ANALYZING CORPORATE EXPANSION TO INTERNATIONAL MARKETS: THE CASE OF GERMANY, UNITED KINGDOM, CANADA, MEXICO AND CHINA[1]

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ABSTRACT

In this study, the authors utilized the Analytic Hierarchy Process (AHP) decision-making model to select the optimal market for international expansion for ABC Corporation

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located in Ohio[3]. The benefits of exporting to nine different countries: Germany, the United Kingdom, Canada, Mexico, Netherlands, China, United Arab Emirates, Australia and Brazil were analyzed. For the sake of more precise and in-depth research, preliminary studies performed on these nine countries were used to determine the top five markets: China, Mexico, Canada, Germany and the United Kingdom. Preliminary research included multiple factors about these nine countries. Market size, market growth rate, market consumption capacity, market intensity, market receptivity, commercial infrastructure, trade barriers, contribution margins, country risk and the growth rate of construction were the qualitative and quantitative criteria specifically considered. The importance of each criteria and sub-criteria were determined with export market experts and company decision makers. The AHP analysis enabled the authors to determine the best possible export market for the company by evaluating the data from China, Mexico, Canada, Germany and the United Kingdom. The robustness of the results was tested using sensitivity analysis. Sensitivity analysis results were then discussed with the decision makers. The best market was selected and alternative markets were presented with degrees of preference. Managerial implications of the study and future research directions will be discussed.

Key words: AHP implementation; prioritizing export markets; case study; Multi-Criteria Analysis

1. Introduction

This study utilizes the Analytic Hierarchy Process (AHP) decision-making methodology and decision-making software in order to make a managerial decision about exporting ABC Corporation's products to a new market (Saaty, 2010; Karpak, 2017; Expert Choice 11.5, ExpertChoice©). ABC Corporation is an Ohio based ISO Certified leader in rubber and silicone extrusions manufacturing that was formed in 1991. ABC's capabilities include producing a wide range of profile designs in both dense and sponge materials. Commonly used rubber extrusion materials include silicone, EPDM, polyisoprene, neoprene, nitrile, butyl, SBR and natural rubber. ABC currently serves various industries such as automotive, mass-transit/railway, architectural/construction, water control, container, pipe, and appliance gaskets and others. ABC also provides in-house die tooling, on-site silicone mixing and silicone color matching, as well as printing, cutting, splicing, and taping.

In the natural course of business, expansion limited within the borders of the United States itself limits any future growth potential. To remedy this issue, since the times of the spice trade, businesses have been expanding their reach far past the borders of the United States. On average, companies who export their services or products see faster growth in sales, greater job creation, and their employees earn more than in non-exporting firms (International Trade Administration, n.d.). ABC's current exports account for X[4]% of their total sales, and they want to grow their export sales. One of the objectives of this research was to contribute impactful knowledge to a local company to

[3] Company name has been disguised for confidentiality reasons.
[4] Again % of exports sales has been disguised for confidentiality reasons.

aid in the decision making of its export endeavors. After meeting with ABC, the researchers, company decision makers and export experts determined that this research would focus on the construction industry for the most immediate growth opportunities.

A literature review is discussed in section two. This section illustrates the gap in the literature and emphasizes the contribution of this paper. In section 3, the top five countries out of the nine considered in the study are introduced. From the perspective of this study, these five countries are China, UK, Germany, Canada and Mexico. Section 4 explains the methodology, the data-base in addition to data elicited from the company, and the two phases of application of AHP. These two phases are prioritizing nine potential countries (phase 1) and a more detailed analysis of the top five countries (phase 2). Section 5 gives the results obtained and discusses how the authors handled inconsistency. Managerial implications are articulated in section six. Conclusions and future research directions are given in the final section of the paper.

2. Literature review

A literature review suggests that research on international market selection remains fragmented; most of the existing studies are on market entry mode selection. The literature review shows that integrated frameworks and comprehensive studies of market selection process have been rare (Sakarya et al., 2007). The authors contend that most studies in the market/market entry mode selection literature focus on quantitative aspects of the process and neglect qualitative aspects.

We found very few articles on AHP in international market expansion. One of the articles was on identifying the critical success factors for the information service industry in a developing international market (Chen &Wang, 2010). Criteria used in this study were different than the criteria we use in our study since the authors wanted to identify international market entry modes. In addition, since the product researched was a software service it was quite different than a physical product. As the authors assert, "Generally, software product has a characteristic which differs a great deal from those of a physical product." The authors discovered from reviewing the earlier literature that there are few research reports focused on identifying the critical factors for investors to successfully enter the international market.

The two most relevant studies to our research were papers presented at the International Symposium of the Analytic Hierarchy Process in 2014. One of them compared Brazil, India and China as potential export markets for the U.S. (Huston et al., 2014). The second one identified the most attractive emerging market for a business to enter among the countries of Turkey, Russia, India, and China (Tizio, et al., 2014). Both studies used AHP as a methodology.

The general approaches to foreign market selection are composed of stages like preliminary screening, identification/in-depth screening and final selection (Sakarya et al., 2007). Preliminary assessment or "screening" identifies potential markets as candidates for subsequent in-depth analysis. Macro-level indicators are used to eliminate countries that do not meet the firm's objectives. The research of both Huston et al. (2014)

as well as Tizio et al. (2014) did an initial screening to identify potential markets for any company, but subsequent in-depth analysis and final selection were missing.

We attempt to fill this gap in the literature. This study focuses on a small medium enterprise (SME) which to the best of our knowledge there is no study on SMEs market expansion using the AHP. In addition, the "one size fits all" approach is not a good idea. We used specific criteria and the specific weights that are quite particular to the company size and industry.

3. Country introductions from the perspectives of this research

Initially, we considered nine different countries which included Germany, the United Kingdom, Canada, Mexico, Netherlands, China, United Arab Emirates, Australia and Brazil. Preliminary studies performed on these nine countries were used to determine the top five markets which were determined to be China, Mexico, Canada, Germany and the United Kingdom. Due to the space limitation of the journal we will only give country profiles of the top five countries researched.

3.1 Germany

Germany is a strong exporting market. The market size of Germany is relatively large. The urban population of Germany is 62,341,809, which makes up 77% of the total population (Countries in the world, 2017). That population ranks as the 18th largest in the world. The population uses the sixth most electricity in the world, roughly 540,100 million kWh in 2012 (World Bymap, 2012). As for market intensity, the personal consumption percentage of GDP continues to decrease every year for Germany. The last known personal consumption percentage of GDP for Germany was 53.9% in 2015. It has had a steady decrease since 2005 (Germany, n.d.). This shows that families are not willing to spend money to have an increase in GDP.

Unlike market intensity, the market growth rate for Germany has exceeded expectations. "The German economy advanced by 1.9 percent in 2016 after growing by 1.7 percent in 2015, beating market expectations of a 1.8 percent expansion" (Trading Economics, n.d.). Germany has seen growth over the last several years and it is predicted to increase in years to come. Market Consumption Capacity is made up of the income share of the middle class and the annual disposable income of the middle class. The middle class is shrinking in Germany as fast, if not faster than, the middle class in the United States; between 1991 and 2013 the middle class shrank by 5%.

Germany has the best infrastructure in the world (Germany, n.d.). Paved roads are plentiful, airlines and airports are located across the country, and internet access, and cellular service is vastly available. Germany ranks 16th in the world in trade as a percentage of GDP. Germany is a big exporter for companies in the United States, importing roughly $62 billion from the U.S. As for economic freedom, Germany ranks 17th in the world, and is considered "mostly free". They compare to countries like Iceland, Japan and the United States. This freedom contributes to making it a great exporting country. However, Germany does have some risk politically. The risk average in Western Europe is 80 and Germany is slightly above with a score of 83. This needs to

be taken into consideration by a company when picking where country to export their products.

3.2 United Kingdom

With a population of 64.5 million, the United Kingdom is not necessarily one of the larger countries to export to. However, it makes up for its smaller size with a high urban population of just over 82% and a steady GDP growth rate of 2.3%. The United Kingdom also boasts a high income per capita and a GDP per capita of over $41,000. A couple notable companies based in the UK are BP (energy) and Fiat (automotive) which are both top competitors in their respective industries (GlobalEDGE, United Kingdom, n.d.; GlobalEdGE, 2016).

The United Kingdom recently left the EU which led to a slight increase in their country risk rating, which is now A3. However, the business climate rating is A1 which is the lowest rating achievable. Regarding infrastructure, the UK has 462 airports, over 81 million cell phones, nearly 400,000km of highways and over 16,000km of railroads. These factors point to a very well-developed country with an already established and stable infrastructure (GlobalEDGE, United Kingdom, n.d.; GlobalEDGE, 2016).

The United Kingdom currently imports just under 10% (over $58 trillion) of its goods from the United States which is one of its top three trade partners including Germany and China (GlobalEDGE, United Kingdom, n.d.; GlobalEdGE, 2016). We believe that given the factors stated above, the UK will be a strong partner in trade and will yield a high return on investment for ABC company.

3.3 Canada

Canada, being the top-pick for ABC, naturally had the best overall qualities in regard to export. There is no tariff tax rate when marketing to Canada, so this immediately increases the potential for a larger profit. This is also the closest nation in proximity to the United States therefore reducing shipping costs. Canada's business risk rating is A1, meaning that there is virtually no real outstanding risk when doing business based on the country's laws/politics (GlobalEDGE, Canada, n.d.)

The compound annual growth rate as a percentage of GDP in Canada is the greatest (2.3%) of all of the countries in the study; this means that Canada's growth is also reflected directly in the GDP. This along with the income share of the middle class (52.9%) is also the highest of all countries in the study. One of the biggest factors was the government spending on construction growth rate in which Canada scored highest by a large margin (Canada scored 18.7, while the next highest was only 13.28) (WiserTrade, 2017). One final point for Canada was their ease of doing business score (22^{nd}). This being one of ABC's first ventures into international export, a country that is considered "easy" to do business with is a big plus.

3.4 Mexico

Mexico was one of the larger markets of the top five countries with an urban population of over 100 million people. The urban population is also growing at 1.64% which shows growth in Mexico relative to its population. The income share of the middle class is also 47% which states that Mexico has a large middle class in their economy.

Mexico is known as a lesser developed country that is struggling with its infrastructure. Mexico spends roughly $55 million of private spending on construction (GlobalEDGE, 2016). This shows that Mexico is spending money on construction which is a possible sign of growth. They have a paved road density of 322,859 km and 250 airports scattered across the country. However, the government spending on construction is declining at 6.47% annually (GlobalEDGE, 2016). They have 42 ports for exporting which allows for easy shipping access. With a close location to the United States, Mexico is also cheaper to ship to from the U.S. in comparison to Germany, China and the United Kingdom.

Mexico imports $55 billion per capita from the United States. However, its economic freedom index rating is 64 which is quite low compared to the other four countries. Its political freedom index is also relatively low at 6.82 (GlobalEDGE, 2016). Mexico has a business risk rating of a B which is one of the lowest scores out of our original nine countries. One thing that Mexico excels in is that it has a 0% tariff tax rate because of NAFTA. This country could make a strong export partner for ABC.

3.5 China

China also ranked very high. The massive urban population of over 700 million paired with China's urban population growth percentage (which was the highest in the study) made China a very strong candidate for ABC (Center for Strategic and International Studies, 2017) A large population that yielded a very high consumer expenditure figure, which was over 4.3 million, the highest in the study.

Some of the drawbacks that impaired China were the ease of doing business score and the presence of non-tariff barriers such as the protection and enforcement of trade secrets. China also has a business risk rating of B, and a political freedom index of 4.81. These factors added an element of ambiguity which would not be ideal for the ABC. The final statistic that should be mentioned is the private spending on construction, which was over 28 billion; this greatly increased the potential for profitability of exporting to this nation (WiserTrade, 2017).

4. Methodology

Wiser Trade is a database resource provided by the Ohio Export Assistance Network. It provides detailed trade statistics for over 150 countries worldwide (WiserTrade, 2017). We began by analyzing nine countries based on the Wiser Trade Harmonized Code Database reports for three of ABC's top products: Gasket, Washers & Other Seals, of Vulcanized Rubber (HS Code 401693), Silicones, In Primary Forms (HS Code 391000) and Ethylene-Propylene-Nonconjugated Diene Rubber (HS Code 400270) (Wiser Trade, 2017). The report supplied the top 10 countries to which the United States exports these products. We deduced that the nine recurring and growing countries that should be analyzed were Germany, Australia, United Arab Emirates, Brazil, United Kingdom, Mexico, Canada, Netherlands and China. At this time, we developed a 2-phase research approach. Phase one uses preliminary research and criteria to rank all nine markets and Phase 2 takes the top markets from phase one and adds more specific criteria that relates to the ABC Corporation.

4.1 Phase 1

In order to conduct analysis on the potential markets, the researchers developed multiple market identification criteria. These criteria were designed to reflect the qualities of markets that ABC might thrive in. The criteria were derived from the 2016 Global Edge Market Potential Index study which was developed by international marketing experts, ABC decision makers and export experts (Çavuşgil, 1997; Çavuşgil et al., 2004). The specific criteria used for phase 1 were market size, market intensity, market growth rate, market consumption capacity, market receptivity, commercial infrastructure, economic freedom, and country risk (GlobalEDGE, 2016; Çavuşgil, 1997; Çavuşgil et al., 2004).

Each of the areas of comparison includes multiple quantitative and qualitative sub-criteria. A few of the more important quantitative sub-criteria are Cost, Insurance and Freight (CIF) costs, tariff tax rates and government and private spending on construction. An example of qualitative data in this study is non-tariff trade barriers. Each of the criteria also includes multiple quantitative sub-criteria. Some examples of important sub-criteria for the preliminary research were urban population and private consumption as a percentage of GDP. Each of the initial criteria was not only sourced from but also weighted based on Global Edge's 2017 Market Potential Index Ratings (GlobalEDGE, 2017). The Global Edge study ranks the market potential to provide guidance to companies that plan to expand their markets internationally. This indexing study is conducted by the Michigan State University International Business Center to help companies compare prospect markets on several dimensions. Eight dimensions are chosen to represent the market potential of a country on a scale of 1 to 100. The dimensions are measured using various indicators and are weighted to determine their contribution to the overall Market Potential Index. Global Edge weights market size and market intensity as the most significant criteria (GlobalEDGE, 2017). Figure 1 shows the weights that were used for Phase 1 of our research.

Criteria	Weight
Market Size	25/100
Market Intensity	15/100
Market Growth Rate	12.5/100
Infrastructure	10/100
Market Receptivity	10/100
Market Consumption Capacity	12.5/100
Economic Freedom	7.5/100
Country Risk	7.5/100

Figure 1 Criteria weights for Phase 1

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After all the initial data was collected for the nine markets and the initial criteria were weighted, we then performed the minimum number of pair-wise comparisons of the alternatives (countries) with respect to the above criteria to derive priorities of the countries in terms of export market. After the pair-wise judgements were made, the results were tested for robustness using sensitivity analysis. Sensitivity analysis is a test that determines how sensitive the priorities of each alternative are to the change of criteria importance. To analyze sensitivity, we changed the weights of each criteria to see how much variation of the criteria there could be before the outcome (top export markets) changed. We were able to change the priorities of the criteria drastically before the outcome changed. This tells us that our results are robust. Results were then discussed with the export expert who was in agreement with our findings. At this time, we were confidently able to identify the best markets for ABC's international expansion. Figure 2 shows that China, UK, Germany, Canada and Mexico are the top five markets. These are the markets that Phase 2 focuses on.

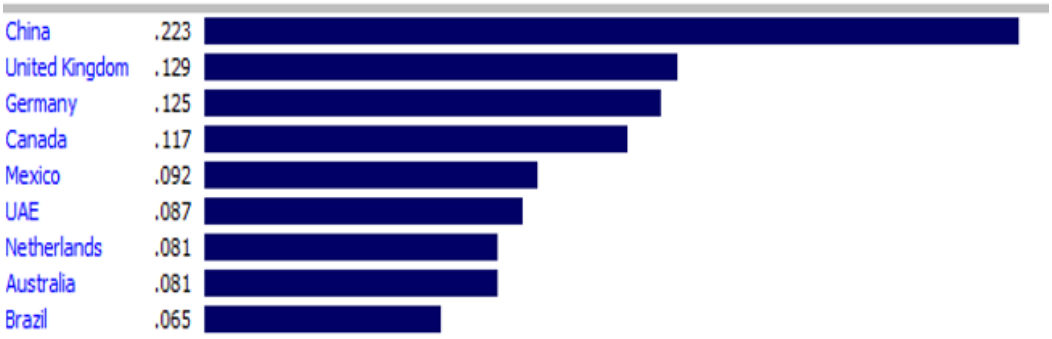


Figure 2 Most promising export markets

4.2 Phase 2

During Phase 2 we added criteria that are more specific to our analysis. The specific criteria were designed to reflect the construction industry and ABC's specific needs. The research team, the faculty advisor, ABC decision makers and the export expert decided on these more specific criteria. Private and government spending on construction and the Logistics Performance Index (LPI) score were sub-criteria added to the commercial infrastructure criteria. Trade barriers, which consisted of tariff barriers, non-tariff barriers and ease of doing business scores, as well as contribution margins which included shipping, insurance and freight costs were also added. It is interesting to note that unlike other studies, we were able to utilize qualitative data. We also decided that for ABC market intensity was not an important factor because market intensity is based more on the individual consumer purchasing capabilities. We do not believe that this would be a driving force of the construction and infrastructure growth within each country and so it was deleted from Phase 2.

As a team, we decided that although the Global Edge weights provided a strong starting point, it was now time to weight the final criteria with the benefit of ABC's expansion into the construction market specifically. To arrive at our final criteria weights (Figure 3),

we worked with ABC decision makers and our export expert to perform pair-wise analysis for each criteria and sub-criteria. After the export expert performed pair-wise analysis for every criterion, the top criteria were contribution margin, infrastructure and Schedule B.

Criteria	Expert Weight
Market Size	8.0%
Market Growth Rate	4.8%
Infrastructure	21.6%
Market Receptivity	5.7%
Market Consumption Capacity	4.3%
Economic/Country Freedom	5.7%
Trade Barriers	7.5%
Schedule B	20.6%
Contribution Margin	21.6%

Figure 3 Final criteria weights

Our export expert then performed pair-wise comparison on the new criteria and finished the incomplete comparisons for every criterion for the new markets. Based on these comparisons of the new criteria, we found that a few of the more important sub-criteria were Cost, Insurance, and Freight (CIF) costs, tariff tax rates, non-tariff barriers, government, and private spending on construction. Entire final criteria and sub-criteria are given in the appendix.

5. Results

After all the comparisons were made, the final results were determined. The ideal mode results show that if ABC were to export to one new market it should be Canada at 26.8% (Figure 4). Ideal mode was selected in order to identify one country as an export partner for ABC. While China was previously the number one country, Canada is now the best market for ABC to explore exporting its construction products to. This occurred because Canada excelled in the newly added criteria which were weighted quite high.

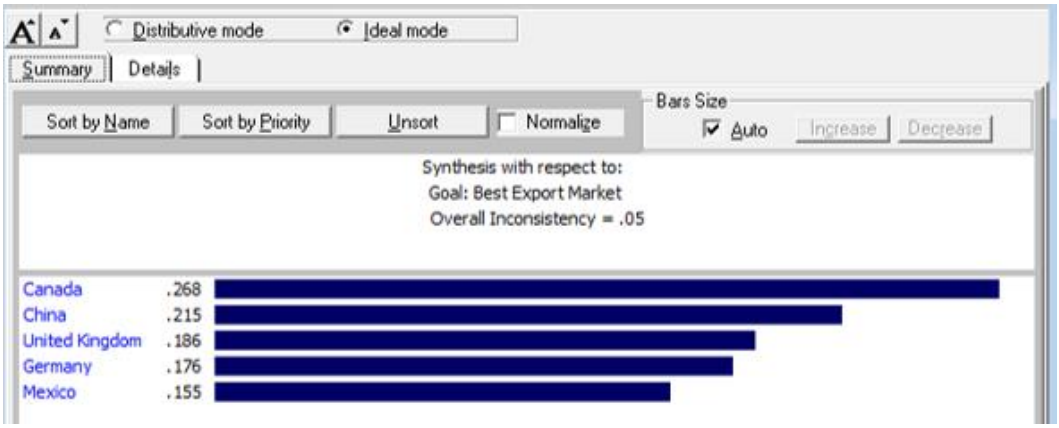


Figure 4 Ideal mode ranking of export markets

Distributive mode results show that if ABC wishes to export to multiple locations, they should export about 27% of their products to Canada, 22% to China, 18% to the UK, 17% to Germany and 15% to Mexico (Figure 5). In this analysis, Canada is still the best market for ABC to explore.

Figure 5 Distributive mode ranking of export markets

Canada was identified as the top market for ABC. Figure 6 shows that Canada has outperformed the other four markets in the market consumption, economic and political freedom, trade barriers and contribution margin criteria. These criteria were all weighted heavily, especially contribution margin. In addition, Canada was simply never the worst in any criteria.

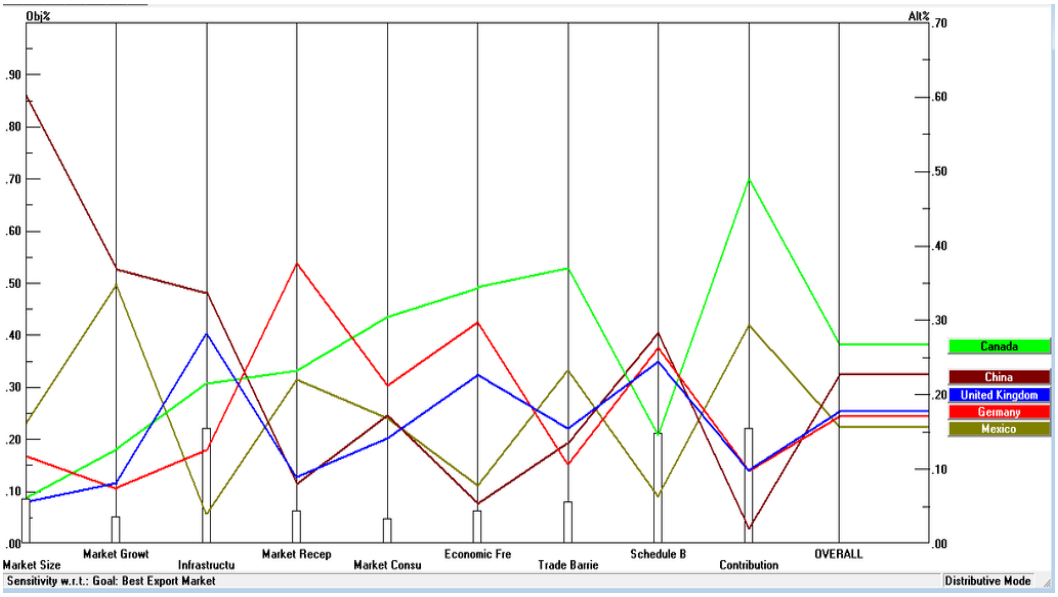


Figure 6 Sensitivity Graph

5.1 Inconsistency

In the AHP, an inconsistency measure is useful for identifying possible judgment errors and measures the logical inconsistency of the judgments. Inconsistency occurs when misjudgments are made during pair-wise comparisons and is measured using a consistency ratio index commonly referred to simply as inconsistency (Saaty, 2010; Karpak, 2017). It is important for inconsistency ratings to be below or equal to 10%. Our final inconsistency rating was 5%. Though our main focus was not to achieve consistency but to elicit the importance rating of the criteria and preference of the alternatives in the mind of the decision maker, the consistency ratio was less than 0.1 in all the pairwise comparison matrices in our model, indicating that judgments made were consistent. We did not consciously monitor the inconsistency rating, but instead relied on the true and pure judgements of our experts.

6. Managerial implications

Canada is the top export market for 35 out of 50 states in the U.S. and is a strong choice for a new-to-export strategy. Canada is a highly receptive, open and transparent market for U.S. products and services with Canadians spend more than 60 percent of their disposable income on goods and services from the U.S. Close geographic proximity and initiatives between our governments make cross-border business increasingly seamless. Since the implementation of the North American Free Trade Agreement (NAFTA) in 1994, trade between our two counties has more than doubled (Export.gov, 2017). Figure 7 shows that Canada outperforms the other countries in regard to trade barriers and contribution margin.

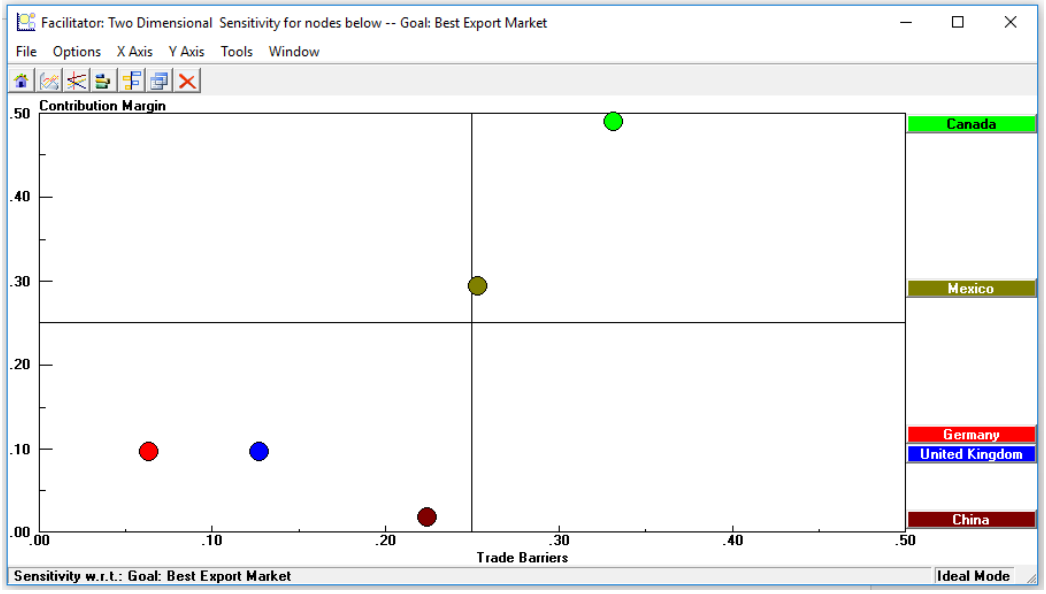


Figure 7 Sensitivity Analysis of trade barriers and contribution margin

We wanted to dive even deeper into the robustness tests that Expert Choice offers. Because of sensitivity analyses, we know that China will only outperform Canada with respect to contribution margin if the weight of importance of the contribution margin criteria falls below 15% (Figure 8).

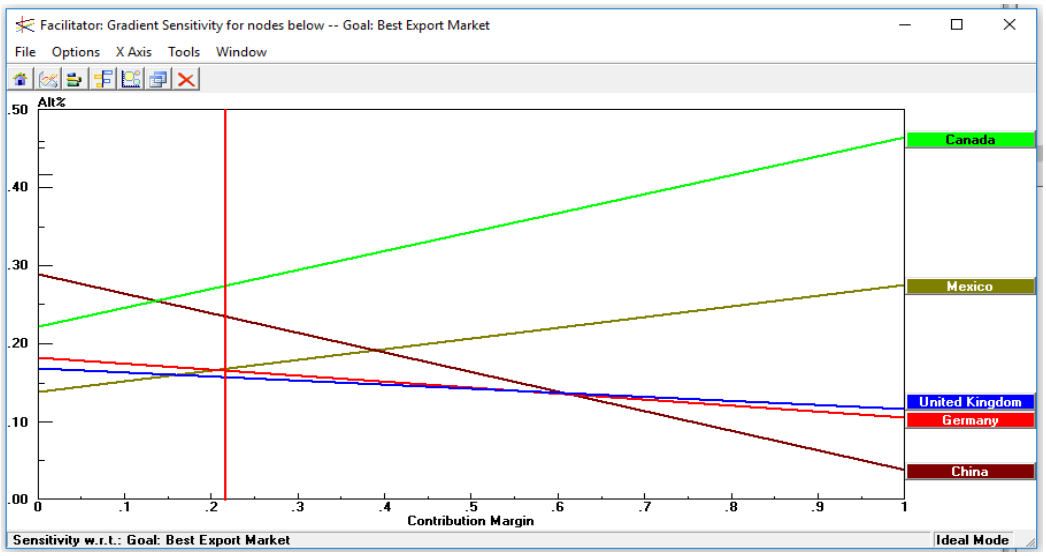


Figure 8 Contribution margin sensitivity analysis

Canada will continue to outperform China in infrastructure unless the weight of the infrastructure criteria is increased to over 35% (Figure 9). Both of the findings show that the results are robust and a considerable change in weights would have to occur before these results vary.

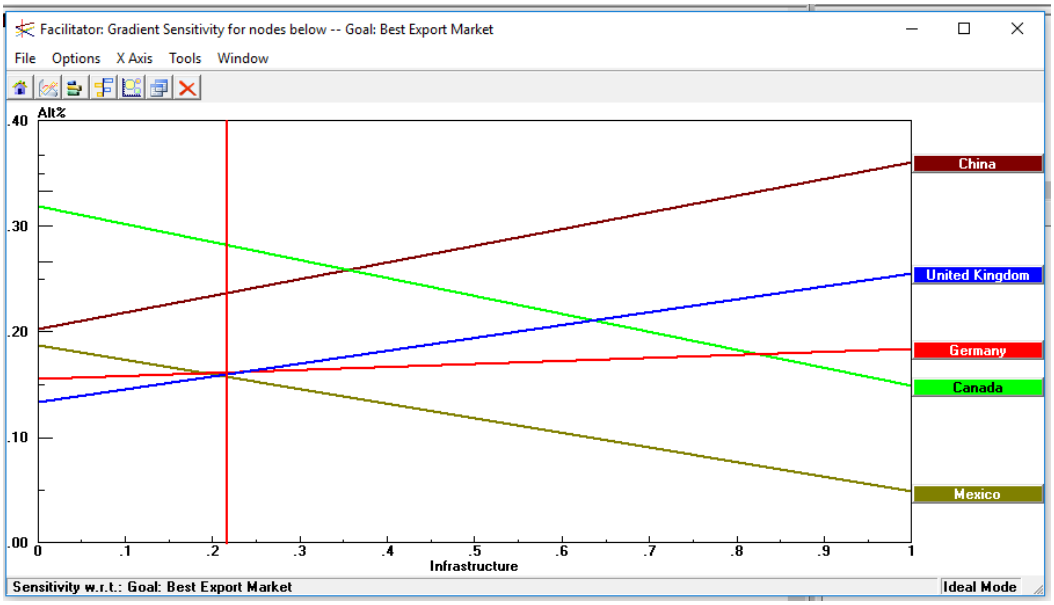


Figure 9 Sensitivity Analysis for Infrastructure

7. Conclusions and future research directions

When an organization is confronted with choosing the best market the decision can often be intricate. Export market prioritization problems are multi-criteria problems which might have many qualitative and quantitative factors that should be considered. We propose AHP as a multi-criteria business analytics approach in export market expansion problems. We developed a comprehensive AHP model to prioritize export markets for a rubber and silicone extrusions manufacturing company. As Sakarya et al. (2007) assert most studies in the market/market entry mode selection literature focus on quantitative aspects of the process and neglect qualitative aspects. With the AHP model, we were able to consider qualitative as well as quantitative factors when assessing the different export markets. Canada was determined as the most promising export market.

Chen and Wang (2010) found out from reviewing the earlier literature that there are few research reports focused on identifying the critical factors for investors to successfully enter the international market. Our study fills this gap in the literature. We identified critical success factors and prioritized them for ABC Company.

Sensitivity analysis was performed to determine the robustness of the final export market ranking. This illustrated to the decision makers that even if the importance of certain criteria change, the overall ranking of the potential export markets does not change though the degree of preference is increased or decreased. The company managers and the export expert were very certain with their decisions. The sensitivity analysis illustrated to the decision makers its importance in practical decision making and also illustrated the robustness of the best solution.

In real life it is difficult, if not impossible, for a decision maker or a group of decision makers to adequately consider all of the factors of a complex decision. They need some

kind of decision support system, and AHP with its software is one of them. Without these decision support systems, managers might only be able to consider a subset of important criteria, ignoring some others which might lead to incorrect decisions.

In general, decision-makers are not aware of the relative accuracy of elicitation methods. In this study, among the non-dominated elicitation methods, the decision-makers were presented verbal pairwise comparisons mode to transmit their judgments. This was because it was known from our earlier research that verbal comparison mode performs best in terms of ease of use and accuracy criteria.

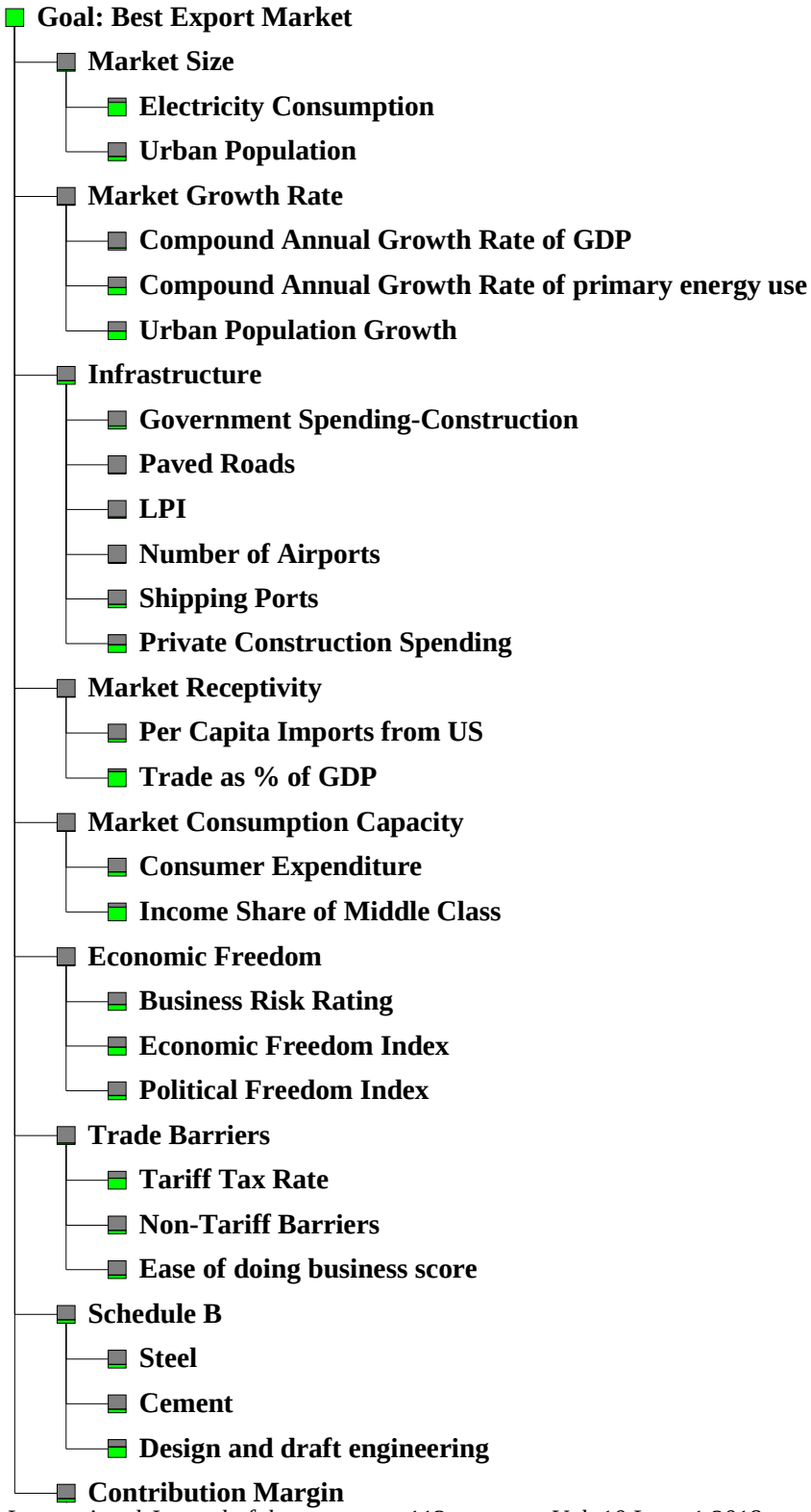
This research can be replicated for all of ABC's industries including but not limited to the automotive and appliance gasket sectors. The important criteria will change with each varying industry. This is the recommended method for ABC to explore new markets and is a tool the export expert will be utilizing with ABC, and others, in the future. The next steps for ABC include the export expert's assistance with execution. The expert will need to use this research to explore suppliers in Canada. They will be able to utilize a grant through the state of Ohio to conduct export exploration travel.

When AHP is implemented for a decision analysis, criteria and the alternatives are considered to be independent. If there is dependence among the criteria and/or alternatives the Analytic Network Process (ANP) is more suitable. The ANP, however, requires far more comparisons which may be daunting in a practical decision environment. In real life, managers might prefer simplicity over precision. Also, determining the interdependence links and their intensity are not trivial tasks. Still, this is a new area of research to explore.

The Analytic Hierarchy Process methodology was easily understood by the managers. With the Expert Choice or Decision Lens software AHP empowers sensitivity analysis of the results. Sensitivity analysis is important in practical decision making to illustrate robustness of the results. This study showed the decision makers that the AHP is an easy to use methodology for complex export market selection problems especially if some criteria are qualitative and others are quantitative.

Appendix

Final Criteria and Sub-criteria



Criteria Definitions

Market Size: Market size carries a rough estimate of the market potential using the country's urban population and electricity consumption measured in billions of kilowatts in this study. (The World Bank Group, 2014; The World Bank, 2016) High electricity consumption implies a country is improving and has faster economic growth. Growing electricity consumption is a positive identifier of enhanced standards of living and economic development. (Tizio, et al., 2014)

Market Intensity: Market Intensity utilizes two variables: Gross National Income (GNI) per capita using Purchasing Power Parity (PPP) in US Dollars and Private consumption as a percentage of GDP. The first variable, GNI per capita in PPP, is the Gross National Income divided by the mid-year population, converted into PPP. This is based on Purchasing Power Parity, which measures the purchasing power of other countries' currencies for the same goods. This allows for a more accurate comparison of standards of living. Private consumption as a percentage of GDP observes the value of household and non-profit institution purchases divided by the total population. This is a variable to measure private purchases (Cavusgil, 1997).

Market Growth Rate: Market growth rate observes The Compound Annual Growth Rate (CAGR) of Primary Energy Use and the Compound Annual Growth Rate (CAGR) of GDP (constant 2005 US$). Increase in GDP accounts for all final sales in the market value of goods and services. Additionally, market growth rate observes how the world is urbanizing and the differences in urban population growth rate/population percentage in the countries we studied (The World Bank Group, 2016). Each region of the world is urbanizing at different paces and is creating different degrees of economic growth as a result of urbanization. (GlobalEDGE, 2017).

Infrastructure: Commercial Infrastructure looks at the most variables: Government Spending on Construction, Private Construction Spending, paved road density as a percentage, and Logistics Performance Index (LPI), number of airports and shipping ports. Commercial Infrastructure measurements define the overall accessibility of distribution and communication abilities of the country. Because the costs associated with overcoming issues from infrastructure and connectivity can quickly become overwhelming to an expanding business, commercial infrastructure is an important dimension to pay attention to when looking at a potential market to enter.

Market Receptivity: Market Receptivity utilizes the variables of per capita imports from the US and Trade as a percentage of GDP in this study. These two variables measure the openness of the country to trade with the United States of America (US) and other foreign countries as well. A country's imports alone are not a clear indicator of its receptivity to other markets. Therefore, it is important to measure its total trade as a percentage of GDP, as well as how open to trade they are with the US. (Tizio, et al., 2014)

Market Consumption Capacity: Market Consumption Capacity is measured by two variables, percentage share of middle-class in consumption/income and consumer

Expenditure. The middle class has a good amount of purchasing capacity, and makes up between 20 to 80 percent of the country's income (Cavusgil, 1997). Businesses looking to enter into a country's market need to consider purchasing power of the middle class and goods and services popular to them. Raising household income of the low to middle class is the force driving much of the economic growth (Tizio, et al., 2014).

Economic Freedom: Economic Freedom uses the Business Risk Rating, Economic Freedom Index and the Political Freedom Index. The Economic Freedom Index ranks countries based on the number of and intensity of government regulations on wealth creating activities. Political Rights Rating score is derived from measures such as election process, functioning of government, freedom of expression and belief, and organizational rights. The Freedom in the World global report assesses real-world rights and civil liberties experienced by individuals not government reports (Freedom House, 2018). Countries are given a rating of Free, Partly Free, or Not Free and a numerical rating of 1 to 7 with 1 being very free with a range of civil liberties and 7 being few to no civil liberties (Tizio, et al., 2014).

Business Risk Rating: "Probability of loss due to economic and/or political instability in the buyer's country, resulting in an inability to pay for imports. (Online Business Dictionary, n.d.) The Business Risk rating (BRR) is determined by the associated risk of investing in the foreign country. These ratings were found using Standard & Poor's Banking Industry Country Risk Assessment (BICRA) rating. These scores reflect the country's' economic strength and creditworthiness of its financial institutions. BICRA scores examine rated and unrated financial institutions and their relationship to the country's banking industry as a whole and are scored on a scale of 1 to 10, 1 being the lowest risk banking and 10 being the highest-risk banking (Tizio, et al., 2014).

Trade Barriers: "A government imposed restriction on the free international exchange of goods or services." (Online Business Dictionary, n.d.) In this study trade barriers consisted of tariff barriers, non-tariff barriers and ease of doing business scores.

Schedule B: "the export classification system of the United States, and is administered by the Foreign Trade Division of the Census Bureau, which is part of the U.S. Department of Commerce." (Nemer, n.d.)

Contribution Margin: Contribution margin (CM), defined as selling price minus variable cost, is a measure of the ability of a company to cover variable costs with revenue. In this study shipping, insurance and freight costs were used as a proxy for CM since the company did not want to share contribution margins in different countries.

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