

Tanger MED SEZs: A Logistic and Industrial Hub in the Western Mediterranean

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Abstract. This paper aims to investigate the impact of Special Economic Zones within a specific system-based economy, and variations in both individual sectoral specializations and those of the local labour market. There are six Special Economic Zones geographically located within the Tanger-Tétouan-Al Hoceima region in northern Morocco; each zone is centred on specialised production and strictly related to Tanger MED Port Complex, 1 and 2. At the present, they are among the most influential hubs of the Mediterranean and a crucial element of Morocco's economic and commercial development strategy.

The aim of this paper is to demonstrate how the presence of regional SEZs has positively impacted the increase in national FDEs and the increase in company localisations in the area under study.

This research is to be credited equally to both authors, for it is the result of their joint work.

Keywords: Logistic hub · Special Economic Zones · Commercial development strategy

1 Overview

SEZ is a tool with a widespread worldwide application: both for the attraction of foreign direct investment and for the diversification of the industrial sector.

SEZs have been a vastly covered topic in academic literature; both from an economic point of view [1–6] than one of organization of territory [3, 7–9]. The historical evolution of SEZs has been accompanied by several changes [10–12] resulting in a wide variety of tools; these differ on a technical - operational level, and the purpose they are intended for [12].

The following table shows the different types of SEZ used worldwide (Table 1).

The term SEZs is as a generic definition that includes multiple variants of traditional commerce [11]; that is why their institutional definition does not always find convergence within academic literature. International Labour Organization (ILO) defines EPZs as "*industrial zones with special incentives set up to attract foreign investors, in which imported materials undergo some degree of processing before being exported again*" [13]. According to World Bank "*the principles incorporated in the basic concept of a special economic zone include: geographically delimited area,*

© Springer Nature Switzerland AG 2020
O. Gervasi et al. (Eds.): ICCSA 2020, LNCS 12255, pp. 40–50, 2020.
https://doi.org/10.1007/978-3-030-58820-5_4

Table 1. Tipology of SEZs

Tipology	Definition
Free Trade Zone	Commonly known as Commercial Free Zone. Generally located within large ports of entry; it is a duty free, not very large area. It houses facilities for storage and distribution operations in order to facilitate exchange, transfer and re-export of goods
Traditional EPZ	The Export Processing Zones offer incentives and a barrier-free environment. These are preferred locations of export specialised companies and industrial complexes. In these areas, only export-oriented companies are licensed to operate
Hybrid EPZ	These includes non-EPZ companies as well. Thusly, these companies are not exclusively limited to the export market to sell their product
Freeports	They include very large areas that host many businesses: from retail to wholesale. The companies that are part of it enjoy special incentives and benefits
Enterprises Zones	These areas' production is intended exclusively for the domestic market; generally not very extended on the territory, they are closely linked to urban redevelopment
Single Factory EPZ	Individual companies, irrespective of their geographical location within the country, that enjoy particular forms of incentive. Their production is exclusively intended for export markets

usually physically secured (fenced-in); single management/administration; eligibility for benefits based upon physical location within the zone; separate customs area (duty-free benefits) and streamlined producers" [12]. Another definition by World Trade organization is that "*an EPZ refers to one or more areas of a country where barriers to trade are deduced and other incentives are created in order to attract foreign investors. The incentives provided differ in nature and can change over time, but many or most take the form of fiscal measures–tax reductions or exemptions rather than cash*" [14]. These definitions identify SEZs as catalysts for a country's economic growth; that is accomplished through the implementation of a series of policies aimed at achieving short-term static economic benefits (e.g. investment strategies to increase employment) or long-term dynamic economic benefits (e.g. increase of trade openness and international competitiveness of a single country or region) [4]. There are four main reasons why implementing such a tool would be beneficial, especially in developing economies: SEZs could be a support for a wider national economic reform. In a political-economic context, they could be an instrument to abate unemployment rates. These areas could also be used to test new policies and approaches, and to encourage Foreign Direct Investments, in particular in the MENA area [12].

As of 2018 there are 147 economies that over time have implemented this tool (there were 29 in 1975), bringing the number of world SEZs to 5,400 (there were 79 in 1975). Of these, decreased to 5,383 in 2019, 88.64% are located in developing countries; Asia has a leading position with 4,046 (2,645 in South East Asia alone) [15]. Morocco's experience is certainly one of the most deserving of attention; a developing

country that over the last twenty years has employed a series of open trade policies that have resulted in some of the highest economic levels in the MENA area. Similarly, in Middle East and North Africa areas, the Dubai government implemented in 1985 the Jebel Ali Free Zone in order to diversify investments in such a way as to disengage from the impact of oil on GPD. They are symbiotically linked to the Jebel Ali port complex launched in 1983, and later with the twin port Port Rashid in 1972. The area currently hosts 3,880 transnational industrial companies, with Europe and the United States as major outlet markets [9]. Between the Atlantic and the Pacific, Panama is worthy of attention for its implementation of SEZs, specifically: Colon Free Zone (launched in 1948) which houses 2,527 companies and 29,786 employed in 2015, Panama-Pacific (launched in 2007) with 251 companies and 2,035 direct jobs in 2015 and the City of Knowledge (launched in 2000) with 75 SMEs and 1,290 workers [3].

2 Modeling of Regional Variables

What emerges, in the specific case of Tanger-Tétouan-Al Hoceima, is an economy that employs, as main strategic levers, an experimental implementation of a structured SEZs scheme: duty free areas, which have tax incentives and simplified administrative procedures. These characteristics are to be considered as functional to the local success of new industrial plants, product and logistics services; over the years, a progressive revitalization of the regional infrastructure fabric has followed. A peculiar case is the very existence of Tanger MED Port Complex focal element of Morocco's economic and commercial development strategy and in a symbiotic and functional relationship with SEZs. Through the systemic use of multiple databases [16–24], this paper has striven to acquire as many detail as possible on the subject, taking into account all the variables that could qualify as consistent for the research.

The purpose of this research: observing a given economic, social and demographic situation before and after the implementation of SEZs in Morocco. The examined time range, in reference to the regional market analysis, covers from 1999 to 2014; the choice of such time frame is to be found in the chronological origin of the implementation of SEZs in Morocco. Tanger Free Zone was the first launched in 1999. Today, it is the first industrial platform in the Tanger-Tétouan-Al Hoceima region and the most important industrial hub in the whole of Morocco. 2014 is the year of the last population census, preceded by that of 2004. The chosen time range, considering an analysis on a national scale and one about the localization regional companies, covers a period of twenty years between 1999 and 2018, the latter being the last available year in the databases at the time of this research.

In particular, the analysis focuses on four elements, both regionally and nationally: 1) economic growth (companies growth for sector and for dimension); 2) trade integration (balance of payments, foreign direct investment); 3) labour market. To better understand the impact of SEZs on local industry and the local labour market, this research will focus on a sample of companies extracted from Orbis database (the companies identified and located in Morocco through the database are 18,202 in total). Companies are categorized by following geographical survey parameters (e.g. sector of membership; company size), financial collection of assets, and time parameters (year of

foundation). The variables are analyzed and subsequently matched; this was accomplished using pivot tables in order to identify historical matches in terms of foundation, evolution of sectoral specialization, production, and modification of the local labour market. The six SEZs identified were found in the administrative division of the Tanger-Tétouan-Al Hoceima Region, which includes the following provincial-prefectural scales: 1) Al Hoceima; 2) Chefchaouen; 3) Fahs-Anjra; 4) Larache; 5) Ouezzane; 6) Tanger-Assillah; 7) Tétouan; 8) M'Diq-Finideq with a total of 146 municipalities, of which 86.3% rural and 11.6% urban.

Finally, the 18,202 companies are reclassified by Province and Prefecture, in order to locate them in the region. Out of the entire national sample, the weight of activities located in Tanger-Tétouan-Al Hoceima is 10.4% of the sample, corresponding to 1,900 companies.

3 Tanger MED and the SEZs of Tanger-Tétouan-Al Hoceima

Tanger MED, located on the north coast of the Tanger-Tétouan-Al Hoceima region in Morocco, is now one of the main hubs of the Mediterranean basin. The significant public investment in the expansion and modernization of the entire port complex (Tanger MED 1 was only launched in 2007, while Tanger MED 2 in 2019), alongside the geo-strategic location of the infrastructure (the Strait of Gibraltar) are but few of the elements that have allowed the increases in performance and competitiveness levels. In just over ten years, the complex has indeed become an international model of governance in the global maritime cluster. Morocco, with a population of 33,848,000 in 2014 census, is one of the main emerging economies in MENA, an area strongly characterized by regional heterogeneity, both in terms of growth, commercial openness and institutional capital endowment.

The Moroccan state in 2018 recorded a growth of GDP, at constant prices, of 3%, down from the 4.2% of 2017 [16]. However, it is estimated that product will grow at rates of 3.8% in 2020 and 4.5% in 2024 [25]. Therefore, it is only logical that Morocco endeavors to consolidate on one hand the values of economic and commercial growth (the percentage change in the value of the *Merchandise trade* is 60% between 1999 and 2018), which could benefit from such an investment; on the other hand, connecting population growth to new opportunities arising from the local labour market. In 2018 Morocco, in line with the values of the entire MENA area, has indeed increased its population for an annual rate of 1.25%, given a fertility rate in 2017 of 2.45% [16]. There is no doubt that the localization of the complex also benefits from the centrality of maritime traffic in the AREA of MED (looking at the double track of market penetration, the land and the maritime kind, China's *One Belt Road Initiative* or even the effects of the doubling of the Suez Canal in 2015).

In this strategic view, the port complex is coming closer to the European market, a larger consumer market. It must be also taken into consideration the possible relocating of European companies production departments in the SEZs area. This last point is supported by the existence of a Logistic Duty Free Zone, located at Terminals 1 and 2 of Tanger MED 1; the "Medhub" platform that today hosts numerous companies operating in the value logistics sector. According to data from [26], the entire port

complex covers an area of 1,000 ha and consists of four areas with different specializations. The Tanger MED 1 includes two container terminals TC1 + TC2; their volume capacity of 3 mln TEU, managed by transnational leaders APM Terminals and Eurogate CMA-GMA respectively. A railway connects the Port to the city of Tangier. A hydrocarbon terminal with an annual storage capacity of 15 million tonnes (input/output) of refined products. A Renault vehicle terminal with storage capacity of 1 million vehicles. A terminal dedicated to the management of containerized goods. The global investment of the Tanger MED 1 infrastructure, launched in 2007 (works started in 2003), amounted to 43 billion dirhams, 58% of which were paid by the Agence Spéciale Tanger Mediterranéè (from now on TMSA) and 49% by private investors. TMSA is the result of a public/private partnership established since 2003; an Anonymous company with public prerogatives around which revolve special purpose vehicles related to governance of port, and industrial and service poles. The group, with a social capital allocation of 3,795,079,100 dh, is composed of 87.50% of the "Hassan II Fund for Economic and Social Development"; 12.38% from Etat; 0.12% from the Moroccan investment bank "CDG Capital S.A.". Tanger MED 2 is relatively new, so the actual port operations were launched in 2019, nine years after the start of basic infrastructure works, started in 2010. The total investment amounted to 24 billion dirhams, of which 58.3% was paid by TMSA, the remaining 41.7% paid by privates. The infrastructure includes two container terminals, TC4 and TC3, respectively contracted to the APM terminal and Marsa Maroc operators, with a total capacity of 6 million Teu. On the whole, considering the Tanger MED 1 and 2, the potential capacity of the infrastructure reached 9 million TEU, with a storage capacity of 1 million vehicles, 7 million passengers, 700 thousand trucks (Table 2). Furthermore, two other infrastructures make up the extension of the port: "Port Tanger MED Passagers et Rouliers" launched in 2010 and operated by Tanger Med Port Authority and the "Centre d'affaires Tanger Med (Tanger Med Port Center)".

In terms of performance indicators, the investments distribution was very effective and had a considerable impact on the international competitiveness of Moroccan portal economy. In the 2006–2018 range, the country increased its Liner shipping connectivity index (LSCI), in a percentage change of +440%, rising the indicator level from 12% of 2006 to 65% in 2018. In terms of international competitiveness, with Chinese LSCI set to 100 in 2006, this means that Morocco from 79th position on a global scale raided to 18th in 2018; this growth started since 2007, the year of the launch of anger MED 1. In terms of Container port throughput, expressed in units equivalent to twenty feet (Teu), the percentage change between 2010 and 2018 was 70%, bringing the containerized goods managed by the port from 2,800,000 to the current 4,763,500 Teu [27].

Table 2. Number of arrivals; average size (GT) of vessels, Morocco (UNCATAD, 2018).

Measure	Number of arrivals	Average size (GT) of vessels
Passenger ship	13,929	11,614
Wet bulk	1,576	9,966
Container ship	3,676	39,913
Dry breakbulk	1,988	5,679
Dry bulk	1,351	25,867
Roll-on/roll-off ship	2,281	22,510
Liquefied petroleum gas carriers	332	17,601
All ships	**25,133**	**17,015**

In the same period, 2006–2018, there is also a change in the Liner shipping bilateral connectivity index (from now on LSBCI); in 2018 there is greater bi-lateralization and trade integration with Asian countries: Malaysia, Singapore, South Korea, China. The research identifies four key elements in Tanger MED's development: the strategic location of the port; the ability to attract mega carriers and top-level terminalists; the ability to play a multi-purpose role and thus accommodating every type of ship; the arrangement of a structured Free Zone [28]. The figure (Fig. 1) shows the six SEZs of Tanger-Tétouan-Al Hoceima.

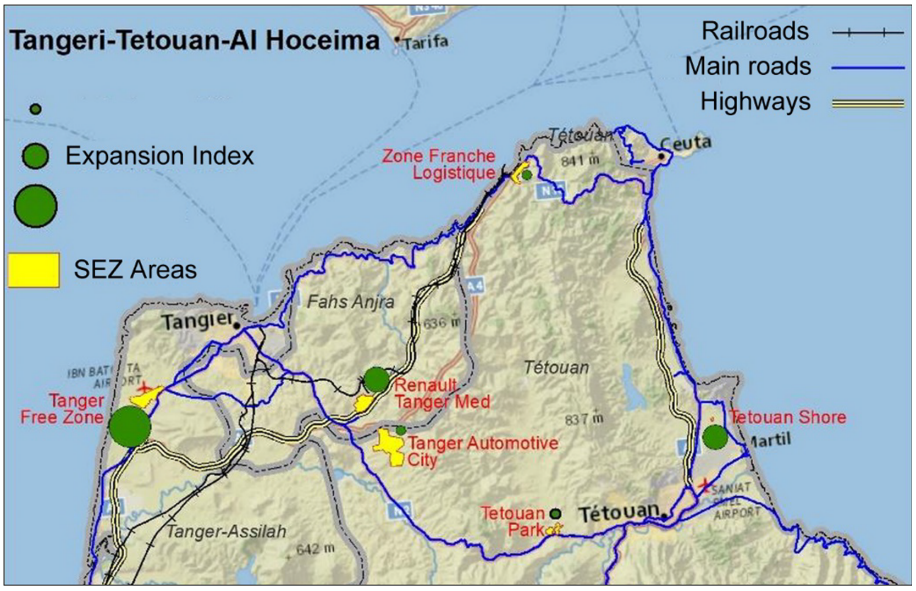


Fig. 1. Industrial facilities expansion index in SEZs ares, Tanger- Tétouan-Al hoceima (Our elaboration from ArcGis source).

The data measured the industrial expansion index within each Free Zone. What emerged is that within the SEZs, an industrial facility equal to 1,162 has an average expansion rate of 3.19%.

In detail, the structured SEZ covers a surface area of 5,000 ha, thus distributed: 1) the industrial platform Tanger Free Zone launched in 1999, a Generalist Free Zone distributed over an area of 400 ha. The area, home to textile, automotive, aerospace and agricultural companies, is 4 km from the region's main airport, Tanger Ibn Battouta, and about 54 km from the Tanger Med complex. It is the main industrial platform of the entire MENA area to date, hosting companies from more than 30 nationalities; it is the 6th Free Zone on a global scale; 2) Tanger Automotive City (TAC) launched in 2012, extended over an area of 800 ha, is an industrial platform specialized in automotive industry, 22 km from Tanger Med and 20 km from Tanger Free Zone, next to the Renault Tanger Med Free Zone, founded in 2008 covering a territory of 300 ha. The area is entirely dedicated to administrative location of Renault-Nissan plants; inside models are being made for Lodgy, Sandero, Sandero Stepway, Dokker, Logan MCV. The Free Zone is 7.4 km away from the TAC; 3) Tétouan Park, a logistics and industrial park on an area of 150 ha, currently still under development. Closely connected to the activities of the Tanger Free Zone, the park aims to stimulate industrialization processes (localizing light industry) within the province; 4) Tétouan Shore, launched in 2013, covers an area of 20 ha. The area is entirely dedicated to offshoring activities offering spaces for services related to Information Technology Outsourcing (ITO), Business Processing Outsourcing (BPO) and KPO (Knowledge Process Outsourcing); 5) Commercial Zone of Findeq, launched in 2012, is spread over an area of about 100 ha, designed for wholesale and retail trade development; 6) Logistics MedHub Free Zone, launched in 2008, covering an area of 250 ha behind the terminals of Tanger Med 1, is a unique customs area on the doorstep of the European and African market; it specialises in value logistics activities, distribution to other Moroccan Free Zones, storage, assembly, labelling and quality control.

The table (Table 3) shows the increase in the number of industrial facilities within the northern region. The increase is observed precisely since 1999, year of the launch of Tanger Free Zone platform; there are peaks, in non-cumulative terms, in the corresponding years of the construction of Tanger MED 1 and the launch of MedHub Free Zone. Between 2003 and 2007, major automotive companies relocated to the area: Lear Automotive Morocco (2003); Delphi Packard Tanger (2007); textiles with Erum Maroc (2003), New Line Fashion (2006); Steelworks with Kaye Aluminium Tanger (2002); to agro-industrial with Maroc-Produits Agro-Alimentaires. A further increase is observed between 2009 and 2011. At this stage, the companies relocating are such as: Sealynx Automotive Morocco (2008); S.N.O.P Tanger (2010); Denso Thermal Systems Morocco (2010); Joyson Safety Systems Maroc (2010); Plastic Omnium Auto Inergy Morocco (2010); Procesos Industriales Del Sur Maroc (2010). The sample analysis shows a progressive tertiarization of the regional economy (Fig. 2). By setting to 100 the entire regional sample, the weight of the tertiary sector is 57%; follows the secondary sector with a weight of 39.1%.

Table 3. Company activities classified by foundation year, Tanger-Tétouan-Al Hoceima region. Cumulative values (Orbis sample).

Foundation year	Cumulative values
1970	30
1975	37
1980	58
1985	66
1990	113
1995	183
2000	308
2005	717
2010	1,303
2018	1,900

The sectoral distribution of companies there sited follows the trend measured on the entire national sample where the weight of the service sector is 59%, followed by the manufacturing sector of 36%. It could be assumed that the presence of SEZs in the northern region has attracted services and manufacturing companies mainly. Of the total number of national companies operating in the service sector, the regional weight is 10%; speculatively on the total of secondary sector companies, it is 12%.

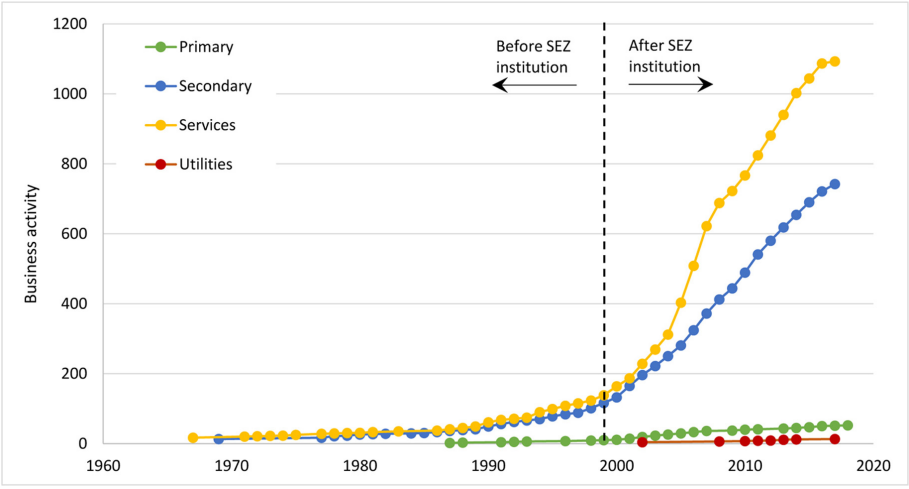


Fig. 2. Sectoral classification of companies in Tanger- Tétouan-Al Hoceima. Cumulative values (Orbis sample).

The location of very large companies was followed by the creation of an industrial ring consisting mainly of medium-sized companies. Indeed, the next figure (Fig. 3) shows the R^2 correlations between the cumulative value of very large and medium size

companies, and the correlation between the first and the large companies, respectively at 0.95 and 0.97.

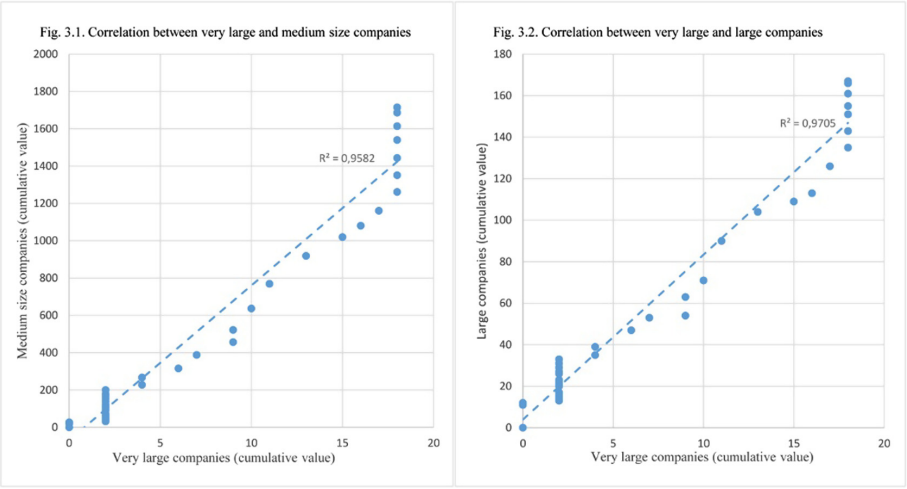


Fig. 3. Correlation between the cumulative value of very large and medium size companies (3.1) and correlation between the first and large companies (3.2)

Morocco is part of those Developing Economies and emerging markets that have made institutionalization of SEZs a competitive leverage instruments; a tool aiming at a more aggressive commercial strategy and at increasing FDI, in order to improve and diversify the pre-existing industrial fabric. The survey of the increase in FDIs in the 1999–2018 time interval finds support in academic literature: in that time range, Morocco increased FDI by 15.42%. In the same period, major infrastructure works have been built to expand and consolidate the port complexes and internal multimodal networks. This is reflected in the trend of gross fixed investment (purchases of plants, machinery, improvements in roads, railways, etc.). Between 1999–2018, the percentage change in gross capital formation was 26%, similar to what happened chronologically regarding FDI.

It should be pointed out that Morocco remains a predominantly importing country; between 1999–2017, importations increased by 62% (especially for petroleum products). However, in the same time frame there is a considerable increase in exports of 48%: 20% textiles; 14% machinery; 11% cars; 6.8% mixed mineral or chemical fertilizers; 4.1% phosphoric acid (2017 data).

4 Conclusions and Research Prospectives

This research provided evidence of the creation of an a industrial ring, both in secondary and tertiary sector. It could be postulated that to very large companies, absent until 1999 in the region, followed a localized growth of medium and large enterprises, connected to both related and support sectors. The increase in the number of activities was observed mainly in tertiary, in the city of Tangier. Hence, the increase in urbanization rate of resident population has been considerable, both nationally and regionally; also, the shift from rural to urban areas, from the primary sector to the industrial sector and services. In absolute terms, the increase in employment showed a greater proportion of industrial sector workers by 10.83% in the 1999–2013 period; on the other hand, a massive 40% in the number of service workers.

Therefore, a seemingly premature tertiarization of the economy can be observed; it is hypothesized that to accompany the surfacing of a stronger industrial fabric, there was an increase in activity in the service sector, which is characterized by a weaker structure in the long run. In the same years, there has been an increase in employment rates, but at the same time an increase of unemployment rates, and a drop in activity rates. The hypothesis is that, given the introduction of SEZs and a still evolving scenario, the regional population has grown rather evidently; much more than the real labour market, where the largest labour force is mainly absorbed by the service sector, would have allowed. In addition, is impossible not to notice that in the same years, at a regional level, there has been an increase in feminization of the labour force, which is to be considered a very positive outcome. At the same time, there is an increase in the proportion of private sector workers relative to the public sector. In the first, the variation was of 27.76%; in the second of −16.58%. This had an effect on employment relations distribution with a 53.44% increase in wage earners between 1999 and 2013.

In conclusion, this paper and the collected data, allowed an analysis of this evolving scenario since the establishment of SEZs in the chosen time frame. The existence of positive correlations between very large companies and industrial rings also emerged. Future studies will cover the comparative analysis between this reference context and other contexts on a global scale.

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