

International Innovation Management

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Feasibility Study Report – Selection of Centres for International Operations for Griffiths & Hughes Ltd., Wales, UK

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1. Executive Summary

Griffiths & Hughes global expansion plan for their new electronic biometric devices requires locations with favourable industrial ecosystem with well established supply chain for electronic parts and subassemblies; IT enabled knowledge pool for ample supply of IT professionals, well established logistics infrastructure and strong marketing network.

In Latin America, comparative analysis shows Montevideo and Buenos Aires both show comparable benefits. Buenos Aires has shown better manufacturing and marketing performance. Whereas, Montevideo has better skill base, better communication, is more stable in aspects of politics, economy and law. Overall, Montevideo rates better over both Porto Alegre and Buenos Aires.

Of the three Asian cities, from the qualitative analysis, Shenzhen outweighs Mumbai and Taipei in its strong industrial presence and local supply chain for electronic devices. Shenzhen rates well over the others in terms of security, easy of doing business as well as well established global distribution network. But, one need to be aware and careful of China's changing international policies now and then, such as the recent ban on solar panel and technology (Dan Murtaugh, 2023) which can jeopardise international co-operation. It would be worth exploring other Asian destinations like Chennai, Pune (India) which score better in terms of supply chain, knowledge base and security of resources over Mumbai.

Comparative analysis of the three African cities shows Durban outperforming over Tunis and Bulawayo in many aspects. Durban comparatively has a good industrial presence, better transport facilities, larger talent pool, bigger market, well established distribution network as well as communicates better internationally.

Findings of the report are to be treated as recommendations and general guidelines for selection and in **NO** way an absolute declaration of selective decision or agglomeration of findings. Section 7 provides areas of further research to aid in the process of selection.

2. Introduction

Griffiths & Hughes Ltd., (GHL) who are at the forefront of specialised security systems in Wales are aspiring to expand their foot print beyond the UK and into other area of the world. They are willing to strategically position themselves to control the manufacture, marketing and distribution of their products on a global scale. They have shortlisted the following locations for further investigation.

South America	Asia	Africa
Porto Alegre (Brazil)	Shenzhen (China)	Durban (South Africa)
Montevideo (Uruguay)	Mumbai (India)	Bulawayo (Zimbabwe)
Buenos Aires (Argentina)	Taipei (Taiwan)	Tunis (Tunisia)

The task in hand is to provide research evidence to the management of Griffiths & Hughes Ltd.; to further help them make an informed and educated decision on the strategic location selection.

Key points to keep in mind while conducting the research are:

Griffiths & Hughes are into design, production and marketing of electro/electromechanical devices for high end security systems involving intricate electronics, high end scanning & data collection softwares as well as lightening speed data analysis systems for seamless data management and result interpretation in a split second. The location selected should have a market for such devices, should have infra relevant to electronic hardware manufacturing as well as professional resource pool to develop high end software as a minimum.

See appendix 10.1 for benefits of selecting the right geographical location for business.

To respect the limited scope of this report, research will be carried out on the country level only and not to the level of the Cities down selected by GHL. Only where the selected cities have a large contrast or outstanding characteristic in the attributes and factors only then they will be presented.

3. Methodology for Comparative Analysis

All data presented in this report are from free sources and literature available in the academia. Credibility of data is not fully guaranteed. Analysis of data is purely qualitative in nature and where numbers are presented will also be treated qualitatively for the simplicity of analysis.

Twelve main country attributes and industry factors are considered for comparative analysis. Each attribute/factor is further broken down into key focus areas as described in detail in Appendix 10.2. Each of these key focus areas are studied for their comparative pros & cons, level of ease, quality, good or not etc., and are aggregated to assign indicators for each city/country. A matrix of all the indicators is written down to indentify the country with best/most attractiveness, ease of ability to executive and low risk to business sustainability.

4. South America

Manufacturing & Production:

According to the World Bank global ranking 2018 for infrastructure (The World Bank, 2018), among the 3 countries, Brazil tops at 50th rank, succeeded by Argentina at 62nd and Uruguay lagging behind at 94th. See Appendix 10.4 and column 7 for Infrastructure ranking.

Marketing:

There is not much free source data available on the market and marketing of biometric scanners worldwide. Although, we can derive some parallels with the market intelligence on the industrial electronics. Brazil undoubtedly has a larger market due to its larger population and well established marketing network in comparison to Argentina and Uruguay. Brazil was one of the worst affected countries due to Covid 19 and hence has a larger customer base for scanners and analysers. On the other hand Uruguay has the smallest population of the three and hence the largest GDP per capita of the three. From a local business opportunity point of view, of the three, Brazil stands first, followed by Argentina and Uruguay.

Ease of Doing Business & Growth Prospects

According to (World Bank Group, 2020) ease of doing business ranking, Uruguay is ranked the highest among the three at 101, followed by Brazil at 124 and Argentina trailing at 126. From the point of comparison Brazil and Argentina can be considered with same weights as their rankings are pretty similar. See Appendix 10.3.

Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce

In Latin America Brazil tops the list of business friendly nations (Marco, 2018) when it comes to IT (Information Technology) and ITES (Information Technology Enabled Services) outsourcing due to its vast base of tech specialists, conducive infra for IT including 90 tech parks and 35 accelerators (Time Doctor, n.d.). However, on the (Tholons, 2018) list of top 20 outsourcing destinations Montevideo ranks at 9th, Buenos Aires at 10 and Porto Alegre not listed among the top 20.

Logistics & Transportation

According to (The World Bank, 2018) for logistics ranking, Brazil tops the list at 46, followed by Argentina at 68 and Uruguay last at 78. See Appendix 10.4.

Political Aspects

(Worldwide Governance Indicator, 2022) provides indices which are based on six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption. Per the percentile ranking for political stability and absence of violence, Uruguay tops the list with 88.68, Argentina at 45.75 and Brazil at 28.77. See Appendix 10.5.

Cultural & Social Implications

(Commisceo-Global, 2023) has published the business culture complexity index for the 50 world economies, formulated using economic, cultural and social data from 14 sources. According to them Argentina is the easiest (Rank 24) followed by Brazil (Rank 31). Uruguay being a smaller nation and with high rate of literacy in secondary and University education would be the easiest from a cultural perspective to do business. See Appendix 10.6.

Language & Communication Channels

According to English Proficiency Index (EF EPI, 2022) Buenos Aires score 578 followed by Montevideo at 530 and Porto Alegre is much less. From a country's perspective Argentina is ranked number 30 with high proficiency in English, Uruguay at 49 and Brazil at 58 as moderate proficiency in English.

Law of Land & Legislature

According to the law of land ranking (Worldwide Governance Indicator, 2022) which covers the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence Uruguay has the best law and legislature for businesses, followed by Brazil and then Argentina. See Appendix 10.7.

Safety & Security of Resources

According to the Global Terrorism Index (Institute for Economics & Peace, 2022), all three nations are at moderate level of alert on the global terrorism index with Argentina relatively more vulnerable than Uruguay and Brazil being the least of the three.

Competition

Due to the sheer size of the industry, Brazil is expected to have more competition and product pricing and revenue challenges in comparison to Argentina and Uruguay.

Economic & Financial Stability

Per (Haken, 2022), Uruguay is very stable, Argentina is more stable and Brazil is at elevated level of warnings from the point of financial stability and human security.

Overall Comparative Matrix

Item	Attributes	Porto Alegre (Brazil)	Montevideo (Uruguay)	Buenos Aires (Argentina)
3.1	Manufacturing & Production			
3.2	Marketing			
3.3	Ease of Doing Business & Growth Prospects			
3.4	Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce			
3.5	Logistics & Transportation			
3.6	Political Aspects			
3.7	Cultural & Social Implications			
3.8	Language & Communication Channels			
3.9	Law of Land & Legislature			
3.1	Safety & Security of Resources			
3.11	Competition			
3.12	Economic & Financial Stability			

Discussion: See appendix 10.9

5. Asia

Mumbai, Shenzhen as well as Taipei are all port cities with good sea links. Nevertheless, each city has its own relative strengths and weaknesses when it comes to setting up a new business.

Manufacturing & Production:

According to the World Bank global ranking 2018 for infrastructure (The World Bank, 2018), among the 3 countries, China tops at 20th rank, succeeded by Taiwan at 23rd and India lagging behind at 52nd. See Appendix 10.4 and column 7 for Infrastructure ranking.

Marketing:

China is second largest economy and largest population at 1.4billion. As it is the fastest growing markets, China is an attractive country for businesses around the world. With vast opportunities for business in infrastructure, technology, engineering, China has ranked at the top of the list for global expansion and investment (INS Global Consulting, 2021). India being the second largest population with largest percentage of young population among the three countries stands at number 2 from the point of marketing. Although Taiwan had been a hub for electronic manufacture, it may not be as big a local market for consumer and industrial safety devices.

Ease of Doing Business & Growth Prospects

According to (World Bank Group, 2020) ease of doing business ranking, Taiwan is ranked the highest among the three at 15, followed by China at 31 and India trailing at 63. See Appendix 10.3.

Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce

India tops the list when it comes to IT outsourcing with virtually unlimited number of companies, unlimited pool of IT resource, large IT infrastructure and at a very affordable cost (Linkedin, 2022). China stands at 2nd. Chinese universities produce 4.7 million tech specialists every year (Linkedin, 2022). China is more than twice at cost when it comes to IT spending. Taiwan rests at last with regards to its competitiveness in IT outsourcing. Mumbai is ranked 3rd in the top 20 super IT outsourcing destinations (Tholons, 2018), whereas Shenzhen or Taipei haven't made it to Top 20 list.

Logistics & Transportation

According to (The World Bank, 2018) for logistics ranking, China tops the list at 27, followed by Taiwan at 30 and India last at 42. See Appendix 10.4.

Political Aspects

(Worldwide Governance Indicator, 2022) Per the percentile ranking for political stability and absence of violence, Taiwan tops the list with 72.17, China and India are at the same level with China at 29.25 and Indian at 24.53. See Appendix 10.5.

Cultural & Social Implications

According to (Commisceo-Global, 2023) China is the easiest (Rank 20) followed by Taiwan (Rank 30) and then India (Rank 45) from a cultural perspective to do business. See Appendix 10.6.

Language & Communication Channels

India is the only region with English as a state language and has a clear advantage in this area. Indian primary and higher education institutions mostly use English to teach, as a result, all college graduates in this country are fluent in English language. China and Taiwan lack English skills needed for international business which creates a major business barrier.

Law of Land & Legislature

According to the law of land ranking (Worldwide Governance Indicator, 2022) Taiwan has the best law and legislature in support of businesses, followed by India and China at more or less the same level. See Appendix 10.5.

Safety & Security of Resources

According to the Global Terrorism Index (Institute for Economics & Peace, 2022), India is more likely to be affected by terrorist activities than China and Taiwan. Global security threats index (The Global Economy, 2022) shows India is more vulnerable than China and Taiwan. Whereas on the cyber security index China scores the least (International Telecommunication Union, 2021). Overall, Taiwan is safer than India and China.

Competition

China has been extensively producing and distributing biometric scanners including the retina scanners especially during the breakdown of pandemic and hence the market competition in China for such scanner is the highest among the three nations.

Economic & Financial Stability

India is at elevated warning levels, where as China is at warning level of financial stability and human security (Haken, 2022). Data for Taiwan is not available, but with a strong GDP it can be considered on par with china.

Overall Comparative Matrix

Item	Attributes	Shenzhen (China)	Mumbai (India)	Taipei (Taiwan)
3.1	Manufacturing & Production	😊	😞	😊
3.2	Marketing	😊	😊	😞
3.3	Ease of Doing Business & Growth Prospects	😊	😞	😊
3.4	Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce	😊	😊	😞
3.5	Logistics & Transportation	😊	😞	😊
3.6	Political Aspects	😞	😞	😊
3.7	Cultural & Social Implications	😊	😞	😊
3.8	Language & Communication Channels	😞	😊	😞
3.9	Law of Land & Legislature	😊	😊	😊
3.1	Safety & Security of Resources	😊	😊	😊
3.11	Competition	😞	😊	😊
3.12	Economic & Financial Stability	😊	😞	😊

Discussion: See Appendix 10.10

6. Africa

Manufacturing & Production:

According to the World Bank global ranking 2018 for infrastructure (The World Bank, 2018), among the 3 countries, South Africa tops at 36th rank, succeeded by Tunisia at 133rd and Zimbabwe lagging behind at 154th. See Appendix 10.4 and column 7 for Infrastructure ranking.

Marketing:

South Africa has a larger market due to its larger population and well established marketing network in comparison to Zimbabwe and Tunisia. From a local business opportunity point of view, of the three, South Africa stands first, followed by Zimbabwe and Tunisia.

Ease of Doing Business & Growth Prospects

According to (World Bank Group, 2020) ease of doing business ranking, Tunisia is ranked the highest among the three at 78, followed by South Africa at 84 and Zimbabwe trailing at 140. See Appendix 10.3.

Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce

South Africa is the only country among the three under scrutiny which appears on the Global Services Location Index (GSLI) 60 nations (Sethi & Joe Raudabaugh, 2021). GSLI indexes global locations across four major categories: financial attractiveness, people skills and availability, business environment, and the new digital resonance. South Africa has the largest software developer community and digital infrastructure in the African continent, followed by Tunisia and then Zimbabwe (SPRUYT, 2021).

Logistics & Transportation

According to (The World Bank, 2018) for logistics ranking, South Africa tops the list at 39, followed by Tunisia at 123 and Zimbabwe last at 147. See Appendix 10.4.

Political Aspects

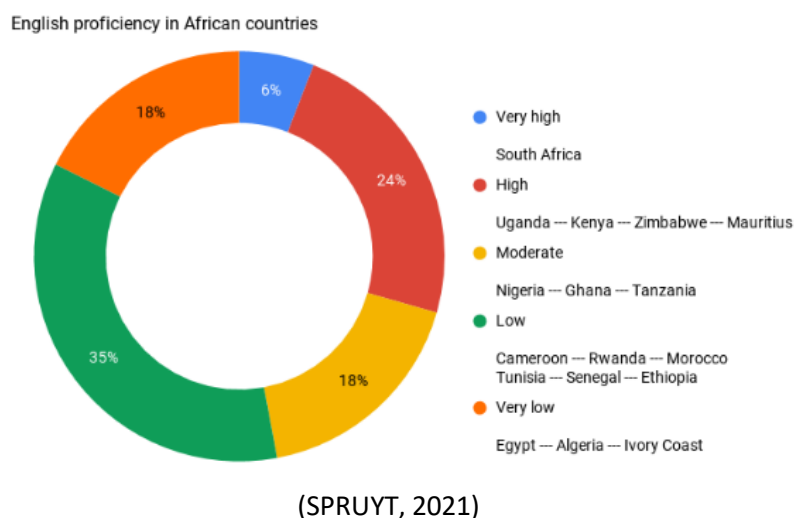
(Worldwide Governance Indicator, 2022) Per the percentile ranking for political stability and absence of violence, Tunisia tops the list with 22.17, South Africa is slightly lower at 21.7 and Zimbabwe the lowest at 14.15. See Appendix 10.5.

Cultural & Social Implications

According to (Commisceo-Global, 2023) South Africa is ranked 37 among the top 50 global economies. Whereas, there is no mention of either Tunisia or Zimbabwe in the list. See Appendix 10.6.

Language & Communication Channels

South Africa tops the list with a very high proficiency in English followed by Zimbabwe with high and Tunisia with low English proficiency (SPRUYT, 2021) .



Law of Land & Legislature

According to the law of land ranking (Worldwide Governance Indicator, 2022) South Africa (56.25) and Tunisia (54.81) are at the same level. Whereas Zimbabwe is at a very low percentile ranking of 8.65 making it least preferred. See Appendix 10.7.

Safety & Security of Resources

According to the Global Terrorism Index (Institute for Economics & Peace, 2022), Tunisia is more likely to be affected by terrorist activities than South Africa and Zimbabwe. Global security threats index (The Global Economy, 2022) shows Zimbabwe is more vulnerable than Tunisia and South Africa. Whereas, on the cyber security index Zimbabwe is more vulnerable for cyber breach than Tunisia and South Africa (International Telecommunication Union, 2021). Overall, Tunisia is safer than South Africa and Zimbabwe.

Competition

South Africa has a large market for consumer and industrial electronics as well as has a large base of producers of these electronics in comparison to both Tunisia and Zimbabwe. Hence, South Africa is expected to have heavier competition to the intended product than others.

Economic & Financial Stability

Tunisia is at warning level, South Africa is at elevated warning levels, where as Zimbabwe is at alert level of financial stability and human security (Haken, 2022).

Overall Comparative Matrix

Item	Attributes	Durban (South Africa)	Bulawayo (Zimbabwe)	Tunis (Tunisia)
3.1	Manufacturing & Production	😊	😞	😊
3.2	Marketing	😊	😊	😞
3.3	Ease of Doing Business & Growth Prospects	😊	😞	😊
3.4	Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce	😊	😞	😊
3.5	Logistics & Transportation	😊	😞	😊
3.6	Political Aspects	😊	😞	😊
3.7	Cultural & Social Implications	😊	😊	😊
3.8	Language & Communication Channels	😊	😊	😞
3.9	Law of Land & Legislature	😊	😞	😊
3.1	Safety & Security of Resources	😊	😞	😊
3.11	Competition	😞	😊	😊
3.12	Economic & Financial Stability	😊	😞	😊

Discussion: See Appendix 10.11

7. Scope for Further Study on Selection of Global Centre for Business

- Consider opinion of Expatriates & Experts
- Analyse strength of collaboration and Joint Ventures in selected geographic locations for
 - o Technological foot print for Collaboration/Joint Ventures
 - o Quality of Educational Institution and R&D Facilities (labs)
- Consider Data and heat map tools
- A 2 x 2 matrix technique for location selection (Baigun, 2016)
- Consider other factors outlined in International market selection guidelines (European Commission, 2023).

8. ISO56000 and its Benefits to the Company's Sustainability

Innovation is at the heart of Griffiths & Hughes business policy. They have been providing innovative solutions time and again based on worlds ever changing needs. Innovation management should be at the core of their business policy. Innovation capacity of firms is known to improve through the adaptation of standardized innovation management systems such as the ISO56002:2019(Silva, 2021).

Standardised process for innovation management is key to a firm's successful and profitable innovation, without which the innovation journey could be rudderless and end up in losses, lose to competition and disheartened work force. ISO56002:2019 provides details related to the industry best practices on how to manage a firm's innovation projects (Bernaouane & Harrington, 2021).

On this specific instance, where Griffiths & Hughes is trying to establish overseas operation of production, distribution and possible R&T, innovation is imperative to be profitable and sustainable. In such global scenarios, each unit working in different geographic locations, it is absolutely important that a standardized innovation process is followed to avoid multiple standards and gaps in onsite offshore innovation strategies.

(AFUAH, 2003) through *The Profit Chain* explains how a firm based in one country can profit from

- innovations in other countries,
- what can be the best globalization strategies for innovation,
- role of governance in globalisation.

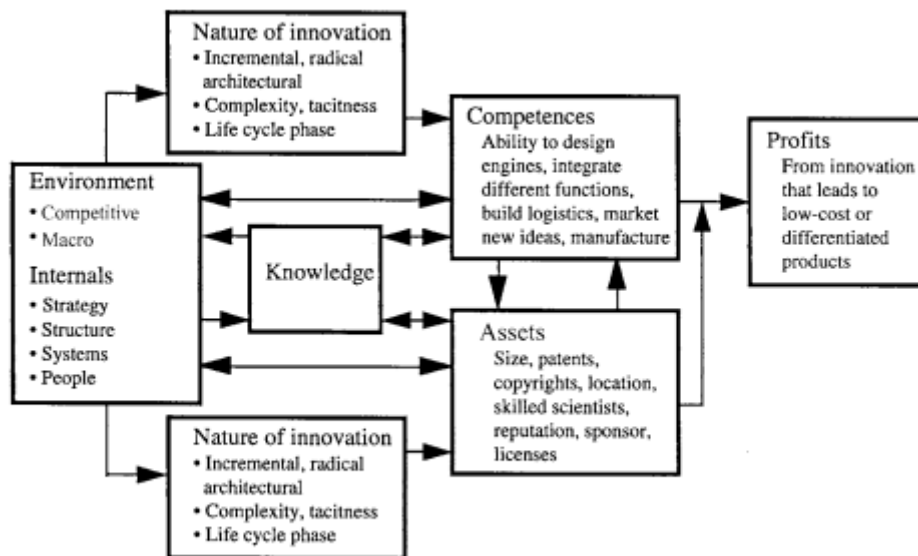


FIGURE 1.1. The profit chain.

(AFUAH, 2003)

The potential benefits of implementing an innovation management system in accordance with ISO 56002 Innovation management system (ISO, 2019) are:

- increased ability to manage uncertainty;
- increased growth, revenues, profitability, and competitiveness;
- reduced costs and waste, and increased productivity and resource efficiency;
- improved sustainability and resilience;
- increased satisfaction of users, customers, citizens, and other interested parties;
- sustained renewal of the portfolio of offerings;

- engaged and empowered people in the organization;
- increased ability to attract partners, collaborators, and funding;
- enhanced reputation and valuation of the organization;
- facilitated compliance with regulations and other relevant requirements.

ISO 56002: 2019's framework developed by the ISO is aligned with other international standards. It can help the organization in determining its global Innovation strategy, policy and objectives and help achieve better results through systematic collection, processing and presentation of data.

However, ISO 56002: 2019 fails to identify the complexities and contexts for managing innovation due to lack of specific tools and techniques to support managers and organisations in practices such as risk and uncertainty management (TIDD, 2021).

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10. APPENDIX

10.1. Benefits of Selecting the Right Geographical Location for the Business

One cannot forget the Fordlândia failure just so quickly which was purely because of the selection of wrong geography combined with ignorance of local culture, food, vegetation, animal diversity & misunderstanding of ecological communities (thehenryford.org, 2023). China banning export of solar panels to protect solar tech is a caution bell for companies which plan to setup R&D centres in China (Dan Murtaugh, 2023). Benefits of selecting the right geographical location:

- Increased Earning Potential
- Reduce cost and better availability of Man, material, land
- Reduced Operating Expenses
- Improved Market Impact
- Greater Efficiency in business operations
- Local Market Potential for near and far future business expansion

10.2. Country Attributes and Industry Factors for Comparative Analysis

10.2.1. Manufacturing & Production

- Availability & Cost of Land and Equipment
- Quality of Labour, Skill & Training needs
- Availability & Cost of Raw material
- Climate Conduciveness
- Construction Cost

10.2.2. Marketing

- Presence of Target Customer
- Ease of Marketing
- Pricing and Profit Margin
- Market legislation Support
- Severity of State-level protectionism
- Quality of Marketing Channels

10.2.3. Ease of Doing Business & Growth Prospects

- Special Economic Zones
- Corporate Tax Regime
- Foreign Direct Investment restrictions
- Future Expansion Prospects

10.2.4. Skill, Capabilities, Knowledge Base, Talent Pool of the Local Workforce

- Education quality index
- Availability & Quality of Specialist Talent Pool,
- Specialist staffing partner availability

10.2.5. Logistics & Transportation

- Easy & access to main transport sources
- Restrictions on size, weight and volume of goods moved
- Ease of custom clearance and transport licensing for speciality goods
- Threat /Risks in transportation

10.2.6. Political Aspects

- Degree of political intervention in business decisions
- Corruption & Bureaucracy
- Political stability
- Alliances or trade agreements with the country of origin

10.2.7. Cultural & Social Implications

- Innovation/Entrepreneurial spirit
- Openness to Foreign Companies
- Compatibility of company culture with local culture
- Potential desire or resistance to the intended product/product line
- Possible cultural restrictions to intended product/industry

10.2.8. Language & Communication Channels

- Ease of Communication -English

10.2.9. Law of Land & Legislature

- Environmental and pollution norms
- Disposal of Waste and effluents
- Offset clauses
- Labour Laws & Restrictions
- Support from local bodies (Councils, Metropolitan bodies)
- Threat of expropriation

10.2.10. Safety & Security of Resources

- Crime rate, general and cyber security
- Drug abuse and narcotics
- Terrorist activities

10.2.11. Competition

- Intensity of local competition
- Presence of competitors and products

10.2.12. Economic & Financial Stability

- Economic Stability (GDP, CPI)
- Exchange Rates
- Inflation
- Interest Rates
- Cost of Living

10.3. Ease of doing business, the world bank ranking

(World Bank Group, 2020) documents changes in regulation in 12 areas of business activities in 190 economies. Ease of Doing Business index considers regulations that encourages efficiency and supports freedom to do business.

TABLE O.1 Ease of doing business ranking

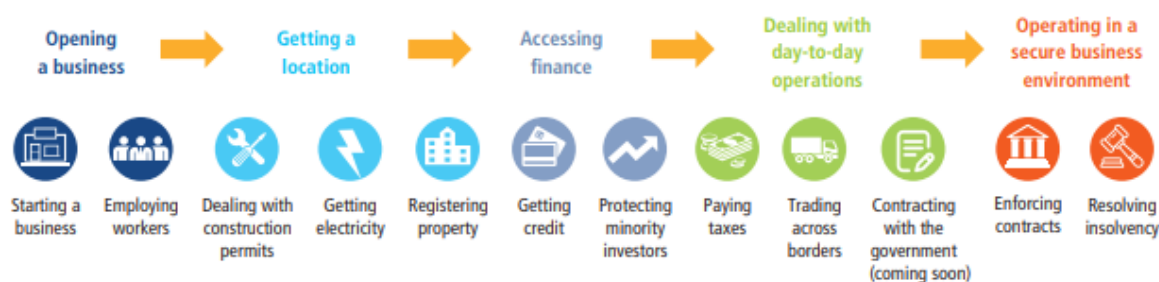
Rank	Economy	DB score	Rank	Economy	DB score	Rank	Economy	DB score
1	New Zealand	86.8	65	Puerto Rico (U.S.)	70.1	128	Barbados	57.9
2	Singapore	86.2	66	Brunei Darussalam	70.1	129	Ecuador	57.7
3	Hong Kong SAR, China	85.3	67	Colombia	70.1	130	St. Vincent and the Grenadines	57.1
4	Denmark	85.3	68	Oman	70.0	131	Nigeria	56.9
5	Korea, Rep.	84.0	69	Uzbekistan	69.9	132	Niger	56.8
6	United States	84.0	70	Vietnam	69.8	133	Honduras	56.3
7	Georgia	83.7	71	Jamaica	69.7	134	Guyana	55.5
8	United Kingdom	83.5	72	Luxembourg	69.6	135	Belize	55.5
9	Norway	82.6	73	Indonesia	69.6	136	Solomon Islands	55.3
10	Sweden	82.0	74	Costa Rica	69.2	137	Cabo Verde	55.0
11	Lithuania	81.6	75	Jordan	69.0	138	Mozambique	55.0
12	Malaysia	81.5	76	Peru	68.7	139	St. Kitts and Nevis	54.6
13	Mauritius	81.5	77	Qatar	68.7	140	Zimbabwe	54.5
14	Australia	81.2	78	Tunisia	68.7	141	Tanzania	54.5
15	Taiwan, China	80.9	79	Greece	68.4	142	Nicaragua	54.4
16	United Arab Emirates	80.9	80	Kyrgyz Republic	67.8	143	Lebanon	54.3
17	North Macedonia	80.7	81	Mongolia	67.8	144	Cambodia	53.8
18	Estonia	80.6	82	Albania	67.7	145	Palau	53.7
19	Latvia	80.3	83	Kuwait	67.4	146	Grenada	53.4
20	Finland	80.2	84	South Africa	67.0	147	Maldives	53.3
21	Thailand	80.1	85	Zambia	66.9	148	Mali	52.9
22	Germany	79.7	86	Panama	66.6	149	Benin	52.4
23	Canada	79.6	87	Botswana	66.2	150	Bolivia	51.7
24	Ireland	79.6	88	Malta	66.1	151	Burkina Faso	51.4
25	Kazakhstan	79.6	89	Bhutan	66.0	152	Mauritania	51.1
26	Iceland	79.0	90	Bosnia and Herzegovina	65.4	153	Marshall Islands	50.9
27	Austria	78.7	91	El Salvador	65.3	154	Lao PDR	50.8
28	Russian Federation	78.2	92	San Marino	64.2	155	Gambia, The	50.3
29	Japan	78.0	93	St. Lucia	63.7	156	Guinea	49.4
30	Spain	77.9	94	Nepal	63.2	157	Algeria	48.6
31	China	77.9	95	Philippines	62.8	158	Micronesia, Fed. Sts.	48.1
32	France	76.8	96	Guatemala	62.6	159	Ethiopia	48.0
33	Turkey	76.8	97	Togo	62.3	160	Comoros	47.9
34	Azerbaijan	76.7	98	Samoa	62.1	161	Madagascar	47.7
35	Israel	76.7	99	Sri Lanka	61.8	162	Suriname	47.5
36	Switzerland	76.6	100	Seychelles	61.7	163	Sierra Leone	47.5
37	Slovenia	76.5	101	Uruguay	61.5	164	Kiribati	46.9
38	Rwanda	76.5	102	Fiji	61.5	165	Myanmar	46.8
39	Portugal	76.5	103	Tonga	61.4	166	Burundi	46.8
40	Poland	76.4	104	Namibia	61.4	167	Cameroon	46.1
41	Czech Republic	76.3	105	Trinidad and Tobago	61.3	168	Bangladesh	45.0
42	Netherlands	76.1	106	Tajikistan	61.3	169	Gabon	45.0
43	Bahrain	76.0	107	Vanuatu	61.1	170	Sao Tome and Principe	45.0
44	Serbia	75.7	108	Pakistan	61.0	171	Sudan	44.8
45	Slovak Republic	75.6	109	Malawi	60.9	172	Iraq	44.7
46	Belgium	75.0	110	Côte d'Ivoire	60.7	173	Afghanistan	44.1
47	Armenia	74.5	111	Dominica	60.5	174	Guinea-Bissau	43.2
48	Moldova	74.4	112	Djibouti	60.5	175	Liberia	43.2
49	Belarus	74.3	113	Antigua and Barbuda	60.3	176	Syrian Arab Republic	42.0
50	Montenegro	73.8	114	Egypt, Arab Rep.	60.1	177	Angola	41.3
51	Croatia	73.6	115	Dominican Republic	60.0	178	Equatorial Guinea	41.1
52	Hungary	73.4	116	Uganda	60.0	179	Haiti	40.7
53	Morocco	73.4	117	West Bank and Gaza	60.0	180	Congo, Rep.	39.5
54	Cyprus	73.4	118	Ghana	60.0	181	Timor-Leste	39.4
55	Romania	73.3	119	Bahamas, The	59.9	182	Chad	36.9
56	Kenya	73.2	120	Papua New Guinea	59.8	183	Congo, Dem. Rep.	36.2
57	Kosovo	73.2	121	Eswatini	59.5	184	Central African Republic	35.6
58	Italy	72.9	122	Lesotho	59.4	185	South Sudan	34.6
59	Chile	72.6	123	Senegal	59.3	186	Libya	32.7
60	Mexico	72.4	124	Brazil	59.1	187	Yemen, Rep.	31.8
61	Bulgaria	72.0	125	Paraguay	59.1	188	Venezuela, RB	30.2
62	Saudi Arabia	71.6	126	Argentina	59.0	189	Eritrea	27.6
63	India	71.0	127	Iran, Islamic Rep.	58.5	190	Somalia	20.0
64	Ukraine	70.2						

Source: Doing Business database.

Note: The rankings are benchmarked to May 1, 2019, and based on the average of each economy's ease of doing business scores for the 10 topics included in the aggregate ranking. For the economies for which the data cover two cities, scores are a population-weighted average for the two cities. Rankings are calculated on the basis of the unrounded scores, while scores with only one digit are displayed in the table.

Ease of Doing Business Ranking (World Bank Group, 2020)

FIGURE 0.1 What is measured in *Doing Business*?



Note: The employing workers and contracting with the government indicator sets are not included in the ease of doing business ranking.

Ease of doing business ranking for selected countries for study:

South America	Rank	Asia	Rank	Africa	Rank
Porto Alegre (Brazil)	124	Shenzhen (China)	31	Durban (South Africa)	84
Montevideo (Uruguay)	101	Mumbai (India)	63	Bulawayo (Zimbabwe)	140
Buenos Aires (Argentina)	126	Taipei (Taiwan)	15	Tunis (Tunisia)	78

(World Bank Group, 2020)

10.4. LPI Global Ranking 2018, (The World Bank, 2018)

Country	Year	LPI Rank	LPI Score	Customs	Customs	Infrastructure	Infrastructure	International shipments	International shipments	Logistics competence	Logistics competence	Tracking & tracing	Tracking & tracing	Timeliness	Timeliness
China	2018	26	3.61	31	3.29	20	3.75	18	3.54	27	3.59	27	3.65	27	3.84
India	2018	44	3.18	40	2.96	52	2.91	44	3.21	42	3.13	38	3.32	52	3.5
Taiwan	2018	27	3.6	22	3.47	23	3.72	24	3.48	30	3.57	25	3.67	35	3.72
Brazil	2018	56	2.99	102	2.41	50	2.93	61	2.88	46	3.09	51	3.11	51	3.51
Uruguay	2018	85	2.69	87	2.51	94	2.43	82	2.73	78	2.71	82	2.78	109	2.91
Argentina	2018	61	2.89	98	2.42	62	2.77	59	2.92	68	2.78	58	3.05	58	3.37
South Africa	2018	33	3.38	34	3.17	36	3.19	22	3.51	39	3.19	35	3.41	34	3.74
Zimbabwe	2018	152	2.12	146	2	154	1.83	156	2.06	147	2.16	137	2.26	152	2.39
Tunisia	2018	105	2.57	107	2.38	133	2.1	115	2.5	123	2.3	71	2.86	70	3.24

10.5. Worldwide Governance Indicator – Political Stability NoViolence

Country/Territory	Code	2021	2021	2021	2021	2021	2021
		Estimate	StdErr	NumSrc	Rank	Lower	Upper
Argentina	ARG	-0.11	0.23	7.00	45.75	28.30	54.72
Brazil	BRA	-0.49	0.21	8.00	28.77	19.34	42.92
China	CHN	-0.48	0.21	8.00	29.25	19.34	42.92
India	IND	-0.62	0.21	8.00	24.53	16.04	36.79
Tunisia	TUN	-0.70	0.24	6.00	22.17	13.21	34.91
Taiwan, China	TWN	0.78	0.21	7.00	72.17	58.02	92.45
Uruguay	URY	1.05	0.24	6.00	88.68	66.51	96.70
South Africa	ZAF	-0.71	0.23	7.00	21.70	12.74	33.49
Zimbabwe	ZWE	-1.03	0.24	6.00	14.15	9.43	24.06

Political Stability NoViolence percentile ranking for the year 2021 (Worldwide Governance Indicator, 2022)

10.6. The Business Culture Complexity Index League Table

Country	Rank	Score
China	20	21121
India	45	6984
Taiwan	30	16650
Brazil	31	15650
Uruguay	N/A	N/A
Argentina	24	19501
South Africa	37	12645
Zimbabwe	N/A	N/A
Tunisia	N/A	N/A

(Commisceo-Global, 2023)

10.7. Worldwide Governance Indicator – Rule of Law

Country/Territory	Code	2021	2021	2021	2021	2021	2021
		Estimate	StdErr	NumSrc	Rank	Lower	Upper
Argentina	ARG	-0.46	0.16	12.00	35.10	24.52	46.63
Brazil	BRA	-0.28	0.16	12.00	42.31	32.21	53.37
China	CHN	0.04	0.16	10.00	53.85	45.67	59.62
India	IND	-0.08	0.16	11.00	51.92	40.87	56.73
Tunisia	TUN	0.10	0.16	12.00	54.81	47.60	62.50
Taiwan, China	TWN	1.30	0.17	9.00	87.98	82.69	90.87
Uruguay	URY	0.73	0.17	11.00	75.96	66.83	82.69
South Africa	ZAF	0.13	0.16	11.00	56.25	49.04	63.46
Zimbabwe	ZWE	-1.26	0.15	12.00	8.65	5.29	15.87

Rule of Law percentile ranking for the year 2021 (Worldwide Governance Indicator, 2022)

10.8. Tholons 2018 Services Globalization Index

Top 20 Super Cities			Top 20 Digital Nations		
SUPER CITIES	RANK 2017	RANK 2018	DIGITAL NATIONS	RANK 2017	RANK 2018
Bangalore	1	1	India	1	1
Manila	4	2	Philippines	3	2
Mumbai	2	3	Brazil	4	3
Delhi (NCR)	3	4	United States	16	4
Hyderabad	5	5	Mexico	5	5
Kraków	8	6	Canada	6	6
Dublin	7	7	Russia	11	7
Sao Paulo	6	8	Vietnam	8	8
Montevideo	21	9	Colombia	17	9
Buenos Aires	10	10	South Africa	12	10
Cebu City	12	11	Poland	9	11
Singapore	16	12	Chile	7	12
Kuala Lumpur	20	13	Singapore	20	13
San José	14	14	Argentina	13	14
Toronto	18	15	Ireland	10	15
Prague	17	16	Thailand	34	16
Chennai	9	17	Malaysia	22	17
Pune	11	18	Turkey	18	18
Dubai	19	19	Indonesia	29	19
Santiago	13	20	Peru	36	20

Top 20 Super Cities & Top 20 Digital Nations (Tholons, 2018)

10.9. Discussion on South America

Latin America is an emerging geography with respect to innovations, technology implementation and industrialisation. All the three cities under study are port cities with very close proximity to each other but they differ on varied scales with respect to their country and business attributes. Brazil is the largest country by geography in Latin America and enjoys having large area of land mass and huge repository of natural resources which can support large industries, supply a bigger market and well established supply chain. Brazil's has seen political instability in the recent past and ranks lower in English as a global language skills.

Buenos Aires is the capital city of Argentina and is truly cosmopolitan in its cultural aspects. Argentina is the second largest country by geography in Latin America and has good industrial infrastructure and logistics network. Argentina has a good skill and knowledge base along with good level of English language skill. Argentina is moderately stable financially and politically. But scores low on security attributes (Oscar Contreras, 2021).

Montevideo is the capital city of Uruguay and ranks highest in the ease of making business among all the 3 countries in the Latin America. Uruguay is politically, economically and financially most stable among the three. Knowledge of English for business is fairly well. Uruguay needs to improve on its logistics and transportation infrastructure.

10.10. Discussion on Asia

The financial capital of India - Mumbai (Sita, 2013) is ranked 3rd in the global IT outsourcing index and has unlimited pool of IT and ITES professionals. Mumbai or India as a whole has high proficiency in English as a language of business. Political and Economic stability of India is concerning. Mumbai has been under terror attack in several instances and ranks low on security of resources.

Taiwan has a very well established electronics industry both in terms of hardware and software. Knowledge and skill base although is fair, but weights high on it political, economic and financial stability. Taiwan has favourable law and legislature for business and exhibits low risk to resources from external threats.

Shenzhen is one of the major Special Economic Zones of China and is China's 3rd most populous city. Shenzhen port is the world's 4th busiest container port. Shenzhen is a global centre for technology, manufacture, research and transportation. China is ranked fairly well in the ease of doing business index. However, China as of now is struggling with its English skills to do business, but it is clearly improving. It is important to keep an eye on China's international trade and foreign policies.

10.11. Discussion on Africa

Bulawayo is Zimbabwe's second largest city and industrial hub of Zimbabwe. Despite being the industrial centre of Zimbabwe, it has seen slow growth due to geopolitical issues. Zimbabwe as a country ranks below average on the ease of doing business ranking, infrastructure, law & legislature as well as safety of resources.

Tunis is the heart, brain and lungs of Tunisia . Tunis is the industrial and economic hub of the country and home to a third of Tunisian companies. Tunisian economy and political situation is stable and scores well on the ease of doing business. Tunisia ranks pretty well on law & legislature as well as personal and corporate safety. Tunisia is a majority Muslim country with 98% of Arabs, signifying low cultural and linguistic diversity as well as less cosmopolitan.

Durban is South Africa's third most populated city and the largest on the Indian Ocean coast of whole of Africa. Not to forget that Durban was one of the cities that hosted the 2010 FIFA world cup. Durban has a good mix of different ethnicities and languages making it truly cosmopolitan. About 50% of Durban population speaks fluent English, which makes it feasible for international trade. Durban is among the top cities in Africa with high level of infrastructure for industrialisation and logistics. South Africa is fairly stable politically, economically and socially which makes it well suited for any foreign trade and with large IT and ITES population makes it attractive for outsourcing.