



International
Labour
Organization

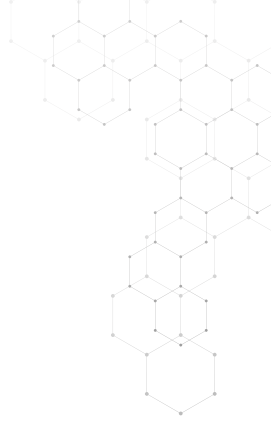


وزارة التخطيط والتنمية الاقتصادية
Ministry of Planning and Economic
Development



►► On Productivity Performance in Egypt: What is at **Stake**?





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In a nutshell

- Using the Egyptian Economic Census of 2013 and 2018, this note provides estimates of total factor productivity by economic activity, firm size, gender, formality status, and sector of ownership. This note summarizes a more technical paper that describe in further detail the methodology and findings of this exercise.
- The main findings show TFP losses across most economic activities over the two periods observed (2013 and 2018), with the exception of crude petroleum, motor vehicles, and some services. This holds true also for most of the governorates especially large ones such as Cairo and Alexandria.
- Formal firms (whether private or public) are generally more productive than informal ones.
- The productivity gap between large and smaller firms declined between 2013 and 2018, given a severe decline of TFP in large firms.
- Overall, more is needed in the way of economic policy reforms that address firms' productivity and their ability to create better and more jobs.

² Zaki, C. (2022). Estimating total factor productivity in Egypt: Evidence from firm-level data. ILO/MPED working paper. Available at: [Estimating Total Factor Productivity in Egypt: Evidence from Firm-Level Data \(ilo.org\)](#)

Background

The Egyptian economy experienced several reforms during the last five years, especially starting 2016 when Egypt signed a three-year extended arrangement under the Extended Fund Facility (EFF) with the IMF in November 2016. A key focus so far has been on macroeconomic stabilization (reducing fiscal deficit, floating the Egyptian currency, reducing oil and electricity subsidies, etc.), and a substantial improvement of macroeconomic aggregates has been achieved. Indeed, in 2019, GDP growth rate reached 5.6%, inflation rate decreased to 9.4%, unemployment rate reached 7.9%, overall fiscal deficit 8%, and international reserves increased to reach USD 44 billion.

Thus, while different macro stabilization programs made the Egyptian economy resilient during the pandemic, it did not help address the deep root causes related to Egypt's structural problems. This is why poverty increased to reach 32.5% in 2018—up from 27.8% in 2015, but decreased to 29.7% in 2020. Underemployment, informal, and precarious forms of employment, have also progressed significantly (Amer et al, 2021). Moreover, the contribution of the private sector to the economy has been substantially decreasing and the total factor productivity did not increase over time.

Against this background, the objective of this policy note is threefold. First, using data provided by the Central Agency for Public Mobilization and Statistics (CAPMAS), namely the Economic Census of 2013 and 2018, this paper estimates the total factor productivity of Egyptian firms.

Second, it tries to provide potential explanations behind the deteriorating total factor productivity. Third, it concludes with some policy recommendation to change these trends.

Main Findings

Using the Economic Census of 2013 and 2018, this paper estimates the total factor productivity (TFP) of Egyptian firms. TFP gains result from different factors such as technological change, education, research, and development. TFP is analyzed from different perspectives - economic activities, firm size, governorates, gender, formality status, and sectors. Labor unit costs, being perceived as a broad measure of international price competitiveness, are also estimated from the Economic Census (EC) data. The two rounds of the EC include 62,108 and 170,330 observations, respectively in 82 two-digit activities across 27 governorates.

The main findings show that most of the economic activities at ISIC 2nd digit level experienced TFP losses over the two periods observed (2013 and 2018, see Figures A1-A3 in the appendix), with the exception of crude petroleum, manufacture of motor vehicles, and a few high-end services. Automotive production in Egypt consists mostly of assembly lines of international firms. Local components only accounted for 17% of the final product of the sector. A deepening of the industry would be crucial to increase its value added and employment impact. In the services sector, slight increases are observed in telecommunication, broadcasting activities, activities auxiliary to financial services, warehousing, water collection, and electricity. The most important increases took place in the civil engineering and architectural activities that also attract a lot of FDI in the construction sector.

At the firm size level (see Figure A4 in the appendix), as expected, we find that the larger the firm the more productive they are. While in 2013 large firms were more than twice as productive as smaller firms, the gap had narrowed by 2018. Given that the vast majority of jobs are in micro and small firms in Egypt, the decrease in productivity in these firms suggests a degradation of wages and job quality for most workers. Second, the erosion of productivity of large firms is concerning with respect to their capacity to compete with imports and in international markets. Moreover WBES data shows to what extent small firms are still facing several impediments especially in terms of crime, theft and disorder; electricity; labor regulations; practices of the informal sector; tax administration; tax rates and transportation more than large or medium firms do.

Considering the formality of firms (Figure A5), formal firms are generally more productive than informal ones. When the gender component is taken into consideration, public firms with women have on average a significantly higher TFP compared to those without women, whereas for the case of private firms, the difference is smaller. The positive association between women and TFP is particularly observed for the manufacturing sector (Figure A6). This confirms the importance of women in some manufacturing sectors where Egypt has a comparative advantage such as textile, readymade garments and processed food.

³ The EC included a question on whether the firm was registered.

Why Didn't Egypt Productivity Improve?

A Focus on Macroeconomic Stabilization

The main focus of Egypt's economic policy since 2015 has been to stabilize the economy. While this is necessary in the short term, it is not sufficient to resolve the structural problems related to competitiveness, productivity, investment, exports, and job creation. More particularly, the reform program that took place since 2016 led to a high economic growth rate that reached 5.6% in 2019 (up from 4.3% in 2016), inflation decreased to 13.8% (down from 23.3% in 2016), unemployment reached 7.9% (down from 12.7% in 2016), the overall fiscal deficit 8% (down from 12.5 in 2016), and international reserves increased to reach USD44 billion (up from 15 billion USD in 2016). In contrast, less reforms have been implemented in order to improve the investment climate, and competition. Yet, it is important to note that, in April 2021, the Government launched a structural reforms program that enhances the efficiency of the labor market and technical and vocational education and training. Moreover, it identified several dimensions required for the development of the institutional framework in order to promote the role of the private sector. More specifically, it targets the creation of a supportive and enabling environment for competition, facilitating and developing trade by removing obstacles, and upgrading the transport and logistics sectors.

A deteriorating investment climate and a decreasing contribution of the private sector

The general decrease in TFP (or increase in ULC) is clearly associated with a deterioration in the investment climate. Indeed, based on the World Bank Enterprise Surveys (2013, 2016 and 2020), several dimensions of the investment climate experienced a significant deterioration. Firms reported that while some constraints had improved significantly (political stability, electricity, access to land, and crime), five aspects deteriorated markedly (practices of the informal sector, corruption, tax administration, tax rates and customs and trade regulations). This suggests that the business climate, as it relates to government services to firms, and the regulation of competition, are still quite challenging for Egyptian firms.

In addition, bank credit to the private sector as a share of the total domestic credit has decreased from 46% in 2004 to 18% in 2018, while the share of credit to the government increased from 26% to 50% over the same period. This explains why the contribution of the private sector has been decreasing, with fewer investments.

An over-valued currency

Despite the announced move by the Egyptian Central bank to abandon its currency peg and allow the Egyptian plan to float in 2016, the currency remained actively managed (as per the classification of the IMF). A number of studies pointed to the currency remaining largely overvalued after this policy shift. Thus, while the nominal effective exchange rate was decreasing until 2020, the real effective exchange rate recovered fairly quickly its pre-floatation levels. This clearly weighs heavily on Egypt's foreign reserves that was already subject to pressures with the decrease in foreign direct investment and the capacity to export, two key economic performance measures that have failed to pick-up since 2016.

The Way Forward

The State has a key role to play in shifting an economy highly dependent on extractive industries and construction to a more diversified economy that relies more on the manufacturing sector, that can make better use of Egypt's abundant labour, including via export-promotion and import substitution channels. Clearly, the manufacturing sector is much more sensitive than the oil one when it comes to the quality of the investment climate (Karam and Zaki, 2019). In fact, extractive industries are less dependent on institutions since differentiated (manufactured) product (machines, high technology equipment, etc.) are traded through search and match between traders, customers, and suppliers. The process of search is facilitated by the quality of the institutions that increase the transparency and availability of the information flow (Rauch, 1999).

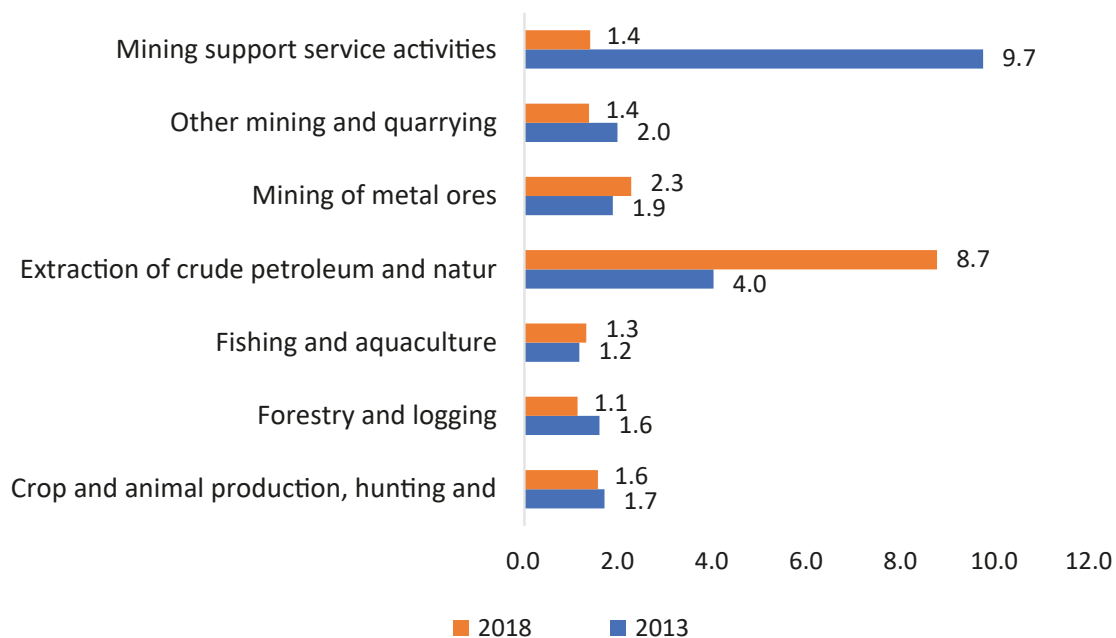
From a policy perspective, several points are worth mentioning. First, more structural and deeper reforms are needed in order to improve the investment climate, generate externalities, and help firms improve their productivity. This applies to competition policy, simplifying business procedures, fiscal and financial measures to bolster industrial development, and aligning trade policy with the industrial development goals. Second, on the monetary and exchange rate front, the Central Bank of Egypt should avoid managing an overvaluation of the Egyptian pound. These policy shifts are critical to diversifying beyond extractive industries and construction, boost FDI and exports and reversing Egypt's early de-industrialization. Finally, more policy focus is also needed to encourage firms to formalize and expand, by eliminating administrative barriers, reducing the regulatory burden and red tape that will lower compliance costs for informal firms.

Selected References:

- 1 Karam, F and Zaki, C. (2019) "Why Can't MENA Countries Trade More? The Curse of Bad Institutions", *Quarterly Review of Economics and Finance*, vol. 73, pages 56-77.
- 2 Rauch, James, (1999), Networks versus markets in international trade, *Journal of International Economics*, 48, issue 1, p. 7-35
- 3 Zaki, C. (2022). Estimating total factor productivity in Egypt: Evidence from firm-level data. ILO/MPED working paper.

ANNEX

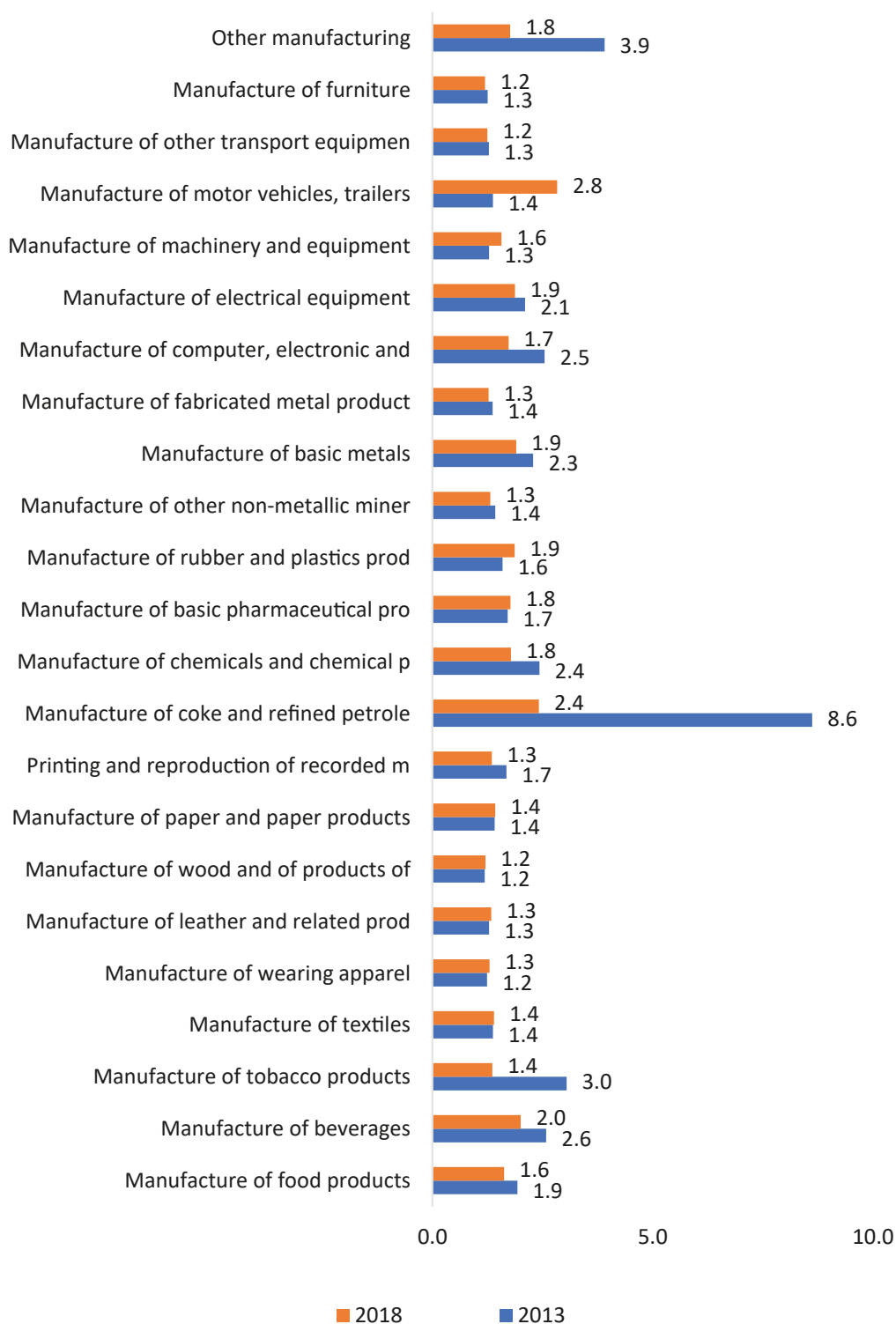
Figure A1: Cobb-Douglas TFP – By Economic Activity – Primary (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2013 and 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

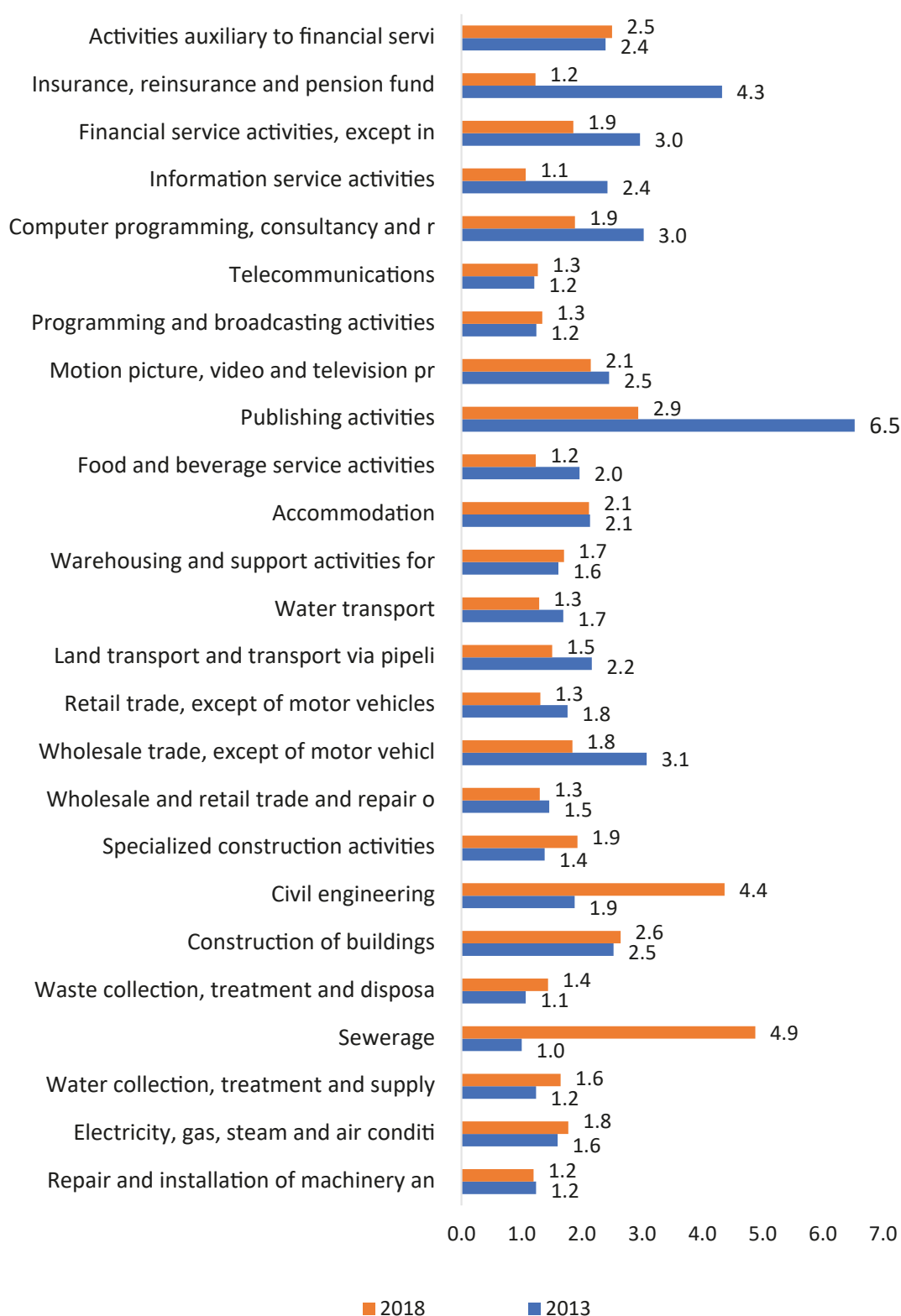
Figure A.2: Cobb-Douglas TFP – By Economic Activity – Manufacturing (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2013 and 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

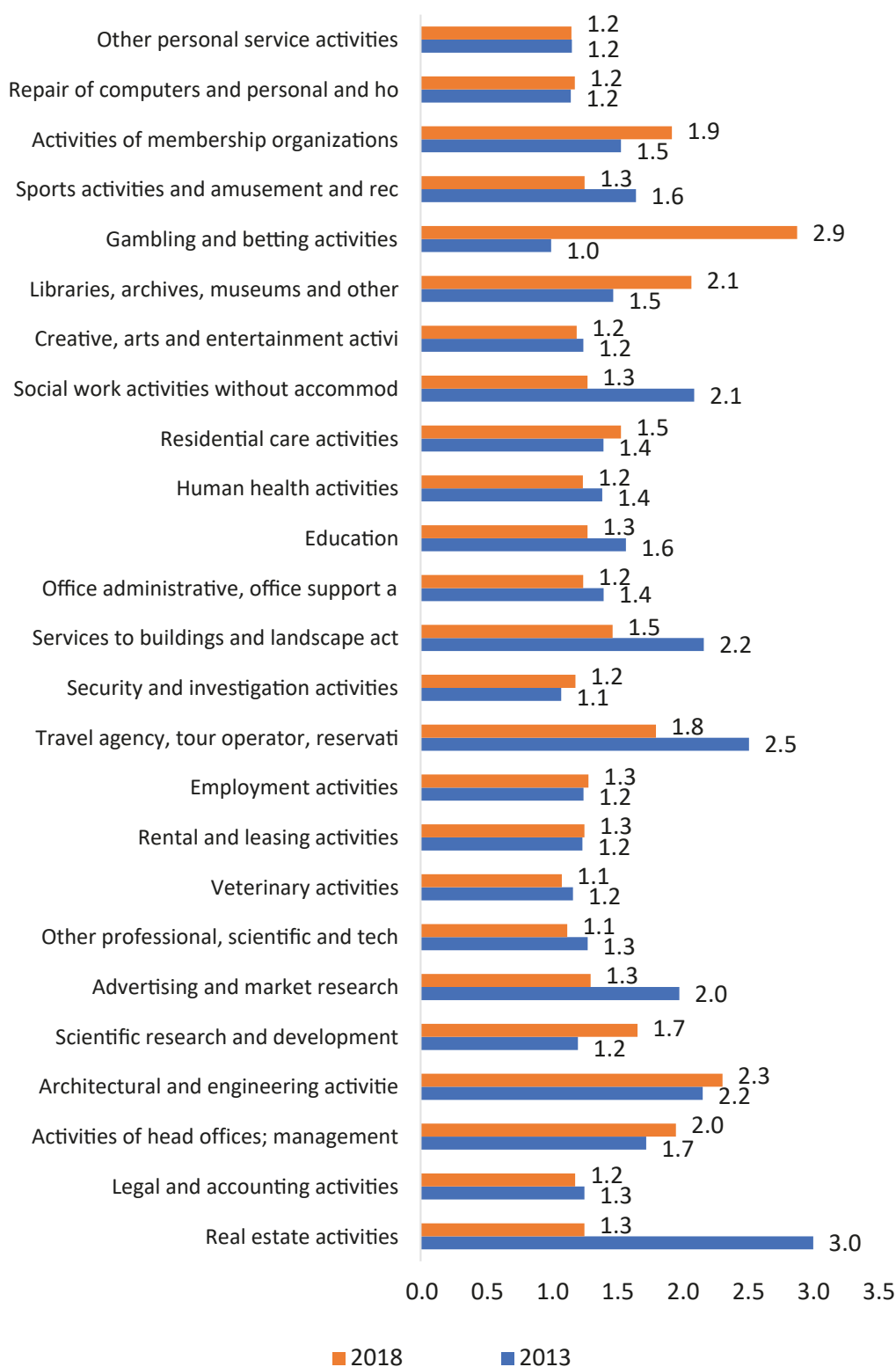
Figure A3a: Cobb-Douglas TFP – By Economic Activity – Services I (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2013 and 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

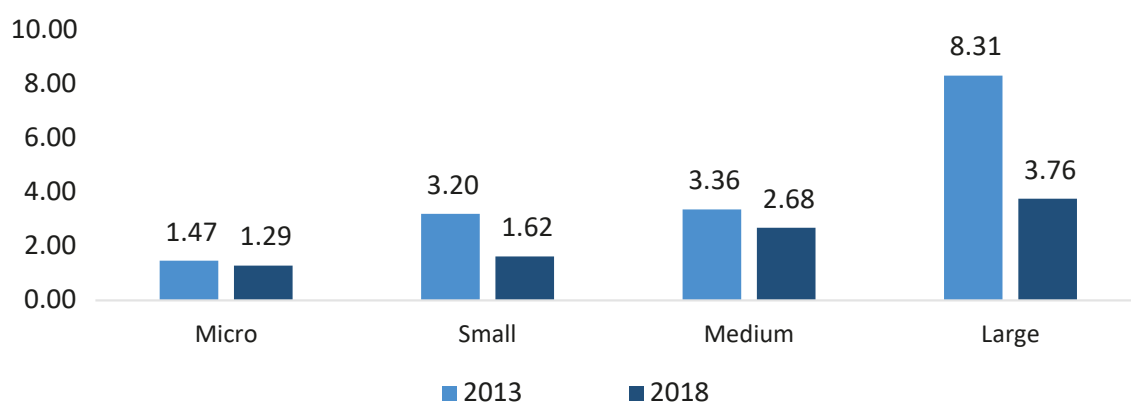
Figure A.2: Cobb-Douglas TFP – By Economic Activity – Manufacturing (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2013 and 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

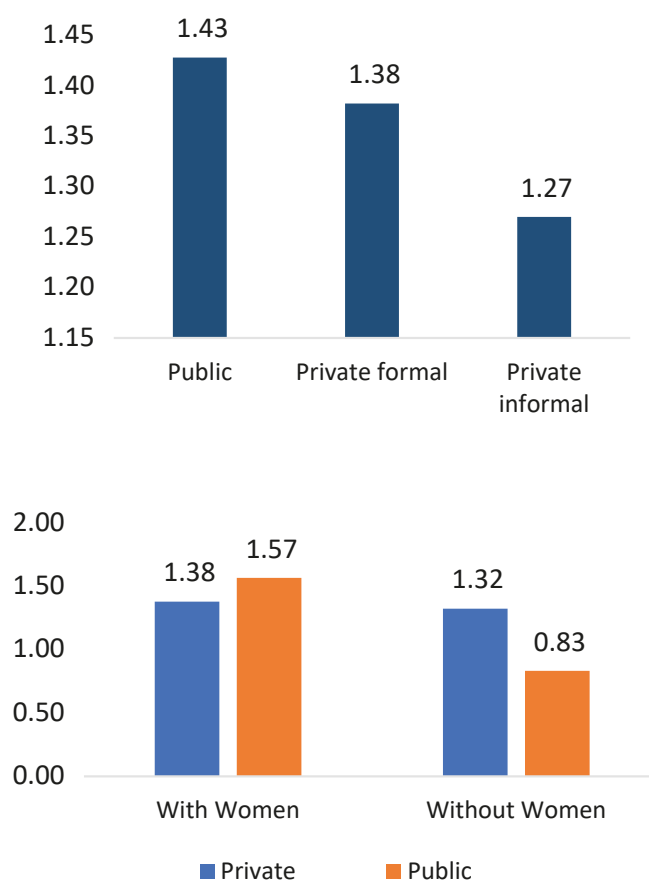
Figure A4: Cobb-Douglas TFP – By Firm Size (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2013 and 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

Figure A4: Cobb-Douglas TFP – By Firm Size (2013 and 2018)



Source: Author's own elaboration using the Economic Census of 2018.

Note: The exponential of the TFP has been calculated in order to obtain the TFP in level.

Selected References:

- 1** Karam, F and Zaki, C. (2019) “Why Can’t MENA Countries Trade More? The Curse of Bad Institutions”, *Quarterly Review of Economics and Finance*, vol. 73, pages 56-77.
 - 2** Rauch, James, (1999), Networks versus markets in international trade, *Journal of International Economics*, 48, issue 1, p. 7-35
 - 3** Zaki, C. (2022). Estimating total factor productivity in Egypt: Evidence from firm-level data. ILO/MPED working paper.
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Acknowledgements

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