



The harbour of Port Louis, capital of Mauritius

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The experience of islands with free ports and free zones

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ABSTRACT

Free zones have developed along every major trade route. These routes not only rely on a network of gateways providing access to market and production facilities, but also on places to unload cargo, save time, and purchase logistics services before rerouting cargo toward the best destination. This buffer effect in today's door-to-door supply chains is particularly beneficial when coupled with island economies.

The first free port in history was located in Delos, an island

near the centre of the Cyclades archipelago. Since then, some island economies, such as Mauritius, located outside of main trade routes, have developed successful free ports. The success of these models, as well as other island-based free trade zones, is a function of trade agreements, extraterritoriality, and embeddedness within a local economy.

The study of free ports through a business-to-business approach provides a new understanding of network dynamics within the free zone, between the free zone and the island economy, and between the island economy and the trade routes.

AN ATTRACTIVE INFRASTRUCTURE

The evolution of free zones since ancient times is based on three factors: the regulatory context, the function devoted to the free zone, and the orientation of flows managed through the free zone (Lavissière & Rodrigue, 2017). With the regulatory factor, the institutional context in which the free zone is located influences the nature of the free zone. Depending on the tax system at the border of the state there are different types of free zones. Trading city-states, protectionist states, and finally states incorporated in a global network of free-trade zones have different needs for free zones and therefore create different models of free zones. With regard to function, the evolution of activities has influenced the nature of the free zones, moving from simple storage activities to processing activities and then to supply chain management activities including marketing, banking services, and other logistics-related services. Finally, the orientation of flows can be either sequential or multidirectional based on the links between the home territory and the rest of the world. In the former, flows are coming from or going to the home country of the free zone, while in the latter there is no connection with domestic territory as imported flows are re-exported after processing takes place. These three factors make it possible to classify free ports in sixteen models according to five stages of evolution (Lavissière & Rodrigue, 2017).

As Figure 5.1 suggests, prior to the early twentieth century there were fewer than 100 free port zones in the world, while a century later this number exceeded 350 (Lavissière & Rodrigue, 2017). Today this number has exploded to more than 1,750 free zones in 133 countries (Bost, 2010). Most countries now have legislation in place and almost all have such zones. In this era of globalization there has been an acceleration of exchanges of all kinds between states, and free zones have become a tool to facilitate these global exchanges. Thus, even the generic phrase ‘free port’ has been superseded by an entirely new set of descriptors, including the Free Trade Zone, Export Processing Zone, and Special Economic Zone. As for the term free port, it now refers to an industrial or commercial free zone attached to a port, whether the latter is maritime, fluvial, air, or dry; i.e., a logistic zone of rupture of load and storage where industrial processing is possible under bond.

FIGURE 5.1: Evolution of the free port (Lavissière & Rodrigue, 2017)

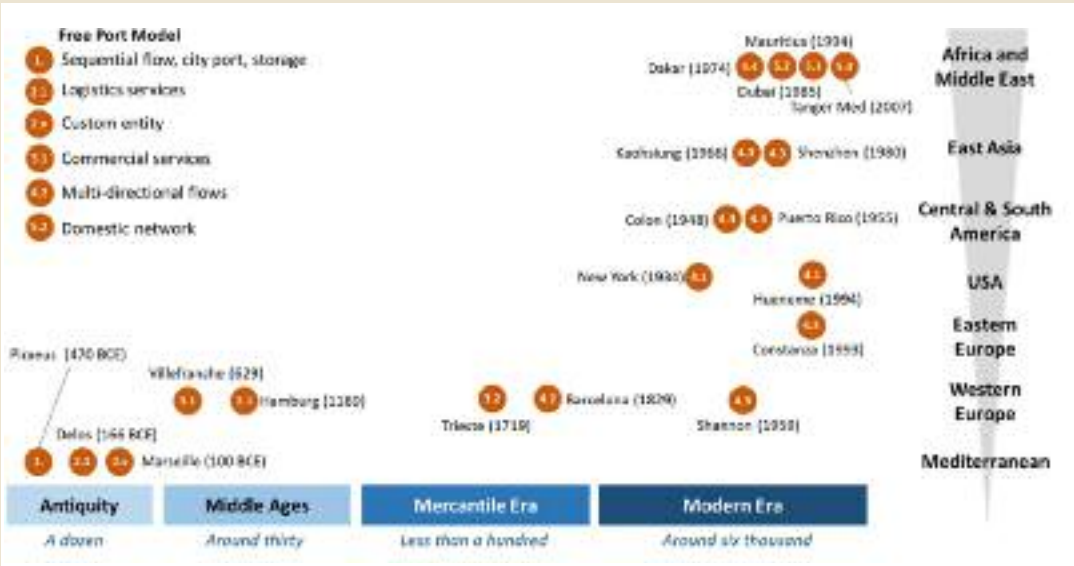
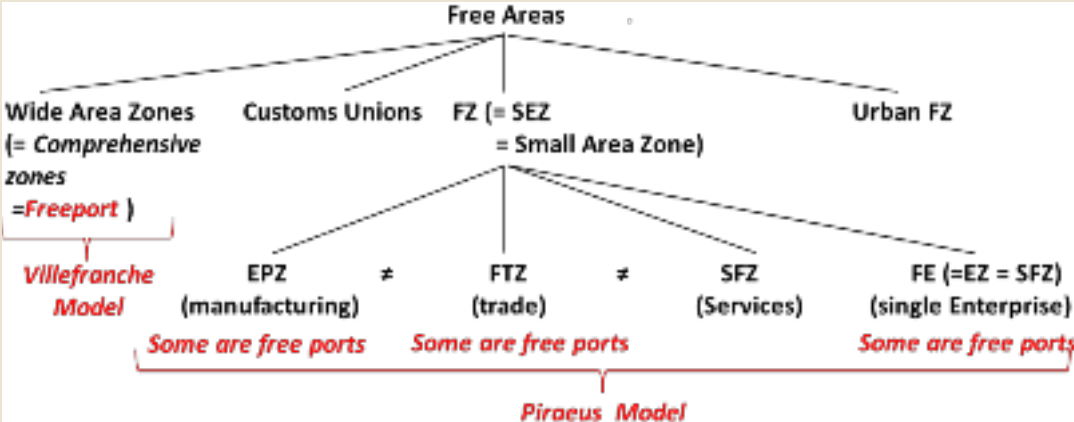


FIGURE 5.2: Typologies of free areas proposed with transversal aspect of free ports (Lavissière & Faury, 2019)



Beyond simply globalization, the increased numbers of free zones has been driven by several types of state-based motivations. Some free zones have focused on attracting flows that would have been established elsewhere without the advantages conferred by the interplay of import, processing, and re-export. Other areas have played on the buffer logistic effect of bonded storage near a target market, while still other areas are

soft economic reform laboratories that allow for the transfer of skills and good practices to the market of the domestic economy hosting the free zone (Lafargue, 2008).

Island economies demonstrate these three economic motivations through the examples of Malta, which is storing products next to the European Union on major intercontinental maritime trade routes; Mauritius, which is attracting Asian semi-finished goods in order to process them with a Mauritian certificate of origin before re-exporting them to Europe; and, more recently, Cuba, which is opening areas of its economy to capitalist ventures in restricted special economic zones.

Political orientations and differing economic aims make free zones both a multi-century and multiform infrastructure. Researchers generally agree that the principle of customs extraterritoriality lies at the heart of the system of the free zones concept (Trampus, 1999). This principle gives rise to many benefits (Tieffenbrun, 2012) and attracts direct foreign investment (Haywood, 2000). The aim of free zones is, therefore, to facilitate trade in order to attract investments and flows, and, through these, create jobs, growth, and knowledge transfer.

TRADITIONALLY, FREE ZONES ARE MEANT TO OPTIMIZE GLOBAL FLOWS

The traditional approach to the issue of the need for free zones, and the search for the success of these zones, is first of all an approach to the conditions of success and the impacts linked to the free zone. Thus, many economists have shown the conditions of development which govern the success of the establishment of a free zone in different parts of the world (Farole, 2011; Haywood, 2000; Kusago & Tzannatos, 1998), the economic impact of a free zone policy (Lorot & Schwob, 1987; Mandani, 1999; Miyigawa, 1986), and how to approach this impact (Baissac, 1996). Similarly, the regulatory conditions (Blanc, 1996; Fedi & Lavissière, 2014; Trampus, 1999), geographical aspects (Bost, 2010; Yang, 2009), and social aspects (Susman & Schneider, 2008), as well as their impacts (Bost, 2007; Lu & Yang, 2007), have been the subject of numerous studies.

International institutions and researchers have also been looking at the best practices and conditions of governance of free zones. The governance structure covers four main functions: the state, the regulation, the development, and the operation (Lafargue, 2008). The state grants the land and the specific conditions of operation of the zone. The regulation covers the management of this grant and often the regulator is a state agency. But it can also be a private body, like Port d'Ehoala in Madagascar, where the regulator is a mining company that also runs the port. The development is a function of creating the buildings (mostly warehouses), while operation is a function of using these buildings. Sometimes, a developer is also the regulator, but this creates situations in which a private function interferes with a public good function, potentially leading to prevarication. Developers, however, can be operators in the sense that they operate warehousing and logistics services for others. Operators can be industries

managing the developed logistics facility or companies that outsource logistics to the developer. Best practice recommends that an operator cannot be the regulator.

The free zone, and especially the free port, which is a logistics zone, brings advantages to global companies in the management of their international supply chains. Tieffenbrun (2012) inventories twelve main advantages for companies. These advantages include:

- *No customs formalities.* This is an advantage that addresses the fact that the free zone, or products within the free zone—depending on the doctrine—are not subject to customs tax, and that there are customs corridors from the point of entry—ports in general and the free zone—to the final destination.
- *Improved cash flow.* This is a consequence of the previous advantage since the company does not have to pay customs taxes before the product enters the customs area, or, at times, even before it is sold.
- *Owner access to merchandise.* This enables the owner to have direct access to one's merchandise even if it has not yet entered into the customs area.
- *Showroom space available.* Most free zones have showrooms because, in addition to all the other advantages of the zone, this allows for importers to show products to potential clients. As a consequence, taxes will only be paid in the case of effective entry into the domestic market, meaning when the products are sold.
- *Accounting advantages.* Since products have to appear on the books only if they enter the domestic market or if they are re-exported, they do not need to appear on the books before they are sold.
- *Reduced insurance and duty costs.* This advantage allows the importer to pay less for insurance because the premium is calculated before the duties and taxes are added.
- *Assembly of domestic with foreign goods.* This advantage works especially for operators that re-export goods, because they do not pay customs taxes on the domestic part, since it is assembled in the host country, or on the imported part, since it did not enter the customs area.
- *Ideal manufacture of goods.* Being, thus, 'bi-national', the product can either get the 'Made-in-Local' certificate of origin or keep the former origin, depending on its target market. This was, for instance, one of the development strategies of Mauritius, which had special agreements with the European Union and could import textile products that were partially fashioned in China. Chinese companies, on the other hand, could not import these products because of quotas.
- *Processing or manipulation of goods.* This advantage is predicated on the ability to process goods outside of any customs area and at times without company taxes. The zone allows for the importation of some products and

goods, which can then be processed or transformed (again, with the advantage of choosing the best customs nomenclature for future operations) and re-exported.

- *Packing, repacking, and labeling.* Workers will pick out and pack the products in the warehouse and make any last changes before these products enter the market. This is especially true for products in close-to-market zones.
- *Easy to discard goods.* International trade is subject to transport conditions that can deteriorate product quality. However, while general legal provisions make the company check the product once the duty taxes are paid, the free zone allows for quality control before the product is taxed. As a consequence, the product can be discarded and the cost of the nonconformity can be reduced.
- *Wide variety of products handled.* Although this advantage is listed, it seems to be a marginal advantage. It simply explains that there is a location where certain companies process the same kind of products as the user. Therefore, experience and know-how are created.

These advantages are linked to the status of free zones and therefore to their extraterritorial customs. The General Agreement on Tariffs and Trade (GATT) and The World Trade Organization (WTO) have, however, worked toward reducing the presence

and impact of tariffs on international trade. Yet how could an infrastructure based on the sole principle of extraterritoriality of customs be so widely distributed while the international structures that supposedly made it necessary have implemented steps to make the need for these zones to disappear (Mandják & Lavissière, 2014; Trampus, 2003)? Free zones are not about the comparatively static world of tariffs, but rather are about dynamic synergies and agglomeration economies.

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FREE ZONES ARE ALSO A TOOL FOR REDUCING FRICTION IN INTERNATIONAL TRADE

The free zone is an infrastructure that, by its very nature, reduces friction in international trade (Lavissière et al., 2014). Indeed, if we consider an international transaction between two partners where there is a physical distance between the point of production and the point of sale, then the interaction must also take into account the roads to connect these two points. Then—and this represents an increase in complexity—there is a logistics route that takes into account the ports and transport lines that

logisticians use and that are neither direct lines nor lines that follow the same geographical routes, but which follow a logic of optimized and massed merchandise in order to achieve economies of scale.

In addition, there is a financial distance wherein the shipper may realize a higher profitability by making an intermediate transformation in a low-cost country of production outside the optimal logistics route. It is often at these points that the extraterritoriality of customs offers financial advantages for a foreign direct investment that makes the implantation in one zone more profitable than another. The benefits described by Tiefenbrun (2012) are then all vectors for reducing the financial distance between the point of production and the point of sale.

When we look at the case of Mauritius with Mandják & Lavissière (2014), we notice there is no financial or logistics reason, sufficient enough alone, to manage flows from South East Asia to Europe, through an island isolated from main trade routes in the Indian Ocean. There is, however, an additional distance revealed by the case of Mauritius free port: the business distance that takes into account the cultural, organizational, linguistic, and administrative aspects that make crossing a border complex by generating frictions called border effects (Head & Mayer, 2002; Yi, 2003). These frictions have consequences on the supply chain, marketing, accounting, finances, etc. It should be noted that the free zone, since it is an interface benefiting from a specific status, makes it possible to reduce these frictions and therefore the distance of business (Mandják & Lavissière, 2014). We can state that this is no longer in the conditions only, but also in the relations between actors that the singularity and the success of the free zones reside.

THE FREE ZONE AS AN INTERNATIONAL NODE OF BUSINESS RELATIONS

Following Mandják & Lavissière (2014), this singularity leads us to question the free zone phenomenon from the perspective of Business to Business (B2B) relations using the interaction model (Håkansson & Johanson, 1992; Håkansson & Snehota 1995; Håkansson & Waluszewski, 2002) to understand the advantages that the free zone confers, in terms of the distance of business, to the actors of the international trade. Free zones are a point of connection of international business networks with local business networks. Sometimes, the free zone connects two potentials and this connection between a potential to internationalize local resources and the potential to reduce global business distance is creating value. The interactionist approach considers the business relationship to be a process that transforms the parties involved in the exchange. It is not merely the sum of equal transactions between immutable partners, all things being equal. These networks also interact with each other (Håkansson et al., 2009).

Applied to free zones, this model makes it possible to understand the value of infrastructure in the international logistics chains that characterize the globalization

of trade in the twenty-first century. First, a free zone helps to connect the local economy to international trade, and, in return, entering globalization helps activate local resources. In addition, the connection to trade routes is often considered as a prerequisite to developing internationally, but a free zone creates the trigger that will generate a virtuous cycle, strengthening attractiveness.

On the local side, the same virtuous cycle can be seen with a cluster effect. Local actors maintain and develop business relationships with local suppliers, local customers, the carriers, and the suppliers of services related to the management of physical flows such as investors or marketing companies, plus they develop new ones internationally (Mandják & Lavissière, 2014).

In addition, the establishment of a free zone within a system of rich and combinable resources increases the value of resources repatriated by the actors settling within the zone. Such relocation of resources comes from either upstream or downstream of the value chain. Thus, economic as well as social and technological assets become potential resources enhanced by the free zone.

In any given environment, the free zone will always be an organizational innovation that requires a specific adaptation in order to succeed. The objective of a successful free zone is to allow the resources of this environment to serve as a foundation for future interactions that will create value. In a business network, it is not necessarily just

the node that generates the relationships, but the relationships may also define the node. Adopting a successful free zone model from one context to a different environment does not necessarily lead to success. It is therefore essential to measure the specificities of environments within which the free zone is implemented. Island economies are, in that sense, an important specific element. For instance, islands are rarely the main market in a globalized economy; therefore, they position as intermediaries within globalized supply chains. In that sense, free zones are especially interesting because they create the opportunity to position the island in a global value chain and, as a consequence, they attract flows.

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THE STATE OF FREE ZONES AND FREE PORTS IN ISLAND ECONOMIES

The first reported free port was located on Delos, an island near the centre of the Cyclades archipelago, just west of the present-day island of Mikonos, Greece. After the third Macedonian war, Rome developed the concept of the free port by establishing a central storage area on Delos (Thoman, 1956, p. 12). In order to provide supplies to the Roman Army within the Mediterranean Sea, the area was free from taxes. Frank (1927), however, shows that the Delos free port apparently had more of an effect on improving the prosperity of the island and developing trade with Greece, Syria, and Egypt than on assisting the Roman army. Bost (2010) explains that many experts on this period refer to Delos as a place that facilitated fortune building. For instance, Bost (2010) cites the Greek geographer Strabo who wrote that all one needed to become wealthy was to simply transload in Delos. Bost (2010) adds it was also said that this free port, which benefitted from the fall of both Carthage and Corinth, might have played an important role in the economic decline of Rhodes because this latter centre of power was trading wine during this period and was in a power struggle with Rome.

During the Middle Ages and the Mercantile Era, most free ports were on continents, either on the Hanseatic range or on the Mediterranean north shore. Only after the Second World War did the growth in the number of free ports start to focus on island locations, at least initially in the Caribbean and Asia. Caribbean countries used free zones primarily as a means to attract foreign direct investment and encourage the movement of American manufacturing to their islands. These companies were labour-intensive, a factor of production that was available at a lower cost in free ports in this region. Asian islands, most of which eventually became associated with the label of New Industrialized Countries, were undergoing rapid (usually export-oriented) economic growth. Developing free ports was an important strategy to support this capture of value-added activities on their soil and, as they continued developing, offered more complex services to companies thanks to the knowledge acquired by relocation to free zones.

Meanwhile, in western countries, free port innovations were also advancing. In 1959, a free zone was created next to the Shannon Airport in Ireland. This was a critical location because the airport lay at the most western point of Europe and it was therefore well positioned to serve as a supply base for American aircraft delivering supplies to Europe. The airport is also used by NASA as an emergency landing option for this region of the world. Such a zone, as a link between the US and Europe, has the potential to rapidly develop logistic services, including packaging and conditioning in marketing, and, later on, industrial transformation (Barbier & Veron, 1991). Given its location close to an airport, the Shannon free zone is an exemplar of the modern era free zone because the free zone is no longer tied exclusively to a maritime site. Moreover, there are services near airports that go beyond logistical hub services and operate as gateways for broader markets.

TABLE 5.1: Free zones and connectedness indices in island states

Continent	Island Country	Type of free zone	No. of free zones	Population	LPI	Liner shipping connectivity index
Africa	Cabo Verde	None	0	560,899	#N/A	6.11
	Comoros	None	0	808,080	2.51	5.41
	Madagascar	Free Port	1	25,054,161	2.35	8.96
	Mauritius	Free Port	2	1,356,388	2.65	34.49
	Sao Tome + Principe	None	0	201,025	#N/A	5.24
	Seychelles	None	0	93,920	#N/A	8.01
Asia	Bahrain	Free Port	2	1,410,942	3.06	38.10
	Brunei Darussalam	Project	0	443,593	2.78	5.27
	Indonesia	Free Port	5	260,580,739	3.08	47.76
	Japan	Free Port	2	126,451,398	3.99	76.75
	Maldives	Free Port	1	392,709	2.63	7.76
	Philippines	Free zone	29	104,256,076	2.91	28.98
	Singapore	Free Port	3	5,888,926	4.05	133.92
	Sri Lanka	Free Port	1	22,409,381	2.65	72.46
Caribbean	Timor-leste	None	0	1,291,358	#N/A	2.47
	Antigua + Barbuda	Free Island	1	94,731	#N/A	3.48
	Bahamas, The	Free Port	1	329,988	2.65	31.55
	Barbados	Free Island	1	292,336	#N/A	5.40
	Cuba	Free Port	3	11,147,407	2.23	7.23
	Dominica	Free Island	1	73,897	#N/A	4.76
	Dom. Republic	Free zone	60	10,734,247	2.68	39.40
	Grenada	None	0	111,724	#N/A	5.01
	Haiti	Free zone	6	10,646,714	2.02	8.81
	Jamaica	Free Port	1	2,990,561	2.52	31.32
	St. Kitts + Nevis	Free Island	1	52,715	#N/A	3.73
St. Lucia	Free Port	1	164,994	#N/A	4.75	
	St. Vincent + Grenadines	Free Island	1	102,089	#N/A	4.43
	Trinidad + Tobago	Free Island	1	1,218,208	2.41	12.36
Europe	Cyprus	Free Port	1	1,221,549	3.10	19.48
	Iceland	None	0	339,747	3.29	5.27
	Ireland	Free Port	2	5,011,102	3.63	10.72
	United King-	Free Port	7	64,769,452	4.01	95.57
	Malta	Free Port	1	475,700	2.94	52.00

Continent	Island Country	Type of free zone	No. of free zones	Population	LPI	Liner shipping connectivity index
Oceania	Cook Islands	None	0	9,290	#N/A	2.00
	Fiji	Free Port	1	920,938	2.37	9.73
	Kiribati	None	0	108,145	#N/A	4.84
	Marshall Islands	None	0	74,539	#N/A	5.24
	Micronesia, Fed.States	None	0	104,196	#N/A	3.40
	Nauru	None	0	9,642	#N/A	1.90
	New Zealand	Project	0	4,510,327	3.68	20.16
	Niue	None	0	1,626	#N/A	#N/A
	Palau	None	0	21,431	#N/A	#N/A
	Papua New Guinea	Free Port	4	6,909,701	2.31	9.33
	Samoa	Free zone	1	200,108	#N/A	5.45
	Solomon Islands	Project	0	647,581	2.52	7.59
	Tonga	None	0	106,479	#N/A	6.11
	Tuvalu	None	0	11,052	#N/A	1.58
Vanuatu	Free Port	1	282,814	#N/A	6.85	

Notes: #N/A means the index is not available for this state.
LPI is Logistic Performance Indicator published by the World Bank
Liner shipping connectivity index is an indicator published by UNCTAD

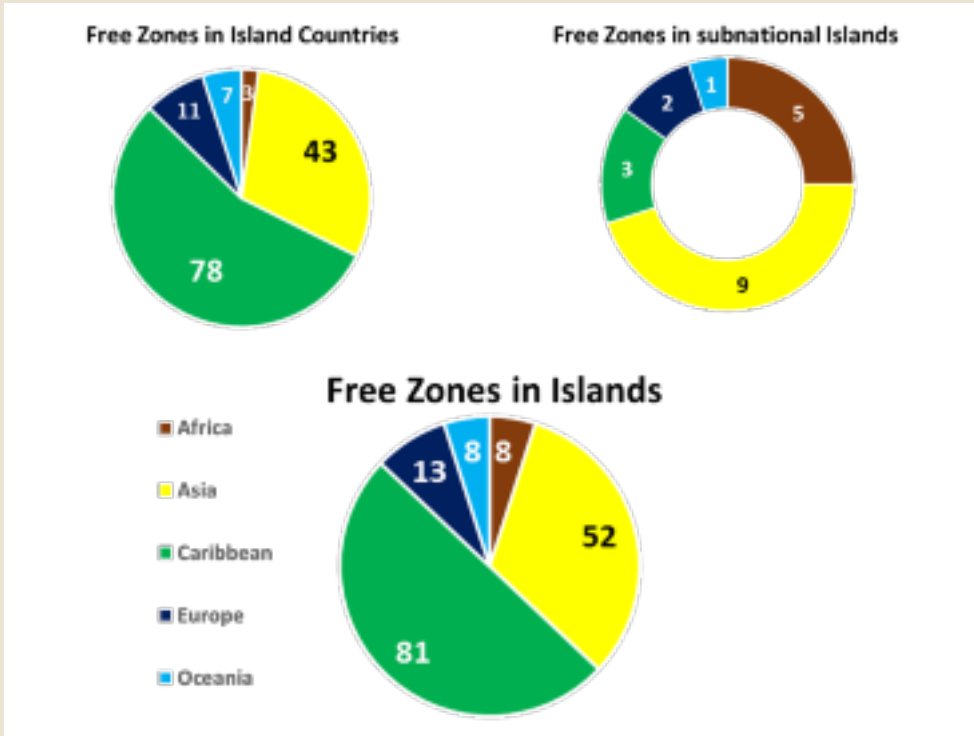
In the late twentieth century, free ports, in different forms such as Export Processing Zones, Free Trade Zones, or Special Economic Zones, developed all around the world in continental as well as in island locations. Among the 367 free ports inventoried by Lavissière and Rodrigue (2017), 47 are located on island states, and another 15 are found on subnational island jurisdictions. When all types of free zones are included, 142 zones are found on islands (see Tables 5.1 and 5.2).

TABLE 5.2: Free zones and connectedness indices in subnational island states

	Sub-national island	State	Type of free zone	No. of free zones	Population of island	LPI	Liner shipping connectivity index
Africa	Bioko	Equatorial Guinea	Free Port	1	130,000	2.21	10.65
	Madera	Portugal	Free Port	1	260,133	3.56	65.13
	Canarias	Spain	Free Port	1	2,218,344	3.78	90.11
	Zanzibar	Tanzania	Free Port	2	1,281,754	2.88	13.2
Asia	Hong Kong	China	Free Port	1	7,347,000	3.60	113.49
	Kish	Iran, Islamic Rep.	Free Island	1	27,000	2.71	42.47
	Qeshm	Iran, Islamic Rep.	Free Island	1	200,000	2.71	42.47
	Taiwan	China	Free Port	6	23,508,428	3.65	77.96
Caribbean	St. Martin	France	Free Island	1	35,107	3.86	84
	St. Barthelemy	France	Free Island	1	9,427	3.86	84
	Aruba	Netherlands	Free Port	1	115,120	4.07	6.46
Europe	Crete	Greece	Free Port	1	621,340	3.19	59.41
	Isle of Man	United Kingdom	Free Port	1	64,769,452	4.01	95.57
Oceania	Hawai'i	United States	Free zone	1	1,427,538	3.92	96.66

As suggested above, there are also free zones on subnational island locations. The inventory in Table 5.2 shows 20 free zones located in the five continents. Most of them are current or former colonial outposts in the Caribbean or Africa. Since they are subnational islands from European states or metropolises and do not belong to the Custom Union, they are accorded a specific status. Crete is slightly different because it is only one of many islands of continental Greece. Bioko is a continental island serving its metropole of Equatorial Guinea and the larger West African region.

FIGURE 5.3: Distribution per continent of free zones hosted in island economies



The distribution of free zones by world region with a larger number in the Caribbean is interesting (see Figure 5.3). This is due almost exclusively to the large number (60) in the Dominican Republic. Asia is the second most important area with 29 free zones in the Philippines.

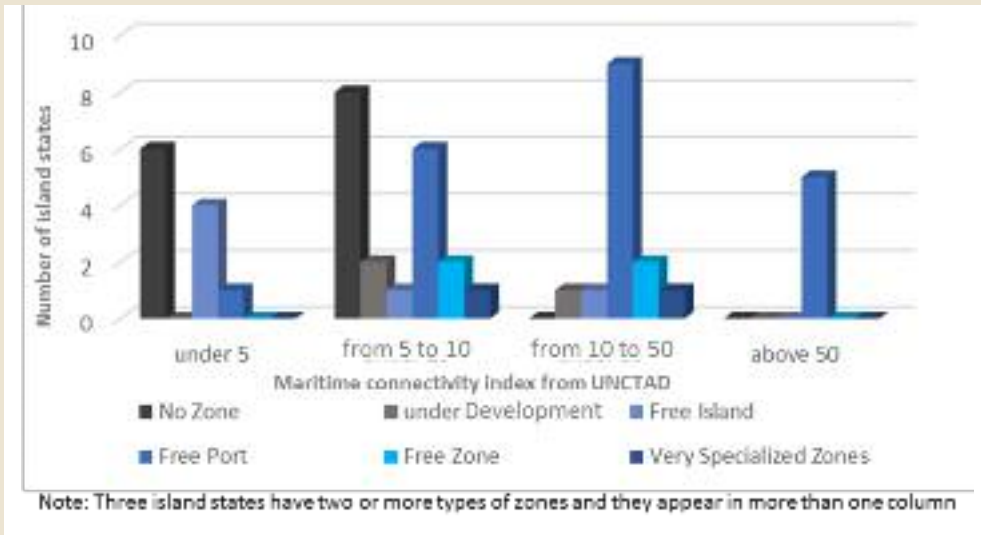
Considering free zones on subnational island jurisdictions, the leading areas are Asia and Africa. When aggregated, the two main areas of development of free zones on islands are the Caribbean and Asia. These two areas account for 82% of the free zones located on all islands. In Africa, there are, however, several free ports on subnational islands.

FIGURE 5.4: Distribution of free zones in island states by continent, including those under consideration (compiled by author)



Not all areas have the same number of island states. Therefore it is interesting to compare the share of states that have free zones and those that do not have them. In Europe, for instance, four of the five island states (Cyprus, Ireland, Malta, and the United Kingdom) have free ports, with Iceland being the only European island state without one. This follows the historic trend described above and shown in Figure 5.1. Asia, Europe, and the Caribbean are located along the main maritime routes, while Africa and most of Oceania are at the periphery of these trade routes. Despite this current situation, islands in Oceania are more likely to be planning future free ports given the growth in the regional economy and the development of shipping opportunities in this area. With few direct connections to the global trade routes, Oceania is inclined to attract flows from these routes or attract the shipping lines to its production centres (Figure 5.4).

FIGURE 5.5: Types of free zones in island countries using the UNCTAD Maritime Connectedness Index



To confirm the influence of trade routes on the development of a free port policy in island economies (Bertram, 2017), it is useful to examine the United Nations Conference on Trade and Development's (UNCTAD) Maritime Connection Index. This index shows the importance of connectedness to trade routes for development. When this factor is combined with the development of free zones in island economies (Figure 5.5) the link is clear. States with the lowest index values have either no free zones or the entire island is given a free zone status, while all states with a higher index have developed free ports. Therefore, there is an association between connectedness and the presence of free zones.

Another contributing factor to the development of free zones is the size of the island, which is also known to be an important factor for the development of island states in general (Randall, 2017, p. 212). Island states with fewer than 120,000 inhabitants have no free zones, or they have defined the entire island as a free zone. Larger islands, i.e., those with between 120,000 and 10 million inhabitants, have fewer free zones but they have also signaled their desire to create a free zone in the future, often by passing a government Bill to that end. The most important category in these mid-sized islands are free ports.

In the largest island states, i.e., those with more than 10 million inhabitants, there are free ports and free zones, but also very specialized free zones, often linked to the information technology sector or to agro-industrial complexes. It seems as though there is a critical size needed to develop a free port and another larger critical size associated with zones that are more specialized.

FOUR EXAMPLES OF FREE ZONES ON ISLANDS

Data on success or failure of free zones are not available and there is no index measuring this. Such an index is a complex function of factors including job creation, company's creation, value creation, and knowledge transfer. In the literature, the best way to approach factors of success is through case studies that bring qualitative data in a longitudinal approach. We have chosen three case studies of island countries with different levels of economic development and different levels of development of their free zone policy. In order to compare them we have added the case of countries that are not islands but are isolated and use free zone policy to connect with global trade.

Mauritius

The Republic of Mauritius is an island nation in the Indian Ocean. The country is an archipelago comprised of four islands that are far from main global trade routes. Mauritius was colonized twice and did not have specific natural resources to be exploited or even an indigenous population when Europeans first encountered the island in the sixteenth century. Although these “disadvantages” should have created a difficult business environment for Mauritius, the country is ranked twentieth on the World Bank's (2012) “Doing Business” index and it is one of the few African countries ranked globally as an upper middle income state.

At the time of independence in 1968, the Mauritian economy was almost exclusively concentrated on sugar cane cultivation, accounting for up to 99% of national exports, 25% of local employment, and 37% of the GDP (Bost, 2011). The 1970s were marked by a strong governmental commitment to diversify the economy and to create more high-



Port Louis, waterfront capital of Mauritius

paying jobs. The promotion of tourism and the creation of a special tax status for some industries, including textiles, were among the most successful government economic development strategies.

The Mauritian government implemented its free ports with the Free Port Act of 1992 and subsequent revisions in 1997 and 2001 (Mandják & Lavissière, 2014). At first the Free Port was a basic logistic facility for transshipment and minor transformation of products. Therefore, it provided basic logistic services. Then, with the separation of the roles of regulator and operator (known as developers in Mauritius), competition was introduced and different players developed different strategies, both on the kinds of services offered, but also in terms of market (Lafargue, 2008). For instance, one of the developers of the free port specialized in cold rooms and fish product-related logistics, another developer built Congress Hall, and a third offered offices and show rooms as a complete supply chain service. The goal of the government was for the free port to increase maritime traffic through the port by 15% and therefore create jobs.

Today Mauritius free port is an exemplar of success because it serves as the central warehouse for the Indian Ocean and Eastern Africa zone (Lavissière, 2013). The Supply Chain services offered are of premium quality and are renowned among European companies, especially those in the food industry, given the guarantee of maintaining the cold chain once products enter the free port. The other important factor of success of the Mauritian free port is its ability to reduce business travel distance between Asian traders and European traders (Mandják & Lavissière, 2014). The free port of Mauritius is therefore a tool to enhance development that is embedded in the local economy. It allows island-based service resources to be used effectively in connecting the local economy to the global value chain.

Dominican Republic

The Dominican Republic is the second largest country in the Caribbean. Located on the eastern two-thirds of the island of Hispaniola, it shares this island with the nation of Haiti. Traditionally, the economy of the Dominican Republic specialized in the production of sugar cane and bananas. In 1968, the government decided to diversify the economy with an emphasis on tourism and manufacturing. In order to develop industry and attract foreign direct investment, it proposed free zones within which companies received tax exemptions for fifteen years (or up to twenty years if a company was within 25 km of the Haitian border) (Bost, 2010).

At 60, the Dominican Republic has (after the US) the second largest number of free zones among world nations and by far the largest number of free zones of any island jurisdiction. More than any other place, it has probably relied on the free zone model to leverage its development (Buzenot, 2009). In order to do so, and to discourage a rural exodus of people and companies, it developed free zones in both urban and rural

areas. Roads were built to enable transportation of goods and fluid logistics between these zones and the air and seaport gateways of the country.

At the beginning of the policy of free zone development, there was only one private zone (Romana I). Although it was successful, public investment did not encourage the development of other zones. In the 1980s, the state invested in public free zones and, a decade later, private investors started to invest capital to create private free zones (Barbier & Veron, 1991). This model proved so successful that today there are 60 free zones, including free ports. This period also coincides with a change in American trade policy in the Caribbean Basin, in which some goods coming from the Caribbean to the US were exempt from tariffs. This encouraged American companies to invest in Dominican Republic free zones in order to take advantage of access to the nearby US market but at a lower cost. In 2010, 46% of companies in the free zones were American companies and only 9% were Dominican (Bost, 2010; Buzenot, 2009).

Dominican Republic free zones have created a considerable amount of local employment with estimates that up to 10% of the labour force has worked in free zones



Santa Domingo, capital of Dominican Republic

(Bost, 2010). Unfortunately, many of the zones have specialized in textiles production and, with the end of Multi-Fiber Agreements, companies in these zones have not been able to compete with lower-cost textiles production originating in several Asian countries. In addition, the Dominican Republic did not move along the value chain to remain competitive. The other sectors developed in the free zones, such as those specializing in electric goods or tobacco, are often labour-intensive and are beginning to suffer the same competitive fate as the textiles sector. Only two industrial sectors in the Dominican Republic free zones are maintaining employment: electronic goods and pharmaceutical goods.

United Kingdom

Developing countries are not the only ones to have developed trade strategies based on free zones. OECD countries account for 42% of the world's free ports (Lavissière & Rodrigue, 2017). Starting in the 1980s, the United Kingdom developed a strategy of Free Enterprises in which companies can be accorded free zone status by locating in regions experiencing job loss. Zone status was supposed to last for ten years after which they could not be extended or renewed.

The principal advantage of these zones was fiscal: up to 100% of the amount of investment could be used to reduce the amount owed in corporate taxes. Locating in these zones also allowed for some administrative simplifications and some logistics advantages around the status of bonded warehouses. Thirty-eight zones were created; however, most of the companies involved were in labour-intensive sectors, including printing and call centres. These types of jobs were not associated with the expansion of the service sector in the British economy.



The harbour area and Spinnaker Tower in Portsmouth on the south coast of England

In 1984, following passage of the Customs and Excise Management Act of 1979, the British government encouraged the development of more traditional types of free zones (Bost, 2010). Free zones under this provision are free trade zones with warehousing and logistics activities. The objective of these sites was to import, store, and sometimes perform small modifications to goods before re-exporting them. The whole process is under customs extraterritoriality (Tiefenbrun, 2012). These free zones were developed

for a period of seven to ten years and their status was renewable. Unfortunately, because a warehouse is normally amortized over a period of twenty years, the likelihood of renewal of the status was important for investors. As of 2008, only seven free zones had been renewed, five at seaports and two at airports.

BY EXITING THE EUROPEAN Union, the UK could benefit from a wider range of manoeuvrability in terms of customs policy. One of the options studied by the British parliament (Sunak, 2016) was the creation of stronger free ports in order to attract flows that would otherwise go directly to the EU, transforming products and then sending them on to the European continent.

Ten years later, with the possible exit of the United Kingdom from the European Union, the nation's free zone strategy is interesting. By exiting the European Union, the UK could benefit from a wider range of manoeuvrability in terms of customs policy. One of the options studied by the British parliament (Sunak, 2016) was the creation of stronger free ports in order to attract flows that would otherwise go directly to the EU, transforming products and then sending them on to the European continent. In other words, what Morocco does with some labour-intensive industries at the periphery of the EU, Britain may do with high value-added goods. Furthermore, the strategy is similar to the Mauritian one since the UK would use its historical and trade ties with Commonwealth countries and its proximity to European countries to become an intermediary. The goal is to reduce business distance and friction of the border.

Metaphorical island regions

The word 'island' finds its roots in Latin *insula*. *Insula* is also the root of the word 'isolated'. Some mainland areas of the world are as isolated as island states and subnational island jurisdictions. For example, Kaliningrad is a Russian exclave isolated from the Russian Federation and bordered by the Baltic Sea, Poland, and Lithuania. Kaliningrad was one of the first free ports developed by the Russian Federation in order to help this area connect with the rest of the world utilizing more capitalist economic rules and regulations than was the case elsewhere in the Russian Federation (Lavissière & Faury, 2019).

Another interesting metaphorical island with free zones is Morocco. Although part of the mainland of North Africa, the argument could be made that Morocco is as isolated as an island. The country's border with neighbouring Algeria is closed and disputes along the southern border make Morocco quite isolated from the rest of the African continent. Almost all of Morocco's international trade comes via sea with no formal trade taking place overland (Arvis et al., 2018). Morocco is, however, located on one of the world's busiest straits and only 14 km from the biggest world market. It has developed the free port of Tanger-Med, and has put in place a complex of free zones dedicated to import-bounded storage and re-export, the automobile industry, general



Fuel and oil storage tanks at the Tangier Mediterranean Port in Morocco

industry, and supply chain services such as banking, marketing, and IT services for international trade. This free port status enhances the local know-how and connects it to global shipping routes. Since neighbouring land-based countries cannot be the main trading partners with Morocco, the free ports break this ‘insularity’ and create a different form of connectedness to the rest of the world.

CONCLUSIONS

Like most countries in the world, islands have developed free zones and free port strategies. Two-thirds of the island countries have at least one free zone and those that do not are either too small, too far from the major markets, or they are already in the process of developing a free zone. In this sense, international trade might be analogous to the circulatory system that irrigates the whole body with different sizes of veins and arteries. The closer an organ is to the main veins and arteries, the better irrigated it is. The larger the organ, the larger the veins need to be to supply blood. It is more difficult for landlocked countries to be irrigated by international trade, just as it is more difficult for island economies that are not near major trading routes. In that sense, island

... international trade might be analogous to the circulatory system that irrigates the whole body with different sizes of veins and arteries. The closer an organ is to the main veins and arteries, the better irrigated it is. The larger the organ, the larger the veins need to be to supply blood.

countries located on the main arteries of international trade, e.g., Asian, European, and the Caribbean, are at an advantage by developing free zone policies.

Research and case studies demonstrate the importance of a strategy to develop free zone policy. The main objective is to divert the flows of trade to the island. In order to be able to influence and attract the flow of goods, the island economy needs to provide the conditions that will lead to a competitive advantage. In terms of international trade one of the most important competitive advantages is a reduction in border friction, whether they come in the form of finances, customs, logistics, regulations, or culture. Premium supply chain services need to be world class with the increasing expectations of global companies in terms of performance, tracking, security, and corporate responsibility. Such logistics services also need to be cost-effective, but not necessarily in providing low-cost labour. The danger in a strategy that relies too much on retaining low-cost labour-intensive companies is that the island economy may be trapped in this strategy and at the mercy of losing competitive advantage to a lower-labour-cost location. For this reason, adding value in the free zone supply chains should be sought to encourage sustainable economic growth.

With few exceptions, island-based free zones have to divert flows because their host economy is too small to be a final consumer market. The activities in these zones are part of a global supply chain. It is therefore crucial to understand that free zone activities are business-to-business activities. What is at stake in such activities is the connection of actors and long-term relationships. The free zone should be the prism that transforms the potential of local resources in actual active resources connected to the global market. The free zone on islands is therefore about diverting flows from main trade routes in order to provide premium services thanks to a balance between the development of a local cluster of activities and the development of connection with global actors.

Finally, the fact that every free zone is created for a specific purpose with specific objectives and specific rules leads observers toward a specific case-study-based approach of success (Barbier & Veron, 1991). The present study confirms the lack of an index that would measure the degree of success of free zones or free zone policies. Such an index would be particularly informative, and island countries and island studies could be a good umbrella for such an index creation.

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