to investigate the effects of the crime and corruption on employment growth, we use an econometric model to estimate the effect of two key variables: (i) criminal acts, defined as theft, robbery, vandalism, or arson; and (ii) bribe payments. The econometric model controls for a series of firm characteristics. The results suggest a strong (and statistically significant) correlation between the occurrence of bribery and lower employment growth, implying that higher bribery is associated with lower job creation.

Figure 49: Guatemalan firms with access to credit and without credit constraints led job creation.

(Compiled by World Bank staff estimates based on the 2006/2010 WBES. Note: No sampling weights.)

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19 Bribe payments are measured as a variable that equals one in either of these three instances: (1) a firm responds with a percentage greater than zero to the question: “It is said that establishments are sometimes required to make gifts or informal payments to public officials to ‘get things done’ with regard to customs, taxes, licenses, regulations, services etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?”; (2) a firm responds with a percentage greater than zero to the question: “When establishments like this one do business with the government, what percentage of the contract value would typically be paid in additional or informal payments or gifts to secure the contract?”; and lastly, (3) a firm answers affirmatively to any of the following questions in reference to a electricity, water, or telephone connection; a construction permit; tax inspections; and an import or operating license: “Was an informal gift or payment expected or requested to obtain the [public service]?” Bribe payments equals zero if the manager answers “zero” to the first two questions and “no” to the final set of questions (public services).
Firms in Guatemala complain more about certain aspects of the business environment, such as crime and corruption, compared to their counterparts in other countries. The share of surveyed firms highlighting these issues in Guatemala exceeded that of surveyed firms across Central America, and across LAC as a whole (Figure 50). In contrast, relatively fewer Guatemalan firms highlighted issues in access to land or finance, an inadequately educated workforce, or problems with customs and trade regulations, relative to firms in other countries in the region.

The relative degree of technological sophistication among firms in an economy is strongly correlated with employment growth. Technological capability is a key determinant of economy-wide productivity and competitiveness, and it plays a major role in firm-level growth. While in the short run the introduction of new technologies may displace existing workers, over the long term the adoption of new equipment types, production methods and organizational models drives innovation and entrepreneurship, which not only increases labor demand but also supports higher wages through improvements in labor productivity. In order to examine how this relationship functions in Guatemala, the following section focuses on the connection between technology and employment in the manufacturing sector.

The data collected in the 2010 WBES has, for the first time, enabled a thorough assessment of the relationship between the technological sophistication of Guatemalan firms and the rate at which they create jobs. The following analysis is based on a Technological Capabilities Index (TCI) constructed for 355 firms in the Guatemalan manufacturing sector; the TCI is an aggregate measure of the extent to which firms use relatively basic or advanced forms of technology. The index is designed according to the model developed by Wignaraja (1998, 2002), following Lall (1992). A TCI score is calculated based on 29 binary indicators representing the utilization of various technologies in the areas of (i) investment, (ii) production and (iii) economic linkages. Of the three areas listed above, the third—economic linkages—is the least tangible. In this

<table>
<thead>
<tr>
<th>Access to finance</th>
<th>17</th>
<th>15</th>
<th>6.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to land</td>
<td>3.3</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Business licensing and permits</td>
<td>2.7</td>
<td>2.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Corruption</td>
<td>6.4</td>
<td>6.6</td>
<td>11.4</td>
</tr>
<tr>
<td>Courts</td>
<td>0.9</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Crime, theft and disorder</td>
<td>5.5</td>
<td>8.7</td>
<td>20.8</td>
</tr>
<tr>
<td>Customs and trade regulations</td>
<td>3.3</td>
<td>4.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Electricity</td>
<td>13.7</td>
<td>8.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Inadequately educated workforce</td>
<td>7.6</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>Labor regulations</td>
<td>2.5</td>
<td>4.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Political instability</td>
<td>8.4</td>
<td>6.4</td>
<td>16.4</td>
</tr>
<tr>
<td>Practices of the informal sector</td>
<td>11.4</td>
<td>13.5</td>
<td>19</td>
</tr>
<tr>
<td>Administración tributaria</td>
<td>3</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Tax administration</td>
<td>10.7</td>
<td>10</td>
<td>5.5</td>
</tr>
<tr>
<td>Transportation</td>
<td>3.3</td>
<td>3</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: World Bank staff estimates based on the 2010 WBES.

Figure 50: Guatemalan firms cite crime, corruption and practices of the informal sector as among the most severe obstacles to doing business. (Main obstacle facing firms, %)

Technological Capabilities and Job Creation in Guatemala: Evidence from the Manufacturing Sector
exercise economic linkages are measured in terms of a firm's history of successful cooperation with other firms, its access to public-sector support, and whether it plans to conduct future collaborative efforts with the public or private sector. These values are then aggregated into a single metric ranging from 0 to 1, with a higher score indicating a more advanced level of technological capability.

This analysis reveals that more technologically capable firms tend to experience more rapid employment growth, with a 10 percent increase in a firm's average TCI score being associated with a 1 percentage point increase in employment growth. Further, a TCI increase of one standard deviation (0.228) is correlated with a 2.3 percentage point increase in employment growth.20

Table 6: Matrix of Technological Capabilities in Investment (TCI), Production and Linkages

<table>
<thead>
<tr>
<th>DEGREE OF COMPLEXITY</th>
<th>INVESTMENT</th>
<th>PROCESS ENGINEERING</th>
<th>PRODUCT ENGINEERING</th>
<th>INDUSTRIAL ENGINEERING</th>
<th>LINKAGES WITHIN ECONOMY</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASIC (Experienced)</td>
<td>PRE INVESTMENT</td>
<td>PROJECT EXECUTION</td>
<td>PROCESS ENGINEERING</td>
<td>PRODUCT ENGINEERING</td>
<td>LINKAGES WITHIN ECONOMY</td>
</tr>
<tr>
<td>SIMPLE ROUTINE</td>
<td>Pre-feasibility and feasibility studies.</td>
<td>Civil construction</td>
<td>Debugging, balancing</td>
<td>Assimilation of product design</td>
<td>Work flow</td>
</tr>
<tr>
<td></td>
<td>Site selection</td>
<td>Ancillary services</td>
<td>Equality control preventive maintenance</td>
<td>Minor adaptation to market needs</td>
<td>Scheduling</td>
</tr>
<tr>
<td></td>
<td>Scheduling of investment</td>
<td>Equipment erection</td>
<td>Assimilation of process technology</td>
<td>Licensing and assimilating new imported product technology</td>
<td>Time-motion studies</td>
</tr>
<tr>
<td></td>
<td>Equipment systems</td>
<td>Commissioning</td>
<td></td>
<td></td>
<td>Inventory control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Information exchange with suppliers</td>
</tr>
<tr>
<td>ADOPTIVE DUPLICATIVE</td>
<td>Search for technology sourcing</td>
<td>Equipment procurement</td>
<td>Equipment stretching</td>
<td>Product quality improvement</td>
<td>Technology transfer of local suppliers</td>
</tr>
<tr>
<td>(Search based)</td>
<td>Negotiation of contracts</td>
<td>Detailed engineering</td>
<td>Process adaptation and cost saving</td>
<td>Licensing and assimilating new imported product technology</td>
<td>Coordinated design</td>
</tr>
<tr>
<td></td>
<td>Bargaining suitable terms</td>
<td>Training and recruitment of skilled personnel</td>
<td></td>
<td></td>
<td>Science &amp; technology links</td>
</tr>
<tr>
<td></td>
<td>Information systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INNOVATIVE RISKY</td>
<td>Basic process desinging</td>
<td>In-hose process innovation</td>
<td>In-hose product innovation</td>
<td>Technology transfer of local suppliers</td>
<td></td>
</tr>
<tr>
<td>(Search based)</td>
<td>Equipment desinging and supply</td>
<td>Basic research</td>
<td>Basic research</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADVANCED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Lall (2002).

These results suggest that there is a great opportunity for improvement in the technological capability of Guatemalan manufacturing firms.21 Guatemalan manufacturers have an average TCI score of 4.23 and a median score of 4.0. The average firm is engaged in fewer than 13 of the 29 activities recorded in the TCI. About 20 percent of all manufacturing firms have TCI scores lower than 0.2, and only 6 percent have scores higher than 0.8. Firms involved in the production of chemicals and rubber and plastics tend to score highest, while those in the non-metallic mineral products industry score lowest on the TCI scale. In addition, larger firms, export-oriented firms, foreign-owned firms, firms based in Guatemala City, and firms with access to loans all exhibit higher-than-average TCI scores.

20 This finding and the TCI analysis for Guatemala are based on “Innovation and Employment Growth in Guatemala,” a background paper prepared by Charles Udomsaph for the Guatemala Economic DNA.

21 See: Lederman et al. (2014).
Low rates of technological uptake are contributing to the deterioration of total factor productivity in Guatemala, discouraging investment and slowing firm growth (Figure 51, Figure 52, Figure 53, Figure 54). The rate of technological uptake in the manufacturing sector suggests in Guatemala is relatively low, as evidenced by the low rates of adoption of behaviors that facilitate technological linkages between firms, such as collaboration with other firms, suppliers, clients or research institutions. These linkages not only affect the productive efficiency of individual firms, but also the diffusion of technology throughout the economy. This implies that there is vast scope to improve productive efficiency and competitiveness in Guatemalan manufacturing.

**Figure 51:** Over 70 percent of Guatemalan manufacturing firms see TCI scores below 0.6 (Share of firms by TCI score range)

![Kernel density plot by TCI dimensions](image)

Source: Udomsaph (2014), background paper prepared for the Guatemala Economic DNA.

**Figure 52:** Firms’ TCI scores are lowest on the dimension of economic linkages

( Kernel density plot by TCI dimensions)

**Figure 53:** The chemicals and rubber and plastics industries lead the manufacturing sector in TCI scores (Kernel density plot by sector)

**Figure 54:** Large firms tend to have higher TCI scores than small firms (Kernel density plot by firm size)

Source: Udomsaph (2014), background paper prepared for the Guatemala Economic DNA.
The relationship between employment and technological capability appears to be stronger for small and medium enterprises (SMEs) than it is for large manufacturing firms. As noted above, in the manufacturing sector as a whole a 10 percent increase in the TCI score is associated with a 1 percentage point increase in employment growth, but among SMEs this rises to 1.3 percentage points. TCI scores are also strongly correlated with total factor productivity (TFP), which affects the returns to labor and indirectly influences employment and wage-rate dynamics. A 10 percent increase in TCI scores is associated with a 5.1 percent increase in TFP, and the relationship between TCI scores and TFP is driven primarily by productive technologies.

Although causal relationships are difficult to clearly establish, a number of firm characteristics correlate with greater degrees of technological sophistication and consequently with higher rates of job creation (Figure 55). These include firm size, export orientation, ownership status, location and access to finance. As noted above, larger, export-oriented, foreign-owned firms located in Guatemala City with ready access to finance tend to exhibit the highest TCI scores and the fastest rates of job creation.22

Figure 55: Job creators, exporters, foreign firms, and firms with access to finance have a higher TCI score
(Kernel Density Plots, Net Job Creation by TCI Score)

Source: Udomsaph (2014), background paper prepared for the Guatemala Economic DNA.

22There is no clear link between TCI scores and the firm age. Although the coefficient estimates suggest that younger firms have lower TCI scores, these differences are not significant when controlling for other characteristics.
Job Creation and the Informal Sector in Guatemala

Although the informal sector is often regarded as a weaker counterpart to the formal economy, consisting of numerous microenterprises marked by low productivity and low remuneration, this view has gradually evolved over time. A growing literature on informal economies has shown that business operators in the informal sector demonstrate as great a capacity for innovation and entrepreneurship as their formal-sector peers. Rather than being driven into informal activities by economic necessity, many workers and business owners freely enter the informal sector to take advantage of emerging opportunities and exploit niche markets. Although recent studies that provide rigorous evidence of the benefits of formalization, they recognize that in many cases these benefits may be modest, ambiguous or only accessible to a small share of firms.

Guatemala’s formal-sector firms cite the “practices of the informal sector” as their primary constraint to doing business. Smaller formal firms are disproportionately likely to identify the informal sector as an obstacle to growth, likely reflecting the generally small size of informal firms, which tends to put them in direct competition with small firms in the formal sector. While determining precisely which practices are perceived as damaging to formal firms is an area for further study, this finding underscores the potential advantages, as well as drawbacks, to operating in the informal sector. Freedom from taxes and regulation may allow informal firms to cut their operating costs, which in some cases could offset the benefits of formalization, especially since their closest formal-sector competitors tend to operate in the same markets under very similar conditions.

In view of the informal sector’s enormous and largely untapped potential to support job creation, the World Bank has begun collecting detailed data on informal firms in Guatemala. A 2010 survey of informal enterprises in Guatemala provides a revealing portrait of the sector. About 300 informal entrepreneurs participated in the survey; most enterprises were very small, with over 85 percent employing no more than two workers. Entrepreneurs in the informal sector were mostly female (56 percent) and married (65 percent). On average, they were 40 years old and had close to 10 years of experience in their fields. About half of respondents had at most a primary school education; a quarter had some secondary schooling; and the rest reported either university-level or vocational education, or no education at all.

At the aggregate level informal firms exhibited strikingly different characteristics from firms in the formal sector. For example, formal sector firms were larger, employing an average of about 6 workers. Only about a third of formal firms were owned by women. Operators of formal sector firms were also more experienced, averaging about 20 years in their field.

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23 One study was based on panel data in Vietnam using a matched double difference approach, an econometric technique that controls for factors that may simultaneously influence the decision to formalize and the performance of the firm thereafter. It found that firms that formalize enjoy greater profits, invest more and provide better working conditions for their employees (Rand and Torm 2011). A field experiment in Sri Lanka, however, found more concentrated benefits (De Mel, McKenzie, and Woodruff, 2012). In this experiment, firms were randomly provided financial incentives to formalize. Those that did so realized increased profits—on average—but these benefits were concentrated among a few enterprises. This seems broadly consistent with the findings in the section that suggest that some firms in the informal sector are opportunity-driven, and given adequate financing they could be much more productive than other firms.
In order to collect information on unregistered businesses and study economic conditions in the informal sector the World Bank has recently begun conducting Informal Enterprise Surveys (IES). The IES are usually implemented in parallel with the World Bank Enterprise Surveys (WBES) and, like the WBES, the survey questionnaire typically focuses on the basic characteristics of the enterprise, its employment dynamics, the state of the business environment and related subjects. Since 2008 over 20 IES have been conducted in nearly every region in which the WBES is also used. In 2010 IES were conducted in Argentina, Brazil, Guatemala and Peru. In Guatemala the survey was a joint undertaking by the World Bank and the Inter-American Development Bank.

The survey’s primary sampling units are unregistered businesses. In Guatemala, businesses that are not registered with the Superintendent for Tax Administration (Superintendencia de Administración Tributaria) or the Commercial Registry (Registro Mercantil) are considered informal. The majority of informal forms operate in the manufacturing or services sector, with a roughly equal share in each sector. Strictly illegal activities, such as drug trafficking, or the provision of individual services, such as domestic labor, are not included.

In each country the IES is conducted in two urban areas, and its findings are designed to complement those of the WBES. The survey team sets a target number of interviews to be divided between the two urban areas according to their relative level of business activity, population size and other criteria. The two urban centers used in the Guatemalan survey were Guatemala City and Quetzaltenango.


More than a quarter of informal business owners in Guatemala report that they would like to register their firms, and many would be willing to pay to learn how to register. Of those who would like to formalize their businesses, the majority (53 percent) would be willing to pay for registration training. According to these respondents the most important benefits of registration are improved access to finance, legal protections, and the ability to issue valid receipts. Formalization also generates important benefits for the broader national economy by expanding the tax base and levelling the economic playing field by equalizing marginal costs and incentives between formal and previously informal firms.

However, a substantial majority of entrepreneurs in Guatemala’s informal sector stated that they did not want register their businesses, citing the tax and regulatory burdens as well as exposure to bribery as the most important reasons for not registering. This suggests that the prevalence of bribery holds back the growth of enterprise sector across at least two dimensions, constraining the growth of formal firms and discouraging informal entrepreneurs from registering their businesses.
BOX 9 Last Resort or New Horizon?
Necessity and Opportunity in the Informal Sector

The literature on labor markets has typically viewed the informal sector as the disadvantaged component of a segmented or a dualistic labor market. This literature tends to regard the informal sector as a last resort for workers and entrepreneurs who are unable to access more secure, better remunerated opportunities in the formal sector. Indeed, wages and profits in the formal sector are typically higher, while job openings are limited and barriers to formalization are frequently significant. However, this case is largely circumstantial, and it should not be taken for granted that all informal workers and entrepreneurs are forced to operate in the sector for lack of a better alternative.

A number of recent studies have challenged the conventional view, arguing that certain entrepreneurs choose to enter the informal sector to take advantage of specific business prospects that are only available to informal firms. And while jobs in the informal sector are generally considered “unprotected,” that is, not covered by labor laws or social protection institutions, workers who decide to enter the informal sector may consciously weigh this drawback against the advantages of employment in the informal sector and rationally decide that it is in their best interest to seek employment there. Analyzing data from the IES has allowed researchers to classify informal entrepreneurs as either “opportunity-driven,” because they are voluntarily exploring unique business prospects in the informal sector, or “necessity-driven,” because they are turning to the informal sector out of desperation. While it is difficult to clearly identify the specific motives and alternatives available to each entrepreneur, his or her previous occupation is a useful guide. Firm owners may be described as opportunity-driven if they were already gainfully employed before entering the informal sector, and as necessity-driven if they were previously unemployed or out of the labor force.

Sources: See Amin (2009); for review of the literature see Amin (2010) and Maloney (2004).
As noted above, the informal sector is not merely an employer of last resort, and informal firms are often as dynamic and innovative as their counterparts in the formal sector (see Box 9). In Guatemala, about three-quarters of all informal entrepreneurs can be considered “opportunity-driven” firms rather than “necessity-driven” firms. Following Amin (2010), some firms are established to take advantage of specific business opportunities (opportunity-driven firms) while others are established in the absence of any other viable economic opportunity (necessity-driven firms). Based on this approach and using information on the previous occupation of the business owner, about 75 percent of informal enterprises in Guatemala can be considered opportunity-driven. This compares favorably with informal sectors in other countries.

Opportunity- and necessity-driven entrepreneurs are marked by very different characteristics (Figure 58). Opportunity-driven entrepreneurs are more likely to have previously held a formal sector job. They are more likely to reside in Guatemala City, and they are more likely to have parents who themselves owned businesses. These characteristics, which remain significant under more rigorous econometric techniques, are consistent with the ability to take advantage of business opportunities. Formal sector employment and residence in Guatemala City tend to correlate with access to financial resources and business connections, while being the child of a business owner implies a degree of familiarity with entrepreneurship and the management of one’s own company. This is consistent with the broader literature on the intergenerational transmission of entrepreneurship.

There is evidence to suggest that opportunity-driven firms are more productive, on average, than necessity-driven firms (Table 7). Opportunity-driven firms employ more workers, and the difference (1.9 versus 1.5 employees), though relatively modest, is statistically significant. Not surprisingly, opportunity-driven firms also have a larger average monthly wage bill. In addition, their lowest monthly sales of the year are significantly higher than those of necessity-driven firms. Somewhat surprisingly, however, the owners of opportunity-driven firms are not necessarily more educated, on average, than those of necessity-driven firms.

Innovation and entrepreneurship in the informal sector is still an emerging field of study, but evidence from a small sample of countries in Sub-Saharan Africa suggests that opportunity-driven firms typically comprise a little more than 60 percent of informal enterprises.

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**Figure 58:** Opportunity-driven entrepreneurs are more likely to have previously held formal jobs, live in Guatemala city and have parents who own their businesses.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Opportunity (%)</th>
<th>Necessity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (%)</td>
<td>55.0</td>
<td>60.5</td>
</tr>
<tr>
<td>Age (years)</td>
<td>41.0</td>
<td>40.4</td>
</tr>
<tr>
<td>Experience (years)</td>
<td>10.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Married (%)</td>
<td>64.4</td>
<td>68.8</td>
</tr>
<tr>
<td>Guatemala City*</td>
<td>65.3</td>
<td>46.8</td>
</tr>
<tr>
<td>Parent Own Business (%)*</td>
<td>17.5</td>
<td>5.3</td>
</tr>
<tr>
<td>Max Time to Register (days)*</td>
<td>27.0</td>
<td>35.9</td>
</tr>
<tr>
<td>Will Pay for Mgt Training (%)*</td>
<td>44.0</td>
<td>26.7</td>
</tr>
<tr>
<td>Will Pay for Reg Training (%)*</td>
<td>27.0</td>
<td>14.5</td>
</tr>
</tbody>
</table>


---

**Table 7:** Opportunity-driven firms tend to be more productive than their necessity-driven counterparts.

<table>
<thead>
<tr>
<th>Classification by firm characteristics</th>
<th>Opportunity</th>
<th>Necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid Employees</td>
<td>1.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Total Employees</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Slowest Month Sales (quetzales)</td>
<td>2,267</td>
<td>1,681</td>
</tr>
<tr>
<td>Wagebill Last Month (quetzales)</td>
<td>1,577</td>
<td>1,072</td>
</tr>
<tr>
<td>Use Machinery (%)</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Total Fixed Assets (quetzales)</td>
<td>2,284</td>
<td>4,392</td>
</tr>
</tbody>
</table>


---

24 Innovation and entrepreneurship in the informal sector is still an emerging field of study, but evidence from a small sample of countries in Sub-Saharan Africa suggests that opportunity-driven firms typically comprise a little more than 60 percent of informal enterprises.
Opportunity-driven entrepreneurs are more willing to pay for both management training and registration training. Access to finance and legal protection top the list of expected benefits of formalization, both for opportunity- and necessity-driven firms. Unfortunately, some 36 percent of all entrepreneurs in the Guatemalan informal sector state that they lack access to the relevant information on how to register their businesses.

Though opportunity-driven firms in the informal sector are numerous and diverse, they still tend to underperform compared to firms in the formal sector. A comparison between opportunity-driven informal firms and small firms in the formal sectors (i.e., those with fewer than ten employees) indicates that formal-sector entrepreneurs have many more years of experience (21 years versus 10), have much larger annual sales volume (more than four times that of informal firms), and offer much higher wages (18 times the monthly salary of informal firms). Formal firms are also able to provide greater quantities of physical capital and inputs per worker, boosting their marginal productivity. However, the formalization of opportunity-driven firms may narrow some of these disparities, and studies show that opportunity-driven informal entrepreneurs expect that formalization will allow for greater access to credit, more secure property rights, and other benefits currently enjoyed by formal firms.
Rates of job creation in Guatemala have on average been lower than in peer economies. At the firm level, rising output has not been matched by commensurate increases in employment. Guatemalan firms grew in terms of sales, on average, during both the global economic expansion of the mid-2000s and the protracted slowdown that followed it. However, overall employment growth was below the average for LAC and middle income countries, and employment growth in Guatemala fell significantly during the 2007-2009 period, more so than in peer economies.

Headline employment growth masks substantial heterogeneity between firms, and job-creating enterprises share a set of common characteristics. Large, foreign-owned, export-oriented firms based in Guatemala City with ready access to capital have taken the lead in job creation. Younger firms tended to perform well in the years prior to the global financial crisis, but lost their advantage in the post-crisis period. Meanwhile, firms characterized by greater financial depth and the ability to mobilize resources have enjoyed especially robust growth in recent years.

Guatemala’s experience both before and after the crisis has yielded important policy lessons, and there is an opportunity to speed job creation. Recent improvements in the business environment are a key step in the right direction. The government’s efforts to reduce administrative costs, streamline regulatory processes and otherwise enhance the business climate have been reflected in Guatemala’s rise in the World Bank’s Doing Business rankings. Guatemala can build on these gains by focusing further reform efforts on priority policy areas that have a particularly strong impact on growth and job creation:

Crime and corruption are among the most serious constraints on enterprise growth in Guatemala. More than a third of Guatemalan firms cite one of these two factors as the most important obstacle to expanding their business. Compared to other countries in the region, crime and corruption appear to have especially significant negative effects on enterprise performance in Guatemala, including the rate of job creation.

The informal sector has the potential to contribute to job growth, but barriers to entry into the formal sector diminish its impact on employment. Informal entrepreneurs in Guatemala are likely to be pursuing emerging business opportunities, and many “opportunity-driven” firms in the informal sector report that they would like to register and would be willing to pay for the cost of registration. However, the registration process is both excessively complex and poorly understood. In addition, there is evidence that formalization increases exposure to corruption. Easing the administrative costs and other barriers faced by firms attempting to enter into the formal sector could provide important benefits to both the public and private sectors. Formalization expands the tax base—a key macroeconomic objective in Guatemala—and ensures a more level playing field between firms, which is especially important given the large share of formal entrepreneurs who identify unfair competition from the informal sector as a major obstacle to enterprise growth. Finally, formalization entails benefits for the firms themselves, by increasing their access to financial resources, inter alia, and for the economy as a whole, since formal firms experience faster rates of job creation than their informal counterparts.

Formalization outreach efforts will be most effective if they target opportunity-driven firms. These firms are operated by entrepreneurs who have voluntarily turned to the informal sector to explore new possibilities in markets that are inadequately served by their formal-sector peers. Facilitating the transition of these firms into the formal sector will help them to prosper and expand their operations, but eliminating the perverse incentives that prompted their initial choice to operate in the informal sector will have a permanent and continuing impact.
on formal-sector growth. While formalization efforts could focus first on opportunity-driven firms, formalizing all informal firms would be beneficial for job creation and overall economic growth\textsuperscript{25}.

Improving the business climate should continue to be the government’s overarching policy objective; creating an environment conducive to innovation and entrepreneurship could both accelerate job creation and boost productivity. A combination of the perverse incentives favoring informality and the asymmetrical competition between the formal and informal sectors, described above, blunts the impact of innovation on productivity and job creation. While this phenomenon is especially pronounced in Guatemala, it is not unique to it. A recent World Bank Regional Report on innovation and entrepreneurship in the LAC region underscores two critical constraints: limited competition and a pervasive lack of human capital\textsuperscript{26}.

\textsuperscript{25}The economic benefits of formalization have been extensively documented in the literature. See, e.g., Bruhn and McKenzie (2013).
\textsuperscript{26}See Lederman et al. (2014).
## Annex 1: Guatemala: Selected Economic Indicators, 2009-2016

<table>
<thead>
<tr>
<th>Real Economy</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012f</th>
<th>2013f</th>
<th>2014f</th>
<th>2015f</th>
<th>2016f</th>
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<td><strong>Real GDP</strong></td>
<td>0.5</td>
<td>2.9</td>
<td>4.2</td>
<td>3.0</td>
<td>3.7</td>
<td>3.5</td>
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<td>5.4</td>
<td>3.2</td>
<td>3.6</td>
<td>3.5</td>
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<td>3.1</td>
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<tr>
<td>Nomina GDP</td>
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<td><strong>GDP (million of USD)</strong></td>
<td>37,734</td>
<td>41,338</td>
<td>47,688</td>
<td>50,388</td>
<td>53,782</td>
<td>57,286</td>
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<td><strong>GDP (million of Quetzales)</strong></td>
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<td>333,093</td>
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<td>394,723</td>
<td>422,670</td>
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<td>11.6</td>
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<td>b. External</td>
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<td><strong>Total Non financial expenditures</strong></td>
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<td>13.0</td>
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<td>12.2</td>
<td>12.2</td>
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<td>Overall balance</td>
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<td>-3.3</td>
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<td>-2.4</td>
<td>-2.1</td>
<td>-2.1</td>
<td>-2.1</td>
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<tr>
<td><strong>Financial requirement</strong></td>
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<td>4.4</td>
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<td>3.6</td>
<td>3.7</td>
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<table>
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<tr>
<th>Balance of Payments</th>
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<tr>
<td><strong>Export of goods</strong></td>
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<td>8.5</td>
<td>10.5</td>
<td>10.1</td>
<td>10.2</td>
<td>10.5</td>
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<td><strong>Imports of goods</strong></td>
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<td>-7.0</td>
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<tr>
<td><strong>Export prices (percent change)</strong></td>
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<td>12.0</td>
<td>15.9</td>
<td>3.1</td>
<td>-4.0</td>
<td>-0.7</td>
<td>2.3</td>
<td>2.5</td>
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<td><strong>Import prices (percent change)</strong></td>
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<td>15.5</td>
<td>0.9</td>
<td>-0.2</td>
<td>1.3</td>
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<td>1.4</td>
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<tr>
<td><strong>Terms of trade (percent change)</strong></td>
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<td>0.3</td>
<td>-3.9</td>
<td>-3.8</td>
<td>-1.9</td>
<td>0.9</td>
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<td><strong>Current account balance</strong></td>
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<td>-1.6</td>
<td>-1.3</td>
<td>-1.5</td>
<td>-1.5</td>
<td>-1.7</td>
<td>-1.7</td>
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<tr>
<td>(as a percentage of GDP)</td>
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<td>-1.4</td>
<td>-3.4</td>
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<td>-2.7</td>
<td>-2.7</td>
<td>-2.8</td>
<td>-2.6</td>
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<tr>
<td><strong>Net international reserves (NIR)</strong></td>
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<td>6.0</td>
<td>6.2</td>
<td>6.7</td>
<td>7.3</td>
<td>7.5</td>
<td>7.7</td>
<td>8.0</td>
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<tr>
<td>(as a percentage of GDP)</td>
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<td>14.4</td>
<td>13.0</td>
<td>13.3</td>
<td>13.5</td>
<td>13.0</td>
<td>12.6</td>
<td>12.2</td>
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<td><strong>Net international reserves (months of imports)</strong></td>
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<td>4.7</td>
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<td>4.6</td>
<td>4.5</td>
<td>4.4</td>
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e: estimates; f: forecasts

Source: Guatemalan authorities and World Bank staff estimates.
References


