

International Operations (ACPA 7003)

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Executive Summary

Organisation X plans on expanding its current business across the globe. The organisation has conducted an initial investigation possible locations, in terms of a manufacturing facilities. The list of locations can be seen below:

The Americas

- Chihuahua (Mexico)
- Montevideo (Uruguay)
- São Paulo (Brazil)

Asia

- Shenzhen (China)
- Visakhapatnam (India)
- Taipei (Taiwan)

Africa

- Durban (South Africa)
- Bulawayo (Zimbabwe)
- Tunis (Tunisia)

Further investigation is outlined in this report to select the three most suitable locations for the manufacture of products, one from each of the identified global regions.

The factors considered include, but are not limited to:

- Talent pool
- Geographical location
- Cultural, social and political complications
- Logistics and transportation
- Crime rates

When considering the above, plus the level and structure of innovation in each location, it was determined that the most suitable locations were: Chihuahua, Shenzhen and Tunis.

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1.0 Introduction

Organisation X based in the mid Wales specialise in security systems, for domestic, commercial and industrial applications. Products range from home security cameras that can be viewed on a mobile device's app, to commercial CCTV equipment. Due to the impact of COVID-19, a very popular product is a body temperature scanner, the product is placed at factory entrances and scans people for body temperature, the machine will then grant or deny access depending on the body temperature. The machine can be also be programmed via the friendly interface to check if the person is wearing a mask or not.

Considering for a future past a COVID-19 environment, the company is also developing a retinal scanner for the same machines, so that an employee for example may be identified prior to being granted access to some buildings.

Organisation X wants to strategically position itself to control the manufacture and distribution of their products on a global scale, with the main headquarters being located in its existing facility in Wales. The organisation has conducted an initial investigation in terms of a manufacturing facilities, and has shortlisted the following possible locations for further consideration:

- The Americas
- Asia
- Africa

The purpose of this report is to investigate the most suitable locations within the above continents.

2.0 International Operations

When considering moving operations abroad, there are a number of factors that should be considered. These include, but are not limited to:

- Talent pool
- Geographical location
- Cultural, social and political complications
- Logistics and transportation
- Crime rates
- Potential for Innovation

For crime rates of each area, locals from all locations were asked to complete surveys. Numbeo (2022) completed these surveys. Each place is then given a crime index of between zero (very safe) and one hundred (very dangerous).

Transportation (airports and ports) were researched using data from Google Maps (2022).

2.1 The Americas

2.1.1 Chihuahua City (Mexico)

Language: Spanish

Population: 878,062 (2017)

Ports: 0

Airports: 1

Crime index: 55.77

Chihuahua City is located in the northwestern state of Chihuahua. Much like Organisation X's existing headquarters in Wales, Chihuahua has historically been known for its mining industry (Mexican Mining, 2008).

More recently, the region has become a hub for the aerospace industry. Large multinational organisations including Bombardier and Honeywell have chosen to move some of their operations to Chihuahua City. Between the years 2012 and 2018, foreign investment in Chihuahua (state) exceeded \$1.1 billion per year (The Financial Times, 2018). This growth is attributed to a number of competitive advantages: there is a large, union-free, highly qualified and stable labour force with a strong infrastructure. Sophisticated industrial property developers are also able to offer investors all the support they need for a 'soft landing' when they invest there (The Financial Times, 2018).

One great advantage of Chihuahua City is its strategic position near the US border. Freight can be moved from Chihuahua City to the United States of American border by road, in just under five hours. This is highly favourable when selecting a location to move overseas, especially when considering the US accounts for up to 80% of all trade from Mexico (Egusa, 2018). The international airport was modernized in 2018 at a cost of \$25million (Timetric, 2018), this included the construction of a cargo area and related infrastructure.

2.1.2 Montevideo (Uruguay)

Language: Spanish

Population: 1.381 million (2017)

Ports: 1

Airports: 2

Crime index: 54.38

Montevideo is the capital city of Uruguay and is also the largest city in the country. It is located the further south than any of the other locations considered. Forty percent of the population of Uruguay live in Montevideo.

The political history of Uruguay in the 20th century can be divided in two periods of roughly 50 years each (Filgueira et al, 2003), the first one is characterized by the systematic expansion of the social and economic role of the state, the second one by a conflictive and contradictory process of decreasing state intervention. This second process was fostered by the limits to industrialization in a small country. The lack of technical progress in Uruguayan cultivation of land led to the decreasing international prices for primary products. After 1960 Uruguay changed from a country of immigration to an emigration country while social unrest and repressive policies escalated. Eventually, a dictatorial government with a military regime was built, culminating with the dissolution of Parliament in 1973 (Bulmer-Thomas, 1994).

In the decades that followed, according to Arocena and Sutz (2011) the main characteristics of the social-economic dynamic have been:

- Low levels of productive investment, a figure that has been below 15% of GDP
- Little Foreign Direct Investment (FDI)
- An export structure mainly based on the good endowment of natural resources with relatively low value added.

More recently, in the last ten years, Montevideo has accounted for 50% GDP and FDI has grown rapidly (Indencia de Montevideo, 2020).

In terms of innovation, an industrial innovation survey reveals that 42% of the projects presented in the year 2020 come from the instruments grouped into COVID-19 Challenges. This is fitting in line with what Organisation X have developed and plan on manufacturing and selling across the globe.

Montevideo has two airports within close proximity to the city and a port on the Atlantic Ocean, distribution of products from this location would not be a problem.

2.1.3 São Paulo (Brazil)

Language: Portuguese

Population: 12.4 million (2021)

Ports: 1 (outside city)

Airports: 3

Crime index: 70.19

São Paulo is the largest city (by population) in the southern hemisphere. It is located in south-east Brazil. Historically, São Paulo was founded on the export of coffee, resulting in huge wealth and becoming of great importance to Brazil's economy (Fix et al, 2003).

In Brazil, 98% of all existing organisations can be considered micro or small enterprises. A study carried out and published in 2019, found that organisations throughout São Paulo had a low concern for innovation practices (Berne et al, 2019). Although, a similar study by Quadros et al (2001) found that there has been much innovation in São Paulo, but there is little knowledge in the innovation process. The study concludes with the role of foreign controlled companies in the process of innovation. These firms present higher rates of innovative performance and of technological intensity than their national counterparts. Both Quadros et al (2001) and Berne et al (2019) found evidence that such innovative performance has relied little on internal R&D activities carried out by firms. They rely primarily on sources of information other than R&D to innovate, such as clients and competitors and other firm departments.

São Paulo has three airports within close proximity to the city, and also has access to a port outside of the city, with access to the Atlantic Ocean.

The crime index is significantly higher in São Paulo than Montevideo and Chihuahua. This is certainly considered a risk when evaluating whether to move Organisation X to this location.

2.2 Asia

2.2.1 Shenzhen (China)

Language: Mandarin Chinese / Cantonese

Population: 12.59 million (2021)

Ports: 3

Airports: 1

Crime index: 33.03

Shenzhen is a city located on the central coast of China, sharing a land border with Hong Kong. In terms of history, Shenzhen is described by Sala (2016) as one of the boldest economic experiments ever attempted. Shenzhen was built to turn China from a conventional communist economy, into the global powerhouse it is today. Just forty years ago, Shenzhen was a fishing village, now, it is an international city.

In 2008, Shenzhen was designated as a pilot experiment to develop into a national innovative city by the State Council (Yang, 2014). Owing to this, with the help of the central government, the city is expected to grow further into a centre of innovation (Shija, 2020).

In 2021, the cities GDP was \$475.42 billion. This is comparable to the GDP of the United Arab Emirates.

Owing to its coastal location and history of fishing, Shenzhen has three ports. One of these ports is the third largest globally, dealing with 194.9 million tonnes of cargo in 2018, along 130 international routes (Menon, 2021).

With a huge population, Shenzhen has a talent pool that is both diverse and skilled. This location has all the key determinants to grow Organisation X's influence across the globe.

2.2.2 Visakhapatnam (India)

Language: Telugu

Population: 1.728 million (2011)

Ports: 3 (1 used exclusively for fishing)

Airports: 1

Crime index: 37.43

Visakhapatnam, known as Vizagapatam until 1947 (India independence), is a city in southern India and is a port city in the southeast. It represents the largest and most populated city in the state of Andhra Pradesh. It also serves as the financial capital of the

state and has the tenth largest Gross Domestic District Product (GDDP) in India (Rav et al, 2016).

As a part of India's recent urbanization initiative, Visakhapatnam is pioneering a future for Smart City changes at a national, state, and local levels. One of the initiatives of this strategy is to maximize use of renewables for clean and efficient energy, with a net zero government supporting incentivising catalytic investment (Smart City Vision Statement, 2016)

The American technology organisation Conduent, has recently started a new operation at this location. This will bring 5000 highly skilled IT jobs to the city. The entry of global businesses like Conduent to the city is a sign of the success of these initiatives and city's growing stature as a business hub (Ujale, 2018).

One unfavourable condition of moving an organisation to this region is the language barrier. According to the BBC (2018), Telugu is mainly spoken in the southern states of India and is only the fourth most spoken language in the country, amounting to only 84million people. Whereas both other options for India largely speak Chinese Mandarin, the most spoken language across the world, accounting for 16% of the global population (Statista, 2020).

2.2.3 Taipei (Taiwan)

Language: Mandarin Chinese

Population: 2.646 million (2019)

Ports: 1

Airports: 2

Crime index: 14.27

Taipei (City) is capital city of Taiwan, located in the north of the island.

In its recent past, Taipei has been an important collaborator with Silicon Valley (California) supporting the growth of the semiconductor and PC industry. However, Feigenbaum (2020) claims that from around the 2000s, the information communication technology (ICT) industry has been depleted, losing most of the production to mainland China. This knowledge remains within the city however, making Taiwan City favourable for organisation 'x' with its heavily ICT biased products.

According to Juan et al (2019), Taipei City is facing the complex challenges of both globalization and urbanisation. Juan et al (2019) continue claiming the Tapei City government proposes promising initiatives and strategic actions based on the Kano two-dimensional quality model. These initiatives are targeting cultural, educational, and industrial

innovations to improve societal quality of life, with the view of eventually becoming a World Design Capital (WDC).

However, it is argued by Lin (2017) that creative city strategies are generating scepticism and are becoming the cause of government deficits by creating 'one-size-fits-all' cultural projects. Instead, Lin (2017) believes that institutional collaborations are critical to replace this state-led governance.

Another consideration for moving organisation x's operations to Taipei is the crime index. Although the crime index has been lower in Asia than on other continents, the index figure in Taipei is more than twice (as favourable) than in Shenzhen or Visakhapatnam. This makes Taipei favourable, although, Organisation X's products (CCTV, security system, etc.) may not sell well in this city/ country.

2.3 Africa

2.3.1 Durban (South Africa)

Language: English/ Zulu

Population: 3.721 million (2018)

Ports: 1

Airports: 3

Crime index: 80.6

Durban is the third most populous city in South Africa, sitting on the eastern coast with access directly to the Indian Ocean.

Prior to the early 1990s, the social and economic trends along with the national urbanisation was structured around racism. These policies were rooted in the notion of Apartheid whereby so-called independent states were to be separately developed to justify minimal contact between different race groups (Marx and Charlton, 2003).

More recently however, Durban has been the centre of impressive expansion, especially when considering its role in combating climate change. Durban is home to Africa's largest United Nations (UN) clean development mechanism project and hosted the 2011 UN climate negotiations (Aylett, 2012).

Between the years 2016 and 2018, there was a 33.03% increase in expenditure from private investors. The department of science and technology (DST) claim that technology innovation sector accounted for 10.59% of all expenditure (Innovate Durban, 2019).

Durban has excellent transport connections, with direct access to the Indian Ocean, as well as three airports. With a first language of English, this will make the transition for organisation x less challenging. Although, with an extremely high crime index, the city is considered a risk, but there may be opportunity to sell Organisation X's products (security systems, CCTV, etc.).

2.3.2 Bulawayo (Zimbabwe)

Language: Shona/ Ndebele/ English

Population: 653,337 (2012)

Ports: 0

Airports: 1

Crime index: 60.16

Bulawayo is the second largest city in Zimbabwe after the capital city of Harare. It is based in the west of the landlocked country. Between the years 2000 and 2008, Zimbabwe was hit extremely hard by an economic crisis that saw GDP shrink by more than 54% (Nani, 2017).

Nani and Radipere (2016) completed a study and claim that as a result of the economic depression, challenges that micro and small entrepreneurs in the Bulawayo Metropolitan Province have faced as a result of these imitations include stiff competition, reduced income, tarnishing of image, theft, lack of technology, jealousy and undercutting of each other's prices. This is seconded by Svodziwa (2021) who says that SMEs need to contribute to meaningful economic development. This can be further enhanced through the nurturing of networks and clusters and becoming more innovative both in terms of producing new products and providing new services.

Unfortunately, the transportation links in Bulawayo are also poor when comparing with both Tunis and Durban. With no port and just one airport.

Overall, as alluded to by Makore (2013) Bulawayo is still undergoing social and economic change. Makore (2013) claims that SME management need to leverage technological innovations with the help of internal and external organisational factors, such as legislation.

For this reason, it is not believed that Bulawayo is an unsuitable location for Organisation X to move operations to.

2.3.3 Tunis (Tunisia)

Language: Arabic

Population: 638,845 (2014)

Ports: 1

Airports: 1

Crime index: 47.8

Tunis is the largest and the capital city of Tunisia. It is located in the north of the country with access directly into the Mediterranean Sea.

Tunisia has a free trade agreement with the European Union and has managed to remove tariff barriers with an opening up policy (Moez, 2012). This is a great advantage to organisation x, especially when considering the strategic location of Tunis for moving products around Europe.

In the 1990s, Tunisia recognised the requirement to develop specific policies for science and technology. In the years that have followed, a comprehensive framework to support innovation has now been established, sub-systems have been strengthened, specific programs to harness science with economic purposes have been launched and a new culture of entrepreneurship and innovation is gradually emerging in the society (Chaabouni, 2008).

Following on from this, Jameleddine et al (2017) completed a study that concluded, that the uptake of innovations in Tunisia does not follow a structured process, with the main issues being: lack of awareness around innovations that could impact the system, non-structured process of information sharing and lack of explicit criteria that determine decisions around technologies.

The introduction of innovation management standards such as the ISO56000 series would be of great benefit to Tunis, who already have the support of government through policies, but the lack of structure during the innovation process is detrimental to the organisations in the city.

3.0 Conclusion

When it comes to moving operations abroad, many factors must be considered.

The locations deemed most suitable are highlighted below:

The Americas

Chihuahua – Thanks to the established trading relationship with the United States, Chihuahua was chosen as the most suitable location in The Americas. With a booming aerospace manufacturing industry, and huge foreign investment over the last decade, it is expected that the talent pool will have the skills required to manufacture organisation x's products.

Asia

Shenzhen – This city was thought to be most suitable on the Asian continent. The reasons for this is attributed to the huge talent pool available, excellent transport and logistical connections and the rate of growth seen in Shenzhen. With innovative initiative supported by the government, the city is soon to be considered an international centre of innovation.

Africa

Tunis – Tunis was chosen based on the support available from policies, it's free trade agreement with the EU and ease of distribution of products from the port of Tunis to Europe across the Mediterranean Sea.

It is suggested that organisation x takes its knowledge of ISO56000. This would be of great benefit by adding structure to the innovation process.

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