

Impact of industrial free zones on the business environment of emerging countries

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Abstract: Free economic zones are one of the many ways for governments to alleviate a national crisis situation, by helping increase trade, enhance production, and create provisions of foreign direct investment. That can help in improving the economic condition of the country and enhance the quality of life of the country's population. Free economic zones, or free zones, in Morocco have also been established for similar reasons, and due to its perfect geographical location, has become one of the top priority destinations for regions across the globe for logistic purposes. To meet this objective, the reflection carried out at the level of this study turned towards the development of free zones in connection with the business environment in emerging countries, taking into consideration the case of Morocco, then it has a very strong logistical evolution as well as an exceptional geographical position for the improvement of its positioning in international competitiveness. This article presents the results of a quantitative study on the business environment of free zones in Morocco as well as on their economic impact aimed at improving the country's logistics level. This study aims to understand the theoretical and practical purpose of establishment of free zones in Morocco, their significance in the logistics industry, and their key advantages and challenges. This study provides a research background for industry practitioners and academicians of different regions alike to understand the use of Moroccan free zones to effectively strategize logistics decisions from a corporate standpoint, leading to better economic performance.

1 Introduction

International trade is now a real source of added value for customers, suppliers and businesses in the form of service reliability, performance, efficiency in terms of time and responsiveness while calling for an efficient logistics system. In addition, free economic and industry zones is the main place for the profitability of the company, through the process aimed at optimizing production capacities, stocks and costs.

In this perspective, this article attempts to identify in a clear and scientific way the impact of the economic and industrial free zones on the economy of a well-defined country, namely Morocco.

2 Materials and methods

In a research study [1], Morocco, due to its geographic presence in North Africa, has become an essential site for the major logistical and commercial processes between the west and the east of the world. The country is at the center of many international trade routes and links the United States, Europe, Africa and Asia. Many countries in these regions have invested heavily in terms of foreign direct investment and have been able to take advantage of Morocco's logistics industry to conduct their activities between the Eastern Hemisphere and the Western Hemisphere of the globe following a study [2]. The Kingdom of Morocco is only 14 kilometres from continental Europe, but far enough to become a stopping

point in front of the regions of Asia and Africa. Taking advantage of this opportunity, the government of Morocco has set up free trade routes through many ports in the country over the years to facilitate international trade [3]. However, the use of free trade must be observed and studied to allow a comprehensive understanding of how it can help companies that have logistical needs requiring a stopover or a need for transport through Morocco. The country is close to Europe, but the business practices, the establishment of rules and regulations, the payment of taxes and logistical costs, among others, are very different from the European and American modes and the needs must be assessed. In the Oxford Business Group Report [4]. In a research study [5] The Moroccan business style is quite different from the way trade relations develop in the European and American regions, and this business style should be studied to ensure the full use of the free zones of the Moroccan logistics sector. This study makes it possible to assess the Moroccan logistics industry and to understand the logistics and transport sector in Morocco for international business and international trade.

The aim of the study is to provide a basic understanding of the logistics industry in Morocco, with an emphasis on the evaluation of free zones within the kingdom. The methodology to achieve the objective of the study will be to examine the literature on the free zones of the logistics sector of Morocco through articles, syntheses and research which have been published in specialized journals, reports

on the sector. transport and logistics of the country, newspaper and magazine articles concerning industry, trade and transport across Morocco. Subsequently, we set up a quantitative study with companies in a few industrial free zones to understand their perceptions of the level of logistics, the business environment and overall performance.

3 Result and discussion

In the software industry, the developers will never state that the product is free of imperfections, dissimilar to other modern item makers generally do. This distinction is because of the accompanying reasons.

3.1 Presentation of the logistics sector in Morocco

The Moroccan economy is improving and, according to its annual growth of around 4%, the country is moving towards economic stability. Its political position and good geographical location are reasons which give it a competitive advantage compared to other North African countries. As a result, it is more likely to become a transition center in the logistics process for many companies in North America and Europe [6]. Foreign direct investment has led to the development of free zones for international companies. In addition, with the signing of free trade agreements with the European Union, the United States and Turkey, alongside the increase in per capita income, Morocco has become an enviable destination for international trade. The Moroccan government is also investing massively in the development of the country's commercial position, by promoting foreign trade through maritime routes. The government has developed and maintained more than 35 commercial ports in Morocco and has also spent around 3-4 billion dirhams to modernize these seaports. In addition to seaports, regarding a study [7] the government has also worked on the development of its road, rail and air network to improve its logistics sector. This has led to increased public sector investment in the development of physical infrastructure, thanks to which the country has evolved into one of the main transportation and logistics centers for North America and is striving to become an Essential "hot spot" for companies in the eastern and western parts of the world.

The average of import days in Morocco is 14 days, which is higher than that found in the countries of the Organization for Economic Co-operation and Development (where the average is 9 days), but well better than the rest of North Africa and the Middle East (where the average is around 24 days). This offers better opportunities to the Moroccan logistics industry. In addition, free trade agreements have been signed unilaterally or bilaterally with the European Union (signed in 1996, entered into force in 2000) and with the United States (signed in 2004 and entered into force in 2006), providing for the development of economic activities in

Morocco by companies from the EU and the United States [8]. Other agreements include the Morocco-EFTA Free Trade Agreement (European Free Trade Association), the Morocco-Turkey Free Trade Agreement for trade in goods and the Arab Free Trade Agreement for the trade in products from the Arab States with the exception of prohibited products regarding a study [9]. These agreements facilitate the conduct of business with very little or no intervention on the part of customers and generating very few commercial costs.

3.2 The current tax system in Morocco

The normal tax rate in Morocco is 30% and applies to both resident and non-resident taxpayers. The tax is applied territorially in the country and companies operating on Moroccan soil are also required to pay taxes on all income of Moroccan origin [9]. The country's tax system also allows for optional advance taxation, which represents around 8% of the contract value. In a study [9] Businesses must pay their taxes before April 1 of each year, and all taxpayers are also required to pay VAT on taxable transactions. With regard to expenses incurred by companies in the exercise of their activities, the tax is deductible if not otherwise specified regarding a study of [11]. For companies operating in free trade zones, the tax rate in Morocco is 8.75%. Corporate taxation concerns foreign companies more than businesses in the region. Moroccan companies have to pay 6 taxes a year, while companies in the Middle East and North Africa have to pay 17 times, American companies 10 times and German companies 9 times [10].

3.3 Key challenges in the implementation of free zones

Free zones present challenges that can threaten the effective use of their benefits. The most common challenges include environmental degradation, scarcity of resources and the mismatch between industrial and social development. In terms of environmental degradation, governments and companies generally abandon the environmental assessment when setting up these free zones, endangering the environment of the region [12]. In a study [19], Goodwill generally reflects the value of industrial assets such as brand awareness, good relationships with customers and employees, and proprietary patents and technologies, which allows for better economic improvement. This poses a long-term problem. Another challenge is the shortage of resources, which can occur if the balance between demand and supply is not properly assessed and if the country is not ready to meet the demands of the free zones [13]. In addition, Morocco could experience a delay in social development, which creates an imbalance in civil society, since the country's industrial development involves leaps and bounds due to free zones [14].

3.4 Impact of free zones on cost reduction

Free zones have substantial benefits for businesses, mainly financial incentives that help reduce costs. In a study [25], Industrial zones help simplify administrative procedures and save money because they encourage foreign ownership. During the last thirty years, important practices have been implemented to achieve an improvement in development, but also to acquire better adaptation, while bringing a real modernization of infrastructures [24], without forgetting the establishment of necessary institutional reforms. at the legislative level. Free zone regulations are relaxed and subsidized, encouraging companies to save despite long-term leases, expatriate employment or by exempting income taxes. Regarding a study [15], Morocco also offers a tax holiday option for companies of around 5 years. These benefits being very lucrative, the free zones are very popular and prosperous, especially in this country. Knowing that the level of competition with innovation in technologies and emergence of FinTech have gone higher [18].

3.5 Change in the face of the Moroccan industry after the establishment of free zones - specialty review

Research on this subject has made it possible to apprehend the free zone of Morocco (Table 1), more precisely the free zone of Tangier (TFZ). The country's free zone has created a different perspective on the traditional export process thanks to a multisectoral approach to development. The creation of this free zone dates back to 1999 and it was opened to operations from 2000. This free zone is located near the airport and covers an area of 345 hectares. Around 400 companies are operational in this space. In the Oxford Business Group. Report (2016) The users of this free zone of Morocco have invested roughly 500 million euros for their installations. The free zone has created around 40,000 jobs, the majority of which are held by Moroccan citizens, Oxford Business Group. (2016). This improved the economic conditions of these workers, while the free zone represented an increase in Moroccan exports to the tune of 1.2 billion euros, of which one tenth comes from the free zone. The Moroccan free zone has also led to the development of the logistics sector in this country, since many companies manufacturing components also require a transport service regarding a study [19].

3.6 Quantitative analysis: normality, reliability and regression test

Quantitative data from 50 employees of logistics companies in the Tangier Automotive city We then

analyzed the data using SPSS (v21.0) and Microsoft Excel statistical tools.

Descriptive analysis was performed for both demographic factors and logistic performance factors, including the test of frequencies, mean variance, and standard deviation. In addition, inferential analysis was performed which included normality test, reliability test, regression [21].

For the statistical analysis of the aspect of the study, the statistical precision must be taken into account. Statistical precision presents the narrowness of the margin of error in the study. For increased accuracy, a larger sample size is required. However, the accuracy slowly increases due to the square root of n in the denominator of the formula. Thus, to halve the margin of error, the sample size would have to be multiplied by four. The margin of error is also influenced by the level of significance or level of confidence, but this tends to remain fixed within a field of study. The inputs are the assumed or estimated value of the proportion, the desired level of confidence, the desired precision of the estimate, and the population size for bounded population sizes. The desired precision of the estimate (also sometimes called the allowable or acceptable error in the estimate) is half the width of the desired confidence interval. Statisticians use a confidence interval to express the degree of uncertainty associated with a sample statistic. A 99% confidence interval will be wider than a 95% or less precise confidence interval. Thus, in the present study, an accuracy of 95% was taken into account.

The importance of the "Cronbach's Alpha" reliability test consists in finding the internal consistency between the variables of the study. It is also done to check the interrelation between the variables of the proximity of the variables between them [17]. However, high reliability does not show one-sidedness of the variable and is simply a test to find the constant measure of a theory. In addition, another hypothesis test was performed to determine the validity of the collected and expected data. The hypothesis normality test was performed to assess whether the found dataset was collected from a normal distribution [16]. While performing a normality test, it is necessary to check whether the variables show a statistical test of "Shapiro Wilk (W)" less than "1", which can be interpreted in the sense that the observed distribution does not correspond to normal distribution [16]. It is also necessary to check that when the "W" value is small enough, the p-value should.

Table 1 Free zones operational in Morocco

Free zone	Activity area	Area (hectares)	Overall cost (millions of DH)	Jobs identified / Companies established in
Tangier (TFZ)	Automotive industry; aeronautics; agro industry; textile and leather; chemistry and parachemistry; metallurgical, mechanical, electrical and electronic industries; and services related to the above activities	45 (planned extension of 100 hectares)	740	44 210 jobs / 415 companies
Tangier Automotive City (TAC)	Mainly automotive sector; Other activities: agro-industry, textile and leather industries, metallurgical, mechanical, electrical, electronic, chemical and para-chemical industries	178	1 181,7	1,020 jobs / 4 companies (and 10 in the process of being set up)
Nouaceur	Mainly aeronautics and space industry; Other activities related to security and detection systems, medical industries and embedded metal, metallurgical, electrical and electronic industries as well as precision systems	78	887,6	5 companies (and 3 in the process of installation)
Kénitra	Automobile industry	199	1 214	11,245 jobs / 7 companies
Technopole d'Oujda	Equipment activities for sustainable development and the industrial professions of renewable energies and energy efficiency	6 (of which 40 completed)	160	
Tétouan-shore	Services: banking, insurance, accounting and finance, human resources, general back office, customer relationship management	6		
Casanearshore	Services: bank, crèche, shops, MedZ Sourcing One Stop Shop, restaurants	53		26,000 jobs (eventually) / 70 companies
Rabat Technopolis	Services: bank, crèche, shops, MedZ Sourcing One Stop Shop, restaurants	107		30,000 jobs / 76 companies
Fès Shore	Services: bank, crèche, shops, MedZ Sourcing One Stop Shop, restaurants	22		15,000 jobs
Oujda Shore	Services: bank, crèche, shops, MedZ Sourcing One Stop Shop, restaurants	22		2,000 jobs

Table 2 Shapiro-Wilk normality test for the collected data set

	Shapiro-Wilk		
	Statistics (w)	Ddl	Signification (p)
Performance level	0.867	50	0.001
Technical level	0.949	50	0.019
Organizational Level	0.984	50	0.009

Table 2 shows the Shapiro-Wilk normality test for respondents working in the Tangier Automotive city. The variables used for the normality test show that all other operational factors of the port are not normal. This is because the p-values for Technique (0.019), Organization

(0.009); are less than 0.05 and therefore do not show a normal distribution. Thus, from the normality test, it can be assumed that the collected data set does not have a normal distribution.

Table 3 Co-effectiveness of Cronbach's Alpha reliability

Cronbach reliability test		
Factors	Cronbach's alpha	Number of items
Technical level	0.885	16
Performance level	0.895	14
Organizational Level	0.848	09

The reliability test was carried out to check the stability and consistency between technical, organizational factors and the general performance of the companies. It was undertaken to determine the consistency of the data collected during the survey. Cronbach's alpha coefficients

as shown in Table 3 were found to be greater than 0.6; (0.885) for Technical, (0.895) for Organizational and (0.848) for global performance, thus showing a relatively high consistency. Thus, it can be interpreted that the factors are very stable and consistent.

Table 4 Model Summary of regression analysis between organizational performance and logistics operations

Model	R	R-R	R- R adjusted
1	0.955	0.927	0.810

The regression analysis between the different organizational services provided by the companies in the logistics zone of Tangier has been shown in Table 4. It is relevant from the regression statistical table that R-square of 0.927 or 92.7% and Adjusted R-square of 0.810 or 81.0% showed that for each logistics service factor indicates variation in overall operations. Thus, with the increase in the variables of the organization's performance factors, there will also be an increase in the overall operations at the level of the companies in the logistics zone of Tangier.

3.7 Discussion

The free zone has made it possible to develop seaports, roads and airports. The direct role of the logistics sector is reflected in its contribution to national GDP, which is 5%. However, the logistics sector plays many indirect roles in Morocco's economic development, which has been made possible only through the creation and development of the country's free trade areas. The success of free zones has also prompted the government to further develop the logistics sector by increasing port capacity, creating logistics free zones, building distribution infrastructure and developing dry ports and multimodal connections [20]. This is a very positive sign for the whole industry regarding a study [22]. Knowing that it is necessary today to systematize the applied concepts of economics and supply chain management following a study [23]. Thus, the creation of free zones in Morocco has led to long-term economic development and political stability in the country.

4 Conclusion

Free zones are very lucrative options for countries looking for foreign direct investment to strengthen their economic situation. Morocco used the construction of free zones to promote itself on the world stage in order to become a profitable destination for the start-up of companies and commercial and industrial operations by

many companies from the United States, Europe and Asia. Globalization has recently become a slogan which has boosted business investment in developing countries, particularly in Morocco. The free zone established in Morocco has thus been very successful and new free zones are being created. However, calling on investors for the development and initial launch of a free zone is a difficult and complex process, and the road to success is long. The creation of these free zones also helps a country to improve its economic score. For Morocco, the free zone has led it to maintain its political and economic stability for the past 15 to 20 years and has enabled it to become one of the most stable economies in the North African region. With regard to the future direction, it is very important to understand the pitfalls of free zones in order to be able to establish a global image of the economic zone.

In this study, the researcher focused on the impact of industrial free zones on the technological economy of emerging countries: the case of Morocco, he concluded that the establishment of free zones within any emerging economy will allow an improvement in the performance of the country but this through the technologies made available by the parent companies, and this has had a very positive impact on the performance of all the players, in this context it is strongly recommended to carry out similar studies on the possibility of emerging high technologies in emerging countries.

Regarding the difficulties encountered, since the free industrial zones are very far away, this forced us to work on the minimum number of cases due to the logistics of the study. As for future directives, our next research work will focus on the port performance of ports with direct connectivity to industrial free zones.

References

- [1] BENABDEJLIL, N., LUNG, Y., PIVETEAU, A.: *L'émergence d'un pôle automobile à Tanger (Maroc), Emergence of an automotive cluster in Tangier (Morocco)*, Groupe de Recherche en Economie

- Théorique et Appliquée, GRETHA UMR CNRS 5113 Université de Bordeaux, 2016. (Original in French)
- [2] MOHAMED-CHÉRIF, F., DUCRUET, C.: Regional integration and maritime connectivity across the Maghreb seaport system, *Journal of Transport Geography*, Vol. 51, No. February, pp. 280-293, 2016.
- [3] LAVISSIÈRE, A., RODRIGUE, J.-P.: Free ports: towards a network of trade gateways, *Journal of Shipping and Trade*, Vol. 2, No. 1, pp. 1-17, 2017.
- [4] Oxford Business Group: *Morocco concentrates efforts on improving logistics sector*, Oxford Business Group, 2016.
- [5] IVANOVA, O., PERSSON, S.: Transition as a ubiquitous and a continuous process: overcoming the Western view, *Journal of Change Management*, Vol. 17, No. 1, pp. 31-46, 2017.
- [6] AGGARWAL, A.: *Impact of Special Economic Zones on Employment, Poverty and Human Development*, East Asian Bureau of Economic Research, New Delhi, 2007.
- [7] KABBASSI, I., BOUREKKADI, S., EL IMRANI, O., BAOUNIA, A.: *The Innovative System of Maritime Lines Between the Challenge of Integration and the Choice of Reinforcement*, Proceedings of the 35th International Business Information Management Association (IBIMA), 1-2 April 2020, Seville, Spain, pp. 13839-13847, 2020.
- [8] RENSMA, M., HAMOUMI, S.: *Transport & Logistics sector Morocco*, Netherlands Enterprise Agency, 2018.
- [9] TRINIDAD REQUENA, A., SORIANO MIRAS, R.M., BARROS RODRÍGUEZ, F.: Working conditions in the export industry of northern Morocco: Legal framework and situation on the ground, *International Labour Review*, Vol. 157, No. 2, pp. 307-329, 2018.
- [10] JARRAR, H., DANA, L.P.: Implementation of strategic cost management in manufacturing companies: overcoming costs stickiness and increasing corporate sustainability, *Future Business Journal*, Vol. 7, No. 1, pp. 1-8, 2021.
- [11] EL IMRANI, O.: *Study to Reduce the Costs of International Trade Operations Through Container Traffic in a Smart Port*, In: Ben Ahmed M., Rakıp Karaş İ., Santos D., Sergeyeva O., Boudhir A.A. (eds) *Innovations in Smart Cities Applications* Vol. 4, SCA 2020, Lecture Notes in Networks and Systems, Vol. 183, Springer, Cham., 2021. https://doi.org/10.1007/978-3-030-66840-2_36
- [12] FAROLE, T., MOBERG, L.: *It worked in China, so why not in Africa?*, The political economy challenge of Special Economic Zones, WIDER Working Paper 2014/152 Helsinki: UNU-WIDER, 2014.
- [13] PAGE, J., TARP, F.: *The Practice of Industrial Policy: Government—Business Coordination in Africa and East Asia*, Oxford University Press, 2017.
- [14] AKOUDAD, K., JAWAB, F.: Analysis of freight transport and logistic sector in Morocco, *International Journal of Scientific & Engineering Research*, Vol. 9, No. 2, pp. 1087-1094, 2018.
- [15] BIALASIEWICZ, L.: *Tangier, Mobile City: Re-making Borders in the Straits of Gibraltar, in Borderities and the Politics of Contemporary Mobile Borders*, London, Palgrave Macmillan, pp. 224-240, 2015.
- [16] BALON, B., ROSZAK, M.: Cost-quantitative analysis of non-compliance in the internal logistics process, *Production Engineering Archives*, Vol. 26, No. 2, pp. 60-66, 2020.
- [17] Report of the secretariat of the world trade organization on the review of Morocco's trade policies, December 2018.
- [18] ASSABANE, I., EL IMRANI, O.: The impact of logistics capacities on the logistics performance of LSPS: results of an empirical study, *Acta logistica*, Vol. 9, No. 2, pp. 141-149, 2022. <https://doi.org/10.22306/al.v9i2.284>
- [19] CHRISTIAN, K.T., SMITH, S.: An Internal Company Analysis of Avalanche Creative: Toward Enhancing Business Management in the Creative Design Industry, *Journal of Advanced Research in Dynamical and Control Systems*, Vol. 12, No. 1 pp. 1-4, 2020.
- [20] ARIAWATY, R.R.N., AGUSIAD, R.R., RUSDAN, M.: Managing Reputation to Achieve Competitive Advantage Sustainability by Applying Information Technology based Management, *Journal of Advanced Research in Dynamical and Control Systems*, Vol. 12, No. 3, pp. 1-6, 2020.
- [21] KUNZ, N.: An automated quantitative content analysis process for humanitarian logistics research. *Journal of Humanitarian Logistics and Supply Chain Management*, Vol. 9, No. 3, pp. 475-491, 2019.
- [22] RABBANI, M.R.: The Competitive Structure and Strategic Positioning of Commercial Banks in Saudi Arabia, *International Journal on Emerging Technologies*, Vol. 11, No. 3, pp. 43-46, 2020.
- [23] KUZMA, E., SEHNEM, S.: Validation of the Measurement Scale for the Circular Economy: a proposal based on the precepts of innovation, *International Journal of Professional Business Review*, Vol. 7 No. 1, pp. 1-20, 2022.
- [24] KHAN, M.: Empirical Exploration of Public Sector Undertaking in Petroleum Industry: Perils and Prospects, *Test Engineering & Management*, Vol. 82, No. January-February, pp. 244-250, 2020.
- [25] ABOUS, H., HAMICHE, M., EL MEROUANI, M.: Optimization of Transshipment Operations: Simulation of the APM Terminal/Tanger Med Port Case, *IBIMA Business Review*, Vol. 2020, pp. 1-14, 2020. <https://doi.org/10.5171/2020.359922>

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