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## SPECIAL ECONOMIC ZONES AND THEIR IMPACT ON REGIONAL ECONOMIC DEVELOPMENT

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### Abstract

This paper offers a systematic review of the international literature addressing the impact of the Special Economic Zone (SEZ) model on regional economic development. By identifying, critically assessing, and compiling the most relevant and high-quality studies on the topic, the basic conditions for the success or failure of this industrial policy model come to light. Key results are then discussed with an eye to the characteristics of the states in which these models will be implemented in Mexico.

**Keywords:** Special economic zones, regional development, industrial policy, foreign direct investment, literature review.

### 1. INTRODUCTION

Special Economic Zones are delimited geographic areas located within a country's borders where the rules for doing business are different than they are throughout the rest of the territory. These differences pertain primarily to conditions for investing, international trade, and customs; as well as taxes and regulations. Accordingly, the idea is to endow the zone with a more liberal (from the political and economic standpoint) and effective (from the administrative standpoint) business environment than that which can be found anywhere else in the country (Farole and Akinci, 2011).

Although the incentive packages are very similar to those found in Export Processing Zones (EPZ),<sup>2</sup> the economic activities in SEZs are far more comprehensive, ranging across not only manufacturing activities but also to agriculture, tourism, trade, and real estate development (Wong and Chu, 1984).

Although this industrial policy model is not new,<sup>3</sup> its impact on economic growth, improved income levels, and labor conditions, as well as an overall boost in welfare in regions throughout the world where it has been successfully implemented, all continue to be reason enough for many developing countries to continue implementing it.<sup>4</sup> Nevertheless, the context in which these zones developed has shifted drastically.

Likewise, the success attained by several of these zones in East Asia and Latin America has not been uniform. There are even examples in which SEZs have not been successful in achieving their objectives, bringing to the fore the degree to which these programs are largely dependent on the specific context in which they are introduced and the effectiveness in how they are designed, implemented, and managed (Farole, 2011b).

International experience has underscored the importance of both physical and non-physical factors involved in raising the likelihood of success. Some of the top-ranking factors include the geographic location of the zone, availability of ports and airports, terrain, workers, and infrastructure and support services for companies. The non-physical factors are related to having a reliable investment environment, including both political and economic stability, as well as efficient governance so that the zones can operate with a minimum amount of bureaucracy (Wong and Chu, 1984).

This set of requirements and baseline conditions to establish special economic zones highlights the need to design public policies tailored to fit the regional context. Looking at the experiences of the economic zone programs implemented in developing countries, Farole (2011b) found three themes of critical interest to public policymakers:

- i. Successfully attract companies and foreign direct investment (FDI) to create jobs;
- ii. Make sure that the zones are economically sustainable and able to generate positive externalities, facilitating modernization and structural transformation, and acting as a catalyst for economic reform;
- iii. Ensure that the economic zones are sustainable from an institutional, social, and environmental standpoint.

In Mexico, pursuant to Article 1 of the Federal Special Economic Zones Act (LFZEE, in Spanish), issued on June 1, 2016, and the most salient bylaws governing them, the implementation and development of this program in the southern region of the country is meant to drive sustainable economic growth to, among other aims, reduce poverty, provide basic services, and expand the opportunity to enjoy a healthy and productive life. The regions that will be impacted by the establishment of the first three SEZs<sup>5</sup> are as follows: Puerto Chiapas, with the economic zone located in Tapachula, Chiapas; Puerto Lázaro Cárdenas, in the zone running to the borders of the states of Michoacán and Guerrero; and the Isthmus of Tehuantepec Corridor zone, including the Ports of Coatzacoalcos, Veracruz, and Salina Cruz, Oaxaca (Diario Oficial de la Federación, 2016a, 2016b, 2016c).

In light of the foregoing, and considering the international track record in implementation the SEZ model, the objectives

set forth and amount of public resources allocated for its implementation in Mexico,<sup>6</sup> and the dearth of research on the topic in the national context, it is relevant to analyze the following questions. What have the main outcomes been in terms of regional development as a result of this sort of program internationally? Moreover, considering the lessons learned in other developing countries similar to Mexico, what conditions would it take for SEZs to be successful in Mexico?

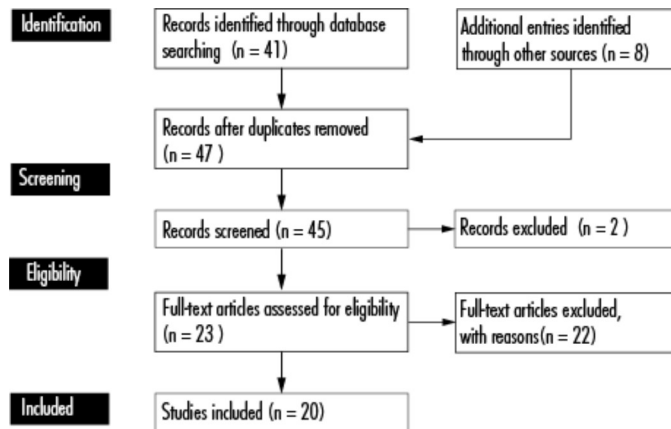
This document is designed to answer these questions via a systematic review of the literature specialized in this topic around the world, as well as open the door to other salient topics of discussion in the midst of one of the most ambitious programs ever undertaken in Mexico over the past decades, in an attempt to close the economic gaps between the northern and southern regions of the country.

## 2. METHODOLOGY

For purposes of this research, the literature review was conducted during the second half of 2016, examining three databases of peer-reviewed literature: JSTOR, ScienceDirect, and Web of Science. The researchers also looked at publications from the World Bank, as it is one of the sources with the greatest number of working documents and specialized reports pertaining to economic zones around the world available.<sup>7</sup>

The key terms for the information search were: "special economic zones," "economic growth," and "economic development;" even so, given their relevance and relationship, several research papers related to the SEZ model were also included as long as the analysis and results were within the scope of the objective of our analysis. Accordingly, the criteria for inclusion covered empirical research<sup>8</sup> starting in 1990<sup>9</sup> containing these terms, published in renowned international journals (Q1 and Q2).<sup>10</sup> The criteria for exclusion were any research with theoretical discussions about the SEZs not underpinned by hard data, statistical and/or econometric models to explain their performance. Figure 1 shows a PRISMA flow chart explaining the process.<sup>11</sup>

Figure 1. PRISMA Flow Diagram



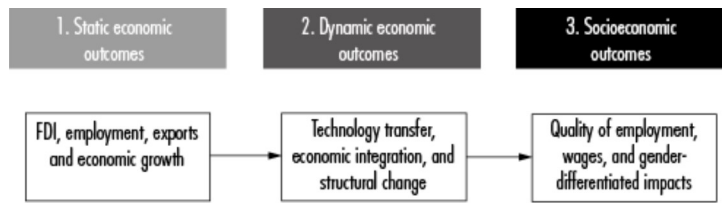
Source: Created based on the PRISMA methodology.

## 3. RESULTS

The SEZ model has had both a direct and indirect impact on regional development. To further elucidate the role it has played, this analysis classified the results pursuant to an assessment of the performance of the economic zones used by Farole (2011a).

Figure 2 summarizes the main types of research outcomes worldwide included in the systematic analysis. These results are presented as incremental impacts arising from the establishment of SEZs and are directly tied to the success or failure of the public policy designed to generate sustainable economic growth: (1) static economic outcomes, derived in the short term through the use of economic zones as instruments of trade and investment policy (including primarily investment, employment, and exports); (2) dynamic economic outcomes, including technology transfer, integration with the domestic economy, and, ultimately, structural change (including diversification, upgrading, and increased openness); and (3) socioeconomic outcomes, including the quality of employment created and gender-differentiated impacts.

Figure 2. Classification of the SEZ Results



Source: Created by the authors based on Farole's (2011a) classification.

The results of the articles reviewed are given in Table 1.

(SEE TABLE 1)

### Static Economic Outcomes

The basic principle to attract significant quantities of local and foreign investment to SEZs continues to be designing specific public policies applicable solely within these zones, which serve as major incentives for appealing to companies. The different types of incentives that have been given to both local and foreign companies can be summarized as follows: a) preferential treatment when it comes to taxes, cost of land, loans, credit, etc.; b) greater freedom for investors in terms of earnings and ownership; c) local supply and advantages for cheap labor, infrastructure, services, etc.; d) administrative advantages in the zones to simplify and unify formalities (Li, Whitwell & Yao, 2005; Wong & Chu, 1984).

In the case of Mexico, the Secretariat of Finance and Public Credit has announced that companies and individuals doing business and investing in SEZs shall be entitled to a 100% discount on paying the Income Tax (ISR, in Spanish) during the first ten years and 50% for the next five. To these incentives are added others pertaining to credit and administrative facilities, and special treatment when it comes to the Value Added Tax (VAT), primarily.

Incentives of this sort have fulfilled the goal of attracting significant investment to the majority of the economic zones implemented around the world (Li, Whitwell & Yao, 2005; Schweinberger, 2003), so much of the specialized literature related to this topic has focused on explaining the dynamics of Foreign Direct Investment (FDI) after it arrives to the zones, as well as measuring its direct impact on the economic growth of regions where this investment ends up, and on the neighboring municipalities or regions.

Such is the case of the SEZ model implemented up and down the coast of China, one of the most-studied systems in the world. Beginning with the economic reform kicked off by Deng Kioping toward the end of the nineteen-seventies with the Open-Door Policy, China became one of the top recipients of FDI, flowing principally from Hong Kong, Taiwan, the United States, Japan, and Singapore (Liu, 2002). In 1980, the first SEZs were launched in the cities of Shenzhen, Zhuhai, and Shantou in the province of Guangdong, followed by Xiamen in the province of Fujian. By 1984, these cities had annual average GDP growth rates above the 10% national rate: Shenzhen grew at an annual average rate of 58%, followed by Zhuhai (32%), Xiamen (13%), and Shantou (9%). This astonishing growth in the four SEZs was in large part due to FDI, which at the end of 1985, represented 20% of the national total. By 2007, FDI in the country's most significant economic zones amounted to 46% of the national total (Zeng, 2010).

This principle was corroborated in a more recent study, designed to quantify the impact of the SEZs and explore the mechanisms by which they yield effects. To do so, Wang (2013) compared the changes across 321 Chinese municipalities with an SEZ before others between 1978 and 2008. The results demonstrated that the SEZs had an overall positive effect on investment, that the introduction of this model on average significantly raised FDI by 21.7% per capita, and that the FDI growth rate was 6.9 percentage points. Moreover, looking at the dynamics of where investments and their companies were located, the study concluded that the economic zones model increased FDI, but not at the cost of relocating existing companies or investments; and, finally, that the new FDI did not displace domestic investment.

The FDI flowing into various developed zones in Africa, Asia, and Latin America has also entailed a first step for the success of this program, because it has created jobs, boosted exports, and provided the possibility for structural change. In the time period 2000-2008, FDI in the zones as a percentage of total FDI received in Vietnam, Ghana, Bangladesh, Tanzania, and the Dominican Republic amounted to 100, 48, 30, 18, and 18%, respectively (Farole, 2011a).

In the case of Mexico, it is evident that the states in the zone in question face challenges in attracting FDI. In 2015 alone, the states of Chiapas, Guerrero, Michoacán, Oaxaca, and Veracruz were among those with the lowest levels of FDI in Mexico, at just 0.46, 0.53, 1, 0.76, and 5.07% of total domestic FDI, which in that same year amounted to 30,284.6 million dollars (Centro de Estudios de las Finanzas Públicas, 2016).

The second static economic outcome to which SEZs have made a salient contribution is bound up in employment and exports. Beginning in the nineteen-seventies in East Asia and Latin America, the economic zone programs were designed to attract investment from labor-intensive multinational corporations (Farole, 2011b). In 2008, there were approximately three thousand economic zones spread across 135 countries, generating over 68 million direct jobs and over 500 billion dollars in direct commercial added value within the zones (The World Bank Group, 2008).

In China, in 2006, total employment in the four initial SEZs was around 15 million jobs, representing 2% of national employment (Zeng, 2010). For its part, in the Dominican Republic, the EPZs enable the creation of 100,000

manufacturing sector jobs, helping the country move away from its reliance on agriculture (Farole, 2011b). In 1989, 56.4% of the manufacturing jobs were located within a EPZ, in contrast with just 43.6% of the jobs located in companies outside of the zones (Kaplinksy, 1993).

According to the National Export Processing Zone Council's Statistical Report, in 2015, the Dominican Republic had 65 export processing zones operating, composed of 630 companies, generating 161,257 direct jobs and exports worth 5.5123 billion dollars, ranging across 1,724 sectors or products and going to 128 countries. Looking at export growth, between 2004 and 2008, the average export growth rate of the economic zones in Vietnam, Ghana, Bangladesh, and Honduras was 35, 31, 16, and 6%, respectively (Farole, 2011a). Several other cases with a similar impact on jobs and exports can be found in Mauricio, South Korea, Taiwan, El Salvador, and Madagascar (Farole, 2011b).

These data underscore the opportunities that the zone states in Mexico could enjoy in terms of increasing their share in national exports. In 2014 alone, the value of exports in the states of Chiapas, Guerrero, Michoacán, Oaxaca, and Veracruz, as a percentage of total national export value, fell toward the bottom of the country ranking, at just 0.4, 0.1, 0.3, 0.3, and 1.8%, respectively, of a total 397, 128, 659 million dollars (Centro de Estudios de las Finanzas Públicas, 2016).

As a consequence of the first two static economic outcomes, the empirical evidence suggests that establishing economic zones has a direct impact on economic growth in the regions where they are set up, which is one of the main objectives described for this program in Mexico. The result has also been found in the case of China, one of the economies with the highest growth rates over the past decade. Jones, Li, and Owen (2003), using city-level data on FDI —infrastructure, income, and government spending— found that the discrepancies in growth rates among cities with SEZ status are much higher than what has been found in previous studies using province-level data.

In their research, Jones, Li, and Owen (2003) estimated growth equations and ascertained that the policy to establish SEZs considerably improves economic growth, driving up annual growth rates by 5.5%; accordingly, the annual growth rate in coastal cities with an open economy turned out, on average, to be 3% higher than in the rest of the cities that did not have this status.

The zone states in Mexico could entail a good opportunity to counteract their low growth and weak contribution to the domestic economy. In 2014, the states of Chiapas, Guerrero, Michoacán, Oaxaca, and Veracruz had a share in the national economy, as a percentage of national Gross Domestic Product (GDP), of 1.8, 1.5, 2.4, 1.6, and 5%, respectively, of a total of 13,401,020 million pesos. Contrast that with the shares enjoyed by Mexico City, State of Mexico, and Nuevo León, which contribute the most to the national economy, with shares representing 16.8, 9, and 7-5% of national GDP, respectively (Centro de Estudios de las Finanzas Públicas, 2016).

Finally, an additional static outcome of FDI in economic zones is tied to the positive externalities they generate for neighboring regions. Analyzing the concentration of FDI in the different regions throughout China in the time period 1996-2004, Ouyang and Fu (201) found that the positive interregional externalities of coastal FDI (where the SEZs are located) are significant, robust, and economically important: an increase of one standard deviation in coastal FDI raises the growth rate of the inland cities by 33% on average.

Without these secondary interregional effects derived from FDI, Ouyang and Fu (2012) assert that the regions inland would not have grown as fast as they did. These findings lead them to suggest that interactions within supply chains across inland companies and foreign coastal companies are an important channel through which inland regions benefit from the positive interregional externalities of coastal FDI. In the case of Mexico, these effects are a good opportunity for economic growth in the states, regions, and municipalities that are directly impacted by the SEZs, by integrating them into the local economy via productive chains and local clusters that spring up.

In brief, in the short term, SEZ policies have a direct impact on growth by creating an environment more conducive to production and, indirectly, by attracting FDI to these cities (Jones *et al.*, 2003). Accordingly, the international evidence pertaining to the static outcomes points to positive prospects with respect to the aims outlined in Article 1 of the LFZEE.

### **Dynamic Economic Outcomes**

Analysis of SEZ dynamics around the world has shown that it is an industrial policy whose most significant impacts are felt in the medium and long run. The cases of China, Malaysia, and the Philippines, success stories when it comes to implementing economic zones, took five to ten years before the most profound policy impacts became palpable.

In order for the economic zone model to be successful in the long term, it must contribute to structurally transforming the local economy through its multiplicative effects, among which are the following: productive diversification, trade liberalization, transfer of hard and soft technology among the local economy, and investors in the zone. Likewise, there ought to be an endeavor to develop management skills and train human capital; the creation of industrial clusters and integration of regional value chains; support from public and private institutions (both sectoral and cross-cutting); and a guarantee that the labor market can facilitate the mobility of skilled labor among companies, all of which are changes that will require effective public policies (Bräutigam & Tang, 2014; Farole, 2011b; Ortega, Aciole & Hermida, 2015).

From 1978 to 2008, the economic zone model in China generated a significant economy of agglomeration by boosting technological progress in the municipalities with these zones by 1.6% as compared to those who carried out a program later, an effect that gradually built up in the wake of the economic zone program (Wang, 2013). Trade liberalization policies via SEZs went hand in hand with the implementation of a variation on the Economic and Technology Development Zones (ETDZ) up and down the coast and throughout the inland areas of the country, focusing less on basic industries and more on technology-intensive industries. As of 2010, there were 69 ETDZs throughout the country. Additionally, other types of SEZs were set up, including high-tech development zones, free zones, export processing

zones, and more, each with a different approach (Zeng, 2010).

Nor did knowledge and technology transfer, as well as diversification into more complex goods in the economic zones, manage to make productivity levels budge. Using data from 29 manufacturing industries located in the Chinese city of Shenzhen in the time period 1993-1998, Liu (2002) found a significant and positive relationship between FDI in the manufacturing industry and productivity and the productivity growth rate of its component industries, suggesting that FDI generates externalities in the form of technology transfer. Specific estimates of the effect of FDI on productivity point to a situation in which an increase of 1% in the average level of FDI in the manufacturing industry can boost the productivity growth rate among component industries by up to 5%. This FDI is attracted to less developed countries in large part thanks to special incentives that local governments offer to foreign companies, primarily in the form of tax incentives and infrastructure subsidies.<sup>12</sup>

The EPZs in the Dominican Republic went through the opposite experience, where, despite their success in terms of employment and short-term static economic outcomes, it became clear that structural change in the local economy would be essential to the ultimate socioeconomic results. Although trade preferences and tax incentives are hallmarks of economic zones, not to mention low labor costs in developing countries, and can serve as catalysts for the model, they are almost never sustainable. EPZs are frequently wielded as a policy to drive exports in less developed countries, the majority of whose comparative advantages reside in producing items intensive in untrained labor. Generally speaking, the companies set up in these zones not only enjoy tax benefits, but also capitalize on the labor and public services the domestic economy provides.

In the Dominican Republic, the EPZ program was launched in 1969 in what was called the La Romana zone. By 1991, there were 22 zones up and running, six under construction, and seven undergoing review. The incentives offered to the companies included the following: import all inputs tax-free and without restriction; total liberty from foreign exchange constraints; complete exemption from all taxes and fiscal levies for 15-20 years; unrestricted repatriation of earnings; and no financial reporting requirements with the exception of local procurement (Kaplinsky, 1993). Nevertheless, the weight of manufacturing labor used in EPZs at the end of the nineteen-eighties fell largely in low-added-value activities, like making clothing and shoes, which not only ramps up the competition between less-developed countries with a policy of this sort in place, but also is unlikely to generate any true economic development.

Based on the study, Kaplinsky posited a viable alternative as not only manufacturing products in which the main comparative advantage is unskilled labor, but also requiring various forms of skilled labor, in an attempt to capture a piece of the pie of income stemming from existing skilled sub-processes. Even so, achieving these objectives requires making adjustments on various fronts, including expanding education and training, and reorienting the financial markets.

Dynamic economic outcomes constitute the most significant challenge facing the SEZ model in Mexico. Implementing them in the short and medium term requires truly structurally transforming the entities that permit these outcomes to remain sustainable in the long term. As one of the earliest studies looking at SEZs in Mexico found, Gómez-Zaldívar (2017) identified that the zone states are among the least complex in terms of their productive structure, read, those with low productive diversification specialized in economic activities and industries that the rest of the states also have. The significance of this analysis, and what follows from it, is that the current economic structure of the regions determines in large measure their potential for diversification and productive sophistication. Accordingly, the decision as to what type of industry to develop in each zone in turn entails designing specific policies, even for the industries themselves, depending on the productive capabilities existing in each region.

### **Socioeconomic Outcomes**

The primary aim of attracting investment, both local and foreign, to economic zones is to directly and indirectly create jobs. Like many location-based models, economic zones seek to foster economies of agglomeration by promoting interaction among companies, raising productivity via the construction of conglomerates, or attracting technologically advanced industrial facilities (Combes *et al.*, 2011). Finally, success in attaining static and dynamic economic outcomes in the zones will help achieve desired socioeconomic outcomes with respect to raising the quality of employment and ensuring decent wages for the local population.

When it comes to wages, in China, based on estimates using the Differences in Differences model, Wang (2013) concluded that the average wage earned by treatment groups in the study was approximately 8% higher than in the control group, and that only a 5% increase in cost of living was estimated. Accordingly, wage increases for the workers outpaced the rising local cost-of-living; the benefits were smaller in more recently-created zones, and municipalities with multiple SEZs experienced greater effects than those with just one zone.

Looking at Africa, besides Mauritius, Madagascar is the only success story of an EPZ policy, despite myriad attempts to create economic zones throughout this part of the continent. Beginning with the implementation of this model in the early nineteen-nineties, the Madagascar free zone gained considerable ground in just one decade where exports and formal employment are concerned (Cling *et al.*, 2005). By estimating Mincer earnings functions considering data on gender, years of schooling, experience, and a dummy variable to estimate the earnings premium associated with the zone, the study concluded that paid remuneration in the zone is not different, everything else being constant, than those paid by other industries in the formal private sector, a fairly accepted fact for free zones in general. Nevertheless, these authors found that companies in the zone did have on average higher salaries than the informal sector and better labor conditions than the rest of the private enterprises, which can be seen as a good point of departure for the zones to develop in Mexico.

The case in Bangladesh is less heartening. According to the World Bank, although EPZs have played an important role in

supporting the rapid growth of exports in the apparel sector, the most critical factor underlying this growth was the country's advantage in labor costs. Low-skilled apparel factory workers in Bangladesh —pre-2010— earned the lowest paid wages in formal employment in any part of the world, with starting salaries at around 30 dollars a month, 2.5 times lower than the next-cheapest country (Vietnam), and three times less than the majority of African SEZs (Farole and Akinci, 2011).

On this point, the states where SEZs will be developed in Mexico enjoy a significant opportunity. In 2014 alone, the residents of Chiapas, Guerrero, Michoacán, Oaxaca, and Veracruz were earning below the national quarterly average income (39,914 pesos); salaries were lowest in Chiapas, with average current income at just 22,603 pesos, followed by Oaxaca, Guerrero, Veracruz, and Michoacán, with 24,041, 25,635, 28,029, and 29,846, respectively (Centro de Estudios de las Finanzas Públicas, 2016).

Finally, another major socioeconomic outcome resulting from implementing these economic zones around the world, which itself deserves a detailed study, is improved gender equity in workforce participation. In 2006, workforce participation in SEZs in Bangladesh, Mexico, the Philippines, the Dominican Republic, and South Korea was 85, 60, 74, 53, and 70%, respectively (Farole and Akinci, 2011).

## CONCLUSIONS

This systematic analysis identified the principal factors behind the success or failure of an SEZ program and discussed the most salient results pursuant to the empirical evidence and most relevant international research. In principle, the evidence and research seem to back up the initial objectives outlined in the LFZEE for the case of Mexico, but it ought not to be forgotten that the international experience suggests that in countries where the program has been successfully implemented, the results obtained were moderate in the first five to ten years of the program. Their most visible impact does not emerge until the long term.

Looking at the factors pertaining to success or failure, there is a wide range of variables that can drive the outcomes of an SEZ program, among them, wages and productivity in the region, trade preferences, market outlook, governmental policy and the macroeconomic environment, the incentives offered to investors, quality of design, and program execution. Nevertheless, the major international studies identify the investment climate in the SEZs (including the presence of high-quality infrastructure and the efficiency of procedures and trade regulations), and access to large local and regional markets as the variables most closely correlated with the outcomes of an SEZ.

The provision of key infrastructure in SEZ states is an essential point to the success of the program. Although true that the regions chosen in Mexico do have strategic port infrastructure that could serve as an incentive to appeal to more FDI, the states and municipalities need to make sure there is sufficient basic functional infrastructure, like roads and highways, water, electricity, gas, sewage, telephone services, Internet, etc., which will require significant investment on the part of the different levels of government and could entail a dual challenge, given the current financial and political conditions prevailing in the country. On the other side, the efficiency of procedures and regulatory affairs implies the need for effective governance, a seamless market system, and strong commitment from political and business leaders to help SEZs in Mexico reach success. Accordingly, the three levels of government shall each play an important role as facilitators of a business environment conducive to investors, ensuring the local provision of business support services, training and education for human capital, and consulting-style support to help local companies manage their business.

On another note, the strategic decision made as to the geographic location of the SEZs in Mexico seems somewhat murky. International experience has shown that zones tend to be more successful when they are located closer to markets with a large number of consumers, a high number of producers, and human capital. Looking at consumers, although there is no real argument for the local piece, one might argue that the South American markets, in particular, those countries which alongside Mexico belong to the Pacific Alliance, could entail an important opportunity for the zones in the southern region of the country. Nevertheless, most of the criteria that ought to be used for selecting geographic location seem not to have been taken into account, which could be explained based on several experiences documented by the World Bank in which a zone's location was chosen based on political, rather than commercial or economic, considerations.

The World Bank reports that nearly all countries place at least one zone in a lagging or remote region, but that few have done enough to address infrastructure connectivity, workforce skills, and access to the supplies these resources lack, which eventually diminishes competitiveness. Accordingly, it ought not to be forgotten that when deciding on the destination of an investment, international companies prioritize regions where they have access to quality infrastructure, functional labor markets, and the externalities of knowledge.

Likewise, it is worth remembering that the traditional sources of competitiveness in emerging countries that have implemented the SEZ model (low wages, trade preferences, and tax incentives), serve as catalysts, but are not sustainable over time, and can even spur distortions that impede the zones from reaching their ultimate goal of becoming an investment-friendly environment, raising productivity, and improving labor market conditions. As such, the initial incentives the government grants need to be followed up on, and should evolve over time so that they are not tainted into tools of political pressure or lead to wage stagnation, as has been seen in several other international experiences.

In this sense, as the World Bank suggests, the sustainability of economic development in SEZs will depend primarily on the external factors going along with and shoring up the policy, such as integration with local value chains and local clusters, and their integration in turn with the domestic economy. As such, it will be necessary to design a strategy that: 1) enables productive diversification and sophistication via technology and knowledge transfer to create economies of scale in emerging sectors and increase the productive skills of human capital; 2) creates industrial clusters and entails

integration with regional value chains that permit local producers to develop; 3) supports educational, research, and technology institutions as part of a triple-helix strategy (companies, government, and educational institutions) to support this initiative in the long term.

Finally, as the burgeoning literature on evolutionary geography and economic complexity suggest, regional economic development is in large part dependent on the pre-existing competencies and industrial structure. As such, an initial strategic step to raise the likelihood of achieving the dynamic economic outcomes observed worldwide will be to identify and consider the existing differences across economic structures and the productive capacities of the states where the SEZ will be implemented in Mexico.

Current productive capacities are a good indicator of the potential and opportunities that each region enjoys when it comes to productive diversification into more complex goods and services that permit sustainable economic growth in the regions. At the same time, these discrepancies in productive capacity highlight the need to design specific public policies in each region in order to harness their specific comparative advantages and/or develop the required capabilities pursuant to the objectives set forth for each SEZ, which will demand a great deal of capacity on the part of the three orders of government, the business sector, and educational institutions in Mexico.

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<sup>2</sup> EPZs have become the most popular economic zone model implemented on the planet. Given their scope, they can be understood as the precursor to SEZs. For greater detail on economic zones, see Wong and Chu (1984), Zeng (2010), and Farole (2011a).

<sup>3</sup> According to the World Bank, the first type of economic zone ever implemented was in the airport of Dublin, Ireland, in 1959.

<sup>4</sup> In the mid-nineteen-eighties, the number of economic zones around the world began to climb rapidly, principally in developing countries. Pursuant to data from the International Labor Organization (ILO), there were 176 types of economic zones in 47 countries as of 1986; by 2006, the number had jumped to 3,500 zones throughout 130 countries.

<sup>5</sup> The criteria used to determine the location of the SEZs in Mexico are described in Article 6 of the LFZEE.

<sup>6</sup> In 2017, the South-Southeast Productive Development program and SEZ contained in the Federation Budget of Outlays (PEF) was allotted a budget of two billion pesos.

<sup>7</sup> JSTOR <<https://www.jstor.org/>>; ScienceDirect <<http://www.sciencedirect.com/>>; Web of Science <<http://www.webofknowledge.com/>>; Banco Mundial <<http://www.worldbank.org>>

<sup>8</sup> With the exception of Wong and Chu (1984), given its relevance in understanding the objectives and evolution of economic zones in Asia.

<sup>9</sup> Research conducted beginning in 1990 was included, considering that the world's main SEZs sprouted up in the nineteen-eighties, so by the nineties, there were already hard data upon which to base analyses and more robust estimates of how these zones were performing.

<sup>10</sup> Referring to the SCImago journal ranking measuring the scientific influence of academic journals. This classification explains both the number of citations a journal receives as well as the prestige or importance of the journals from which these citations come. The Q1 and Q2 quartiles are the highest.

<sup>11</sup> Flow diagram of the information through the different phases of a systematic review. PRISMA web site (viewed on 12/21/2016). Available at: <<http://www.prisma-statement.org>>

<sup>12</sup> In the case of China, depending on the sector, companies were exempt from paying the Income Tax during their first two years of operations, and were given a 50% tax break after three years.