

► Trends in productivity and structural changes

A comparative analysis of four emerging-market economies



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Trends in productivity and structural changes. A comparative analysis of four emerging-market economies.

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Preface

Productivity - the efficiency with which workers, enterprises and economies use available resources to produce goods and services and achieve the maximum possible economic benefits in a given period of time, is the main engine of the development process¹. Productivity growth determines the profitability² and competitiveness³ of enterprises, and the standard of living of society⁴.

Increasing and sustaining the growth rate of productivity tends to be a complex task because productivity growth is a multifactorial phenomenon. Empirical research identifies two sets of key factors. On one hand, at macro level, the business environment can influence productivity growth and business performance. On the other hand, through operational efficiency gains and the strengthening of productive capabilities, management practices are key drivers of business productivity. The interaction of the two groups of factors determines the ability of enterprises to allocate resources efficiently and produce a broader and increasingly more complex set of goods and services. This drives the process of structural change and influences the aggregate productivity and development of a country.

This study is part of a research project to analyse the barriers to productivity growth, diversification and structural change in selected emerging market economies. In the context of the COVID-19 pandemic, the design of coherent and comprehensive strategies, with a human-centred approach, to foster productivity and structural change, will be of utmost importance to accelerate the economic and employment recovery in the post-pandemic environment to *build forward better*.

Finally, the information in this study is intended to help business organizations in four selected emerging market economies (Vietnam, Colombia, Turkey, and South Africa) to develop services on basic but rather essential management practices such as the development of formal business strategies. In addition, the evidence from this research could help them devise a policy reform agenda to foster productivity growth, diversification and structural change for creating decent jobs and raising living standards.

Deborah France-Massin

Director

Bureau for Employers' Activities (ACT/EMP)

Trance More

International Labour Office

Cusolito, A. P., and Maloney, W. F. (2018). Productivity Revisited: Shifting Paradigms in Analysis and Policy. The World Bank.

² Grifell-Tatjé and Lovell (2015) define profitability as the relationship between income and costs. They argue that two sets of factors explain the changes in profitability. The first set of factors includes changes in productivity and price recovery, while the second set consists of technological change and management practices.

³ ILO (2007). The Promotion of Sustainable Enterprises. Report VI, International Labour Conference, 96th Session.

⁴ Krugman, P. R. (1997). The age of diminished expectations: US economic policy in the 1990s. Chapter 1. MIT press.

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Introduction



▶ 1. Introduction

The business environment, in which enterprises operate and compete, and business management practices determine an enterprise's performance including its productivity and employment outcomes¹. The interplay of the two factors determines the enterprises' capacity to produce and allocate resources efficiently, thus influencing a country's overall development and productivity². A growing body of literature has shown that a faulty business environment hinders productivity, returns on investment and in doing so the economic viability of enterprises³, which inevitably has an impact on employment and job creation.

The purpose of this report is to assess how management practices and the business environment impact the productivity and employment of enterprises, with an emphasis on how barriers arising from inefficiencies in the business environment hinder the development of sustainable enterprises, structural change, and productivity growth in selected emerging-market economies. The differential effects of the business climate and management practices are examined by country, firm size, and economic sector. Moreover, this research is also aimed at devising policy recommendations for Employers and Business membership Organizations (EBMOs) to *build forward better* in the aftermath of the COVID-19 pandemic.

The research is focused on four emerging-market economies: Colombia, Vietnam, Turkey, and South Africa. The selection of the countries was made considering the economic level and the region where each country is located. The objective is to have a sample that covers diverse regions of the world, identify differences, and find commonalities between countries.

The study was conducted using the Enterprise Survey (ES) collected periodically by the World Bank. The ES is answered by business owners and top managers of the manufacturing and services enterprises located in the cities/regions of major economic activity. The interviews are conducted for formal (registered) enterprises with five or more employees and the samples do not include enterprises working in the agricultural sector, and public enterprises with 100 percent government ownership (The World Bank, 2021).

Section 1 is focused on the descriptive analysis of productivity, average profits and annual sales of enterprises, and the differences between small, medium, and large enterprises by sector. This section emphasizes the gap between small and large enterprises on employment generation, complexity level and overall performance.

Section 2 analyses the effect of the business environment and management practices on enterprise performance, considering economic, political, and social contexts of the selected countries and differential effects considering the size and sector in which enterprises operate. For instance, crime and political instability are factors that severely affect companies in some countries such as Colombia, while in others the most relevant factors hindering operations are skills shortages and insufficient qualified personnel or even lack of access to basic services such as electricity in the case of South Africa.

^{1 (}Farole 2017)(2017). Business environment and firm performance in European lagging regions. World Bank Policy Research Working Paper, (8281). (Dollar 2005)(2005). Investment climate and firm performance in developing economies. Economic Development and Cultural Change, 54(1), 1-31.

^{2 (}Lopez-Acevedo 2017)(2017). Business Environment Challenges Continue to Weigh on Firm Performance. Chapter 3 in: Lopez-Acevedo, G., Medvedev, D., & Palmade, V. (2017). South Asia's Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse. World Bank. Washington DC.

^{3 (}Hallward-Driemeier 2005). (2005). Improving the climate for investment and business in South Asia. Growth and Regional Integration, 61. (Gogokhia and Berulava 2021)(2021). Business environment reforms, innovation and firm productivity in transition economies, Eurasian Business Review 11, 221-245. Glodowska 2017 (2017). Business environment and economic growth in the European Union countries: What can be explained for the convergence? Entrepreneurial Business and Economics Review, Vol. 5, No. 4.

2

Finally, some recommendations for EBMOs are presented to promote an enabling business environment and support their members in improving management practices aimed at fostering sustainable business development, achieving higher productivity levels, creating decent employment, and advocating for a process of structural reform towards higher-complexity and higher-productivity economic activities.

2 and complexity analysis

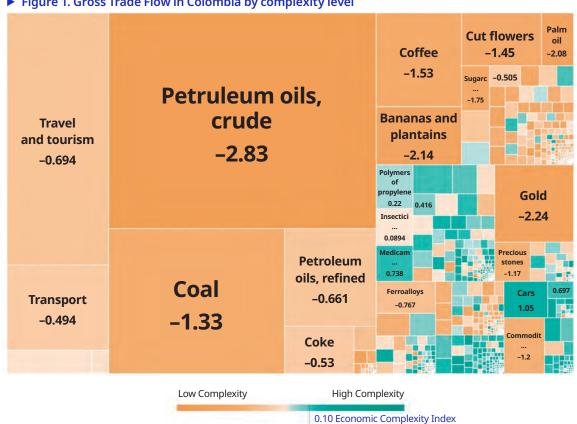


2. Growth and complexity analysis

According to the Growth Lab from Harvard University's Center for International Development, growth can be driven by a process of diversifying knowhow to produce a broader and increasingly more complex set of goods and services. Moving to nearby and related products with similar or existing knowhow can enhance the diversification process. Moreover, industries that are more complex tend to have higher productivity and pay higher wages (Growth Lab at Harvard University 2019).

Complexity refers to the diversity and sophistication of the know-how required to produce goods or services. The Atlas of Complexity Analysis measures the economic complexity of an economy "...based on the diversity of exports a country produces and their ubiquity, or the number of the countries able to produce them...countries that are able to sustain a diverse range of productive know-how, including sophisticated, unique know-how, are found to be able to produce a wide diversity of goods, including complex products that few other countries can make"4.

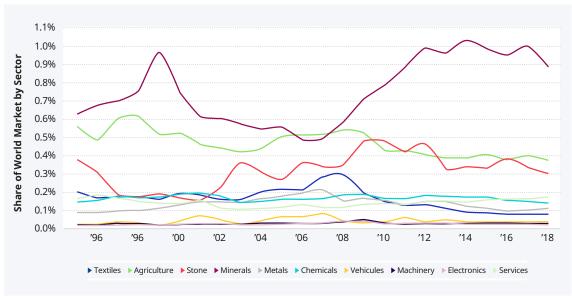
According to the World Bank Development Indicators, Colombia's GDP per capita growth has averaged 1.4 percent in the period 2013-2018, and the projected growth in the next decade is 3.0 percent. Colombia exports mainly low complexity products, minerals, and agriculture (see Figures 1 and 2). It has not made a significant structural change towards high-productivity



► Figure 1. Gross Trade Flow in Colombia by complexity level

Source: Growth Lab, Harvard University, 2018.

For more information see https://atlas.cid.harvard.edu/glossary.



► Figure 2. Colombia's share of the world market by sector

Source: Growth Lab, Harvard University, 2018.

industries. Indeed, Colombia is the only country from the selected sample of this study that may face challenges to grow using its existing knowhow, which reveals that focusing on developing competitive advantage and new strategic sectors by diversifying its productive structure, is of the utmost importance (Growth Lab, Harvard University).⁵

Colombia's export is heavily concentrated on low complexity products such as minerals (crude oil, 28.2 percent of total exports) and agriculture (coffee, 3.9 percent; bananas and plantains, 2.4 percent). Moderate complexity products, such as travel and tourism (12.5 percent), and transport (4.2 percent), account for a much smaller share of exports. By way of diversification, Colombia has added 11 new export products in the last 15 years, which contributed US\$6 to income per capita in 2018. Moreover, based on its current productive structure and exports, some of the economic sectors with high potential to diversify include *industrial machinery*, and *goods of iron or steel*.⁶

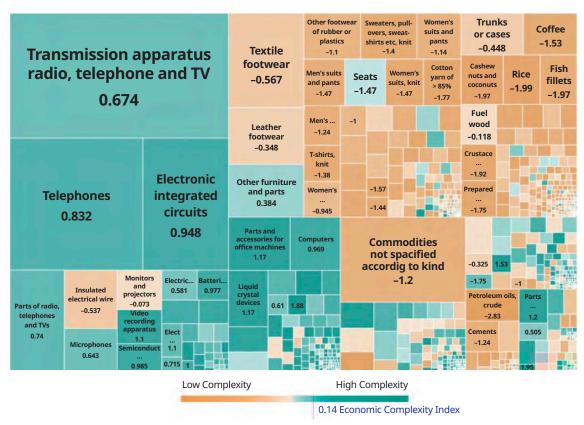
From the selected countries, Vietnam exhibits the highest rates of economic growth and potential for diversification. Vietnam's income per capita growth has averaged 5.5 percent during 2013-2018, and its annual growth rate is projected to rise to 6.2 in the next decade. Exports have grown by an annual average of 14 percent from 2013 to 2018. Non-oil exports have grown by 15 percent, and the country has a trade surplus, in both goods and services (Growth Lab, Harvard University).⁷

Unlike Colombia, the largest proportion of exports is on high and moderate complexity products such as footwear, and electrical machinery and equipment (see Figure 3). Indeed, Vietnam has seen its share in world market increasing in these products over the last 25 years (see Figure 4). Overall, it has been able to add 48 new products since 2003, more than China (43), Thailand (34) and South Korea (22). These new products contributed US\$1,015

⁵ Colombia ranked as the 56th most complex country in 2018, and over the last ten years, it has even become less complex.

Atlas of Economic Complexity, Growth Lab, Center for International Development. A top-50 list of products with high potential to diversify in Colombia can be found at: https://atlas.cid.harvard.edu/countries/49/product-table.

Vietnam ranked as the 52nd most complex country in 2018, and over the last decade, it has become more complex, improving 11 positions.



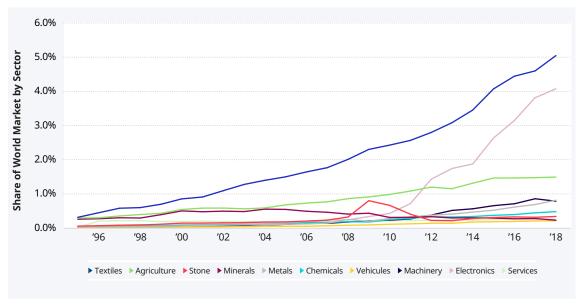
► Figure 3. Gross Trade Flow in Vietnam by complexity level

Source: Growth Lab, Harvard University, 2018.

to income per capita in 2018. Among the new products, those that were exported include transmission apparatus for radio, telephone, and TV (36.5 percent), telephones (23.4 percent), and electronic integrated circuits (15.1 percent). According to the Growth Lab, Vietnam has started a process of significant structural transformation, and it is well positioned to leverage its existing capabilities to diversify further into high complexity industries, which include electrical machinery and equipment and industrial machinery.

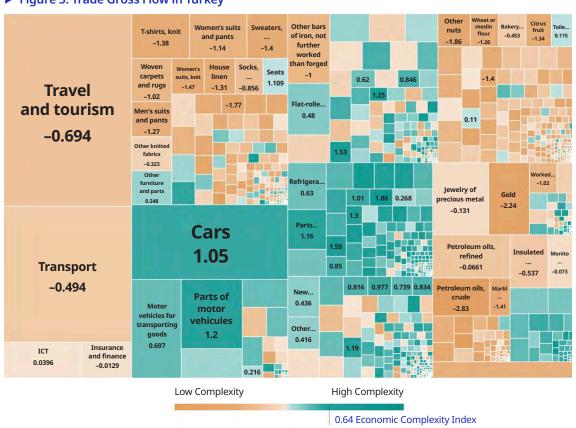
Turkey's annual GDP per capita growth has averaged 3.3 percent during the period 2013-2018, and its projected growth rate in the next decade is 4.6 percent annually. Compared to Vietnam, Turkey's exports grew much less (1.6 percent), significantly impacting overall economic growth. Non-oil exports have grown 1.7 percent, falling below the global average. Despite Turkey's low export growth, the largest export contribution comes from high and moderate complexity products such as vehicles and transport products (see Figure 5). It has increased its world market share in textiles (2.56 percent); metals (1.83 percent); and vehicles (1.5 percent) over the last two decades (see Figure 6). By contrasts, its global market share in electronics has stagnated over the last ten years. Since 2003, Turkey has added 18 new products, which contributed US\$55 to income per capita in 2018.

▶ Figure 4. Vietnam's share of the world market by sector



Source: Growth Lab, Harvard University, 2018.

► Figure 5. Trade Gross Flow in Turkey



Source: Growth Lab, Harvard University, 2018

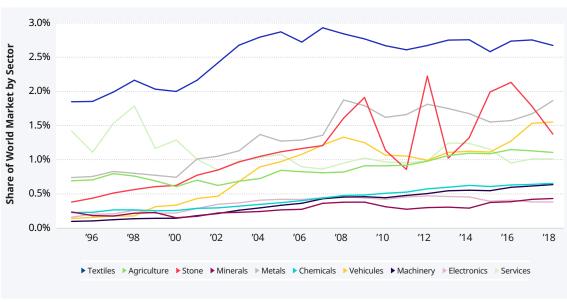


Figure 6. Turkey's share of the world market by sector

Source: Growth Lab, Harvard University, 2018.

Like Vietnam, Turkey has started a process of structural transformation, and it has the capacity to leverage its existing knowhow and capabilities to diversify into high-complexity industries. However, particular attention ought to be paid to increase the volume of production. The country has significant potential to diversify further into related products by utilizing its knowhow and removing bottlenecks. Economic sectors with high potential to diversify include industrial machinery and electrical machinery and equipment (Growth Lab, Harvard University).

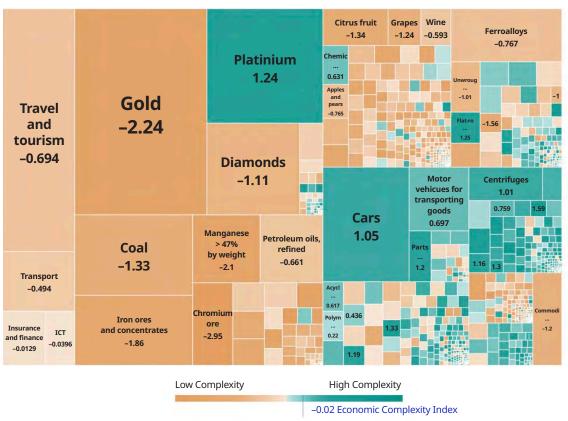
South Africa's income per capita growth has averaged -0.4 percent in the period 2013-2018, and the projected growth in the next decade is 2.6 percent annually. Export growth has been rather disappointing. Non-oil exports have declined 1.7 percent, falling below the global average, thus hindering the overall economic growth. In contrast to Vietnam and Turkey, South Africa has not yet started a process of structural change. It has added only 9 new products since 2003, which only contributed US\$5 to income per capita in 2018,9 which appears to be miniscule against the contribution of new products in Vietnam (US\$1,015 per capita) during the same period.

South Africa exports mainly moderate and low-complexity products such as stone and minerals (see Figure 7). In fact, stone, glass, and ceramics have driven export growth in the last five years, thus gaining world market share in this sector (4.0 percent in 2018). By contrast, no progress has been made to expand South Africa's world market share in other high-complexity economic activities such as *electronics, textile, and machinery* (see Figure 8), which hinders income growth.

⁸ In 2018, Turkey ranked as the 40th most complex country, and over the last decade, it has become more complex improving two positions. Turkey has added 18 new products since 2003. However, these products contributed only USD\$55 to income per capita in 2009.

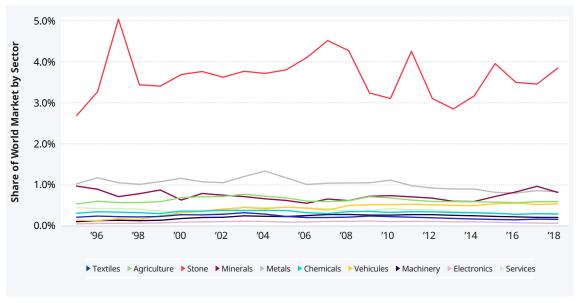
⁹ In 2018, South Africa ranked as the 63rd most complex country, and over the last decade, it has become less complex, falling seven positions. According to the Atlas of Economic Complexity from Harvard University, South Africa's worsening complexity is associated with a lack of diversification of exports.



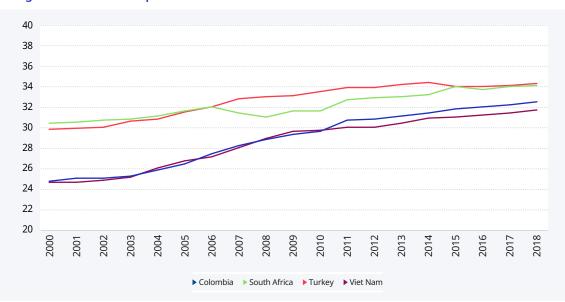


Source: Growth Lab, Harvard University, 2018.

► Figure 8. South Africa's share of the world market by sector



Source: Growth Lab, Harvard University, 2018.



► Figure 9. Productive capacities Index

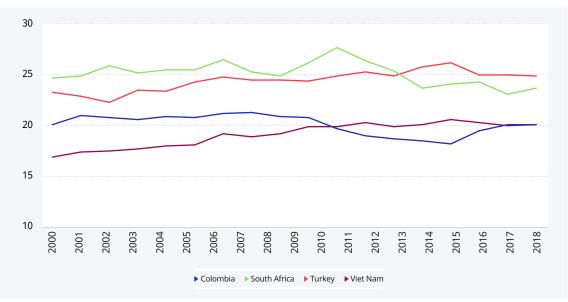
Source: Productive Capacity Index, Structural Change Component.

The largest contribution of export growth comes from moderate and high-complexity products: precious metals such as gold, stone, and vehicles products. Given its productive structure, South Africa has significant potential to diversify further building on existing technical competencies. It can leverage its existing knowhow to diversify the economy into more complex and higher-productivity industries, which also pay higher wages. Economic activities of higher value-added hold more linkages with high-complexity economic sectors, which may induce a process of continued diversification. In South Africa, some of the sectors with high potential for new diversification include *industrial machinery, and paper and paperboard* (Growth Lab, Harvard University).

The structural transformation toward higher-complexity industries requires an improvement of the overall productive capacity. To measure productive capacity, we used the Productive Capacity Index developed (PCI) by UNCTAD. The PCI attempts to measure productive capacities using 46 indicators distributed in eight components: human capital, natural capital, information and communication technology (ICTs), structural change, transport, institutions, and the private sector. It covers 193 economies for the period 2000-2018. ¹⁰

Since 2000, all four economies have increased their productive capacity. Although Turkey and South Africa exhibit higher productive capacity than Colombia and Vietnam in 2018, the latter economies have exhibited a larger growth rate during the 2000-2018. At this rate, Colombia and Vietnam will surpass Turkey and South Africa's productive capacity in the next years.

The higher productive capacity scores exhibited by Turkey and South Africa in 2018 are explained mainly by higher access and use of ICTs, transportation infrastructure and air connectivity. These were particularly strong in Turkey while better performance in government effectiveness, political stability, regulatory quality, rule of law and voice, and accountability, were stronger in South Africa. We do not rule out that other indicators of the PCI, which are not part of this analysis, may have also contributed to higher productive capacity in Turkey and South Africa.



► Figure 10. PCI – Structural change dimension

Source: Productive Capacity Index, Structural Change Component.

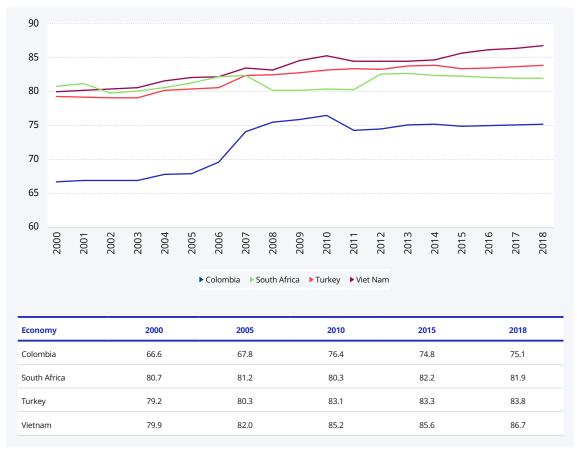
The PCI – structural change component measures the movement of labour and other productive factors from low-productivity to high-productivity industries. As in the complexity analysis, the shift is captured by the complexity and variety of exports, but also from other indicators such as the intensity of fixed capital and the weight of industry and services on total GDP.

The results from the Productive Capacity Index (PCI) show similar results as discussed in the Growth Lab Complexity Analysis. From 2008 to 2018, Colombia practically has not exhibited a structural shift toward high-productivity industries while South Africa has exhibited a decrease in the structural change score during the same period, implying reversal of its structural transformation process. Conversely, Vietnam and Turkey have experienced an increase in the structural change score since 2008. However, the analysis at levels shows that South Africa and Turkey exhibit higher scores than Vietnam despite the latter showing the highest rates of economic growth and potential for diversification compared to the other economies.

In addition, we analysed the PCI – private sector component to assess the easiness of cross-border trade and support to businesses in terms of domestic credit, contract enforcement and time required to start a business. Diversifying knowhow to produce a broader and increasingly more complex set of goods and services requires a supportive business environment. Unleashing the private sector's potential for innovation and productivity is a necessary, but not sufficient, condition for high and sustainable structural change.

The PCI - private sector component shows that Colombia and Vietnam are the countries that have improved the most compared to Turkey and South Africa, and that have remained practically at the same levels during 2000-2018. This suggests that the business environment in Turkey and South Africa has not shown a significant improvement.

► Figure 11. Private sector scores



Source: Productive Capacity Index, Structural Change Component.

Firm - level assessment



▶ 3. Firm - level assessment

The Survey analysis shows that small enterprises account for approximately 60 percent of total enterprises, 30 percent are medium size, and 10 percent are large. The distribution of firms has changed in different ways depending on the country.

Turkey and South Africa have shown a decrease in small and medium firms and a decline of large firms during the 2007/8-2019/20 period, which tend to be relatively more productive than medium or small enterprises. These results support the economy-complexity findings. South Africa's exports have been low compared to the other economies; the industries are still producing moderate and low-complexity products and the country has not shown progress in the market share of high-complexity activities. Turkey's non-oil exports have not grown much, and it has not been able to diversify its economy. Conversely, Colombia and Vietnam have exhibited an increase in the proportion of large firms and practically no statistically significant changes in the proportion of small and medium firms.

► Table 1. Percentage of firms by size

		Colombia			Vietnam	
	2006	2010	2017		2009	2015
	64.8**	68.4**	58.5**	6 "	47.8**	50.3**
Small	(5.5)	(5.7)	(2.5)	Small	(3.6)	(3.0)
Ma alicera	31.3**	20.9**	28.9**	A 4	35.2**	37.9**
Medium	(5.5)	(4.7)	(2.4)	Medium	(3.6)	(3.0)
	3.8**	10.6**	9.7**		16.9**	11.7**
Large	(0.7)	(3.9)	(1.4)	Large	(1.4)	(1.0)

•		Turkey			South Africa	
	2008	2013	2019		2007	2020
	61.1**	61.0**	71.0**	CII	47.2**	58.6**
Small	(1.8)	(2.9)	(2.3)	Small	(0.4)	(1.8)
4 P	28.9**	28.5**	24.2**		42.3**	32.0**
Medium	(1.7)	(2.7)	(2.1)	Medium	(0.4)	(1.8)
	10.0**	8.3**	3.7**		10.6**	9.3**
Large	(0.7)	(1.3)	(0.4)	Large	(0.3)	(0.1)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

 $\textbf{Note:} \ \textbf{Standard errors in parenthesis.}$

Most enterprises in Colombia, Vietnam, South Africa, and Turkey (according to latest available survey) work in services, which is the sector with the lowest average profits. The PCI data show that the productive capacity index in 2008 in Colombia and Vietnam was much lower than that of South Africa and Turkey, but it has improved during the last years at a faster

¹¹ South Africa decline in the proportion of large firms was significant at 90 percent of confidence.

¹² Although point estimates seem different, the values are the same when considering confidence intervals at 95 percent of confidence.

pace than Turkey and South Africa. The increase in the proportion of large firms in Colombia might be a positive development related to the attraction of FDI and the creation of more productive firms, but it may face bigger challenges than the other countries because it has not yet leveraged its own capabilities and know-how to develop competitive advantage. The situation is different for Vietnam where exports have grown by an annual rate of 14 percent, increasing its world market share in several sectors, and diversifying its economy at a higher rate than the rest of the selected economies.

▶ Table 2. Percentage of enterprises by sector, Colombia, and Turkey

Sector		Colombia			Turkey	
	2006	2010	2017	2006	2013	2019
Food	4.1**	3.1**	3.2**	7.9**	2.8**	3.6**
-00u	(0.6)	(0.5)	(0.5)	(0.6)	(0.2)	(0.5)
Textiles					3.2**	1.8**
lextiles					(0.4)	(0.3)
Carmant				10.4**	5.1**	3.6**
Garment				(0.7)	(0.6)	(0.8)
Textiles and	5.5**	4.8**	4.2**			
Garments	(0.7)	(1.2)	(0.6)			
abricated metal				5.0**	2.9**	3.4**
products				(1.1)	(0.2)	(0.6)
Machinery &				4.4**	2.6**	1.9**
Equipment				(1.1)	(0.6)	(0.4)
Other	35.0**	24.3**	21.4**	30.0**	13.5**	13.3**
Manufacturing	(6.3)	(4.7)	(1.8)	(1.8)	(1.1)	(1.6)
Construction				0.8**	17.4**	23.3**
Construction				(0.2)	(3.1)	(2.3)
2-4-11	25.6**	16.7**	14.8**	33.1**	15.3**	15.2**
Retail	(4.3)	(3.3)	(2.0)	(2.1)	(1.4)	(1.5)
D41	30.0**	51.2**	56.4**	8.2**	36.8**	33.7**
Other Services	(5.7)	(6.2)	(2.5)	(0.6)	(3.1)	(2.7)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

The growth in the proportion of enterprises working on the service sector in Colombia was matched by a decline in the manufacturing, electronics, and other high-complexity industries (decline of 14 percentage points from 2006 to 2017). As reported by the Growth Lab at Harvard University, Colombia's productive structure has become less complex. This country would need to support new strategic sectors using an active industrial policy.

From 2013 to 2019, the productive structure of Turkey reduced dependence on retail and manufacturing (except machinery and equipment), due to shifts towards services, construction, and retail. The share of the services sector, which accounted for only 8 percent of total firms in 2018, was 34 percent in 2019.

▶ Table 3. Percentage of enterprises by sector for Vietnam and South Africa

Sector	Viet	nam	South africa		
	2009	2015	2007	2020	
Food	4.7**	4.5**	13.6**	2.1**	
rood	(0.3)	(0.7)	(0.0)	(0.1)	
T .''. 10	4.7**	3.3**	16.4**	3.1**	
Textiles and Garments	(0.3)	(0.3)	(0.0)	(0.5)	
	4.0**	3.8**	13.7**	4.0**	
Fabricated metal products	(0.5)	(0.5)	(0.00)	(0.7)	
Other Manufacturing	13.0**	16.2**	17.3**	15.1**	
	(0.9)	(1.9)	(0.02)	(1.3)	
	9.9**	8.3**	19.7**	22.1**	
Retail	(1.7)	(1.7)	(0.10)	(1.5)	
			1.7		
Wholesale			(1.2)		
	60.1**	62.2**	17.8**	34.4**	
Other Services	(2.0)	(2.5)	(0.00)	(1.5)	
Non-metallic mineral	3.6**	1.6**	0.6**		
products	(0.9)	(0.2)	(0.4)		
				0.3**	
Motor vehicles				(0.1)	
			1.5**	18.0**	
Construction			(0.00)	(0.06)	

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

From 2007-2020, South Africa exhibited a sharp decline in the proportion of enterprises operating on the food, textiles, garments, and fabricated metal products industries (Table 3). This decline was contrasted by an increase in the proportion of companies working in retail, construction, and services sectors. These results coincide with the findings of the Growth Lab at Harvard University (2018), which shows that South Africa' production structure has become less complex since 2013.

In contrast, in Vietnam, the results show a reduction in the proportion of firms working in textiles and non-metallic mineral products and an increase in the "other manufacturing" industry. The distribution of firms by sector did not change much in Vietnam in the 2009-2015 period.

3.1 Productivity

Several studies measure differences in productivity. Robert Solow's (1957)¹³ concluded that income inequality can largely be explained by underlying differences in productivity; Acemoglu and Dell (2010) and Syverson (2011)¹⁴ analysed productivity differences between economies and across firms.

^{13 (}Solow, 1957).

^{14 (}Acemoglu & Dell, 2010) and (Syverson, 2011).

► Figure 12. Labour productivity per working hour in 2019 US\$

Source: Conference Board, 2000-2019.

Considering previous studies, this section analyses productivity and employment growth for the selected emerging-market economies using the Conference Board macroeconomic and the ES firm-level data.

Figure 12 shows labour productivity of the four countries, Turkey's labour productivity per working hour was the highest while Vietnam's was the lowest during the 2000-2019 period. Turkey's GDP per capita growth has averaged 3.3 percent from 2013-2018 and exhibits the highest productive capacity scores, structural change, and transportation capabilities according to the PCI. Conversely, Vietnam shows the lowest productive capacities mainly explained by deficiency in availability and sustainability of energy, access to ICTs and transportation infrastructure.

Labour productivity has grown at a faster pace in Turkey than in Colombia, South Africa, and Vietnam (see Figure 13). With respect to the level observed in 1950, Turkey managed to double its labour productivity in the early 1960s, whereas Colombia and South Africa could only double it until the mid-1990s. Interestingly, after a period of stagnation (1950-1980), labour productivity took off in Vietnam since the early 1980s, surpassing Colombia and South Africa in the mid-1990s. Vietnam is in the midst of a catch-up process and it is closing the gap with Turkey.

Vietnam has shown a persistently positive labour productivity growth trend after 2009 while productivity growth in the other selected countries has stagnated and has even fallen in the case of South Africa. Tukey and Colombia have had similar growth rates whereas South Africa shows a decline in the labour productivity rate mainly between 2015-2016. In both years South Africa exhibited negative per capita growth and between 2011 and 2016 more than 3 million people became poor who are living under US\$2.9 a day.

¹⁵ The Conference Board Total Economy Database.

^{16 (}The World Bank 2017).

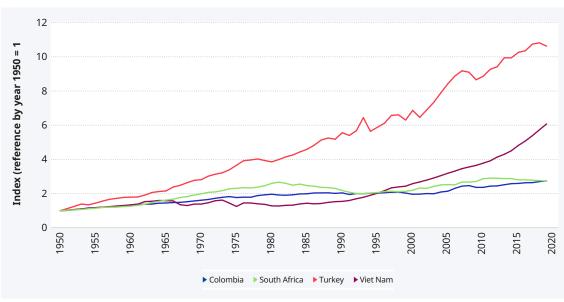


Figure 13. Cumulative labour productivity growth, reference year 1950=1, 1950–2019

Source: Own elaboration with data from The Conference Board, 1950-2019.

The sharp drop in South Africa might be partly due to external factors such as the recent drop in global commodity prices, and internal factors like the worsening of the electricity crisis since 2015, droughts, logistical constraints which might have increased running costs and reduced productivity and profitability for businesses. In addition, the insufficient innovation efforts of private firms and the drop (approximately 40 percent) in private research and development (R&D) might also be factors that explain the productivity decline in recent years (2015-2018) and the little recovery observed in 2019.

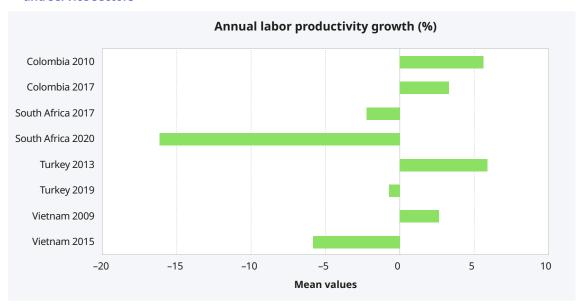
To deepen the analysis on labour productivity, the report used ES firm-level data which is not comparable with the Conference Board time series because the former only focus on formal firms from the manufacturing and service sectors. The surveys were not held for the same period for all the selected economies, so we considered the last two years available. The report does not consider surveys held before 2005.

The ES results suggest positive labour productivity growth rates in Colombia and negative rates for the rest of the selected economies in the last survey year available (Figure 14). However, as shown by the Conference Board data, the overall trend after2009/2010 for Vietnam is positive.

Overall, the ES results show no difference or does not adequately capture labour productivity differences between small, medium, and large firms, except for Turkey where medium-sized enterprises are more productive than large ones in both years (Table 5). Similar results were observed with labour productivity by sector where no difference was found between manufacturing and services, except for Vietnam where services exhibit a larger labour productivity than manufacturing.

In addition, we estimated annual sales in millions of local currency units per operating hour as a proxy of working hours to assess productivity differences (Table 6). Large firms operating in Turkey and Colombia are more productive than medium and small ones. For instance, large enterprises exhibited higher productivity than medium and small ones in Colombia (2017) and Turkey (2013) and, between medium and large enterprises in Turkey 2019.

► Figure 14. Labor productivity and employment growth of formal manufacturing and service sectors



Source: World Bank Enterprise Survey. Colombia 2017; Turkey 2019; South Africa 2020 and Vietnam 2015.

Variables	Colombia	South Africa	Turkey	Vietnam
	2017	2020	2019	2015
Productivity growth	3.3***	-16.1**	-0.7	-5.8**
Troductivity growth	(1.6)	(0.91)	(1.01)	(1.17)
N	843	1,029	1,298	868

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

▶ Table 4. Labour productivity – sales in thousands of USD 2009 per worker

Firm by size	Color	mbia	Tur	key	South	Africa	Viet	nam
	2010	2017	2013	2019	2007	2020	2009	2015
- "	87.3**	407.3	929.3	293.6**	51.8**	35.9**	52.1**	135.0**
Small	(17.3)	(378.8)	(929.7)	(23.3)	(3.9)	(4.9)	(9.11)	(29.1)
	112.6*	87.4**	159.1**	180.8**	69.8**	29.0**	58.0**	70.5**
Medium	(68.3)	(23.4)	(40.8)	(18.9)	(5.3)	(3.3)	(13.6)	(10.2)
	114.7**	77.7**	49.2**	72.5**	132.9**	26.4**	51.9**	48.9**
arge	(27.7)	(12.2)	(7.5)	(6.5)	(14.5)	(6.9)	(10.7)	(15.7)
I	876	876	740	1,613	924	1.047	971	937

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

► Table 5. Labour productivity by sector

Sector	Colombia	Turkey	SA	Vietnam
	2017	2019	2020	2015
land the structure	43.5**	233.5**	37.1**	57.0**
Manufacturing	(6.6)	(23.2)	(5.2)	(6.7)
ondess	374.2	269.4**	31.2**	125.6**
Services	(319.3)	(22.7)	(3.8)	(24.1)

Source: World Bank Enterprise Surveys.

Note: Standard errors in parenthesis.

► Table 6. Labour productivity, Colombia, and Turkey, (measured as annual sales in millions per operating hour)

Firm by size	Color	mbia	Turkey	
	2010	2017	2013	2019
· ma a ll	0.3**	0.7**	674.7	5,655.7
Small	(0.06)	(0.1)	(110.2)	(797.9)
Medium	4.6	2.6**	2,950.7*	10,140.7**
viedium	(3.2)	(0.9)	(707.3)	(1,161.9)
	199.8	17.7**	14,911.6**	31,437.9**
arge	(202.5)	(5.6)	(3,147.9)	8,644.9
1	669	553	693	1,063

Source: World Bank Enterprise Surveys.

Note: Standard errors in parenthesis.

► Table 7. Labour productivity, South Africa, and Vietnam, (measured as annual sales in millions per operating hour – annualized)

Firm by size	South	Africa	Vietnam	
	2007	2020	2009	2015
- "	1,468.1**	1,505.8**	8.767458	15.5
Small	148.9	437.3	7.20	(9.3)
	8,292.8**	5,420.5**	10.6987	26.5**
Medium	844.1	1,594.6	2.145	(8.2)
Lawas	86,575.8**	27,641.6	60.20364	243.1**
Large	13,511.3	15,779.2	9.80	(76.1)
N	680	335	777	676

Source: World Bank Enterprise Surveys.

Note: Standard errors in parenthesis.

^{***} Significance at 99 percent, **95 percent and * 90 percent of confidence.

^{***} Significance at 99 percent, **95 percent and * 90 percent of confidence.

^{***} Significance at 99 percent, **95 percent and * 90 percent of confidence.

Similar to the results found in Turkey, there were differences in productivity between medium and large companies in Vietnam for both years, 2009 and 2015, but no statistically significant difference was found between medium and small firms (Table 7). In South Africa, there were not statistically significant differences in productivity rates between small, medium, and large enterprises in any year.

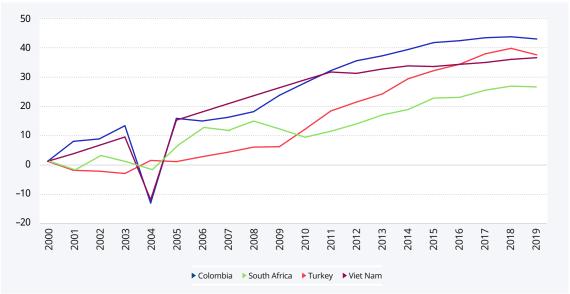
3.2 Employment

This section analyses employment growth for Colombia, Turkey, Vietnam, and South Africa using the Conference Board for a time series analysis and the Enterprise Survey data for firm-level analysis. At the firm-level, we analysed differences on employment between firms disaggregated by size and sector.

Figure 15 shows that after 2011 Colombia and Vietnam exhibit a deceleration in the employment growth trend. After 2017 there is a decline in employment growth in Turkey South Africa and Colombia, which in 2019 exhibit negative growth values.

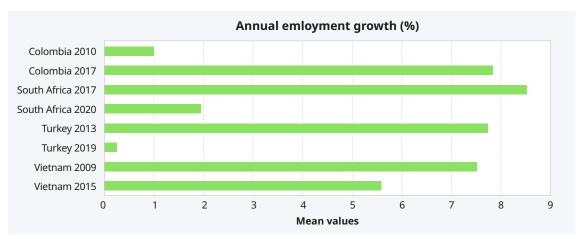
Figure 16 indicate a continuous decline in the employment growth in South Africa in 2020 and the employment slowdown of the rest of economies except for Colombia.

▶ Figure 15. Cumulative employment growth, reference year 2000=1, 2000-2019



Source: Own elaboration with data from The Conference Board, 2000–2019.





Source: World Bank Enterprise Survey. Colombia 2017; Turkey 2019; South Africa 2020 and Vietnam 2015.

Variables	Colombia	South Africa	Turkey	Vietnam
	2017	2020	2019	2015
Employment growth	3.3*** (1.6)	-16.1** (0.91)	-0.7 (1.02)	-5.8** (2.0)
N	913	1.066	1,459	939

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

► Figure 17. Growth of employment by size in Vietnam



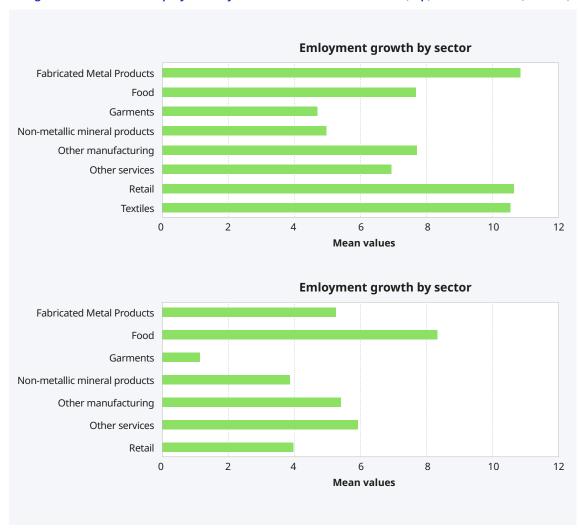
Source: World Bank Enterprise Survey. Vietnam 2009 and 2015.

	Vietnam	Vietnam
	2005–2008	2011-2014
Small (<20)	2.9	3.8**
	(4.9)	(1.41)
Madisura (20.00)	12.9**	8.2**
Medium (20-99)	(3.2)	(2.0)
Large (100+)	6.4*	6.9**
	(3.3)	(1.6)
N	956	939

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

▶ Figure 18. Growth of employment by sector in Vietnam 2005–2008 (top) and 2011–2014 (bottom)



Source: World Bank Enterprise Survey. Vietnam 2015.

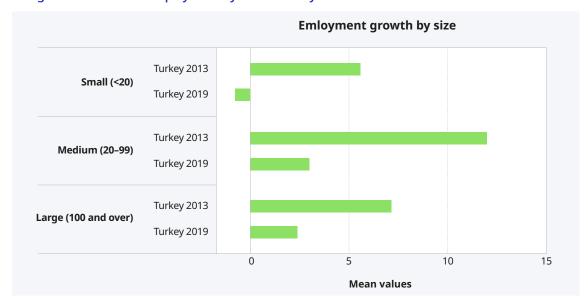
Vietnam	Vietnam
2005–2008	2011-2014
7.6**	8.3**
(2.2)	(4.2)
4.7	1.14
(3.1)	(2.1)
10.5**	
(2.8)	
4.9	3.9
(10.3)	(2.4)
10.8***	5.3**
2.79	(2.3)
7.7	5.4**
(2.7)	(1.5)
10.6	4.0**
(3.1)	(1.7)
6.9	5.9*
(4.9)	(1.6)
956	939
	7.6** (2.2) 4.7 (3.1) 10.5** (2.8) 4.9 (10.3) 10.8*** 2.79 7.7 (2.7) 10.6 (3.1) 6.9 (4.9)

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

In Vietnam, the average number of permanent employees of small firms is half the number of medium size firms. Large firms employ 53 times more personnel than small firms and 24 times more than medium size enterprises. Our calculations suggest the employment growth of small firms is practically zero, and there is no difference between medium and large firms and across sectors.

► Figure 19. Growth of employment by size in Turkey



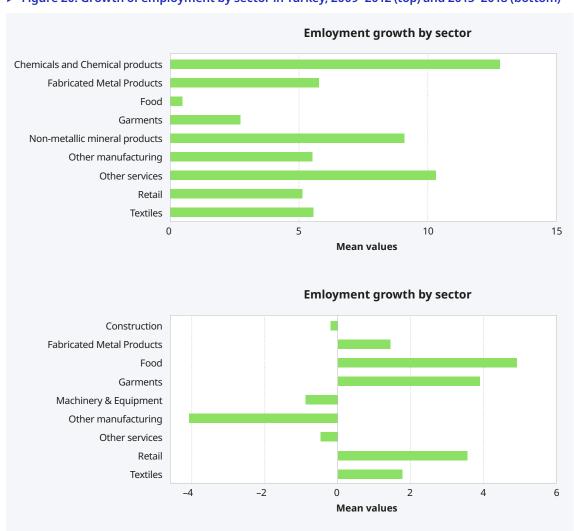
Source: World Bank Enterprise Surveys. Turkey 2013 and 2019.

	Turkey	Turkey
	2009-2012	2015–2018
Small (<20)	5.6**	-0.8
	(1.03)	(1.2)
A4 - di (20, 00)	12.0**	3.0*
Medium (20-99)	(3.9)	(1.7)
Laura (100 t)	7.1**	2.4**
Large (100+)	(1.4)	(1.2)
N	1,168	1,459

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

▶ Figure 20. Growth of employment by sector in Turkey, 2009–2012 (top) and 2015–2018 (bottom)



Source: World Bank Enterprise Survey. Turkey 2013 and 2019.

Sector	Turkey	Turkey
	2009-2012	2015-2018
-ood	0.5	4.9*
Food	(2.6)	(2.9)
	5.6**	1.8
rextiles rextiles	(2.02)	(2.5)
	2.7	3.9
Garments	(2.7)	(2.8)
	5.8**	
abricated metal products	(2.0)	
	12.8**	
hemicals & Chemical Products	(2.9)	
	9.1*	
Non-Metallic Mineral Products	(4.6)	
		-0.9
Machinery and equipment		(6.4)
	5.5**	-4.1***
Other manufacturing	(1.4)	(1.9)
Construction		
	5.1**	3.6**
Retail	(1.7)	(1.3)
	10.3**	-0.5
Other Services	(2.8)	(1.8)
V	1,168	1,168

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

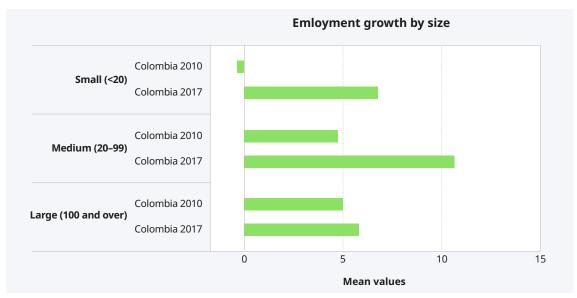
Note: Standard errors in parenthesis.

Large firms in Turkey employ 28 times more personnel than small firms and 10 times more than medium size enterprises. The ratios have not changed during the last three years (2015-2018).

The results show that employment growth in Turkey has taken place mainly in medium and large sized firms. During 2009-2012 the employment growth was larger in medium-sized firms, but small and large firms' employment grew as well.

During 2015-2018, employment growth was explained by medium and large firms. Small-sized firms employment growth was practically zero. The growth of employment in medium-sized firms has been stronger during 2009-2012. The analysis by sector shows a sharp employment decline in the manufacturing sector which are (some of them) high-complexity sectors.





Source: World Bank Enterprise Surveys. Colombia 2010 and 2017.

	Colombia	Colombia
	2007-2009	2014–2016
Sec. 11 (420)	-0.4	6.8**
Small (<20)	(3.4)	(1.6)
Madium (20.00)	4.7*	10.6**
Medium (20-99)	(2.4)	(1.9)
L (400 t)	5.0**	5.8**
Large (100+)	(2.4)	(2.4)
N	921	913

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

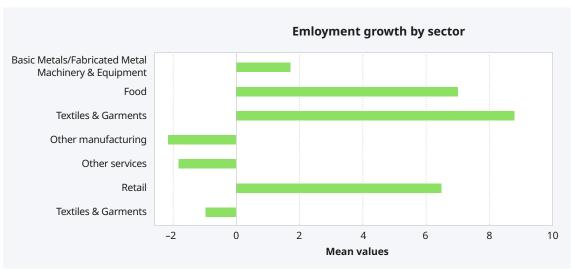
Note: Standard errors in parenthesis.

Figure 22. Growth of employment by sector in Colombia 2010 (page 27) and 2017 (page 28)



Source: World Bank Enterprise Surveys. Colombia 2017.





Source: World Bank Enterprise Surveys. Colombia 2010.

Sector	Colombia	Colombia
	2007–2009	2014-2016
Food	8.8**	11.4**
Food	(2.7)	(2.5)
Textiles and garments	-0.9	0.16
	(4.1)	(4.3)
Other Manufacturing	-2.2	5.8**
	(3.9)	(1.8)
2	6.5**	11.9**
Retail	(2.9)	(1.9)
	-1.8	7.8**
Other Services	(4.8)	(1.9)
	7.0**	
Chemicals, Plastics & Rubber	(2.8)	
N	921	913

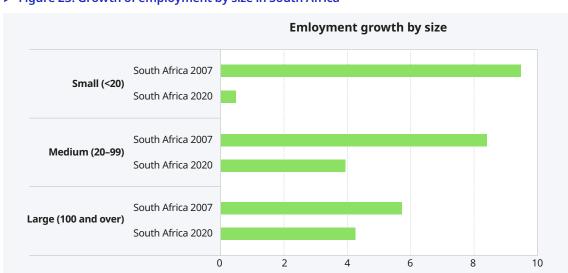
Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Large companies in Colombia employed 22 times more personnel than small enterprises in 2017 while medium size companies employ almost three times more personnel than small ones. These ratios have not changed during the last three fiscal years (2014-2017).

The calculations suggest that employment growth in Colombia has been driven mainly by medium and large firms in 2007-2009 and medium firms in 2014-2016. The analysis by sector shows no changes in the productive structure between the two periods.



▶ Figure 23. Growth of employment by size in South Africa

Source: World Bank Enterprise Surveys. South Africa 2007 and 2020.

	South Africa	South Africa
	2007	2020
Small (<20)	9.5***	0.5
	(0.7)	(0.6)
Medium (20-99)	8.4***	3.9***
	(0.5)	(0.7)
(400.)	5.7***	4.3***
Large (100+)	(0.7)	(0.8)
I	808	1,066

Mean values

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

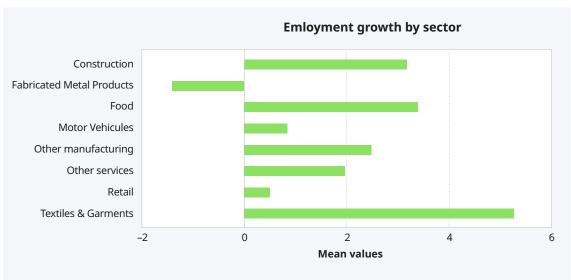
Note: Standard errors in parenthesis.

► Figure 24. Growth of employment by sector in South Africa, 2003–2006 (page 29) and 2016–2019 (page 30)



Source: World Bank Enterprise Surveys. South Africa 2007.

Figure 24. (Cont.)



Source: World Bank Enterprise Surveys. South Africa 2020.

Sector	Employment creation/destruction by sector		
	2003-2006	2016-2019	
Food		3.4***	
F000		(1.5)	
Textiles and garments		5.3**	
		(1.42)	
Fabricated metal products		-1.4	
rauntateu metal products		(3.53)	
Makawahida		0.9	
Motor vehicles		(2.5)	
Manufacturing	8.5**		
ivianuracturing	(0.45)		
Other manufacturing		2.5***	
Other manufacturing		(0.71)	
Construction		3.2***	
Construction		(1.18)	
Detail	9.1	0.5	
Retail	(1.14)	(1.1)	
Otherware		1.9**	
Other services		0.6	
N	808	1,066	

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Large companies in South Africa employed around 30 times more personnel than small enterprises in 2020 while medium size companies employ almost four times more personnel than small ones.

The results show that employment growth in South Africa has been driven mainly by small and medium sized firms in the 2003-2006 period. However, employment growth of small firms between 2016 and 2019 has been practically zero. The analysis by sector shows that employment growth has been larger in the textiles and garments sector. The growth rates of the rest of sectors are statistically the same.

3.3 Production costs

The ES data indicate that inputs used in production represent the largest costs, followed by labour and energy. There are variations in the importance/weight depending on the country and sector. For instance, the cost of fuel and energy are relevant for large firms working in manufacturing.

▶ Table 8. Cost structure in Vietnam in 2015 - percentage

	Small	Medium	Large		
	Weight over total cost				
Labarra	2.4**	0.8	10.7**		
Labour	(0.3)	(0.7)	(3.5)		
Raw materials and intermediate	76.0**	12.5	69.1**		
goods used in production - inputs	(1.3)	(11.5)	(7.6)		
For all a	0.3	0.2	3.2		
Fuels	(0.2)	(0.2)	(1.9)		
	0.5**	0.2	1.3**		
Electricity	(0.2)	(0.1)	(0.4)		
Average costs in LCU millions	31,149	245,752	405,410		

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

In Vietnam, raw materials and intermediate goods used in production (capital) accounts for more than 70 percent of total costs, and labour accounts for 2-11 percent depending on size. The results show that the proportion of the labour and energy costs of large firms are higher than the proportion in small ones which means that intermediate goods costs might be larger in small firms. Actually, the cost of inputs per total annual sales is lower in medium and large firms compared to small ones. This result might imply that large firms are working on manufacturing or services that are more labour intensive than small ones.

The sectorial analysis suggests that textiles and garments (11.1 percent) and other manufacturing (9.8 percent) might be the sectors that exhibit the largest proportion of labour costs, but the results are only valid for low levels of statistical confidence.¹⁸ Moreover,

¹⁷ The difference in the proportion of energy costs is significant at 80 percent of confidence.

¹⁸ The results are statistically different at 60 percent of confidence.

manufacturing (except textiles and garments and fabricated metal and non-metallic mineral products) is the sector with the largest proportion of input costs.

► Table 9. Cost structure in Colombia 2017 – percentage

	Small	Medium	Large
		Weight over total cost	
Labore	12.5	27.7**	19.4**
Labour	(13.8)	(3.8)	(1.4)
Raw materials and intermediate	29.7	64.3**	72.0**
goods used in production – inputs	(33.4)	(4.5)	(3.4)
	3.2	3.0**	4.4**
Electricity	(3.5)	(0.5)	(1.5)
Average cost in LCU millions	1,028	2,381	48,312

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Unfortunately, the estimations for Colombian small firms are non-informative, so we were not able to derive conclusions for this group (Table 9). The data for large and medium firms suggests that raw materials and intermediate goods are the main costs of production.

The results suggest that large firms rely more on inputs (higher proportion of raw materials and intermediate goods used in production) than medium ones, and the former are also more productive. The cost of inputs per unit of sales is lower in large compared to small and medium firms. The sector analysis did not suggest differences in the labour and capital costs proportions across sectors, which might be related to the small sample and large uncertainty in the estimations rather than actual similitudes.

► Table 10. Cost structure in South Africa – percentage

Cost	Small	Medium	Large
		Weight over total cost	
l abasin	46.3**	28.7**	37.9**
Labour	(3.7)	(11.1)	(11.6)
Raw materials and intermediate	45.0**	33.5**	42.3**
goods used in production – inputs	(4.1)	(13.9)	(11.5)
	7.0**	3.2**	17.4
Electricity	(1.3)	(1.2)	(10.7)
Average cost in LCU millions	2.02	12.4	31.5

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Our findings suggest that the proportion of labour and input costs are similar unlike other countries such as Vietnam and Colombia where the latter is clearly the most important cost of production. The results also indicate that medium-sized firms seem to be less labour-intensive than small and large ones, but the differences are significant at low levels of confidence. The proportion of input costs is similar in both small and large firms, but the cost of inputs per annual sales is lower in large compared to small firms which means that the latter use inputs more effectively.

The sector analysis suggests differences in the proportion of labour costs. Around 60 percent of the total costs in the food and beverages are expenses to labour compared to fabricated metal products (20 percent), motor vehicles (27 percent) and other manufacturing (37 percent) which exhibit lower values. In contrast, motor vehicles (84 percent) and other manufacturing (40 percent) input costs are higher than food and beverages (27 percent). The sector with the highest electricity costs in proportion to total costs in the food and beverages sector.

► Table 11. Cost structure in Turkey

	Small	Medium	Large	
		Weight over total cost		
	13.7**	18.9**	23.2**	
Labour	(0.7)	(2.4)	(2.2)	
Raw materials and intermediate	39.7**	39.5**	40.0**	
goods used in production – inputs	(3.9)	(1.6)	(2.3)	
F I .	2.5**	2.1**	2.4**	
Fuels	(0.2)	(0.3)	(0.3)	
Electricity.	4.0**	3.0**	3.8**	
Electricity	(0.4)	(0.6)	(0.4)	
Average cost in LCU millions	7.7	14.2	26.6	

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

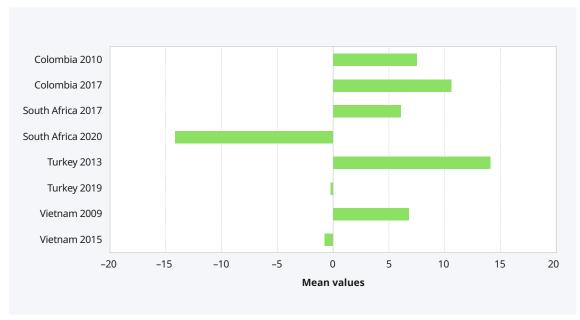
In the case of Turkey, input costs, fuels and electricity share over total costs is similar for all firms regardless of their size. Large firms exhibit slightly higher proportion of labour costs than small firms. The input and labour costs per unit of sales are similar for all firms regardless of their size.

The sector analysis suggests no difference in the proportion of labour costs across industries. Fabricated metal products (55.4 percent) and Machinery and Equipment (44.6 percent) are the sectors with the highest proportion of input costs. Fabricated metal products (4.4) are the sector with the highest electricity costs.

3.4 Business performance: sales growth and profits

This section seeks to assess business performance measured with sales growth and profits for the selected countries.

The real annual sales growth has declined over the last years, except for Colombia. Firms in Turkey and Vietnam have experienced a sales growth deceleration. Sales growth in Turkey in the 2015-2018 period are practically zero compared to 14 percent growth during 2009-2012.



▶ Figure 25. Real annual sales growth (%) last available surveys

Source: World Bank Enterprise Survey.

2011-2014			
	2013–2016	2015-2018	2016-2019
-3.05	13.17**	-0.16	-16.0**
(3.1)	(2.2)	(1.09)	(1.2)
0.92	6.87**	-0.23	-14.2**
(3.1)	(2.54)	(1.42)	(1.6)
5.10***	6.31**	-2.54	-2.8
(2.2)	(2.05)	(1.76)	(3.4)
895	875	1,404	1,049
	(3.1) 0.92 (3.1) 5.10*** (2.2)	(3.1) (2.2) 0.92 6.87** (3.1) (2.54) 5.10*** 6.31** (2.2) (2.05)	(3.1) (2.2) (1.09) 0.92 6.87** -0.23 (3.1) (2.54) (1.42) 5.10*** 6.31** -2.54 (2.2) (2.05) (1.76)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

The same is observed in Vietnam where sales growth in the period 2011-2014 are zero compared to rates over 6 percent during 2005-2008. The large negative growth observed between 2016-2019 shown in the South Africa 2020 survey is probably related with the early effects of the Covid19 pandemic and the worsening electricity crisis since 2015, which has been hitting hard on businesses disrupting their operation and profitability.

The results suggest that sales growth have been larger in small firms in Colombia between 2013-2016, but large and medium-sized firms' sales have grown as well. Most of the large negative growth in South Africa might be due to the poor performance of small and medium-sized firms which exhibited a significant decline during 2016-2019. Large firms show no growth during the same period. In Vietnam, only large firms have exhibit sales growth during 2011-2014 and in Turkey all firms have exhibited practically zero sales growth.

Table 12.	Average	profits by	y firm size	(in thousands o	of deflated 2009 US)

Firm size	Vietnam	Colombia	Turkey	South Africa
	2015	2017	2019	2020
c "	1,126.1**	2,824.4	2,147.1**	277.7**
Small	(321.0)	(2662)	(174.6)	(53.6)
Medium	1,644.0**	2,554.3**	5,210.6**	900.3**
	(305.7)	(733.3)	537.2	(145.4)
	8,666.1**	11,163.2**	9,315.2**	3,313.5 **
Large	(3,809.5)	(2,313.1)	(769.9)	(905.1)
N	949	993	1,663	1,097

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

The average profits were calculated subtracting total labour and raw materials and intermediate goods used in production costs from total annual sales. Overall, the results suggest that firms' size is positively correlated with profits. In fact, profits of large firms are higher than medium and medium higher than small ones for all countries.

► Table 13. Average profits by sector (in deflated USD 2009)

Sector	Vietnam	Colombia	Turkey	South Africa
	2015	2017	2019	2020
- 1	-1,595.3	2,552.1**	3,703.3**	2,728.3**
Food	(3,548.7)	(536.2)	361.0	(1,341.4)
Tartiles 0 Comments		1,184.5**	4,256.0**	544.6 **
Textiles & Garments		(533.5)	(728.0)	(209.7)
C	1,531.5**		2,848.2**	
Garments	(374.3)		(468.3)	
Non-metallic mineral	1,260.4**			
products	(218.6)			
	645.5**		2,855.0**	890.3**
Fabricated metal products	(156.5)		(624.8)	(317.9)
	2,694.1**	1,314.7**	2,758.5**	996.7**
Other manufacturing	(1,223.3)	(369.8)	(444.2)	(326.5)
NA-ta				5,178.0
Motor vehicles				(3,858.0)
			4,746.3**	
Machinery & Equipment			(679.9)	
			4,168.7**	661.4**
Construction			(548.4)	(179.4)
D-4-il	473.2**	780.7**	1,915.8**	774.9
Retail	(137.6)	(282.2)	(220.2)	(218.4)
	2,409.5**	5,344.2	3,017.9**	497.4**
Other services	(524.9)	(2,895.2)	(356.3)	(139.9)
N	996	993	1,663	1,097

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Overall, the retail sector reports the lowest profit levels. Firms working on retail are mainly small and employ most personnel in all countries. Moreover, the retail sector exhibit low complexity and paid lower remunerations than companies working on high-complexity industries (such as manufacturing or electronics and textiles & garments).

As expected, high and/or medium complexity industries are the ones that exhibit the largest profits. For instance, in Vietnam, manufacturing and garments sectors exhibited the largest average profits in 2015 while retail and services reported the lowest values. In Turkey, machinery and equipment and textiles & garments exhibited the largest average profits followed by food and construction. The lowest average profits were reported by retail sector. In South Africa and Colombia, the most productive sectors are related with the manufacturing sector (food, fabricated metal products and other manufacturing) and the least productive is the retail sector.

To understand the factors that are correlated with average profits we ran a multinomial regression taking as an example Colombia, which is the country that exhibited the largest gap between large and small companies. The dependent variable was obtained by taking the logarithms of the average profits.

The estimations show that courts and tax administration obstacles are negatively correlated with medium companies' profits while crime, theft and disorder is negatively correlated with large companies 'profits. Interestingly, business licensing and permits; access to land; tax administration; inadequately educated workforce, and labour regulations obstacles seem to be affecting large companies' profits. The reason might be that these obstacles are more relevant for large companies which are the ones that exhibit higher profits compared to medium and small companies (see Annex for more detail).

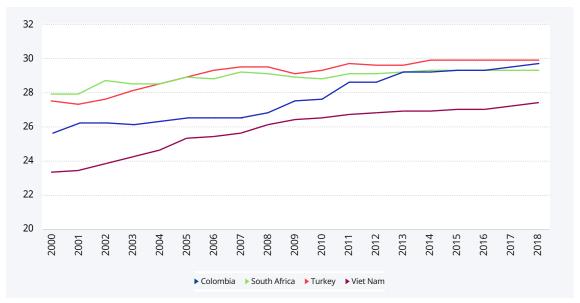
Business environment



▶ 4. Business environment

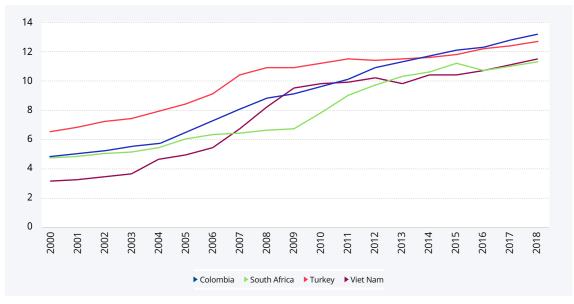
This section takes a closer look at the relationship between business environment variables and the performance of companies using the PCI and ES data. The former was used to describe changes in the use and access to energy, accessibility and integration of ICT, transportation infrastructure and quality of institutions and regulations from 2000 to 2018, and the latter to understand the main obstacles on firms' operations.

▶ Figure 26. Energy scores – availability, sustainability, and efficiency of power sources



Source: Productive Capacity Index, Energy Component.

► Figure 27. Information and Communication Technology Scores

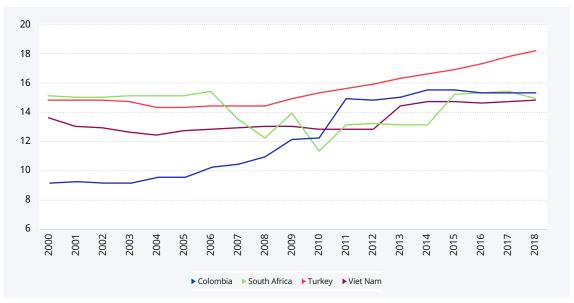


Source: Productive Capacity Index, Energy Component.

The energy component measures among other variables, the use and access and total energy consumption per capita. The energy score has increased for all the economies since 2000, mainly in Colombia and Vietnam, which might indicate a more dynamic productive sector. Unfortunately, the score does not show energy prices comparisons across countries.

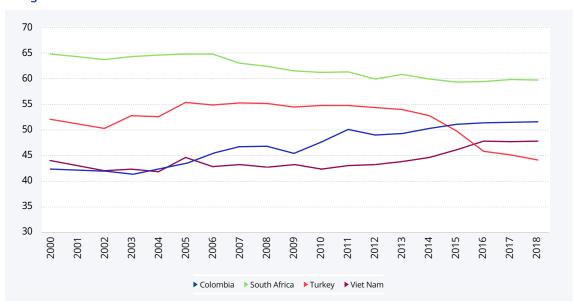
The ICTs component shows the accessibility to fixed lines, broadband subscriptions, mobile phones, and internet. All the economies show a steady growth in the access to information and communication technology since 2000.

► Figure 28. Transport scores



Source: Productive Capacity Index, Transport Component.

► Figure 29. Institutions score



Source: Productive Capacity Index, Institutions Component.

Transport measures the capability of a system to take people or goods from one place to another. It is defined as the infrastructure coverage of roads and railways network, and air connectivity. Colombia and Turkey exhibit an important improvement in the transportation infrastructure and air connectivity while Vietnam's and South Africa's transport score have remained practically unchanged.

The institutions component is measured using selected indicators from the World Governance Index: control of corruption, government effectiveness, political stability and absence of violence, regulatory quality, rule of law, and voice and accountability. Colombia and Vietnam are the economies that have improved the overall institutions score while South Africa and Turkey institutions score got worse.

The business environment is context dependent and affect companies differently in each country. Likewise, the obstacles reported are not the similar for small, medium, and large enterprises.

► Table 14. Obstacles affecting firms 'operations, Colombia 2017

Colombia

Obstacles	Small	Medium	Large	Total
Access to finance	7.7	9.2	2.4	7.5
Access to finance	(1.9)	(2.7)	(1.3)	(1.5)
Business licensing and	4.4	0.0	0.1	0.3
permits	(0.4)	(0.0)	(5.5)	(0.3)
	11.1	14.4	15.7	12.7
Corruption	(2.4)	(4.1)	(6.4)	(1.9)
	0.5	4.6	7.1	3.0
Crime Theft Disorder	(0.3)	(2.3)	(4.4)	(0.9)
nadequately educated	8.5	6.1	9.2	7.7
vorkforce	(2.3)	(2.2)	(4.6)	(1.6)
	4.1	6.0	19.9	6.3
Political instability	(1.3)	(2.1)	(7.3)	(1.3)
Practices of Competitors	23.4	18.9	13.4	21.2
Informal Sector	(3.0)	(3.6)	(4.6)	(2.2)
F	21.0	19.8	11.4	19.5
Tax rates	(3.2)	(3.9)	(2.6)	(2.2)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

In Colombia, approximately 20 percent of companies identified *practice of competitors in the informal sector and tax rates* as the main obstacles affecting operations. Indeed, around 21 percent of small, and 20 percent of medium companies reported tax rates are a major or very severe obstacles for their operations while 20 percent and 16 percent of large companies reported political instability and corruption as a major obstacle. Inadequately educated workforce seems to be a major problem for large companies.

The ES also ask companies about the level of severity of these obstacles. The data shows that 43 percent of medium, 36 percent of small and 30 percent of large companies reported

inadequately educated workforce as a major or very severe obstacle for operations. Moreover, around 23 percent of firms reported access to financer as a major or very severe obstacle. Finally, Colombia exhibited the highest proportion of companies that reported labour regulations as a major or very severe obstacle for their operations (See Annex).

► Table 15. Obstacles affecting firms' operations, Turkey 2019

	Small	Medium	Large	Total
	29.6	28.5	26.5	28.9
Access to finance	(3.7)	(4.9)	(6.3)	(2.9)
Inadequately educated	6.2	7.9	7.5	6.6
workforce	(1.8)	(2.1)	(2.5)	(1.4)
Political instability	20.9	19.0	17.6	20.8
	(3.3)	(4.2)	(5.3)	(2.7)
Practices of Competitors in	6.6	13.9	5.8	8.3
the informal Sector	(1.6)	4.1	2.3	(1.5)
	26.8	15.5	31.5	24.1
Tax rates	(3.5)	(3.1)	(7.7)	(2.7)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

 $\textbf{Note:} \ \textbf{Standard errors in parenthesis.}$

In Turkey, the most mentioned obstacles for companies of all sizes were *access to finance*, *political instability, and tax rates (Table 15)*. When firms were asked about the degree of severity, approximately 65 percent reported that political instability and tax rates were a major or very severe obstacle for operations. Access to finance was not identified as major or severe obstacles by most firms (25 percent).

▶ Table 16. Obstacles affecting firms 'operations, Vietnam 2015

	Small	Medium	Large	Total
	19.2	25.7	20.4	21.8
Access to finance	(4.3)	(5.5)	(5.6)	(3.1)
Access to land	13.0 (4.1)	5.1 (1.7)	6.9 (4.1)	9.4 (2.3)
Inadequately educated workforce	8.9 (2.7)	8.8 (2.7)	24.2 (4.7)	10.7 (2.1)
Political instability	1.8 (0.8)	3.4 (2.8)	4.2 (1.9)	2.7 (1.1)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Obstacles to operations affect firms in different ways depending on their size. For instance, 20 percent of large firms reported that access to *adequately educated workforce and labour regulations* were a major or very severe obstacle for their operations. Interestingly, educated workforce was not identified as a severe obstacle for medium and small companies. However, almost 10 percent of small and medium *companies identified practices of competitors in the informal sector* as a major or very severe obstacle. For large firms the proportion of this last obstacle was less than 1 percent.

Access to finance was the most reported obstacle in small, medium, and large companies in Vietnam, followed by the practice of competitors in the informal sector. Around 12 percent of large firms reported that access to finance, practice of competitors and access to adequately educated workforce were a major or very severe obstacle for their operations. Unlike in Colombia, labour regulations were not reported as major obstacle. Only 5 percent of small and less than 2 percent of medium and large companies reported it as a major or very severe obstacle for operations.

▶ Table 17. Obstacles affecting firms 'operations, South Africa 2019

	Small	Medium	Large	Total
Access to finance	20.1	10.5	6.8	15.8
Access to illiance	(2.0)	(2.2)	(2.8)	(1.4)
Electricity	48.1	64.5	71.1	55.5
Licetricity	(2.5)	(3.2)	(5.3)	(1.7)
	14.1	10.2	8.0	12.2
Political instability	(1.9)	(2.0)	(3.4)	(1.3)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

South African companies face challenges which are different from Colombia, Turkey, and Vietnam. Approximately 56 percent of companies reported that access to electricity was an obstacle to operations, followed by access to finance and political instability. Access to electricity affects mainly large firms which ae probably operating in certain manufacturing sectors which require electricity more than other sectors. In addition, small firms seem to be more affected by access to finance constraints than medium and large firms.

Unlike Colombia, Turkey, and Vietnam, less than 10 percent of companies in South Africa mentioned that access to finance was a major or very severe obstacle. Finally, inadequately educated workforce and labour regulations do not seem to be a problem for companies in South Africa. Less than 2 percent of companies reported them as a major or very severe obstacles.

5 Management practices



▶ 5. Management practices

This section analyses the differences on the management practices between small, medium, and large enterprises and the relationship with enterprises' performance. We analysed the following variables: a) how companies handled problems in production or provision of services; b) the use of performance indicators; and c) the existence of a written business strategy.

With respect to practices for dealing with production or service problems, the ES does not show differences in the management practices between enterprises by firms' size.

▶ Table 18. Actions when problem in production or provision of services arose

What best describes what happened when problem in production or provision of services arose?	Firm size	Colombia	Turkey	South Africa
		2017	2019	2020
ixed it but no further action	Cmall	6.5		7.2
nxed it but no further action	Small	(2.0)		(1.3)
	Medium	7.8	3.4	6.0
	Wedium	(2.9)	(1.7)	(1.5)
	Laura	3.3	1.9	9.0
	Large	(2.1)	(1.0)	(3.4)
ixed and further action		43.2		88.5
	Small	(3.8)		(1.7)
		(=-=,		,
	Medium	29.3	67.3	89.3
	Wediam	(4.3)	(5.4)	(2.0)
	Large	43.0	64.8	84.4
	Large	(7.9)	(6.8)	(4.8)
ixed further action and continuous improvement		48.8		3.3
	Small	(3.8)		(0.9)
		(===)		(,
	Medium	62.3	28.9	4.6
	Wediam	(4.7)	(5.4)	(1.4)
	Large	53.8	30.6	5.1
	Large	(7.8)	(6.7)	(3.3)
No action				0.9
	Small			(0.4)
				(0.7)
	Medium		0.3	0.0
	ivieululli		(0.1)	(0.0)
	1		2.7	1.5
	Large		(2.1)	(1.5)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

The estimations do not show differences within countries. The cross-country analysis shows that in Colombia, 55 percent of companies acted and followed up with continuous improvement measures while in Turkey (65 percent) and South Africa (88 percent) fixed the problem but did not take further actions. Future research could focus on understanding if these differences across countries affect firms' performance.

► Table 19. Monitoring of production performance indicators

How many production performance indicators were monitored?	Firm size	Colombia	Turkey	South Africa
		2017	2019	2020
From 1 to 2	Small	20.5		26.7
From 1 to 2	Small	(3.0)		(3.6)
	Medium	12.4	28.7	21.3
	iviedium	(2.6)	(9.0)	(5.6)
	Laura	6.5	7.7	24.0
	Large	(3.9)	(1.5)	(12.4)
	Small	49.0		48.8
From 3 to 9	Smail	(3.8)		(4.8)
		51.9	49.8	31.8
	Medium	(4.8)	(9.3)	(6.2)
		43.0	52.1	18.3
	Large	(7.5)	(7.9)	(6.4)
10	Consti	10.4		24.4
10 or more	Small	(2.4)		(4.4)
		20.5	21.5	46.9
	Medium	(3.9)	(6.5)	(6.4)
		49.5	40.1	57.6
	Large	(7.7)	(7.9)	(12.9)
N. * 1.	6 "	20.0		
No Indicators	Small	(3.1)		
		15.2		
	Medium	(3.5)		
		0.9		
	Large	(0.3)		

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

With respect to the use of performance indicators, the results show that large companies use more indicators to measure their operations performance compared to small companies. Most of the estimations do not show statistically significant differences between small, medium, and large companies. Nevertheless, we observed some differences in Colombia and Turkey. For instance, in Colombia, a higher percentage of small enterprises (20.1 percent) used no performance indicators compared to large enterprises (only 3.8 percent did not use them). In South Africa, small companies tend to use only 1-2 indicators compared to medium and large ones that in average use more performance indicators. Indeed, a lower percentage

of small enterprises reported that use performance indicators (21 percent) compared to medium enterprises (31 percent).

▶ Table 20. Proportion of firms that responded affirmative, Turkey 2019

Size	Does firms have formalized written strategy?	Do firms have Board of Directors or Supervisory Board?	Firm part of membership organization / Trade association, etc.
- "	21.9	26.1	90.5
Small	(3.1)	(3.0)	(2.3)
	31.0	43.5	89.4
Medium	(4.5)	(5.1)	(3.8)
	56.3	70.8	80.6
Large	(6.9)	(6.3)	(8.4)
T-4-1	25.2	31.7	89.9
Total	(2.5)	(2.5)	(1.9)

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

Finally, we explored how a formal written strategy affects sales. Unfortunately, Turkey was the only country from the sample with these questions in the survey. The results show that large companies are more likely to have formalized written strategies compared to medium and small enterprises. In addition, a larger proportion of large enterprises have their own board of directors and/or supervisory boards that help them planning their strategies and monitor operations and objectives' accomplishments.

► Table 21. Annual sales determinants, Turkey 2019

	(1) Restricted1	(2) Restricted2	(3) Full
Variables	Annual sales	Annual sales	Annual sales
Have a written strategy (Yes)	253,764***	252,345***	294,456***
	(91,110)	(88,227)	(86,106)
Log experience of firms		4.235e+06	-5.376e+06**
		(6.579e+06)	(2.568e+06)
Squared Log		-135,686	471,949
of experience of firms		(929,980)	(327,835)
2. Medium			1.089e+07***
			(2.842e+06)
3. Large			5.721e+07***
			(8.031e+06)
2. Texiles			7.067e+06*
			(3.848e+06)

► Table 21. (Cont.)

	(1) Restricted1	(2) Restricted2	(3) Full
/ariables	Annual sales	Annual sales	Annual sales
3. Garments			-5.470e+06**
			(2.657e+06)
4. Fabricated Metal Products			124,359
			(4.097e+06)
5. Machinery & Equipment			-1.253e+06
			(7.151e+06)
6. Other Manufacturing			5.533e+06*
			(3.160e+06)
7. Construction			-460,458
			(4.701e+06)
8. Retail			1.959e+07
			(1.286e+07)
9. Other services			2.535e+06
			(5.415e+06)
Capacity utilization			37,885
			(34,592)
Managers' experience			408,417
			(465,621)
Square of managers experience			-3,891
			(9,750)
Constant	1.326e+07***	2.908e+06	2.946e+06
	(4.154e+06)	(9.534e+06)	(7.028e+06)
Observations	1,632	1,613	1,108
R-squared	0.003	0.004	0.135

Source: World Bank Enterprise Surveys.

*** Significance at 99 percent, **95 percent and * 90 percent of confidence.

Note: Standard errors in parenthesis.

To determine possible correlations between having a written strategy with annual sales, we ran a multinomial regression model to determine possible correlations between having a written strategy and annual sales. After controlling for experience of firms, size, sector, capacity utilization and managers experience, the results suggest that having a written strategy is positively correlated with annual sales and thus, could be an important strategy to support companies' growth.

6 Conclusions



▶ 6. Conclusions

The overall results are country-dependent and differ mainly between small, medium, and large enterprises rather than across sectors.

At the firm level, the ES results indicate that most of the firms are small with a low proportion of large firms even considering that the sample was restricted to formal business of the manufacturing and service sectors. As discussed, these results are not representative for the whole country because the sample only focuses on the most economically active regions and on formal companies with more than 5 employees. The percentage of small companies could be much higher if the sample would consider the agricultural sector, microenterprises with less than 5 employees, own-accountant workers, and enterprises from lagging regions.

Despite the sample restriction of the surveys, the results suggest that most of the companies are small and belong to the retail sector, which exhibited the lowest average profits, productivity, and levels of complexity.

The panel data shows an increase in the proportion of companies working in the service sector and retail commerce in all countries, matched by a decline of enterprises working in high complexity industries such as manufacturing, electronics, and fabricated metal products. That explains the slight increase of small companies during the last decade most of which are working on low-productivity industries. The observed decline of companies working in manufacturing industries hinders the possibility of countries to start or sustain the structural transformation toward high-complexity industries.

In the last section, we took a closer look at the relationship between business environment variables and the performance of companies by size and sector. The results indicate that the business environment affect companies differently in each country. Political instability and tax rates were the main obstacles in Colombia; political instability, inadequately educated workforce and labour regulations in Turkey; access to finance and practice of competitors in the informal sector in Vietnam; and access to electricity and access to credit in South Africa.

Likewise, the obstacles reported are not the same for small, medium, and large enterprises and governments would need to address these issues with targeted policies considering sector and size differences. For instance, large companies were more worried about access to adequately educated workforce and labour regulations while small and medium companies were more concern about practices of competitors in the informal sector. Less than 1 percent of large companies mentioned informal competition as a major or very severe obstacle.

Moreover, the business-environment analysis show that businesses could benefit from improved access to ICTs and transportation infrastructure to boost productivity and reduce export/import costs. In this respect, EBMOs could focus their efforts on helping enterprises adapt their business models and operations towards the use of digital technologies.

The report did not find a clear relationship between the use of performance indicators and companies' performance. Unfortunately, most of the estimations do not show statistically significant differences between small, medium, and large companies, thus conclusions were not able to de derived. Despite that, the results show that large companies use more performance indicators than small companies and this could make a difference in the achievement of annual objectives.

Regarding formalized written strategies, the results show that large enterprises are more likely to have them compared to medium and small enterprises. In addition, a larger proportion of large companies have their own board of directors and/or supervisory boards that help them plan their strategies and monitor operations and objectives' accomplishments. After

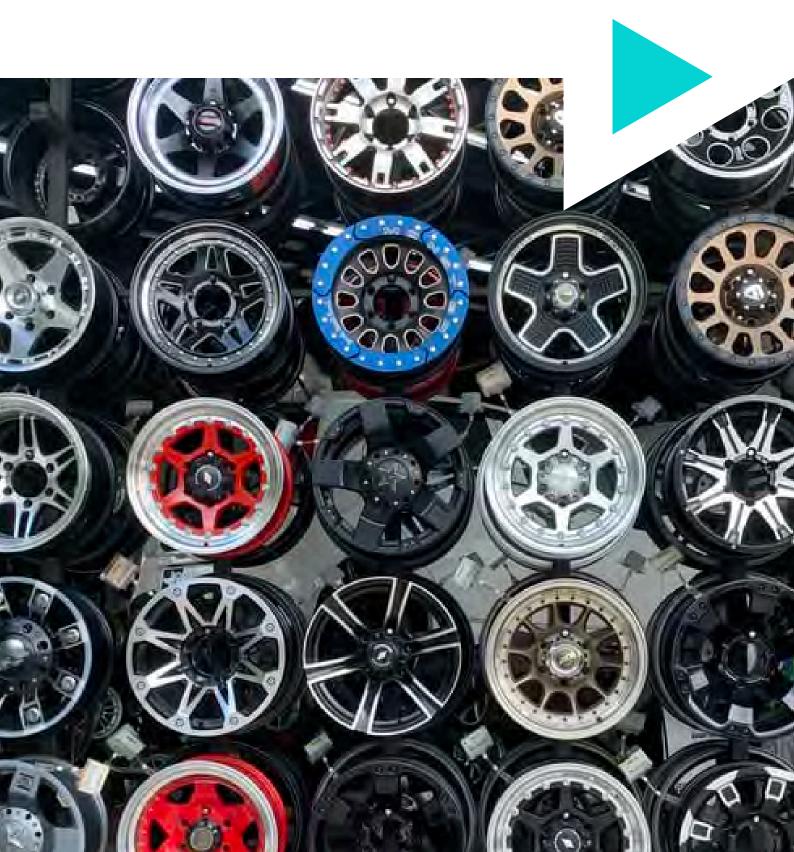
controlling by experience of firms, size, sector, capacity utilization and managers' experience, the results show that having a written strategy is positively correlated with annual sales. EBMOs could revise or devise services and tools to support their members, in particular SMEs, in designing or upgrading business strategies.

Enterprises perceive obstacles in different ways depending on the country, size and sector. In Colombia, for instance, EBMOs could focus on supporting members in dealing with unfair competition from informal economic units, an important concern mainly cited by SMEs. Moreover, by identifying skills in demand and contributing to the design of vocational training courses offered by public and private institutions, EBMOs could also play a leading role to help reduce skills mismatches and increase the availability of an adequately educated workforce, which is one of the main concerns for large enterprises. In addition, advocating for a policy reform agenda to improve courts, tax administrations and labour regulations, which were found to be affecting large enterprises' profits, could also be priority areas to devise policy reform agendas by business organizations.

In Turkey, EBMOs could focus on facilitating access to finance, reduce taxes and improve labour regulations to address SMEs' major concerns. In South Africa, improved access to electricity, a major concern that has led to an energy crisis because of insufficient generation capacity, is a key policy area that if left unattended could hinder sustainable enterprise development. In all countries, but mainly in South Africa and Vietnam, governments could play a more proactive role to promote research and development and foster innovation and productivity.

Finally, the structural transformation toward higher-complexity industries requires an improvement of the overall productive capacity. Hence, productive development policies are essential to support small firms in reaching a minimum efficient scale and economic viability, which is indispensable for decent job creation and the employment recovery in the post-COVID-19 environment. Among the selected emerging-market economies, the economic sectors with high potential to diversify include *industrial machinery* in all four countries and *goods of iron or steel* (Colombia), *electrical machinery and equipment* (Turkey and Vietnam), and *paper and paperboard* (South Africa). In this respect, business organizations could also focus on advocating for policies that enable SME productivity growth, and structural change and diversification towards higher-value added economic activities to *build forward better*.

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8 Annex



▶ 8. Annex

Costs per unit of sales

▶ Vietnam 2015

	Small	Medium	Large
	Cost per u	nit of sales	
l ale accordant	0.19***	0.21***	0.19***
Labour cost	(0.02)	(0.03)	(0.019)
Raw materials and intermediate	0.40***	0.49***	0.44***
goods used in production	(0.03)	(0.028)	(0.04)
C++	1.41***	0.92***	0.97***
Cost to repurchase all machinery	(0.54)	(0.29)	(0.47)
Cost monds for recall (comisse)	1.22***	0.61***	0.34***
Cost goods for resell (services)	(1.11)	(0.11)	(0.007)

Source: World Bank Enterprise Surveys. **Note:** Standard errors in parenthesis.

► Colombia 2017

	Small	Medium	Large
	Cost per u	nit of sales	
	0.26**	0.26**	0.21**
Labour cost	(0.02)	(0.02)	(0.02)
Raw materials and intermediate	0.40**	0.35**	0.50**
goods used in production	(0.02)	(0.02)	(0.02)
Cost to you webses all possions	0.72**	0.57**	0.35**
Cost to repurchase all machinery	(0.12)	(11.7)	(5.7)
Ct	0.57**	0.57**	0.51**
Cost goods for resell (services)	(0.06)	(0.06)	(0.02)

Source: World Bank Enterprise Surveys. **Note:** Standard errors in parenthesis.

► South Africa, 2020

	Small	Medium	Large		
Cost per unit of sales					
Labour cost	0.29**	0.27**	0.27**		
Labour cost	(0.01)	(0.02)	(0.03)		
Raw materials and intermediate	0.19**	0.19**	0.19		
goods used in production	(0.02)	(0.02)	(0.05)		
C	4.6 **	2.6**	2.5*		
Cost to repurchase all machinery	(1.6)	(0.4)	(1.4)		
Cook was do fou word!! (com issa)	0.17**	0.13**	0.18**		
Cost goods for resell (services)	(0.02)	(0.03)	(0.06)		

Source: World Bank Enterprise Surveys. **Note:** Standard errors in parenthesis.

► Turkey 2019

	Small	Medium	Large
	Cost per u	nit of sales	
l about cost	16.9**	16.0**	18.7**
Labour cost	(1.1)	(2.1)	(2.6)
Raw materials and intermediate	0.21**	0.26**	0.24**
goods used in production	(0.019)	(0.03)	(0.017)
	0.59**	0.33**	0.63**
Cost to repurchase all machinery	(0.06)	(0.03)	(0.14)
Contract de fourment (consiste)	0.29**	0.36**	0.13**
Cost goods for resell (services)	(0.03)	(0.016)	(0.04)

Source: World Bank Enterprise Surveys. **Note:** Standard errors in parenthesis.