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Perspectivas Contemporâneas
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Special economic zones and the influence of transport modes: proposal of a theoretical model appropriate to the brazilian reality

Zonas econômicas especiais e a influência dos modais de transporte: proposta de um modelo teórico adequado à realidade brasileira

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Os autores certificam que não possuem implicação comercial ou associativa que represente conflito de interesses em relação ao manuscrito.

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[1, 2, 3] Conceptualization
[1, 2, 3] Data collect
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[1, 2, 3] Writing and Editing

Special Economic Zones (SEZs) have become in recent decades an important strategy for economic stimulation. The SEZs are associated with regional development policies and the fight against economic stagnation. The effectiveness of a SEZ depends on the regional economic context, its potential, incentive policies and investment attraction, as well as the supply of infrastructure for productive development. Thus, this study aims to establish a theoretical/hypothetical relational model that represents the influence of transport modes on the effectiveness of a regional development strategy of the SEZ type. To reach the proposed objective, an extensive Systematic Literature Review was carried out with the help of the scientific platforms Connected Papers and Ryyan, aligned with research in the main academic databases (Scopus, Web of Science, EBSCO host, ieeeXplore, Emerald insight). A qualitative approach, inductive logic, and interpretivist epistemology were adopted. The results of the study suggest a theoretical/hypothetical model composed of eight hypotheses and nine constructs (factors that enable SEZ effectiveness, factors that compromise the SEZ effectiveness, SEZ effectiveness, modals of transport, SEZ performance, SEZ program, SEZ characteristics, contextual factors and regional development. The study improves the regional development literature and especially the Special Economic Zones theme by establishing solid theoretical relationships among the suggested constructs.

Keywords: Regional Growth. Regional Development. Transport Intermodality. Export Processing Zone. Free Trade Zone.

As Zonas Econômicas Especiais (ZEEs) se tornaram nas últimas décadas uma importante estratégia de estímulo econômico. As ZEEs estão associadas às políticas de desenvolvimento regional e à luta contra a estagnação econômica. A eficácia de uma ZEE depende do contexto econômico regional, de seu potencial, das políticas de incentivo e atração de investimentos, bem como da oferta de infraestrutura para o desenvolvimento produtivo. Assim, este estudo visa estabelecer um modelo relacional teórico/hipotético que representa a influência dos meios de transporte na eficácia de uma estratégia de desenvolvimento regional do tipo ZEE. Para alcançar o objetivo proposto foi realizada uma extensa Revisão Sistemática da Literatura com a ajuda das plataformas Connected Papers e Ryyan, alinhada com pesquisas nas principais bases de dados acadêmicos (Scopus, Web of Science, EBSCO host, ieeeXplore, Emerald insight). Uma abordagem qualitativa, lógica indutiva e epistemologia interpretativista foram adotadas. Os resultados do estudo sugerem um modelo teórico/hipotético composto de nove construtos (fatores que viabilizam a eficácia da ZEE, fatores que comprometem a eficácia da ZEE, eficácia da ZEE, modais de transporte, desempenho da ZEE, programa da ZEE, características da ZEE, fatores contextuais associados a ZEE, e desenvolvimento regional), e oito hipóteses. O estudo avança na literatura de desenvolvimento regional e especialmente na temática Zonas Econômicas Especiais ao estabelecer sólidas relações teóricas entre os construtos sugeridos.

Palavras-chave: Crescimento regional. Desenvolvimento regional. Intermodalidade de transportes. Zona de Processamento de Exportações. Zona Franca.

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INTRODUCTION

According to Hall and Charles (1981), government policies play a crucial role in the early-stage development of industries. In this context, Special Economic Zones (SEZs) are regarded as instruments of economic policies aimed at attracting investment, particularly in emerging countries (Cavalcante, 2020). Moreover, SEZs are seen as tools for economic development and poverty reduction (Mösle, 2019). SEZs are delimited geographical areas with distinct tax laws and regulations, primarily focused on economic development through the attraction of foreign investments, increased industrial production, logistics, exports, and job creation (Cavalcante, 2020). They are associated with regional development policies and combating economic stagnation (Cavalcante, 2020). Similar to Free Trade Zones (FTZ), SEZs can stimulate international trade by reducing taxes and customs duties (The World Bank, 2017).

For SEZs to maximize their productivity, they require favorable conditions, such as a sustainable fiscal incentive program that encourages investments, infrastructure development, and adaptation to the regional economic context (The World Bank, 2017). Ensuring an efficient production flow can help reduce costs and risks (Pereira, 2014). Accessibility and mobility options that align with the types of products being transported can enhance the performance and profitability of SEZs (The World Bank, 2017). However, Brazil may face limitations in developing SEZs, particularly due to infrastructure issues in its production flow (Haddad, 2011).

Intermodal transportation is essential for implementing and sustaining transport modes while promoting economic development, as transport costs are inherent to any economic and social activity and should always consider the best transport options (Vilaça, 2005). Transport infrastructure is a constitutional requirement for regional integration and socioeconomic development, as stipulated in Article V, Inc. XV of the Federal Constitution. It must ensure optimal conditions for economic production transport; otherwise, it creates a cycle of competitive disadvantages for both the domestic market and exports (Caixeta Filho; Martins, 2001). Overreliance on road transport for production distribution results in inefficient and costly logistics, reflected in the final costs of products and services (Pereira, 2014).

Padula (2008, p.14) suggests that an ideal distribution of transport modes should allocate around 20% for road, 40% to 50% for rail, and 35% to 40% for waterway or cabotage, with railway and waterway modes responsible for 80% of a country's trade. This emphasizes the principles of transport intermodality and the complementary roles between modes in meeting diverse transport demands (Pereira, 2014).

Considering the above discussions, there is a recognized tool for economic development in emerging countries (SEZs) on one hand and the necessity of adequate transport infrastructure for their effective implementation and operation on the other. Therefore, to guide the study, the following research question was established: How can a

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relational theoretical model representing the influence of transport modes on the effectiveness of the Special Economic Zone-type development strategy be organized? The study aims to establish such a relational theoretical model.

To achieve the proposed objective, a Systematic Literature Review (SLR) was conducted, focusing on the themes "Special Economic Zones" and "modalities of transport." Through inductive logic and interpretive epistemology, constructs, variables, and relationships were defined to suggest a theoretical model.

LITERATURE REVIEW

The theoretical framework of the study was organized into three sections, namely: item 2.1, Special Economic Zones, addresses the conceptualization of SEZs and their fundamental characteristics for promoting and radiating growth. In the step, cases and experiences of the model in several countries are presented. Item 2.2, modes of transport, highlights the importance of a country's transport matrix and the provision of adequate infrastructure for territorial and logistical integration. Some characteristics of road and rail modes are highlighted, as well as some international comparisons on the sector. Item 2.3, a literature review between SEZs and transport modes, clarifies and focuses on the relationship between economic stimulus policies and investments in transport infrastructure.

Special Economic Zones

There are approximately 5,000 SEZs in the world spread across more than 140 countries, most of them in China, being widely used for economic growth (Unctad, 2019). SEZs are considered key drivers for a country's exports (Mösle, 2019).

The SEZs emerged as an economic policy tool aimed at stimulating investments in contrast to the market limitations of developing countries (Mösle, 2019). The SEZs are characterized by a planned policy of tax incentives aimed at attracting investments and are based on the processing of products for export (The World Bank, 2017). They consist of industrial areas, such as districts, with specific legislation and regulation, enabling investments and, consequently, economic development (Cavalcante, 2020).

The emergence of SEZs depends on a program of fiscal incentives suited to the regional context in which they will be inserted (Cavalcante, 2020). Likewise, its operation can be influenced by the offer of infrastructure and the compatibility with the economic nature of the region (The World Bank, 2017). The economic impacts and performance of the SEZs are considered positive, radiating out to the surrounding regions. However, they are limited and progressively decrease up to a maximum radius of 50 kilometers (Frick; Rodríguez-Pose, 2019; The World Bank, 2017). According to Haddad (2011), the

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implementation of SEZs, especially through infrastructure projects, can increase the concentration of resources in specific regions. In this sense, SEZs can act as a driving industry (Perroux, 1967) and contribute to an agglomeration economy (Weber, 1929).

To achieve their goals, SEZs must explore regional specificities and be aligned with the country's industrial development goals (Naeem; Waheed; Khan, 2020). Furthermore, SEZs should be created with the objective of increasing regional competitiveness and radiating growth (Naeem; Waheed; Khan, 2020). To evaluate the performance of SEZs around the world, the World Bank has defined a conceptual framework that presents the drivers of a SEZ's performance (Figure 1).

The World Bank suggests a conceptual framework consisting of three constructs (SEZ Program, SEZ characteristics and Contextual factors) with a set of associated variables that influence the performance of a SEZ.

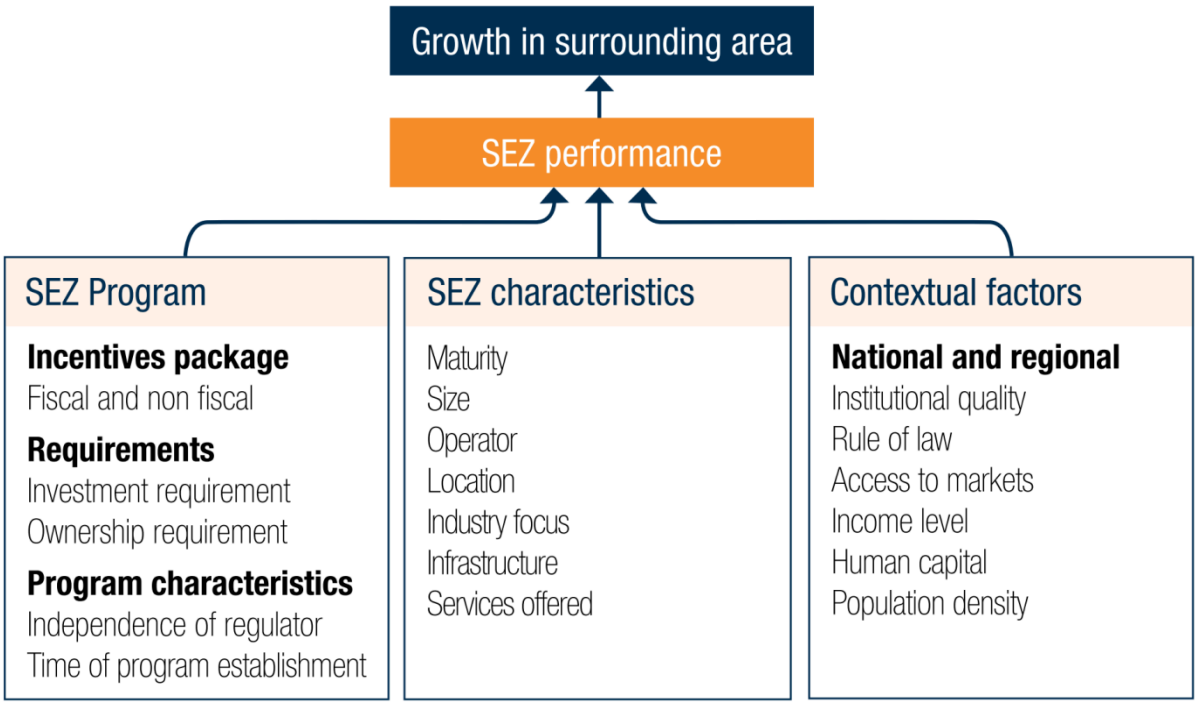

Figure 1 - Drivers of SEZ Performance - The Conceptual Framework

Source: The World Bank (2017, p. 42).

The World Bank (2017) analysis suggests that the specific context of each country and region determines the performance of a SEZ. Furthermore, the study suggests that "large zones in relatively poor areas but not far from the country's largest city and in countries with relatively easy access to the world's major developed markets have demonstrated the greatest economic dynamism" (The World Bank, 2017, p. 92).

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Otherwise, it was noted that incentive packages to attract businesses to SEZs have had limited influence on the success of the zones - factors such as the type of partnership operator (zone-private, public, or public-private); corporate tax exemptions; or subsidized public services have not affected the success of SEZs in emerging economies (The World Bank, 2017).

The World Bank study is an important document for discussions about SEZs and is aligned with studies applied in different countries. For the Chinese case, national policies to encourage SEZs sought to catalyze local and regional socioeconomic development (Alkon, 2018). However, they were restricted mainly to the east coast of the country, not spreading strongly in other regions of the country (Demurger et al., 2002). According to The World Bank (2017), SEZs can influence the growth of surrounding areas, but this effect decreases as the distance from the SEZ increases.

In India, the formulation of policies for SEZs took place in 2000, but satisfactory results were not observed due to issues such as corruption and bureaucracy that compromised the realization of projects (Alkon, 2018). In Russia, the development and implementation of SEZ projects showed a strong dependence on State interference to stimulate commercial processes, regulate competition and collaboration between companies (Sosnovskikh, 2017).

In Brazil, the Export Processing Zones (EPZs), a type of SEZ, 26 in total and are distributed throughout the national territory (Carvalho; Pessoti, 2018). However, only 16 EPZs are authorized for effective implementation (Brasil, 2020). Among the 16 authorized EPZs, there are only two that are effectively implemented and functioning (Pecém - CE and Parnaíba - PI). Not all Brazilian states have some type of SEZ. The predominance of this strategy occurs in the north and northeast of the country, precisely in the economically less developed regions. The main SEZ in Brazil is the notorious Manaus Free Trade Zone (MFTZ), which obtains important socioeconomic results, although concentrated in the regions close to Manaus (Cavalcante, 2020).

In Brazil, there is a fundamental role played by the legislative and executive powers regarding the policies for implementing SEZs (Cavalcante, 2020). Tax incentive programs, compatibility with the regional economic context and existing infrastructure are essential for a SEZ to provide and radiate development in the region (Cavalcante, 2020). There is a close relationship between the aforementioned powers to define the geographic scope of regional development policies. The projects for the creation of EPZs occur through congressmen or senators from the target regions (Cavalcante, 2020). Despite the significant number of proposals for SEZs in Brazil, few are duly approved which may indicate interests or conflicts between bases of political support instead of one effective planning of regional development (Cavalcante, 2020).

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Brazilian Modes of Transport

According to the National Department of Transport Infrastructure (NDTI), the transport matrix can be understood as a set of transportation means available to a country for social and economic transport. The aim is ideally to equate distances, topography, regional socioeconomic characteristics, and technical-economic-environmental feasibility, obtaining the best alternatives for the constitutional premises of safe, efficient, economic, and comfortable transport (DNIT-IPR-742, 2010). In this study, the concept of "economic transport" is understood as the transport of goods and services, and "social transport" as the movement of people across the national territory, with the latter not being analyzed.Infrastructure sector planning can influence national development and is characterized by the inherent need for public policies, planning, regulations, priorities, interrelationship between the Federal, State and Municipal spheres, as well as by the participation of the private sector (Pereira, 2014). According to Veloso (2012, p. 9):

> “Productivity gains should occur especially through investments in transport, either because it is necessary to increase the participation of this service in the total Gross domestic product (GDP), or because of the high irradiation power of transport for the entire economy, since it represents cost reduction, market approximation and creation of new business opportunities in all sectors”.

Brazil faces a significant deficit in transport infrastructure, lacking adequate railways and waterways. As a country of continental dimensions, its internalized production necessitates the movement of large quantities of grains, ores, manufactures, and commodities for both domestic and international markets. Achieving a balanced transport matrix through intermodality is crucial for enhancing accessibility and mobility, thereby enabling the transportation of larger volumes at minimal cost and reduced travel time (Pereira, 2014).

According to Caixeta Filho and Martins (2001), transport plays a pivotal role in logistics and represents the final frontier for cost reduction. Consequently, the internationalization of goods becomes more viable and competitive as transport efficiency improves. In June 2017, the National Confederation of Transport (NCT) launched its second historical series, providing data on Brazil's transport sector, encompassing cargo and passenger movement, infrastructure, production, vehicle fleet, and sector composition. Key findings include: (i) the inadequate quality and growth of the road network fail to meet the demand for transporting goods and people, and (ii) despite a 194.1% increase in the vehicle fleet from 2001 to 2016, highways continue to suffer from serious quality issues, compromising safety. Figure 2 presents comparative data on freight

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transport matrices for countries with similar territorial sizes: Russia, Canada, Australia, USA, China, and Brazil.

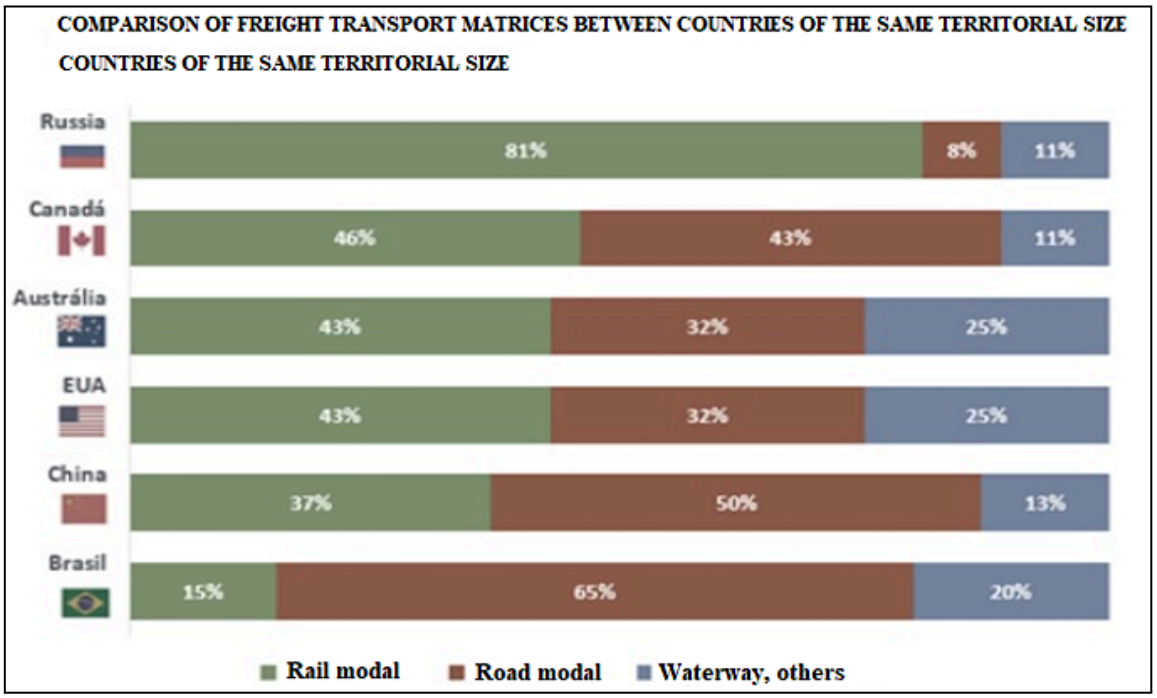

Figure 2 - Comparison of freight transport matrices between countries of the same territorial size

Source: ANTF – National Association of Rail Transporters. Available at: <https://www.antf.org.br/informacoes-gerais/>. Accessed on Nov. 20, 2020.

In these countries there are more balanced portions of cargo transport between the modes. In most cases, the railway receives the major portion. These results suggest some indications regarding the efficiency of the modes. Cargo transportation over long distances on railroads is cheaper and more efficient (Rodrigues, 2004). The rail modal supports larger volumes of cargo, with energy expenditure, maintenance of infrastructure and vehicles, risk of accidents, among others, being considerably lower (Freitas et al., 2004).

According to Vilaça (2005) “Brazil spends an average of US$ 1 billion more each year due to lack of adequate cargo transportation”. Thus, Brazilian logistical imbalance considerably increases transport costs, harming international competitiveness (Vilaça, 2005). At the same time, the majority use of highways accelerates the deterioration of the pavement, reducing the useful life programmed in the project, overloading the conservation systems. Thus, spending more than necessary to maintain the operational conditions of the highways, even though the results do not represent definitive solutions for pavement defects (Pereira, 2014).

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Special Economic Zones and Transport Modes

The SEZs have been an important tool for developing countries to increase their productivity, infrastructure, human and institutional capital (Narula; Zhan, 2019). The benefits of this strategy, in addition to enabling cost reductions through fiscal incentive policies, include the irradiation of growth by fighting economic bottlenecks at the regional level (Mösle, 2019).

Countries use SEZs as a key factor to modify economic distribution, seeking to create formal activities in the economy and stimulating specific regions that face limitations (Narula; Zhan, 2019). The attraction of investments for the implementation of SEZs in these regions also depends on the provision of adequate infrastructure, overcoming disadvantages such as long distances to export markets (Narula; Zhan, 2019).

For developing countries, SEZs can be efficient and productive ways to diminish the barriers of the domestic economy (Warr, 1989). Furthermore, they can represent economic advantages such as the simplification of production procedures, elimination of regulations and encompassing infrastructure improvements (Warr, 1989).

Transport infrastructure can promote economic growth in a number of ways. Initially due to the investment made in the planning and implementation of the works, as well as the consequent reduction in travel times and operating costs (Hong; Chu; Wang, 2011). With the increase in the capacity of transport infrastructure, products and markets become more accessible, integrating larger areas of the territory and stimulating the productivity of the interior of a country (Hong; Chu; Wang, 2011). Furthermore, an adequate infrastructure can attract foreign investment, implying a redistribution of economic growth (Hong; Chu; Wang, 2011). There is a linear relationship between infrastructure, growth and economic development (Hong; Chu; Wang, 2011).

In China, for example, between 1998 and 2007, data from 31 provinces provided strong evidence that quality variations in transport infrastructure were related to variations in the Gross Domestic Product - GDP (Hong; Chu; Wang, 2011). For example, between 1993 and 2004, investments in transport infrastructure in China grew 9.31, 13.89 and 15.86 times in the east, central and west regions, respectively (Zhang, 2009). Another important fact is that investments in the eastern Chinese region correspond to 50% of the total value, forming a *cluster* between economy and transport (Zhang, 2009). In eastern China, most of its SEZs are found due to the proximity to the coast. This agglomeration, a result of Chinese economic growth, creates a gradient that gradually decreases from east to west (Zhang, 2009).

In Italy, the potential of importation and exportation ports started to be analyzed with their position relating to the transport network (Baccelli; Morino, 2020). Understanding the level of integration between the ports and the transport matrix that connects them has become fundamental for socioeconomic analyses. Currently, there are initiatives by members of the Italian government, as well as by public-private partners, to encourage

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intermodality and the expansion of the participation of the railway modal for reasons of efficiency and cost reduction (Baccelli; Morino, 2020).

METHODOLOGY

In this study, a qualitative and interdisciplinary approach was adopted, employing an inductive logic and interpretive epistemology. According to Bernstein (2014), interdisciplinarity occurs when two or more disciplines establish links with each other to achieve diversified and broader knowledge about a given phenomenon. Qualitative studies are based on theoretical-empirical analysis and allow for an approximation between research subjects and objects (Minayo; Sanches, 1993). The qualitative approach must describe, understand and explain the phenomena from the perspective of open and variable studies to subsequently be used in statistical research (Minayo, 2012). Eisenhardt (1989) suggests that inductive logic is applied when the object of study is to build theories or models.

The search for establishing relationships between different disciplines can be carried out, initially, by the Systematic Literature Review (SLR) (Webster; Watson, 2002). In this sense, two types of SLR can be used: (i) the first type of review focuses on an already established and mature literature in which the body of knowledge needs analysis and synthesis; (ii) a second type of literature review involves an emerging theme whose exposure would benefit potential theoretical foundations. This study has characteristics of both approaches, as it involves literature that has got a well-developed body of knowledge (Modes of Transport) and another more incipient research group (Special Economic Zones). Literature review can lead the researcher to propose a conceptual model that synthesizes and expands the existing research (Webster; Watson, 2002). The contribution of the study would be in the relational foundations established by the conceptual model and proposition of variables and constructs (Webster; Watson, 2002).

For an SLR to be considered reliable, Webster and Watson (2002) suggest that the main contributions are probably in the main scientific journals. Therefore, this study was initially developed based on the work of Naeem, Waheed and Khan (2020), where barriers and enablers for the success of Special Economic Zones are discussed. Thus, studies directly and indirectly related to the work of Naeem et al. (2020). To achieve this goal, the applications Rayyan (https://rayyan.qcri.org/) and Connected Papers (https://www.connectedpapers.com/) were used. The Connect papers platform is a visual tool that helps scientists and researchers to find and explore relevant work in their fields of research (Eitan; Smolyansky; Harpaz, 2021). Rayyan is a free online application that helps researchers with systematic literature reviews (Johnson; Phillips, 2018)

The SLR of this study occurred in three distinct, complementary moments. The first moment took place using the Connected Papers platform to identify seminal studies and

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those derived from the work of Naeem et al. (2020). Figure 3 shows the relationships between the study by Naeem et al. (2020) and other relevant works in the literature. This list of studies is considered seminal according to the work of Naeem et al. (2020) and was generated by the ConnectedPapers platform.

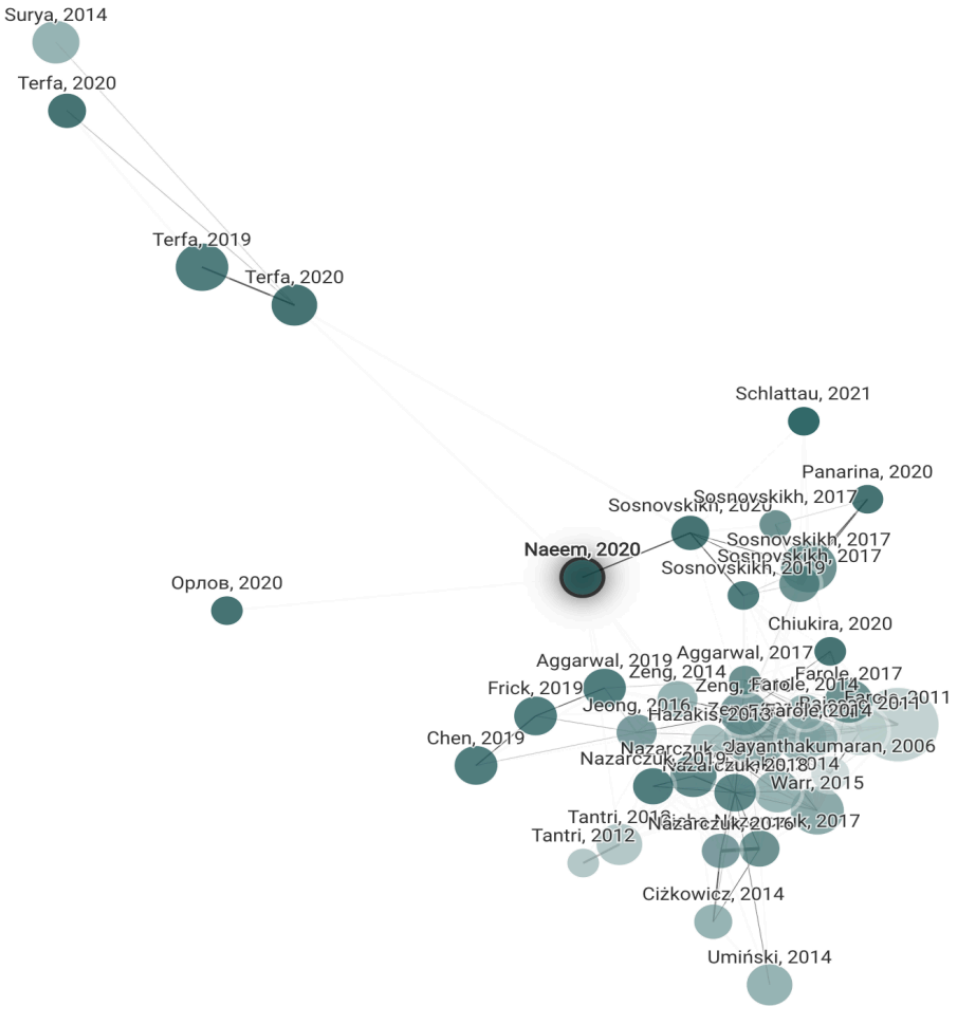

Figure 3 - Works similar to those by Naeem et al. (2020)

Source: Developed by the authors via the ConnectedPapers platform.

The list of articles presented in Table 1 (below) suggests that they are the most cited works by the articles listed in the graph in Figure 3. This generally means that they are seminal works important to this field of research (Eitan; Smolyansky; Harpaz, 2021).

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Table 1 - List of seminal studies according to the ConnectedPapers platform

Title	Last author	year	Citations	Graphic citations
Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences	Thomas, Farole	2011	177	20
The economic impact of Special Economic Zones: Evidence from Chinese municipalities	Jin, Wang	2010	319	18
A Review of the Role and Impact of Export Processing Zones	Dorsati , Madani	1999	295	18
EXPORT PROCESSING ZONES: The Economics of Enclave Manufacturing	Peter G., Warr	1989	182	16
Special Economic Zones and the Opening of the Chinese Economy: Some Lessons for Economic Liberalization	Wei, Ge	1999	143	14
Benefit-Cost Appraisals of Export Processing Zones: A Survey of the Literature	Kankesu, Jayanthakumaran	2003	103	12
Special economic zones : progress, emerging challenges, and future directions	Gokhan, Akinci	2011	192	11
Export processing zones as catalysts	Lars J, Nilsson	1997	146	10
Export Processing Zones in the Dominican Republ ic: Transforming manufactures into commodities	Raphael, Kaplinsky	1993	182	10
An economic analysis of the duty-free zone	Koichi, Hamada	1974	224	10

Source: Developed by the authors.

Below, in Table 2, the documents which cited many of the documents in Figure 1 are presented. This generally means that they are field surveys or relevant recent works that were inspired (derived studies) by the many articles presented in Figure 3.

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Table 2. List of derived studies according to the ConnectedPapers platform

Title	Last author	Year	Citations	References Graphic
Foreign Trade in Special Economic Zones in Poland	Stanisław, Umiński	2019	1	9
Using Special Economic Zones to Facilitate Development: Policy Implications	James, Zhan	2019	3	6
Embedded Enclaves? Initial Implications of Development of Special Economic Zones in Myanmar	Sina, Hardaker	2020	1	4
Reversing Uncontrolled and Unprofitable Urban Expansion in Africa through Special Economic Zones: An Evaluation of Ethiopian and Zambian Cases	Xingping, Wang	2020	0	3
Can public intervention improve local public sector economic performance? The analysis of Special Economic Zones in Poland	Katarzyna, Kopczewska	2019	0	3
Demystifying Chinese overseas investment in infrastructure: Port development, the Belt and Road Initiative and regional development	Weidong, Liu	2020	2	3
Do operations in SEZs improve a firm's productivity? Evidence from Poland	Jarosław Michał, Nazarczuk	2018	3	3
The Role of China's Overseas Special Economic Zones in Economic Development	Salah Eldin Mohamed Ibrahim, Elrashidy	2016	2	3
Sustainable and Special Economic Zone Selection under Fuzzy Environment: A Case of Pakistan	Sharafat, Ali	2020	3	3

Source: Developed by the authors.

The second stage of SLR occurred through the search for studies in the largest academic databases, as shown in Table 3.

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Table 3 - Review in academic databases

Base date	Search text	Results	Exclusion	Inclusion Criteria
SCOPUS	(TITLE-ABS-KEY (special AND economic AND zones) OR TITLE-ABS-KEY (sez) AND TITLE-ABS-KEY (transport))	138	133	5
Web of Science (WoS)	TOPIC: (Special Economic Zones) OR TOPIC: (SEZ) AND TOPIC: (Transport)	31	31	0
EBSCO host	SU Special Economic Zones OR SU SEZ AND SU Transport	287	286	1
ieee Xplore	("All Metadata":Special Economic Zones) OR ("All Metadata":SEZ) AND ("All Metadata":Transport)	93	91	2
Emerald insight	title:"Special Economic Zones" OR (title:"SEZ") AND (title:"Transport")	8	8	0
Total:		**557**	**549**	**8**

Source: Developed by the authors.

According to the *strings* search, a total of 557 studies were returned and of these, 549 were excluded according to the following exclusion criteria: (i) repeated studies already found in other databases; and (ii) studies that did not exactly present a relationship between modes of transport and Special Economic Zones. No type of time cut was performed in the searches performed. To finalize the SLR, the snowball technique was applied (Biernacki; Waldorf, 1981).

Finally, in the third step, the Ryyan platform was used to generate bibliometric data of the publications found by the SLR, which resulted in 28 studies. Among the 28 studies analyzed, 22 are peer-reviewed scientific articles, 3 books and 3 scientific conference articles. Table 4, below, identifies the scientific journals associated with publications on the topics analyzed, as well as the number of publications.

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Table 4 - List of scientific journals with the respective number of published studies

Journal	Amount
World Development	2
Asia Pacific Viewpoint	1
Central European Economic Journal	1
Development Policy Review	1
Economy of Region	1
European Journal of Development Research	1
Igarss 2014	1
Journal of Development Economics	1
Journal of International Economics	1
Journal of Transport Geography	1
Acta ophthalmologica	1
New Trends and Issues Proceedings on Humanities and Social Sciences	1
Research in Transportation Business and Management	1
Research Observer	1
Sustainability (Switzerland)	1
Symmetry	1
The American University in Cairo School of Humanities and Social Sciences	1
Transnational Corporations	1
Transportation	1
Nase More	1

Source: Developed by the authors via the Ryyan platform (2021).

There is a low incidence of publications in academic journals, which may suggest that the joint approach of SEZs and transport modes is still underdeveloped in the scientific literature. Table 5 below details the number of publications on the topics by author.

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Table 5. List of authors with the respective number of published studies

Authors	Amount
United Nations Development Program	3
World Bank	2
Unctad HER	1
El-Rashidy Salah	1
Nazarczuk Jarosław M.	1
Lebel Boripat	1
Kaplinsky, Raphael	1
Morino Pietro	1
Tien, I	1
Narula, Rajneesh	1
Trappey, AJC	1
Alex Soares de Souza	1
Hamada, Koichi	1
Sciences, Social	1
Ali, Sharafat	1
Mswood Javed	1
Ahmed, Waqas	1
Ilyina, OB	1
Solangi, Yasir Ahmed	1
Rudic, D	1
Hardaker, Sina	1
Chu, Zhaofang	1
Reference Costo closes	1
Milos, I	1
Native Woods	1
Demirelişçi B	1
Liu Zhigao	1
Warr, Peter	1
Zhang Xueliang	1

Source: Developed by the authors platform via Ryyan (2021).

Table 5 suggests that the main authors on the themes of SEZs and modes of transport are a financial institution (*The World Bank*) aimed at fostering the development of emerging countries and the United Nations Development Program. It is observed that discussions on SEZs and modes of transport are being discussed, essentially, within the

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scope of international economic development organizations, suggesting that it is a topic with space to be discussed in academia.

Figure 4 shows the evolution of the number of publications on the subject SEZs and Transport Modes from 1974 to 2020.

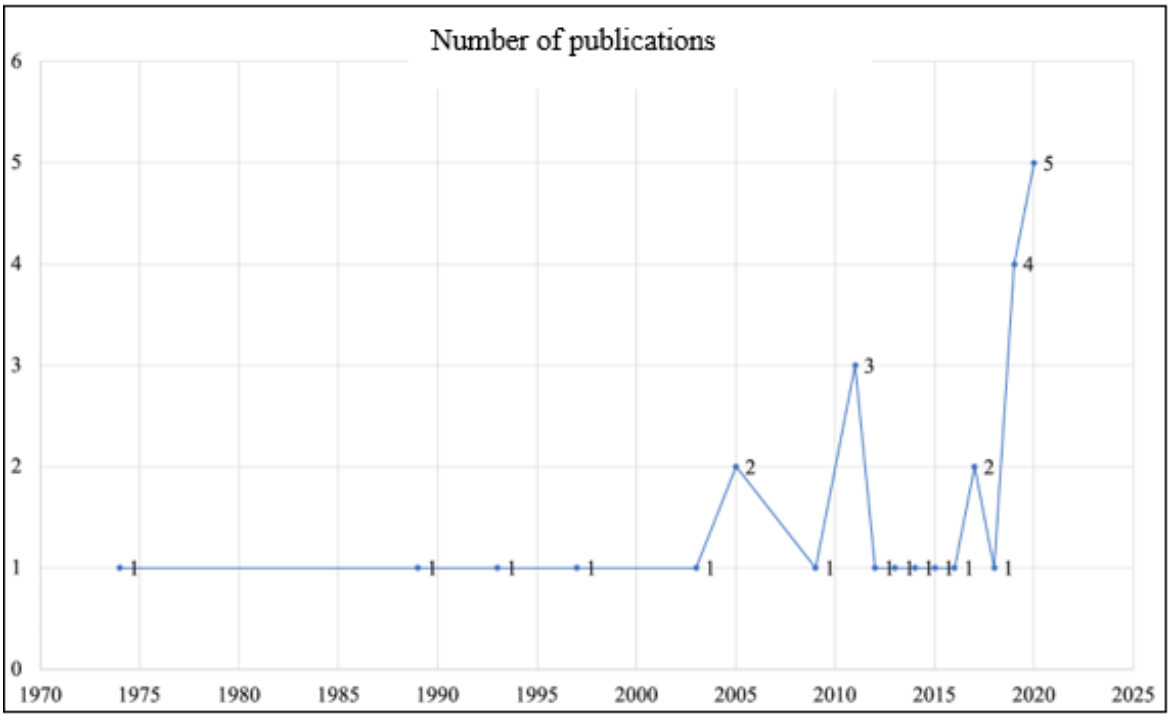

Figure 4 - Publications carried out over the years involving SEZs and Transport Modes

Source: Developed by the authors via platform Ryyan (2021).

Figure 4 suggests that the themes were little addressed until the early 2000s. However, the importance of the theme for economic growth and the influence of transport infrastructure stood out in the last decade, starting on the rise from the year of 2019.

RESULTS AND DISCUSSIONS

The SEZ-type economic strategy is widely used by several countries to promote economic growth in opposition to the obstacles faced by many regions (Mösle, 2019). In several countries, SEZs are considered essential for increasing exports, resulting in attracting investments, generating jobs, and sharing technologies (Narula; Zhan, 2019).

Some characteristics are fundamental and represent premises for SEZs to achieve their goals as an economic development tool. Tax incentives are important to attract investments, reduce bureaucracy and simplify processes. This step guarantees the insertion of SEZs in international markets (Cavalcante, 2020). For such deregulations to be achieved, synergy and alignment between the legislative and executive powers are

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necessary, in all spheres, guaranteeing the stability and longevity of the program (Sosnovskikh, 2017; The World Bank, 2017).

The planning of an SEZ also permeates the regional economic context, making it necessary that its activities are compatible with the economic dynamics of the region, ensuring integration and development. Thus, enabling the exchange of technologies and processes (The World Bank, 2017). In this way, the implementation and operation of SEZs can become effective by attracting foreign investment and increasing job creation (Naeem; Waheed; Khan, 2020). The acquisition of technological resources and increased productivity are important for the irradiation of growth, promoting socioeconomic improvements in the surrounding regions (Mösle, 2019).

The provision of infrastructure is important for the operation of the SEZs to take place efficiently. The transport infrastructure must guarantee satisfactory conditions for the flow of production in a country (Padula, 2008). For the SEZ-type development strategy to be successful, productivity and integration with international markets are fundamental. International competitiveness also depends on efficient logistics (Caixeta Filho; Martins, 2001). The increase in such capacities involves the adequate supply of transport infrastructure, allowing the displacement of large volumes of cargo at the lowest possible cost. This premise is essential so that the model can be implemented in inland regions, further away from the ports (Hong et al., 2011).

In several countries, the intermodality between highways and railways aims precisely at meeting the most diverse demands of cargo transport (Vilaça, 2005). Countries with continental dimensions such as the United States, China, Russia, among others, have a greater participation of the railway modal in economic transport compared to Brazil, given the characteristics of this modal being more efficient in the transport of cargo over long distances (Rodrigues, 2004). International data suggest that better accessibility and mobility options for cargo transportation make the logistical process more efficient, reducing costs (Padula, 2008). In this sense, the dependence on the road modal may entail a burden on export logistics. The lack of railway infrastructure can negatively influence the export processes of the SEZs, hindering their operations and international competitiveness (Vilaça, 2005).

Table 6 shows the constructs and variables that involve the dynamics of the SEZ-type economic model and the respective influence of the modes of transport are discretized. In the step, the bibliographical references that support the listed elements are detailed.

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Table 6 - Presentation of constructs, variables and respective bibliographic references

Construct	Variables	References
Factors that enable SEZ effectiveness	Tax Incentives Program	(Cavalcante, 2020)
	Attracting Investments	(The World Bank, 2017)
	Regulation and synergy between the executive and legislative branches	(Sosnovskikh, 2017)
	Adequacy to the regional economic context	(Cavalcante, 2020; The World Bank, 2017)
Factors that compromise the SEZ effectiveness	Bureaucracy	(Sosnovskikh, 2017)
	Corruption	(Alkon, 2018)
	Distance from the coast	(Zhang, 2009)
SEZ effectiveness	Economic growth	(Mösle, 2019)
	Job creation	(Unctad, 2019)
	Increase in exports	(Naeem; Waheed; Khan, 2020)
	Poverty Reduction	(Narula; Zhan, 2019)
Modals of transport	Intermodal offer: Highways, Railways and Waterways	(Hong; Chu; Wang, 2011; Padula, 2008; Pereira, 2014; Vilaça, 2005; Zhang, 2009)
Regional Development	Irradiation of economic growth	(Hong; Chu; Wang, 2011; Frick; Rodríguez-Pose, 2019)

Source: Developed by the authors.

Table 6 highlights a total of five constructs that, interrelated, can allow the observation of the phenomenon of SEZs, from the factors that enable or impede its effectiveness to the development of the region where the strategy is applied. The relationship of influences between the constructs is suggested in Figure 5, which composes the first phase of the theoretical model of this study.

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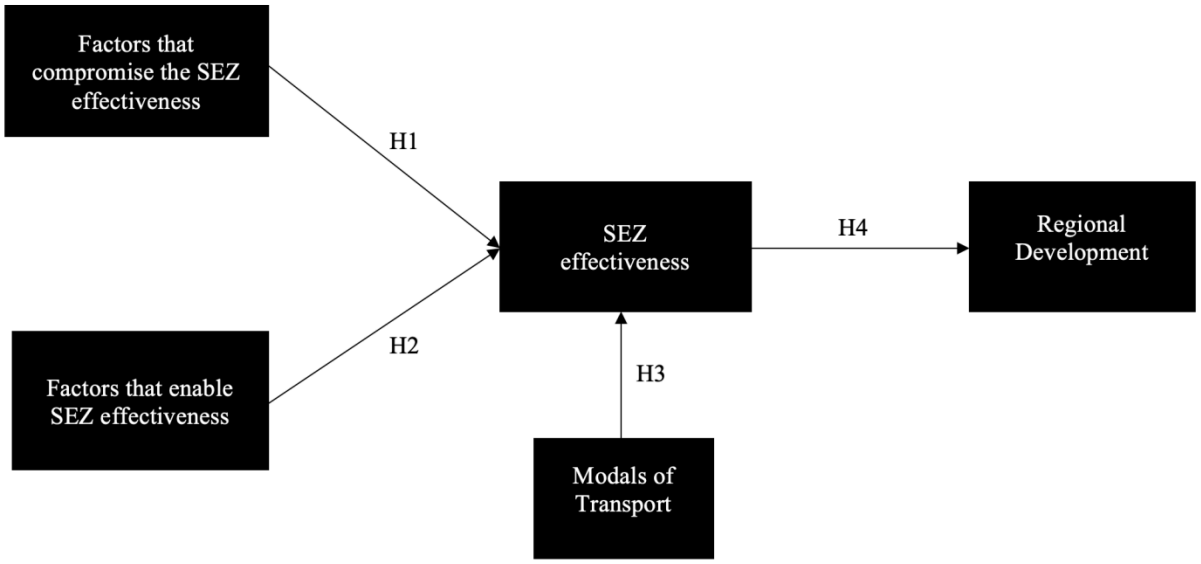

Figure 5 - Theoretical and hypothetical model of the study

Source: Developed by the authors.

Hypothesis H1: factors such as bureaucracy, corruption and distance from the coast negatively influence the effectiveness of SEZs. Excessive bureaucracy can compromise the deregulation and incentives expected in the SEZ-type development model (Sosnovskikh, 2017). In the same way, political conflicts can impede the processing of the program in government spheres, in addition to generating serious problems such as corruption, making projects unfeasible and driving away private investments (Alkon, 2018). The location of the SEZs should also be a factor to be considered for their implementation, ensuring proximity to the coast or territorial integration through the existing transport infrastructure for the flow of production (Zhang, 2009; Haddad, 2011).

Hypothesis H2: factors such as tax incentive programs, investment attraction, regulation and synergy between the executive and legislative powers and adaptation to the regional economic context positively influence the effectiveness of SEZs. The synergy and alignment between the executive and legislative powers is essential for the project to be developed and approved in accordance with technical precepts, aiming exclusively at achieving socioeconomic benefits in the region in question (Cavalcante, 2020; The World Bank, 2017), without political deadlocks (Sosnovskikh, 2017). The program must contain a series of tax incentives that attract investments (Cavalcante, 2020), present affinity and adaptation to the regional economic context, enhancing productive capacity (Cavalcante, 2020; The World Bank, 2017). Thus, SEZ can produce growth and radiate to the

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surrounding regions and economies, generating development (Hong; Chu; Wang, 2011; Frick; Rodríguez-Pose, 2019).

According to previous discussions, the transport infrastructure of the country and region in which the SEZ will be implemented can be an influencing factor in its effectiveness - an effective SEZ is understood to be one that provides economic growth for the region in which it is located (Mösle, 2019), job creation at the regional level (Unctad, 2019), increased exports (Naeem; Waheed; Khan, 2020) and poverty reduction in the region surrounding the SEZ (Narula; Zhan, 2019)

Hypothesis H3: the offer of intermodality (roads, railways and/or waterways) in the country and in the region where SEZ is located positively influences its effectiveness. Since the SEZ-type economic development strategy is aimed at the export market, transport logistics becomes important to reduce product prices to ensure international competitiveness (Hong; Chu; Wang, 2011; Padula, 2008; Pereira, 2014; Vilaça, 2005; Zhang, 2009). Thus, for the strategy to be disseminated in countries with continental dimensions, as well as states and regions far from the coast, it is necessary to offer intermodal transport infrastructure. Ensuring accessibility and mobility options for cargo transportation between railroads and highways. It is the ideal railroad mode for transporting cargo over long distances. (Hong; Chu; Wang, 2011; Padula, 2008; Pereira, 2014; Vilaça, 2005; Zhang, 2009).

Hypothesis H4, as a result, an effective Special Economic Zone positively influences Regional Development. The promotion and diffusion of growth can be achieved through the SEZ-type economic model, provided it is based on an adequate program of incentives, infrastructure and regional integration. There is a linear relationship between investments in transport infrastructure, growth and economic development (Hong; Chu; Wang, 2011). The economic impact of the SEZs are limited and radiate to their surrounding regions within a radius of approximately 50 kilometers (Frick; Rodríguez-Pose, 2019), observing this type of development strategy much more associated with Regional Development than with a strategy which can radiate at the national level in cases of countries with high territorial dimensions.

Although the model suggested in Figure 5 represents the elements that may influence the effectiveness of an SEZ, it is important to consider the framework suggested by The World Bank (2017) (Figure 1) associated to the performance of SEZs. We understand that the effectiveness of a SEZ occurs at a time before its performance - which can only be determined after an SEZ effectively exists and has companies or industries exporting and moving the economy. Thus, the direct relationship between the effectiveness of an SEZ and regional development may be questioned, since its performance may depend on the characteristics of the SEZ and contextual factors (The World Bank, 2017). In this way, the model presented in Figure 5 can be organized to a broader optics, in line with our findings and The World Bank (2017) study (Figure 6).

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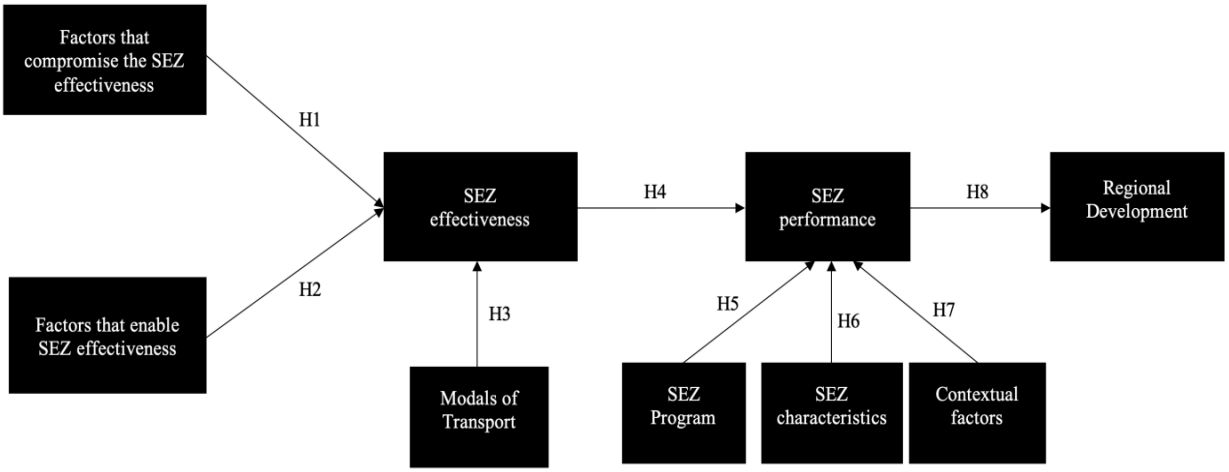

Figure 6 - Theoretical and hypothetical model aligned to The World Bank framework

Source: Developed by the authors.

Assuming that the achievement of an SEZ effectiveness can occur due to the influence of hypotheses H1, H2 and H3, the need arises to investigate the performance criteria of the SEZ economic model.

Hypothesis H4: an effective SEZ should operate efficiently, guaranteeing good performance. For good performance to be achieved, three factors are discretized through hypotheses H5, H6, and H7, as suggested by the conceptual framework of The World Bank (2017) study.

Hypothesis H5: the performance of the SEZ model depends directly on the quality of the program - permanent fiscal incentives, guarantee of stability and longevity are fundamental for attracting investments and maintaining the model (The World Bank, 2017). This economic policy depends on government alignment which is important for the independence of the SEZ model and its regulation (Sosnovskikh, 2017).

Hypothesis H6: highlights the operational characteristics of an SEZ as an influencing factor of its performance. The larger its industrial park and focus on regional productive potential, the better the model has chances of growth (The World Bank, 2017). Similarly, the location and supply of transportation infrastructure directly impact competitiveness and investment attraction (Hong et al., 2011). Thus, the maturity of an SEZ refers to its operation time and product diversification, becoming relevant as an indicator of the model's success in meeting international demands (The World Bank, 2017).

Hypothesis H7: proposes the influence of the national and regional context on the performance of an SEZ. The population density in the region where an SEZ operates directly affects the supply of qualified human capital, which is an important issue for the

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region to benefit from job creation (Naeem; Waheed; Khan, 2020). Moreover, it is noted the importance of legal certainty so that there is institutional quality and security for investments to occur (The World Bank, 2017).

Hypothesis H8: suggests as a product of the effectiveness and performance of an SEZ the development of the region. Development can occur in the surrounding regions with the irradiation of growth at a limited distance from the SEZ (The World Bank, 2017). The SEZ-type economic strategy can promote entrepreneurship, credit supply, innovation, job creation, and income growth. In this sense, consisting of a regional economic development strategy (Frick; Rodríguez-Pose, 2019).

CONCLUDING REMARKS

At this point, it is opportune to return to the question that guided the study - how can a relational theoretical model that represents the influence of transport modes on the effectiveness of the Special Economic Zone-type development strategy be organized? For the SEZ-type development strategy to achieve its objectives of stimulating economic growth and development in developing countries, some assumptions are fundamental. Its intrinsic characteristics related to fiscal planning and adaptation to the regional productive context are preponderant for attracting investments and creating new markets. Meanwhile, the transport infrastructure plays an important role in its regional integration, production capacity, logistics and, consequently, in international competitiveness.

For continental dimensions countries, such as Brazil, to benefit from the SEZ-type development strategy, it is important to observe the enabling and compromising factors for the effectiveness and performance of an SEZ. As is already observed in Brazil, there are many SEZ projects that are not effectively concluded. Furthermore, there are SEZs projects in Brazil in regions far from the coast (Cavalcante, 2018) without an adequate outflow logistics infrastructure for the production of these Zones. There is, on the one hand, the need for development strategies at the national level to foster an adequate logistical infrastructure and, on the other hand, a regional development strategy with concrete results in emerging countries (SEZs), but which needs articulations both at the local and regional level, and also national.

We believe that the hypothetical model suggested in Figure 6 allows us to theoretically organize the elements that involve the phenomenon of SEZs and their relationship with the intermodality of transport in a country. We advanced in the academic literature by allowing a single and integrated analytical perspective between the constructs “factors that enable SEZ effectiveness”, “factors that compromise the SEZ effectiveness”, “SEZ effectiveness”, “modals of transport”, “SEZ performance”, “SEZ program”, “SEZ characteristics”, “contextual factors” and “regional development”.

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Future studies can make use of the suggested theoretical model so that hypotheses can be put to the test of falsity. Furthermore, due to the incipience of the topic it is suggested that studies at a qualitative level make use of the hypotheses presented to deepen the phenomena that each one suggests. Otherwise, the suggested model can be observed in parts for reduced discussions of the problem.

Even though methodological principles required by a scientific study are used, limitations must be considered and highlighted. The construction of the theoretical model was based on a selection of scientific literature and through inductive associations of the authors. This approach may limit the study's contributions to the scope of the scientific productions analyzed and inductions carried out by the authors. Furthermore, the construction of theoretical models as presented in this study can be better founded when they originate from studies based on more robust approaches such as *grounded theory* or meta-analysis.

REFERENCES

ALKON, M. Do special economic zones induce developmental spillovers? Evidence from India's states. **World Development**, [*s. l.*], v. 107, p. 396–409, 2018a. DOI: https://doi.org/10.1016/j.worlddev.2018.02.028

BACCELLI, O.; MORINO, P. The role of port authorities in the promotion of logistics integration between ports and the railway system: The Italian experience. **Research in Transportation Business and Management**, [*s. l.*], v. 35, n. January, p. 100451, 2020. DOI: https://doi.org/10.1016/j.rtbm.2020.100451

BERNSTEIN, J. H. Disciplinarity and trandisciplinarity in the study of knowledge. **Informing Science**, [*s. l.*], v. 17, p. 241–273, 2014. Disponível em https://www.researchgate.net/publication/265280117_Disciplinarity_and_Transdisciplinarity_in_the_Study_of_Knowledge. Acesso em: 29. nov. 2022.

BRASIL. **ZPE criadas e autorizadas no Brasil**. [*S. l.*], 2020.

CAIXETA FILHO, J. V.; MARTINS, R. S. **Gestão Logística do Transporte de Cargas**. [*S. l.*]: São Paulo: Átlas, 2001, 296 p., 2001.

CARVALHO, J. S.; PESSOTI, G. C. Revisitando as zonas de processamento de exportação como mecanismo para o desenvolvimento econômico: revisão conceitual , panorama mundial atual e possibilidades para o Brasil. **Nexos Econômicos**, [*s. l.*], v. 12, n. 2, p. 73–104, 2018. Disponível em: <https://periodicos.ufba.br/index.php/revnexeco/article/download/34678/20582>. Acesso em: 29. nov. 2022.

CAVALCANTE, L. R. Geographical coverage of the regional development policies in Brazil. **Revista Brasileira de Gestão e Desenvolvimento Regional**, [*s. l.*], v. 16, n. 3, p.

DOI: https://doi.org/10.54372/pc.2024.v19.3591

151–164, 2020. Disponível em: <https://www.rbgdr.net/revista/index.php/rbgdr/article/download/5880/983>. Acesso em: 29. Nov. 2022.

CAVALCANTE, L. R. **Abrangência Geográfica das Políticas de Desenvolvimento Regional no Brasil**. Brasília, DF. Disponível em: <https://www12.senado.leg.br/publicacoes/estudos-legislativos/tipos-de-estudos/textos-para-discussao/td246/view>. Acesso em: 29. nov. 2022.

DEMURGER, S. *et al.* The relative contributions of location and preferential policies in China's regional development: Being in the right place and having the right incentives. **China Economic Review**, [*s. l.*], v. 13, n. 4, p. 444–465, 2002. Available at: DOI: https://doi.org/10.1016/S1043-951X(02)00102-5

DNIT-IPR-742. **Manual de Implantação Básica de Rodovia**. [*S. l.: s. n.*], 2010.

EISENHARDT, K. M. Building Theories from Case Study Research. **The Academy of Management Review**, [*s. l.*], v. 14, n. 4, p. 532–550, 1989. Disponível em: <https://www.semanticscholar.org/paper/Building-Theories-from-Case-Study-Thleen-Eisenhardt/ad19b994ed568156c5e9ca8763e8013bc5d1e0c6>. Acesso em: 29. nov. 2022.

EITAN, A. T.; SMOLYANSKY, E.; HARPAZ, I. K. **Connected Papers**. [*S. l.*], 2021.

FRICK, S.; RODRÍGUEZ-POSE, A. Are special economic zones in emerging countries a catalyst for the growth of surrounding areas? **Transnational Corporations**, [*s. l.*], v. 26, n. 2, p. 75–94, 2019. DOI: https://doi.org/10.18356/0554caef-en

HADDAD, E. **Nova geografia econômica e políticas de transporte: o caso brasileiro**. *In*: O BRASIL E A CIÊNCIA ECONÔMICA EM DEBATE: O ESTADO DA ARTE EM ECONOMIA. São Paulo: Saraiva, 2011.

HONG, J.; CHU, Z.; WANG, Q. Transport infrastructure and regional economic growth: Evidence from China. **Transportation**, [*s. l.*], v. 38, n. 5, p. 737–752, 2011. DOI: https://doi.org/10.1007/s11116-011-9349-6

JOHNSON, N.; PHILLIPS, M. Rayyan for systematic reviews. **Journal of Electronic Resources Librarianship**, [*s. l.*], v. 30, n. 1, p. 46–48, 2018. DOI: https://doi.org/10.1080/1941126X.2018.1444339

MINAYO, Maria Cecilia de S.; SANCHES, O. Quantitativo-qualitativo: oposição ou complementaridade? **Cadernos de Saúde Pública**, [*s. l.*], v. 9, n. 3, p. 237–248, 1993. DOI: https://doi.org/10.1590/S0102-311X1993000300002

MINAYO, Maria Cecília de Souza. Análise qualitativa: teoria, passos e fidedignidade. **Ciência & Saúde Coletiva**, [*s. l.*], v. 17, n. 3, p. 621–626, 2012. DOI: https://doi.org/10.1590/S1413-81232012000300007

MÖSLE, S. Special economic zones: An effective instrument for growth in Africa? **PEGNet**

DOI: https://doi.org/10.54372/pc.2024.v19.3591

Policy Brief, [*s. l.*], v. 16, n. May, p. 1–5, 2019. Disponível em: https://www.econstor.eu/handle/10419/206420. Acesso em: 08 Março 2021.

NAEEM, S.; WAHEED, A.; KHAN, M. N. Drivers and barriers for successful special economic zones (SEZs): Case of SEZs under china Pakistan economic corridor. **Sustainability (Switzerland)**, [*s. l.*], v. 12, n. 11, 2020. DOI: https://doi.org/10.3390/su12114675

NARULA, R.; ZHAN, J. X. Using special economic zones to facilitate development: Policy implications. **Transnational Corporations**, [*s. l.*], v. 26, n. 2, p. 1–26, 2019. DOI: https://doi.org/10.18356/72e19b3c-en

PADULA, R. **Infra-estrutura I: Transportes: fundamentos e propostas para o Brasil**. [*S. l.*]: Confea, 2008.

PEREIRA, V. D. B. **Transportes: história, crises e caminhos**. [*S. l.*]: Grupo Editorial Record, 2014.

PERROUX, F. **A Economia do século XX**. Porto: Herder, 1967.

SCHUMPETER, J. A. **Teoria do Desenvolvimento Econômico**. [*S. l.*]: São Paulo: Abril Cultural, 1982., 1911.

SOSNOVSKIKH, S. Industrial clusters in Russia: The development of special economic zones and industrial parks. **Russian Journal of Economics**, [*s. l.*], v. 3, n. 2, p. 174–199, 2017. DOI: https://doi.org/10.1016/j.ruje.2017.06.004

SOUZA, N. J. **Desenvolvimento econômico**. [*S. l.*]: São Paulo: Atlas., 1999.

THE WORLD BANK. **Special economic zones: an operational review of their impactsThe World Bank**. [*S. l.: s. n.*], 2017. Disponível em: <http://documents.worldbank.org/curated/en/316931512640011812/Special-economic-zones-an-operational-review-of-their-impacts>. Acesso em: 29. nov. 2022.

UNCTAD. **World Investment Report 2019 – Especial Economic Zones**. [*S. l.: s. n.*], 2019. DOI: https://doi.org/10.1017/9781108233118.008. Disponível em: <https://unctad.org/system/files/official-document/wir2019_en.pdf>. Acesso em: 29. nov. 2022.

VELLOSO, R. *et al.* **INFRAESTRUTURA. Os caminhos para sair do buraco.** [*S. l.*]: INAE, Rio de Janeiro, 2012.

VILAÇA, R. Importância do setor ferroviário no cenário logístico e econômico do País. **Jornal fique por dentro da CNT**, [*s. l.*], 2005.

DOI: https://doi.org/10.54372/pc.2024.v19.3591

WARR, P. The Economics of Enclave Manufacturing. **Research Observer**, [*s. l.*], v. 4, n. 1, p. 65–86, 1989. Disponível em: <https://documents.worldbank.org/pt/publication/documents-reports/documentdetail/893611468773056389/export-processing-zones-the-economics-of-enclave-manufacturing>. Acesso em: 29. nov. 2022.

WEBER, A. **Theory of Location of Industries**. [*S. l.: s. n.*], 1929.

WEBSTER, J.; WATSON, R. T. Analyzing the Past To Prepare for the Future : Writing a Review. **MIS Quarterly**, [*s. l.*], v. 26, n. 2, p. xiii–xxiii, 2002. Disponível em: <https://www.jstor.org/stable/4132319>. Acesso em: 29. nov. 2022.

ZHANG, X. Regional Diferences in the Contribution of Transport Infrastructure Investment to Local Economic Growth in China. *In*: , 2009. **Eighth International Conference of Chinese Logistics and Transportation Professionals (ICCLTP)**. [*S. l.: s. n.*], 2009. p. 748–755. DOI: https://doi.org/10.1061/40996(330)107

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