INTERNATIONAL JOURNAL OF ORGANIZATIONAL BUSINESS EXCELLENCE

ABOUT IJOBEX

OVERVIEW
Business excellence relies heavily on the type of strategies, techniques and tools for measuring and benchmarking the business performance. Subsequently, identifying best practices and their implementation eventually decides excellence in business. Given the importance of business excellence, a journal devoted to performance evaluation and best practices both processes and results, especially in order to be competitive in the global market, is essential. International Journal of Organizational Business Excellence (IJOBEX) addresses new developments in business excellence and best practices, and methodologies to determine these in both manufacturing and service organizations.

IJOBEX focuses on organizational performance with particular areas as the scope—strategic planning, human resource, communication and management that result in improving organizational. Organizational performance excellence is essentially required to improve values to customers and stakeholders that contribute to organizational sustainability, and to develop organizational effectiveness.

FOCUS AND SCOPE
The scope of this journal includes, but not limited to:
- Leadership for performance excellence
- Strategic Planning for performance excellence
- Customer and market focus for performance excellence
- Information, measurement, knowledge management, and information technology for performance excellence
- Human Resource for performance excellence
- Operational Focus for performance excellence
- Communication for performance excellence
- Performance measures and metrics in business management
- Methodologies and tools for performance measurement
- Benchmarking business performance
- Business excellence in various functional areas
- Best practices in business management
- World class business and operational strategies and techniques
- Alignment between different levels of strategies
- Understanding the customer requirements
- Process design management
- Knowledge management for improved performance
- Systems approach for determining the best practices
- Six-Sigma, QFD, Taguchi methods and TQM
- Data warehousing and data mining in business excellence
- Measuring performance in creative industries
- Best practices in creative economy and industries

All of the topics above are considered to have essential involvement in developing organizational performance excellence.
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The elapsed time from submission to publication for the articles averages 3-4 months. A decision of acceptance of a manuscript will be reached in 1 to 2 months (average 6 weeks).

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Peer reviewers are experts chosen by journal editors to provide written assessment of the strengths and weaknesses of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

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Foreword

Welcome to the second issue of International Journal of Organizational Business Excellence (IJOBEX). IJOBEX is an open-access scientific journal published by Bina Nusantara University (BINUS) and International Performance Excellence Forum (PEF) and is independently managed and run on a non-profit basis for the benefit of the world-wide science community. This journal is specifically committed to publish research paper in the area of business management and social sciences that contribute in excellence to business, manufacturing, healthcare and education in both public and private organization. The topics include but not limited to: Leadership, Strategic Planning, Customer and Market Focus, Information, Measurement, Knowledge Management, and Information Technology, Human Resource, Operational Focus, and Communication for Performance Excellence. This second issue is a compilation of 5 regular research articles coming from different countries i.e. Indonesia, Canada, Ecuador and Thailand.

The first article talks about factors influencing purchase intention on cosmetic products of female consumers in Yangon, Myanmar (Santhaya Kittikowit, Kittiya Suwanabubpa and Sophat Sithisomwong). The following articles is about supplier selection criteria using fuzzy AHP in textile industry in Indonesia (Lim Sanny and Yuliana); global competitiveness among BRIC nations: implications for China (Mark Kam Loon Loo); impression management for digital corporate image (Yulianne Safitri and Lidya Wati Evelina); the tattoo as ancestral legacy and dichotomic element of national identity (Mónica Santillán Trujillo, Víctor Villavicencio Alvarez, Lorena Caiza Morales, Eunice Ayala & Teresa Sánchez Manosalvas).

We would like to thank the contributors as well as the reviewers for their commitment and patience which made this first edition a successful endeavor. It is hoped that this publication would be an encouragement for researchers from around the world to be more active in publishing their research papers many more with good quality research paper that are insightful for academics and practitioners alike.

Special thanks to the Editorial Board Member, International Advisory Board and, Dr Nayan Kanwal as the consultant for their guidance and support in making this publication possible. This will continue to motivate us to do more and better and bring IJOBEX in to international arena sooner.

Bachtiar H. Simamora, M.Sc., PhD.
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FACTORS INFLUENCING PURCHASE INTENTION ON COSMETIC PRODUCTS OF FEMALE CONSUMERS IN YANGON, MYANMAR

Santhaya Kittikowit1*, Kittiya Suwanabubpa2, Sophat Sithisomwong3
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Abstract

Since its economic liberalization in 2012, there has been continuous economic and social development in Myanmar. People, especially city dwellers, are receptive to the foreign and modernized cultures, causing the evolving shift in lifestyle and values. Increase in purchasing power as a result of higher disposable income including higher personal care and beauty consciousness lead consumers to higher attention to personal care and beauty products. As a result, this industry has been enjoying robust growth. However, most cosmetic products seen in the market are imported from overseas, especially from Thailand. As Yangon is a very promising consumer market, it is consequently rather highly competitive. The researcher was then interested in studying the factors influencing purchase intention of female consumers aged 20-60 years old. The objectives of the study are 1.) to explore the current situation of cosmetic industry in Yangon 2.) to identify factors influencing purchase intention and 3.) to provide recommendations to cosmetics exporters or any interested parties. The research analysis was conducted based on the information from consumer and a business operator interviews as well as the subsequent quantitative data acquired from 315 survey respondents during August - October 2017. According to the research findings, brand, quality and price of a product, including social influence all have influence on purchase intention. Moreover, country of origin also has an influence on perceived quality among consumers. Recommendations based on research result interpretation are to develop value for money products for which quality is the primary focus, to formulate effective branding and marketing strategies deploying social influence as one of the strategic communication channels.

Keywords: Purchase Intention, Cosmetic Products, Yangon Myanmar, Social Influence, Country of Origin

INTRODUCTION

Rationale for the Study

Culturally, the lifestyle of the people in Myanmar, especially those living in the urbanized areas, has substantially been westernized as a result of globalization, trade liberalization and end of economic sanctions. These citizens are exposed more to the outside world, bombarded with myriad of products and services offered from international brands when they, especially young citizens, are also willing to embrace the new westernized lifestyle since their purchasing power, considered from higher income, is also greater than it was in the past.

Young population and higher disposable income, cosmetics has also been one of the fast growing industries in Myanmar as more and more women, especially those having stable jobs, regular income are seeking for western, modernized and better quality cosmetics, shifting away from using just only plain cosmetics in basic colors or just their traditional Thanaka, to nurture their skin and enhance their look. As a result, there is a constant rise in demand, as shown in Figure 1, especially in urban cities like Yangon. Seeing this prospect, many international and multinational players mainly from South Korea, China, Japan, Thailand, Singapore, Europe and The United...
States wanted to enter Myanmar to preempt early mover advantages and gain customer’s loyalty, resulting in various choices of international cosmetic products currently available in the market through modern-trade retail stores in both department stores and even stand-alone shops. Despite the constant rise in demand, local production proficiency is still insufficient to manufacture and supply cosmetic products for domestic consumption, causing Myanmar to rely heavily on importation which is expected to be continuously increasing every year.

Among the international players in the market, Thailand is the biggest cosmetics exporting country to Myanmar thanks to many competitive advantages such as proximity of the country location, low import taxes as an ASEAN member country, good perception toward the product quality among Myanmar consumers. As mentioned earlier, 50 percent of the total imports were from Thailand in 2011.

In order to establish a foothold in the market, players are competing with their products and marketing strategies to attract consumers. Therefore, it is essential to know what can trigger or stimulate the needs and intention to buy among the target consumers or what business operators can leverage in their product and marketing strategies in order to respond to those needs or preferences of their segment. With accurate market insight and streamlined strategies, a player that is able to swiftly respond precisely to consumer’s needs is likely to build a favorable customer experience and relationship with their brand, eventually leading to customer’s loyalty which is considered one of the sustainable competitive advantages in doing business, especially for cosmetics industry.

This study objectives are to explore the current situation of cosmetics industry as well as the perceptions and attitudes of the consumers towards cosmetics, to identify what can be factors influencing purchase intention which can lead to purchase decision on cosmetics among consumers and to provide recommendations to any cosmetics exporters for their marketing strategies in order to be successful in establishing foothold and to be competitive in Yangon. While the target respondents are women living in Yangon aged between 20-60 years old; the ages at which women usually use cosmetics and have certain purchasing power. The location is Yangon because it is one of the major cities in Myanmar which is populated by middle class such as white-collar workers or government workers whose purchasing power and demand for cosmetic products are higher than other areas in the country.
LITERATURE REVIEW
Definitions of Cosmetics
The U.S. Food and Drug Administration (FDA), which regulates cosmetics in the United States, [1] defines cosmetics as products "intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions." (Lewis, 1998)

Cosmetics are essentially used on ground of three goals basis, namely: 1) to enhance personal appeal through decoration of the body; 2) to camouflage flaws in the integument; and 3) to alter or improve upon natures (Milstein, Bailey & Halper, 2001).

Kim & Chung, (2011) cited that consumption of personal care products is a purchasing behavior that satisfies one’s needs for beauty and care of one’s general appearance.

Therefore, cosmetics products in this research are scoped only to those cosmetic products in general perception which is used to satisfy one’s need for beauty and appearance enhancement, namely all kinds of make-up applied to face, hair and skin such as lipstick, mascara, eye shadow, foundation, brush-on, highlighter, hairstyling products, perfume and cologne, including skin-nurturing products like facial and body lotion, anti-aging or whitening cream and lotion while excluding basic personal care products used for personal hygiene such as shampoo, soap and toothpaste mainly due to difference in purpose and necessity of use.

Consumer Purchase Decision Process, Purchase Intention and Purchase Decision
The term consumer purchase decision (also known as consumer buying decision or consumer decision making process) is defined as the process of a person who has specific needs then took after with steps taken to satisfy those requirements. (Violani & Liswandi, 2016) or the process used by consumers regarding market transactions before, during, and after the purchase of a good or service. (Nicosia, 1966)

The purchase decision process is theoretically simplified into general five forward-moving stages namely; problem recognition, information search, evaluation of alternatives, purchase decision and post-purchase behavior. In this theory of decision making process, only stage three (evaluation of alternatives) and four (purchase decision) are focused in this research to identify the determinants playing roles in evaluation of alternatives which eventually leads to purchase decision. (See Figure 3)

The third stage is evaluation of alternatives where a person assesses the gathered information and makes a final judgment of the most preferred brand based on endogenous and exogenous variables. Simultaneously, a purchase intention is created. And stage four, purchase decision, is the stage when a person commits to execute the purchase intention. However, it is also important to note that purchase intention is not considered as absolutely reliable predictor of actual purchase since there are two general intervening factors between the purchase intention and purchase decision (Keller, Manceau, Hénonnet-Goujot & Kotler, 2015) which are attitude of others, especially that of friends, relatives or family, that are probably against the person’s original attitude and decision and unanticipated situational factors such as abrupt financial constraint, time constraint or other emergencies that may erupt to change the purchase intention.

Figure 3. Focus of Research

Determinants of Purchase Intention
The most commonly cited variable used to measure the factors affecting purchase intention are brand awareness, perceived quality, perceived price and social influences. Anyway, social Influence is commonly deployed in the research conducted among Asian consumers (Zahid & Dastane, 2016).

Brand awareness.
Brand awareness is used to measure the accessibility of the brand in consumer memory, and it constitutes of all kinds of
brand associations or anything linked in memory of the brand (Aaker, 2009), namely:

- Brand recalling; consumers can remember or recall the exact brand name whenever they notice a product in its category. (Zahid & Dastane, 2016) or consumer can name the first brand of (category) that comes to mind. (Nicholls, Roslow & Dubish, 1999)

- Brand recognition; the extent to which the general public is able to identify a brand by its attributes or consumer ability to recognize a brand when there is a brand sign. (Zahid & Dastane, 2016)

- Brand image; the consumer’s perceptions of the brand’s tangible and in tangible associations (Faircloth, Capella & Alford, 2001) or the current view of consumers about the brand.

- Brand attribute; the tangible and intangible features and physical characteristic of the brand (Faircloth, Capella & Alford, 2001)

- Brand personality; the set of human characteristics associated with the brand (Aaker, 1997)

- Brand knowledge; personal meaning about a brand stored in consumer memory, that is, all descriptive and evaluative brand-related information. (Keller, 2003)

Perceived quality is consumer subjective decision and judgment on a particular product quality which can vary from the actual quality possibly due to earlier poor product image or unsatisfactory experience, different views of producer and consumer judgment in the scope of quality and insufficient knowledge of consumer to assess a product. this hypothesis is developed:

H2. Perceived quality has a significant positive influence on cosmetics purchase intention of female consumers in Yangon.

Country of Origin Effect (COE)

Country of Origin Effect is cited in Elliott and Cameron (1994) that it is any influence, positive or negative, that the country of manufacture might have on the consumer’s choice processes or subsequent behavior. Hsu, Chang and Yansritakul, (2017) claimed that numerous previous studies have confirmed that the COO of a product affects consumers’ evaluations and purchase decisions and their findings itself also supported this statement. Due to the aforementioned information, this hypothesis is developed in order to prove its validity on the effect of COO on perceived quality;

H3. Country of origin has a significant positive influence on perceived quality of female consumers in Yangon when evaluating cosmetic product alternatives.

Perceived price.

Price has demonstrated its significant impact on consumers’ evaluation of product alternatives and their final purchase decision. However, value for money is subjective and can vary by each individual’s perspective. In other words, perceived price can be influential to consumers’ evaluation of alternatives in two ways depending on the degree of their price and quality consciousness.

Based on these findings, this hypothesis is developed;

H4. Perceived price has a significant positive influence on cosmetics purchase intention of female consumers in Yangon.

Social influence.
Social influence setting is defined as social pressure on consumer from significant others such as friends, family including friends on social media (Zahid & Dastane, 2016). It can be referred as subjective norm or social pressure in the theory of planned behavior (TPB) that links to purchase intention creation. Hence, this hypothesis is developed;

**H5. Social influence has a significant positive influence on cosmetics purchase intention of female consumers in Yangon.**

**The Conceptual Framework**

Adapted from the theory of consumer decision-making and theory of planned behavior (TPB), the relationship between aforementioned determinants, purchase intention and purchase behavior are depicted in the Figure 4.

**Figure 4. The conceptual framework**

**MATERIALS AND METHODS**

**Population**

The population of this study is women living in Yangon, Myanmar. The target age is the working age which is for 20-60 years old as women in these ages normally use cosmetics to beautify and enhance their appearance either for work or for personal desire. They are assumed to have experience in using cosmetics or at least have an interest to use ones and expected to be the decision makers upon purchase for their personal use. The target sample size for this study is set at 400. However, due to the constraints of time and location, the total number of survey participants eventually ends at 329, giving 315 valid respondents.

**Research Instrument**

This research is conducted in 2 stages; an exploratory research design (qualitative approach) at the initial stage and a descriptive research design (quantitative approach) at the second stage.

Due to very few information about the cosmetics industry in Myanmar available on the Internet, the researcher took a trip to Yangon, Myanmar to gain certain data about the current market situation by observing cosmetics shops, stands and shelves of various brands and consumers in department stores and standalone beauty shops (i.e. Beauty Diary) to explore major players in the market, consumer behavior at point of purchase, enthusiasm among consumer toward cosmetic products, marketing communication channels and marketing activities of certain brands.

Moreover, primary data are collected in this stage using qualitative approach by setting up individual interviews with 6 female consumers at point of purchase and their workplaces to verify the previously identified determinants of purchase intention and factors that affect their purchase decision, including consumer preferences, perceptions, cosmetic use and purchase patterns.

Furthermore, an individual in-depth interview with the owner of the only local cosmetics brand in the market at the time when this research is conducted is arranged to acquire the market information, the industry trend and consumer behaviors and preferences from her business experience and point of view, getting insight information from the business operator side. The obtained qualitative data from these consumers and a business operator interviews are used to be the basis of survey questions scheduled to be developed the next stage of the research process.

The second stage: In this stage, the research is conducted by using questionnaire as a research instrument. The data are collected quantitatively through questionnaires. 250 self-administered surveys are distributed to female consumers at department stores, Yangon University, in front of office buildings and other public areas while 70 responses are gathered from female respondents participating on online platform, the survey results are used to test the set hypotheses as well as to describe the consumer attitude, perceptions and behaviors on the concerned variables.

**RESULTS AND DISCUSSIONS**
Consumer Interview
Quality comes first, followed by brand. Anyway, Price also takes into consideration. International brands are preferred and linked with quality. Discounted price or promotion attract buying decision.

Demographic Analysis
Gender – 100% female
Age – 45% 20-30 yrs old, followed by 31-40 (41%)
Occupation – 68% business employee and 19% government official
Monthly Income – 78% earns USD 100-400 a month
Education – 52% local bachelor degree, followed by 38% local master degree

Consumer behavior related to cosmetics usage and purchase intention
Cosmetic usage frequency – 29% every day and 62% almost every day regardless of age group
Average spending per one purchase – 68% spend within 5-20 USD for middle to low monthly income

Factors when purchase cosmetics
Consumers concern on quality (35%), regardless of age group and monthly income, then brand (18%), price (16%).
Quality relates with the expected benefit. Make your skin brighter comes first (17%) followed by moister your skin (14%). However, for older age group, skin brightening come first, then anti-aging or wrinkle free is concerned.

Country of Origin
With regard to the importance of country of origin and the preference to international brands over a local one, the results go positively to the same direction which is ‘agree’. To clarify, the respondents agree with the statement that ‘country of origin of a product is important to me.’ and believe that cosmetic products from overseas origins offer guaranteed better quality over those from a local brand. In addition, they also agree that they prefer cosmetic products from international brands. These results are in line with the results from the previous descriptive analysis of the brands they are familiar with and favorite countries of origins.

Brand
Most familiar brands are Revlon, L’Oréal, and Maybelline due to heavy advertising and friend recommendation. Advertising has influence on younger age group, while friend recommendation got on older age group.

Social Influence
In term of social influence, the respondents were asked if they look for or rely on reviews, recommendations and information of a product from others prior to making a purchase decision. 82.5 percent or 260 persons always look for the reviews and recommendation while 16.2 percent sometimes do it. Only 1.3 percent or 4 persons do not. The average reviews or recommendations they search are mostly 2-5 reviews equivalent to 58.1 percent. The second largest group or 24.4 percent looks for even more than 6-10 reviews. 11.7 of the respondents look for only 1 review before making a purchase decision while 4.4 percent of them may look for more than 10 reviews. In addition, the source of review, recommendation and information about a product is mostly from beauty advisors at points of purchase at 46 percent, followed by friends and family at 29.5 percent. Bloggers or online reviews equal to 14 percent and product and company websites is at 10.5 percent.

Hypothesis Analysis
H1. Brand has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.
H2. Perceived quality has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.
H3. Country of origin has a significant positive influence on perceived quality of female consumers in Yangon was supported.
H4. Perceived price has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.
H5. Social influence has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.

Inferential Statistic for Hypothesis Testing
Correlation coefficient analysis.
In this section, inferential statistics is employed to investigate the relationship
between independent variable (purchase intention) and dependent variables (brand, perceived quality, perceived price and social influence). Specifically, multiple regression is used to test the relationship between brand, perceived quality, perceived price and social influence to purchase intention. However, prior to the regression analysis, Pearson correlation coefficient analysis is applied in order to detect multicollinearity among variables to ensure there is no relationship so strong that can possibly distort the result of multiple linear regression (Hair Jr., Anderson, Tatham & Black, 1995).

<table>
<thead>
<tr>
<th>Table 1. Pearson Correlation Coefficient</th>
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<td>Variable</td>
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<tr>
<td>Purchase Intention</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>Perceived Quality</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>Social Influence</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<tr>
<td>Brand</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>Perceived Price</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to Table 1, the result of p-value obtained from Pearson Correlation Analysis at lower than 0.01 indicates the positive correlation among each variable at 0.01 significant level. Moreover, correlation coefficient values range from 0.172 to 0.535, not exceeding the value of 0.90, the value cited by Mela & Kopalle (2002) as one of the thresholds of bivariate correlations f or the harmful effect of colli nearity. Hence, the test ensures no multicollinearity among tested variables and the analysis result from multiple regression is justified.

The analysis of the relationship between each independent variables and purchase intention.

After correlation coefficient analysis, multiple linear regression is employed to investigate the relationship between each variable to purchase intention. The 4 (four) independent variables namely Perceived Quality, Social Influence, Brand and Perceived Price are investigated as the predictors of the purchase intention. Based on the model summary in Table 2, The R-square value equals to 0.355 which reflects 35.5 percent of the variance of purchase intention is influenced by these independent variables. The p-value of F-test affirms the regression model is significantly predicted by at least one construct (F = 42.648, p-value = 0.000).
Kittikowit, Santhaya, Suwanabubpa, Kittiya & Sithisomwong, Sophat

Table 2. Model Summary

<table>
<thead>
<tr>
<th>Model</th>
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<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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<td>1</td>
<td>.596a</td>
<td>.355</td>
<td>.347</td>
<td>.40327</td>
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Model Sum of Squares Df Mean Square F P-value

| Regression | 27.743 | 4 | 6.936 | 42.648 | .000b |

b. Predictors: (Constant), Perceived Quality, Social Influence, Brand, Perceived Price

The beta correlation and p-value presented in Table 3 are used to test the set hypothesis 1, 2, 4 and 5 for a positive influence Brand, Perceived Quality, Perceived Price and Social Influence have on Purchase Intention respectively.

Table 3. The Relationship between each Variable to Purchase Intention

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients B Std. Error</th>
<th>Standardized Coefficients Beta</th>
<th>t-Value</th>
<th>P-value</th>
<th>95.0% Confidence Interval for B</th>
<th>Collinearity Statistics</th>
<th>Tolerance</th>
<th>VIF</th>
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<td>Constant</td>
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<td>.224</td>
<td>3.479</td>
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<td>Perceived Quality</td>
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<td>Brand</td>
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<td>.000</td>
<td>.151</td>
<td>.384</td>
<td>1.420</td>
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<tr>
<td>Perceived Price</td>
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<td>.049</td>
<td>.158</td>
<td>3.290</td>
<td>.001</td>
<td>.065</td>
<td>.257</td>
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a. Dependent Variable: Purchase Intention

The relationship between brand and purchase intention.

According to Table 4.3, p-value of 0.000, less than significant level of 0.05 reflects the significant relationship between brand and purchase intention. Furthermore, the beta correlation is positive (Beta = 0.245), which indicates it is a positive relationship. Therefore, **H1. Brand has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.**

The relationship between perceived quality and purchase intention.

Similarly, to Brand, p-value of 0.007, less than significant level of 0.05 reflects the significant relationship between perceived quality and purchase intention. The beta correlation is positive (Beta = 0.154), which indicates it is a positive relationship. Hence, **H2. Perceived quality has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.**

The relationship between perceived price and purchase intention.

In case of perceived price, p-value of 0.001, less than significant level of 0.05 presents the significant relationship between perceived quality and purchase intention. Also, the positive beta correlation (Beta = 0.158) indicates it is a positive relationship. As a result, **H4. Perceived price has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.**

The relationship between social influence and purchase intention.

With regards to social influence, p-value of 0.000, less than significant level of 0.05 shows the significant relationship between social influence and purchase intention.
Moreover, the positive beta correlation (Beta = 0.303) proves it is a positive relationship. Consequently, **H5. Social influence has a significant positive influence on cosmetics purchase intention of female consumers in Yangon was supported.**

According to Beta value considered as the indicator of level of impact each independent variable has on the dependent variable (purchase intention), the highest Beta is that of social influence, followed by those of brand, price and quality respectively.

The analysis of the relationship between countries of origin to perceived quality

The relationship between countries of origin to perceived quality is tested using simple linear regression to investigate the relationship between these 2 variables. According to Table 4.4, the P-value of 0.000 at the significance level of 0.01 shows the positive correlation between Perceived Quality and Country of Origin.

<table>
<thead>
<tr>
<th>Table 4. Pearson Correlation Coefficient between COO and Perceived Quality</th>
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</thead>
<tbody>
<tr>
<td><strong>Pearson Correlation Coefficient between COO and Perceived</strong></td>
</tr>
<tr>
<td>Quality</td>
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<tr>
<td>Variable</td>
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<tr>
<td>Perceived Quality</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to the result from simple linear regression presented in Table 5, p-value of 0.000, less than significant level of 0.05 shows the significant relationship between country of origin and perceived quality. Moreover, the positive beta correlation (Beta = 0.316) indicates a positive relationship. Pursuant to this result, **H3. Country of origin has a significant positive influence on perceived quality of female consumers in Yangon was supported.**

<table>
<thead>
<tr>
<th>Table 5. The Relationship between country of origin and perceived quality</th>
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<tbody>
<tr>
<td><strong>The Relationship between country of origin and perceived quality</strong></td>
</tr>
<tr>
<td>Model</td>
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<tr>
<td></td>
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<tr>
<td>Constant</td>
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<tr>
<td>COO</td>
</tr>
</tbody>
</table>

**a. Dependent Variable: Perceived Quality**

CONCLUSIONS

Cosmetic Industry in Yangon

Cosmetic industry in Yangon is currently competitive with many brands, almost all of them from international origins. Despite increasing presence of various cosmetics brands in Yangon, there is still a market gap for the majority of its people, the poor, many of whom still cannot afford branded cosmetics and has to purchase fake or low quality products from grey market.

Consumer Behavior

Women in Yangon are really receptive and enthusiastic with cosmetic products. They have increasing beauty consciousness and higher
desire for personal care. Based on the data obtained from the interview and survey, most of female consumers wear make-up quite often or more than 3-7 days a week regardless of their ages. Despite frequent cosmetics use, they do not purchase cosmetics that often, but mostly only twice a year. Growing number of consumers are quality conscious and value quality over price. They are looking for a product that is harmless and compatible with their skin.

Factors Considered for Product Evaluation and Purchase Decision

Brand, quality, price and social influence can all influence consumer purchase intention. However, purchase intention cannot always lead to actual purchase due to the possible blocking factors such as high price and unnecessity of such a product.

They believe products from international brands are more reliable and better in quality. Brand and quality are highly associated in their perception. Once they are satisfied or have a pleasant experience with any brand, they are likely to become brand loyal and quite cautious and reluctant to try new products from unknown brands.

In term of perceived quality, the investigated variables of perceived product quality in this research include product benefit, product design and packaging. Among these variables, product benefit is the most crucial part in consumer opinions while design and packaging are not as equally important as product benefits and product safety.

Perceived price is also undeniably underlying factor to determine buying decision. Most female consumers in Myanmar do not look for the cheapest product to buy. Instead, they are looking for something value for money. In other words, they are willing to pay more in order to get a better-quality product.

Discussion

In this part, the findings of this research will be comparatively discussed with related theories and the findings of certain preceding literature associated with purchase intention. The thematic theory of this research to be discussed is consumer decision making process. According to the theory of consumer decision making process or consumer purchase decision, there are 5 consecutive stages namely problem or need recognition, information search, evaluation of alternatives, purchase decision and post-purchase behavior. Pertaining to need recognition, a problem or need can be caused by internal or external stimuli (Keller et al., 2015) and social pressure is cited as one of the external stimuli, this is in coherent with the findings that social influence has a positive significant relationship or in other words an impact on purchase intention or the desire to get the product. Moreover, the subsequent stage of information search supported the findings that female consumers in Yangon usually seek for reviews and recommendations before making a purchase decision. It was also cited by Comegys, Hannula and Väisänen (2006) in their research that the most effective information source comes from personal one which is incoherent to the finding in this research that friends and family is the most influential in term of social influence. However, according to this theory the purchase intention is created during product evaluation process on the basis of need, belief and attitude toward each particular product. Variables like quality and price involve in this process conforming to the findings that these 2 variables have a positive significant relationship to the purchase intention. Moreover, at the stage of purchase decision, the theory suggests that there are 2 possible intervening factors; the disagreement from the significant one (opposing attitude of others) and unanticipated situational factors, that deter the actual purchase decision. Based on the finding, the intervening factors are the belief that the product they want to buy is not necessary, the perceived high price as well as the significant ones’ disagreement. This mostly complies with the theory while the belief that it is not necessary may stem from attitude of significant others or personal attitude causing weak purchase intention.

To discuss further, perceived price, perceived quality and brand are the sources of attitude toward products while social influence can be regarded as a subjective norm or external stimulus to purchase intention in accordance to the results from hypothesis testing that perceived price, perceived quality, brand and...
Factors Influencing Purchase Intention on Cosmetic

social influence all have a positive impact on purchase intention.

Discussed one by one, the hypotheses of each variable are statistically supported which are in coherence with the preceding literature to be mentioned as following;

The approved hypothesis that brand awareness has a positive relationship or influence on the purchase intention is in compliance with the findings of Zahid & Dastane (2016) on the purchasing intention for a Smartphone, of Hoyer and Brown (1990) suggesting that that brand awareness serves as a dominant choice tactic among inexperienced consumers presented with a brand-selection task. In addition, the study of Nair & Pillai (2007) on the purchase pattern of cosmetics among consumers in Kerala, India affirms the similar results that consumer is quite brand loyal when it comes to cosmetic product and they receive the information about the brand mostly from advertisement as well as friends and family. To add, this finding also supports the research result of Laroche, Kim & Zhou (1996) on brand familiarity and confidence as determinants of purchase intention.

Similarly, the supported hypothesis that perceived quality, perceived price and social influence have a positive relationship or influence on the purchase intention is the same as those from the study of Zahid & Dastane (2016) on the purchasing intention for a smartphone, Nair & Pillai (2007) on the purchase pattern of cosmetics among consumers in Kerala, India and that of Calvo-Porral & Lévy-Mangin (2017) on the role of perceived quality on the store’s brand purchase intention. The same study on perceived quality also suggested that among the consumers with high perceived quality, their purchase intention is not influenced much by price which is in the same way as the questionnaire results of this research that low-price product could possibly cause less confidence in trustworthiness of a product. Therefore, low price does not really attract them to buy.

Regarding the research findings that country of origin has a positive influence on the perceived quality. The finding is aligned with the previous study of White and Cundiff, (1978) on assessing the quality of industrial product and Hsu, Chang and Yansritakul, (2017) on the moderating effects of country of origin on the purchase intention of green skincare products. However, although Thailand scores the most frequency in term of the favorite country origin associated with the reason of favorability as ‘quality’, the difference between products genuinely of Thailand and products imported from Thailand where the brands are not genuine Thai should also be considered as it might not be very distinctive in consumers’ perception.

Recommendations

Recommendations for product.

Most female consumers in all age groups in Yangon desire to have bright skin. Product must be harmless and compatible with their skin is equally crucial. The language on the packaging and the labels should include local language as well. However, the level of localization should be optimal, not fully localized it since it is more preferable to still sustain the international-look of such a particular product. The preference of natural ingredient is not yet explicit. However, natural ingredients will become an evolving trend especially among premium segment.

Recommendation for price.

Regarding pricing strategy for a cosmetic product, entrepreneurs should not focus on low price strategy. Consumers with certain purchasing power does not look for the cheapest product, they are looking for quality-price balance or value for money which is the price commensurate the efficacy and the effectiveness of a product.

Recommendation for marketing communication.

The popularity of brand can increase purchase intention or purchase preference for one particular brand over the others, conforming to the fact that, in consumer perception, well-known brands are more reliable than the unknown ones and brand is another pivotal factor they consider when purchasing cosmetics. Reliability and credibility are crucial for cosmetics as it is a product involving with individual physical health and some consumers may judge the product quality simply through its brand.
To build brand awareness or making people know the brand can be effectively executed mainly through advertisement, followed by big influencers namely friends and family, attractive point of purchase and beauty advisors and digital influencers such as bloggers or internet peer reviews. Digital media such as social networking sites like Facebook and Instagram or relevant websites are currently a very suitable and effective advertising channel as growing number of Yangon populates, especially youth and young adults are very active social networking users.

According to the statistic result, many consumers may want to purchase or have a cosmetic product but do not eventually buy it mostly because they think it is not necessary. To bridge this gap, marketers should find ways to reiterate the importance of make-up or self-care activities, probably through role models or creating desired personality and appearance for the target group to follow, rather than just emphasizing product benefits.

**Limitations**

The first limitation of this study is the sample size owning to the constraints of collection time, place and resources. Consequently, 315 usable survey respondents were acquired instead of the stretch target of 400 respondents. Moreover, considering the demographic information of the respondents, they are rather homogenous in term of age, occupation, education and income. With this fact, it can be assumed that the results can only applicable or represent only one group of female population in Yangon, especially those age 20-40 years old, with the income ranging around $200-$300 per month while it may not be sufficient to epitomize those consumers not falling into these groups such as those earning much less or much higher or those older female consumers.

Moreover, this research was conducted only in Yangon or the research frame is geographically limited. The obtained results may not sufficient to represent the entire population in Myanmar.

Another limitation of this research is the language barrier during the individual interviews as well as the questionnaire which were primarily conducted in English with the help with local interpreters. Therefore, some messages may be lost or misinterpreted during the translation.

**Recommendations for further studies**

As per the limitations stated in previous section, future studies should be encouraged in order to bridge such research gaps. Since the purchase intention of consumers in emerging markets has not yet been much explored in any literature, there should be further studies on such purchase intention for other products in other categories, including a study on the influence from other possible factors such as consumer demographic or marketing strategies. Also, as this research explores each variable like product, price, quality and social influence in general, future studies may be purposed to study these factors further into details of each attribute for more in-depth understanding on the influences and the role they play in consumer decision making process.

In addition, it would also be interesting to study the purchase intention of a specific consumer group such as that of the poor or that of the rich which would be beneficial to any parties interested in doing business in such mentioned segments.

Moreover, this research is conducted only on women who are the main contributor to the sales of beauty industry. However, since the world and life style change, men concern about their appearance more than they did in the past so future studies may consider conducting research on both male and female or specifically on men.

The last recommendation for future study is based on the fact that this research is conduct on the assumption that all purchase decision is always a cognitive process while such buying decision could be impulsive; hence, impulsive buying among consumer in emerging markets such as Myanmar should be further investigated.

**REFERENCES**


Factors Influencing Purchase Intention on Cosmetic Products


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ANALYSIS OF SUPPLIER SELECTION CRITERIA USING FUZZY AHP IN TEXTILE INDUSTRY IN INDONESIA

Lim Sanny1* and Yuliana2
Bina Nusantara University, Indonesia

Abstract

The purposes of this study are to determine the order of criteria and sub-criteria in supplier selection process by measuring the weight of each criteria and sub-criteria to find out the best supplier in each TPT industry sector for the company which become the subject of this study. The technique of collecting data is through questionnaire distribution to 5 respondents who are the experts of the company. The collected data were analysed using Fuzzy AHP approach. The result of this research will assist in giving beneficial solutions in decision making, especially in selecting the best suppliers based on supplier selection criteria and sub-criteria to supports an excellent supply chain management.

Keywords: Fuzzy analytic hierarchy process, operations management, supplier selection, supply chain.

INTRODUCTION

Decision making is a necessary activity in life for everyone because in any activity, people must make a decision while considering every choice that they have and the future outcome of their decision, as a short-sighted decision may bring disasters in the near future of someone. Such crucial action is becoming even more important for someone in the top position as a leader of an organization, as a short-sighted decision without enough considerations may cause chain reaction of chaos for other people in the long run. Therefore, a leader has the most important job with a lot of responsibilities. The same rule applied to countries’ government who is responsible for millions of people’s life. Indonesia, the world’s largest archipelagic country, is also the fourth most populated country in the world with 263,991,379 population by 2017, and this number keep growing every year (Worldometers, 2017). This increasing number of population become a major concern for the government as it caused some serious issues such as poverty and unemployment.

Despite these problems, there is a high opportunity for Indonesia’s economic growth through ASEAN Economic Community (AEC), a community of South East Asia nations that effectively active by the end of 2015, consisting Indonesia, Brunei Darussalam, Cambodia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam, with the main objective to bring equality and prosperity for each of its members by lifting every obstacles and boundaries that restrict the movement of workforces, goods, and services. While AEC gives Indonesia the opportunity to improve economy, it is also a challenge to improve the quality of human resources management in order to compete with other countries.

The demand of labor force in the textile and textile product industry (TPT) is increasing along with the improvement of industry performance that engaged in the labor-intensive sector. Indonesia Ministry of Industry (2017) stated that the TPT industry contributes about 17% of total TPT industry labor force.

Table 1. Contribution of Manufacturing
As shown in Table 1, manufacturing industry contribution to Indonesia’s GDP is declining every year. Despite the decreasing percentage, Central Statistics Agency (2017) shows that the biggest contributor to Indonesia’s economic growth based on the sectors is still placed by the manufacturing sector with 0.92% of the total economic growth which is 5.02%. Moreover, according to Central Statistics Agency (2017), Indonesia’s manufacturing industry is in the top 10 of the world, placed side by side with UK, above Mexico and Spain. TPT sector increased by 1.92% compared to the same period in the previous year which decreased by 0.13%. The numbers show a relatively positive performance in both domestic and export market, a promising manufacturing industry with a lot of potential to grow and expand in the future (Bisnis Indonesia, 2017). Therefore, based on the National Industrial Development Master Plan (RIPIN) in 2015-2035, the TPT sector development is prioritized for it to contribute significantly towards the national economic growth. The TPT industry production process can be classified in 3 main areas. The first area (upstream sector) is mostly the production of fibre products; the second area is spinning, knitting, weaving, dyeing, printing and finishing; and the third area (downstream sector) is the form of garment factories and other textile products. Beside the challenge to compete with other textile producing countries in South East Asia (Cambodia, Myanmar, and Vietnam), Indonesia must face other deal with other issues at hand such as the increasing reliance on imported raw materials, lack of investment, and old machines condition especially the weaving and knitting machines.

A particular trading company in TPT industry chooses to form partnership with manufacturers rather than having their own mills. By collaborating with the upstream sector, especially those with spinning, knitting, weaving, dyeing, printing, and finishing activities in their mills, the company is able to purchase raw knitting colourless fabrics which can be customized with different colours and shapes based on the considerations of fashion trends and customers’ demand. The target market of the company is the downstream sector who produce garments in large quantity.

The company’s supply chain management starts with purchasing raw knitting colourless fabric from a supplier and doing the colour immersions with the help from another supplier. The process could be done in the same supplier company if the result is close to customers’ demand. The manager is not only responsible for the number of fabrics, but also the quality and colour according to customers’ order. This process need a lot of quality control and good communication skills with both the supplier and the customer. Another important thing is to have warehouses to keep the finished fabric stocks.

Because of the large amount of costs in starting a manufacturing company, this company suffer a capital limitation that prevents them from having their own mills, therefore, this supply chain management is applied to maintain the company in a safe position in textile industry.

While the research about supplier selection has been done by several previous studies, studies about supplier selection with Fuzzy AHP technique in small industry in Indonesia is very limited as far as author’s knowledge. Therefore, this research give contribution especially for Indonesia’s textile industry.

The purpose of this research will determine the order of criteria and sub-criteria in supplier selection process of the company. This research is expected to give beneficial solutions in decision making of obtaining the best supplier based on the supplier criteria. Therefore, supply chain management is expected to go smoothly and well planned to maintain a good company’s position in customers’ mind.
Analysis of Supplier Selection Criteria

LITERATURE REVIEW

Overview of Mobile Banking Customers in Thailand

Operation management is the activities of organizing, operating, and repairing a system for it to work effectively and efficiently (Russell and Taylor, 2014). Supply chain is one of the system and the activities to manage it is called supply chain management which is made up of parties that directly or indirectly receive and meet customers’ demand (Chopra & Meindl, 2007). These parties are not only producers and suppliers, but also include carriers, warehouses, and even customers themselves. Supply chain management is a crucial part of companies as a correct usage of supply chain management can give companies significant competitive advantages (Mentzer, Myers & Stank, 2007).

Supply chain management is said to be successful when the flow of information, products and funds is done accordingly (Chopra and Meindl, 2007). Therefore, a proper and precise decision in managing supply chain must be made. There are three phases of decision making with different frequencies and time frames. The first one is Supply Chain Strategy Design, where the company prepares the supply chain for the next few years according to their marketing plan. The second phase is Supply Chain Planning, which take time about quarter to one year to plan the configuration of the supply chain, what need to be changed or fixed. And the final phase is Supply Chain Operations, which have time phase as daily or weekly and during that time, the decisions regarding individual customers are made.

To make the operation management successful, several decisions considering the situation of the company is mandatory. One of the decision need to be made is regarding the company’s capability to manufacture their product. The decision to do Outsourcing, an act of using services from external providers to perform some internal activities of the company (Chase, Jacobs & Aquilano, 2009), is the solution for this problem. The company can focus on activities that are better in representing their core competencies (Chase, Jacobs, Aquilano, 2009) as it can create value or competitive advantage while reducing costs that are not very necessary.

Another crucial decision in managing supply chain is Supplier Selection. Verma & Pateriya (2013) argues that supplier selection process is part of quality, production, and logistics management for some companies. To improve the effectiveness of the entire supply chain system, supplier selection is crucial as a variety of method to measure supplier performance. Supplier selection issues only about who to buy and how much to buy (Ozfirat, Tasoglu, Memis, 2014). Selection of supply sources is the most important function in the purchasing department as an effective supplier selection process has the opportunity to reduce cost and effective resource control.

Decision-making is defined as the process of taking action relating to problems or opportunities (Ivancevich, Konopaske, Matteson, 2013) which usually consists of three steps; perceiving there are needs and dissatisfaction within oneself, decision to fill the needs, and the last is the awareness and dedication to make that decision (Arsham, 2010). There are several decision-making methods, but in this study, author will discuss about Multi Criteria Decision Making (MCDM).

Problems arise in Multiple Criterias Decision Making (MCDM) if there are several conflicting factors in the selection of suppliers, so there needs to be a cross-criteria analysis by the purchasing manager (Verma, Pateriya, 2013). Analytical Hierarchy Process (AHP) is a technique that helps decision makers to evaluate alternative options. Some criteria are considered important depending on the purchase situation so there is always a need to measure and weigh them. The AHP is a theory and methodology for relative measurement, which define as the proportions between some quantities (Brunelli, 2015). It suits properly for the problems that need to choose the best alternatives. However, AHP’s capabilities are limited in dealing with uncertainty in decision-making that take place in the real environment (Ozfirat, Tasoglu and Memis, 2014).

Fuzzy sets and fuzzy logic are useful as great mathematical tools for modeling: nature and humanity, uncertain systems in the industry,
and facilitators for common sense reasoning in decision making that require complete and precise information (Khan, Jayant & Kumar, 2015). The fuzzy logic theory is based on fuzzy sets which are a natural extension of the classical set theory. A sharp set (also called crisp set) is defined by a bivalent truth function which only accepts the values 0 and 1 meaning that an element fully belongs to a set or does not at all, whereas a fuzzy set is determined by a membership function (Werro, 2015). Fuzzy or fuzzy logic set theory is a collection of theories that provide solutions for inaccuracy and ambiguity (Ma, Zhang, Yan, Cheng, 2014). The fuzzy information has been discussed by Zadeh in 1965 that provides a temporary idea of the fuzzy set and fuzzy logic and its application in real life (Ma, Zhang, Yan, Cheng, 2014).

The extension of AHP is developed to become fuzzy AHP because conventional AHP fails to reflect the human thinking style (Ganguly & Guin, 2013). The fuzzy-AHP methodology has been used as a tool capable of analysing, capturing the uncertainty of human judgment, its simplicity and its ability to solve multi-criteria decision-making problems (Mastrocinque, Mondragon, Hogg, 2016). According to Khan, Jayant and Kumar (2015), fuzzy analytic hierarchy process known as FAHP processes the pair-wise pairing numbers into fuzzy triangle numbers to lower the priority of different selection criteria and attributes. A fuzzy AHP model has been developed to select the most appropriate supplier based on selection criteria and capacity and split orders among these suppliers so that the company can maximize the producer’s profit.

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![Figure 1. Framework](source)

Source: Author (2018).

**MATERIALS AND METHODS**

This study is quantitative with a company as unit analysis and cross-section time horizon. The data used in this study is both primary and secondary data and the data collection method are questionnaire, interview with the top management of the company, and literature review, where author collect data about the backgrounds and methods for this research from books, journals, and internet.
Analysis of Supplier Selection Criteria

Analytical Hierarchy Process (AHP), proposed by Thomas L. Saaty in Know (2008), is a quantitative alternative method of choice that relates to one or more of the criteria under consideration (Boroushaki & Malczewski, 2008; Lin F. et al, 2007). There are six steps in this process (Vahidnia, Alesheikh, Alimohammadi & Bassiri, 2008):

1. Describing the unstructured problem,
2. Detailed criteria and alternatives,
3. Recruiting pair wise comparisons among decision elements,
4. Using the eigen value method to predict the relative weights of the decision elements.

More specifically, the process consists of the following steps:

1. Decomposing the decision problem into a hierarchy (Srichetta and Thurachon, 2012). Arrange the decision problem into a structured hierarchy starting from the destination to the lowest level containing the alternatives to which you wish to choose. The upper level of the hierarchy is the overall goal to be achieved from the decision problem; the intermediate level is the criterion and sub-criteria that will influence the decision; and lastly the lower level which are possible alternatives.

2. Calculating the relative importance weights of decision criteria in each level of the hierarchy using pair-wise comparisons (Srichetta and Thurachon, 2012). Use a fundamental scale or a 1 (to 9) weighting system proposed by Saaty (2008) to make pairwise comparisons so that the results can be summarized in the evaluation matrix. This process simultaneously determines the relative influence of decision elements at each hierarchy level.

3. Estimation and consistency measurement of local priorities (Secundo, Magarielli, Esposito & Passiante, 2017). The "local priorities" are the weights and judgments given to the criteria that indicate preferences among alternatives. Local priority values are known by normalizing the main eigenvectors α corresponding to the largest eigenvalues of pairwise comparison matrices. Then, a consistency ratio calculation is performed to determine the quality of a local priority vector that relies heavily on λmax and the order n matrix, with a value not exceeding 0.1.

4. Synthesis of local priorities into global priorities (Secundo, Magarielli, Esposito & Passiante, 2017). According to Srichetta and Thurachon (2012), the step of aggregating the pair-wise comparison and the synthesis of the priorities to determine the overall priorities of the decision alternatives will be done.

   1. Triangular fuzzy numbers
   2. Construct the fuzzy pair-wise comparisons matrix
   3. Aggregate the group decisions
   4. Compute the value of fuzzy synthetic extent
   5. Approximate the fuzzy priorities

   Consistency test of the comparison matrix.

   The whole process of Fuzzy AHP is shown as the following flowchart:

Figure 2. The Hierarchy Process
Source: Secundo, Magarielli, Esposito & Passiante (2017).
RESULTS AND DISCUSSIONS

The arrangement of the criteria used in this study is based on the journal of Khan, Jayant, Kumar (2015). After finding the decision problem, the next step is to compose it into a structured hierarchy starting from the destination to the lowest level containing the alternatives to which you wish to choose. The upper level of the hierarchy is the overall goal to be achieved from the decision problem; the intermediate level is the criterion and sub-criteria that will influence the decision; and lastly the lower level which are possible alternatives. The alternatives will be divided into 3 types; yarn, knitting and dyeing suppliers.

Data collection is done by distributing 5 questionnaires to some experts in the trading company in TPT industry who has a direct

![Figure 3. Fuzzy AHP Flowchart](source: Jain, Singh and Mishra (2013).)
relationship with alternative suppliers to support the validity of data. Pairwise comparison is conducted to calculate the relative importance weights of decision criteria and sub-criteria in each level of the hierarchy. A fundamental scale by Saaty (2008) is used for weighting system to make pairwise comparisons.

After author process the collected data with Pairwise comparison and TFN (Triangular Fuzzy Numbers), author calculate the result and find out the weight of each criteria and rank them as shown in the following table:

Table 2. Fuzzy AHP Weights of Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weights</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>0.0641</td>
<td>4</td>
</tr>
<tr>
<td>Quality</td>
<td>0.5021</td>
<td>1</td>
</tr>
<tr>
<td>Delivery</td>
<td>0.1641</td>
<td>3</td>
</tr>
<tr>
<td>Service</td>
<td>0.2698</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Data Primary Processing (2017).

Then, authors calculate the processed result to find out about the weight of each sub-criteria and rank them as shown in the following table:

Table 3. All Sub-criteria in Priority Order

<table>
<thead>
<tr>
<th>Rank</th>
<th>Sub-criteria</th>
<th>Final Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Q4 Inspection methods</td>
<td>0.2454</td>
</tr>
<tr>
<td>2</td>
<td>Q3 Order completeness</td>
<td>0.1503</td>
</tr>
<tr>
<td>3</td>
<td>S1 Responsiveness</td>
<td>0.1420</td>
</tr>
<tr>
<td>4</td>
<td>D4 Compliance with delivery dates</td>
<td>0.0666</td>
</tr>
<tr>
<td>5</td>
<td>Q1 Quality management</td>
<td>0.0562</td>
</tr>
<tr>
<td>6</td>
<td>S2 Modification capability</td>
<td>0.0560</td>
</tr>
<tr>
<td>7</td>
<td>D1 Delivery lead time</td>
<td>0.0517</td>
</tr>
<tr>
<td>8</td>
<td>Q2 Low rejection rate</td>
<td>0.0502</td>
</tr>
<tr>
<td>9</td>
<td>D3 Arrive in good condition</td>
<td>0.0477</td>
</tr>
<tr>
<td>10</td>
<td>S3 Reliability</td>
<td>0.0472</td>
</tr>
<tr>
<td>11</td>
<td>C4 Payment system</td>
<td>0.0265</td>
</tr>
<tr>
<td>12</td>
<td>C3 Quantity discount</td>
<td>0.0256</td>
</tr>
<tr>
<td>13</td>
<td>S4 Complaint resolution</td>
<td>0.0245</td>
</tr>
<tr>
<td>14</td>
<td>C2 Transportation cost</td>
<td>0.0128</td>
</tr>
<tr>
<td>15</td>
<td>C1 Meet price standard</td>
<td>-0.0009</td>
</tr>
<tr>
<td>16</td>
<td>D2 Right location delivery</td>
<td>-0.0019</td>
</tr>
</tbody>
</table>


Based from the results, it can be seen that Quality is the most important criteria in determining the best supplier. Moreover, its sub-criteria, Inspection Method, is the most important sub-criteria among the others. Producing the best product quality need a good production system that requires further examination and quality control in order to confirm the results the determined standard. Therefore, a good inspection method is required as it enables the company to fix the sources of defects immediately after they are defected, and it is useful to improve productivity, reduce defect rates and reduce re-work and waste.

The results of this study show that the quality has the highest weight among other high-level decision criteria, followed by service, delivery and cost. It means that quality is the most important criteria for the company in selecting the best supplier. Similar studies conducted by Khan, Jayant & Kumar (2015) and Ozfirat, Tasoglu, Memis (2014) also show that quality criteria has the highest weight results and is the most important criteria in the selection of the best suppliers in a manufacturing company. However, the results of this study are not in line with the study conducted by Secundo, Magarielli, Esposito and Passiante (2017) which shows that the functional suitability and supplier characteristics (reputation) are the criteria with the highest weights and are the most important weights in choosing the best supplier.

CONCLUSIONS

By using Fuzzy AHP approach, author find out the most important criteria and sub-criteria for the company based on the calculated and processed weight of importance. The result of Fuzzy AHP calculation shows that quality is the most important and most influential criteria in the supplier selection process. The calculation also shows that inspection method is the most important and most influential sub-criteria in the supplier selection process.

From the result of this research, company is expected to be able to make an accurate decision considering these criteria and sub-criteria. Author also suggest the company to develop the criteria and sub-criteria used in supplier selection process using Fuzzy AHP approach depending on the situation. Company is also suggested to apply Fuzzy AHP approach for other practical decisions within the company such as in selecting the candidates who are eligible to be promoted.
REFERENCES


A COMPARATIVE ANALYSIS OF GLOBAL COMPETITIVENESS AMONG BRIC NATIONS: IMPLICATIONS FOR CHINA

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Concordia University of Edmonton, Canada

Abstract

Since the acronym BRIC was coined in 2001, the world has touted Brazil, Russia, India and China as the emerging superpowers and engines of growth that would supersede the G7 economies and revive the sagging global economy. By 2010, the Big Four accounted for only 25% of the world’s gross national income despite owning over 25% of land area and over 40% of global population. This paper analyzes the global competitiveness of the BRIC nations over 15 years, in three five-year periods, and finds only China has shown stable growth. What then are the secrets to China’s growth and can China maintain growth? This paper then investigates the performance of China’s pillars of competitiveness and identifies the weak pillars, drawing attention to the issues and making recommendations for sustainable growth.

Keywords: BRIC, global competitiveness, World Economic Forum, Institute of Management and Development

INTRODUCTION

At the start of the 21st century, Brazil, Russia, India and China were hailed as the emerging nations that would supersede the G7 economies. Known as the BRIC, they were expected to increase in competitiveness and provide the impetus for global economic growth. Indeed, for example, the BRIC have become crucial profit drivers for the global car industry as car ownership surged in the last decade with a new middle class with higher income and access to credit. However, by the end of the decade, the BRIC nations were losing their charm. By 2010, the Big Four accounted for only 25% of the world’s gross national income despite owning over 25% of land area and 40% of global population. The booming car market has accelerated pollution and traffic congestion (BRIC nations’ promise as saviours of car industry wavers, December 15, 2013).

Some analysts argued that the B and R should be dropped (Bushra, 2013) while others claimed that China is driving the BRIC train (Mishra, 2014) and still others are proposing a new list of nations to replace the BRIC nations as the engines of growth (Boesler, 2013). The indicators of an overheated BRIC (Colombo, 2015) are pointing to a lack of attention to building sound fundamentals to sustain growth (When Giants Slow Down, July 27, 2013). What then are the measurable fundamentals to ensure BRIC remain competitive and attractive to investors? In that context, how does China compare in global competitiveness among the BRIC nations?

Although much has been said about the BRIC nations’ competitiveness, from how their economic growth has reduced poverty to the huge market size that many marketers are vying for a slice to the recent formation of their New Development Bank in Shanghai to counter the “failed reform within the International Monetary Fund” (BRICS New Development Bank Threatens Hegemony of U.S. Dollar, December 22, 2014), most studies focused on current performance. While data on global
competitiveness from the World Economic Forum and Institute of Management and Development are available each year, national governments and business communities have tended to use the latest data to review current performance, and at best compared the current with the previous year's performance. Few examined the historical trends that analyzed the past, evaluated the present and forecasted future incline or decline in competitiveness.

A time-series study over 15 years is rare but important to investors and governments to examine the ability of nations to sustain growth in the next decade. This is of critical significance to domestic and foreign investors who value stability and transparency of government policymaking to seed and grow their ventures. Other concerns would include infrastructure for business and tourism as well as the reliability of police services to provide safety and fight organized crime, such as in the cases of Singapore and Hong Kong where implementation of such policies since the 1980s had enabled them to growth from strength to strength making them favorites for tourist arrivals, expatriate settlement and foreign direct investment as well as among the most competitive nations in the world.

Breaking the 15 years into three-five year periods will further test the progress over every five years, much like the five-year-plans of most nations and five year review of financial performance of corporate businesses, to determine the government's ability to raise the standard of living, affecting international recognition and investor confidence. The time-series study will reveal the strengths and weaknesses of the pillars of competitiveness and the critical success factors that need attention providing the implications for policy making. Literature on the performance, issues and implications for policy based on a period of one and a half decade are rare but wanting and important for the nations, their citizens and business operators as well as foreign investors.

Finally, a focus on China is timely as it is the most sought after trading partner for its huge market and increasingly affluent population. Further, it has outpaced the rest of the BRI compatriots and surprised the world how communism and capitalism are juxtaposed with resounding economic success for over a decade.

This study seeks to study the reasons for its success and strip the veneers to examine each indicator that may foretell boom, gloom or doom for the world’s most talked-about nation currently. The objective of this paper is to analyze the global competitiveness of China among the BRIC, identify the key issues facing China based on the analysis and propose recommendations to overcome the issues for sustainable growth. Thus, the first step is to define global competitiveness and second, identify the measurement for global competitiveness.

LITERATURE REVIEW

The two most authoritative sources on global competitiveness are the World Economic Forum's (WEF) Global Competitiveness Report (GCR) and the Institute of Management Development's (IMD) World Competitiveness Yearbook (WCY). The WEF released its first report on global competitiveness in 1979 and the IMD in 1988.

Defining Global Competitiveness

The WEF and IMD are based in Switzerland and both use macro and microeconomic concepts to study the efficiency of governments and private sectors as well as infrastructure that shape a nation's competitiveness. The difference lies in their approaches via their definition and hence, their measurement of global competitiveness (Phiromswed, Srivannaboon, Fujioka and Hoontrakul, 2010). The WEF defines national economic competitiveness as “the set of institutions, policies and factors that determine the level of productivity of a country”, which affect the rate of return on investment and rate of output growth (Aridas and Magno, 2011). The WEF determines the sustainable current and medium term levels of economic prosperity of each nation through 12 pillars of global competitiveness (Garelli, 2011). The WEF’s Global Competitiveness Report (GCR) releases the annual Global Competitiveness Index (GCI) that awards a rank to each of the 12 pillars and culminating in the rank of the nation.

The IMD defines national economic competitiveness as “how a nation manages the totality of its resources and competencies to increase the prosperity of its people” (Aridas
A Comparative Analysis of Global

and Magno, 2011). The IMD analyzes national policies that create and maintain an environment that sustains more value creation and long-term sustainability for its enterprises and thus, promote more prosperity for its people (Garelli, 2011). The IMD’s World Competitiveness Yearbook (WCY) releases the annual rankings of nations based on four key measurements. The difference can be further clarified from the objectives explained by the leaders from both organizations. WEF defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country (Blanke, 2014). The WEF GCI provides a sense why some countries have been better at providing high and rising living standard to their citizens than others. The IMD focuses on how nations and enterprises manage the totality of their competitiveness to achieve long-term prosperity (Rosselet, 2014). This implies that the WEF emphasizes the government’s role in providing a rising living standard for their citizens reflective in the 12 pillars, while the IMD seeks to determine the extent of collaboration between governments and enterprises to manage resources to achieve sustainable progress.

Identifying Measurement: Differences between WEF and IMD

The key differences in measurement between the two research organizations can be summarized in Table 1 below based on the WEF’s Global Competitiveness Report 2011/2012 and IMD’s World Competitiveness Yearbook 2011.

<table>
<thead>
<tr>
<th>Item</th>
<th>WEF 2014/15</th>
<th>IMD 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Data:</strong> Executive Opinion Surveys (EOS)</td>
<td>Over 14,000 business leaders Median 98 per country</td>
<td>4,300 local and expatriate business leaders</td>
</tr>
<tr>
<td></td>
<td>150 Partner Institutes*</td>
<td>54 Partner Institutes*</td>
</tr>
<tr>
<td></td>
<td>148 countries</td>
<td>60 countries</td>
</tr>
</tbody>
</table>

Table 1. Comparing Global Competitiveness Methodology between WEF and IMD

As shown in Table 1, the WEF and IMD rely on primary and secondary data to determine the competitiveness of nations. The number of countries surveyed fluctuates slightly from year to year but overall the WEF surveys close to 150 countries and IMD about 60 countries, and thus, WEF’s samples are two to three times higher than IMD’s:

- WEF surveys over 15,000 management executive respondents and IMD at about 5,000.
- WEF collaborates with 150 partner institutions and IMD with about 60 to help execute the surveys in each nation.

However, IMD has nearly three times more measurements at 338 than IMD’s 114 indicators. The key difference lies in their ratio between primary and secondary data to achieve the respective objectives. The WEF findings are based on two-thirds of primary and one-third secondary data, while the IMD’s findings are reversed at one-third and two-thirds secondary data. The strength of the WEF’s methodology is up-to-date perceptions and forward-looking indicators that reflect the voices of opinion leaders in business, while the IMD emphasizes more on the indicators from independent sources which reveals more about past
performance. The WEF measures 114 indicators that form 12 pillars while the IMD evaluates 338 criteria categorized in four factors as shown in Table 2.

The WEF evaluates economies by the 12 pillars to construct a weighted Global Competitive Index that determines their rank. The 12 pillars of competitiveness relate to three stages of economic development (Sala-I-Martin, 2011) as shown in Figure 1.

Pillars 1 to 4 are weighted 20% and they form the first stage of economic development, they provide the basic requirements comprising factor endowments, such as human and physical capital, natural resources and trade location. They produce labour intensive products and compete on price. Competitiveness hinges on well-functioning public and private institutions, developed infrastructure, stable macroeconomic environment and healthy workforce with at least primary education.

Pillars 5 to 10 are described as efficiency enhancers, weighted at 50%. Economies move into the efficiency-driven stage of development when they market capital intensive products and compete internationally on price and quality. Competitiveness is increasingly driven by higher education and training, efficient goods market, well-functioning labour markets, developed financial markets, advance technology and expanding market size.

Pillars 11 to 12 describe the innovation and sophistication stage of development, weighted at 30%. Economies enter the innovation driven stage when they pay high wages and provide a high standard of living. Their businesses compete by developing new and unique products using and investing heavily in sophisticated production processes.

Table 2. Differences in Competitiveness Measurement between WEF and IMD

<table>
<thead>
<tr>
<th>WEF 12 pillars</th>
<th>Indicators</th>
<th>IMD’s Four Factors</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutions</td>
<td>21</td>
<td>Economic</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Performance</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macroeconomic Environment</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and primary education</td>
<td>10</td>
<td>Government</td>
<td>70</td>
</tr>
<tr>
<td>Higher education and training</td>
<td>8</td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td>Goods and market efficiency</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour market efficiency</td>
<td>10</td>
<td>Business</td>
<td>71</td>
</tr>
<tr>
<td>Financial market development</td>
<td>8</td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td>Technological readiness</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market size</td>
<td>4</td>
<td>Infrastructure</td>
<td>114</td>
</tr>
<tr>
<td>Business sophistication</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>Total</td>
<td>338</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Report 2014/15 and World Competitiveness Yearbook 2014
The 12 pillars of competitiveness are described briefly as follow (Grammy, 2011):

1. Institutions: Legal and administrative framework within which individuals, firms, and governments interact to generate wealth.
2. Infrastructure: Effective modes of transportation and communication, including quality roads, railroad, ports, airports, utility supplies and telecommunication networks.
3. Macroeconomic Environment: Stability and predictability in economic activity based on optimal levels of regulation and taxation for private firms to create employment, manage production and make profit.
4. Health and Primary Education: A healthy, literate and cultured workforce supporting production of goods and services in an efficient manner.
5. Higher Education and Training: A pool of well-educated and skilled workers who are able to adapt rapidly to a changing environment and evolving needs of the production system.
6. Goods Market Efficiency: Market competition, both domestic and foreign, to facilitate a proper balance between demand and supply with minimal public regulations.
7. Labour Markets Efficiency: Efficiency of labour markets to allocate workers to their optimal employment positions and provide them with incentives to give their best effort.
8. Financial Markets Development: Efficiency of financial markets to allocate domestic and foreign savings to provide entrepreneurial and investment projects based on expected rates of return rather than political connections.
9. Technological Readiness: Agility with which an economy adopts existing technologies to enhance productivity, with full capacity to leverage information and communication technologies in production processes for increased efficiency and competitiveness.
10. Market Size: Expanding market size allows firms to exploit economies of scale with regional and international markets complementing domestic markets.
12. Innovation: Invention and innovation made possible by substantial investment in research and development to create new products and offer better methods of production and distribution.

The IMD measures four factors of competitiveness and each factor comprises five sub-factors as seen in Figure 2.

**Economic Performance**
1. Domestic Economy
2. International Trade
3. International Investment
4. Employment
5. Prices

**Business Efficiency**
1. Productivity and Efficiency
2. Labour Market
3. Finance
4. Management Practices
5. Attitudes and Values

**Government Efficiency**
1. Public Finance
2. Fiscal Policy
3. Institutional Framework
4. Business Legislation
5. Societal Framework

**Infrastructure**
1. Basic Infrastructure
2. Technological Infrastructure
3. Scientific Infrastructure
4. Health & Environment
5. Education

The 20 sub-factors comprise a total of 338 criteria to calculate the overall competitiveness ranking, as seen in Table 2. These criteria emphasize the market’s support for...
entrepreneurship and ability to attract investment.

Which measurement is better?

Many developing nations suffer from the annual fluctuations in their competitiveness ranking. For example, in 2010, IMD ranked Thailand 26th among 59 countries while WEF ranked it 38th among 139, declining by two ranks from 36th the year before. The fall in rankings of a nation can give room to criticism against the ruling government. The Thai government would be happier with the IMD than the WEF rankings, especially in the aftermath of a period of domestic political instability (Limsamarnphun, 2010).

The situation becomes even more controversial when a significant difference exists between the two measurements. Thailand fell from 28th in 2006 to 38th in 2010 in the WEF reports. Meanwhile, Thailand advanced from 33rd in 2007 to 26th in 2010 in the IMD findings (Sujjapongse, 2011). While the Thai government could be criticized for failing by WEF standards, it could defend that it has progressed since 2007 by IMD’s measurements. However, the WEF places Thailand in a more competitive position in the top 27% compared to the IMD’s position among the top 44%. So which measurement should governments, business managers and scholars use? The methodology of this paper takes into account the difference in ranking approaches.

MATERIALS AND METHODS

The soundness of the fundamentals of a nation are tested in the nation’s ability to compete globally, especially when they lose preferential tax and tariff status. The global competitiveness of a nation may fluctuate over time and for some nations, from year to year. True performance has to be assessed over a reasonable duration to evaluate its consistency in progress or decline in competitiveness, much like the review of businesses for their historical performance to forecast future potential. The assessment will also reveal the issues that need to be addressed, and hence the implications for policy decisions.

As discussed earlier, there are two main sources of global competitiveness data: The World Economic Forum (WEF) and the Institute of Management and Development (IMD). The WEF measures 12 pillars of competitiveness comprising 114 indicators while the IMD evaluates four factors comprising 338 criteria.

This study will use both measurements to study the global competitiveness of the BRIC nations. The objective for this paper is accomplished in three stages.

1. Determining China’s Performance in BRIC

a) Country overall rankings over 15 years: An analysis over the last 15 years to determine the trends in growth or decline in competitiveness of each BRIC nation. The WEF data is selected as it provides a better picture of each nation’s competitiveness against nearly 150 nations.

b) Country overall rankings over three-five year periods: A comparison over three five-year periods, totaling 15 years to compare the growth of each nation from the first five years to the second five and finally, the last five years. This will also test each nation’s sustainability in continuous economic progress over the three five-year periods.

c) Country’s average rankings in 12 pillars or four factors of competitiveness in the last five years. This will provide a picture of China’s strengths and weaknesses relative to the Brazil, Russia and India.

Identifying Issues in China’s Competitiveness: China’s performance in the WEF 12 pillars and IMD four factors in the last five years will be analyzed. The performance in the last five years is the best predictor of China’s competitiveness in the next five years. The analysis will identify the strong and weak pillars and factors, yielding the issues for discussion.

Proposing Recommendations: The focus will be the weaknesses as they need improvement to enable China’s sustainable growth. Policy implications will be raised.

RESULTS AND DISCUSSIONS

Determining China’s Performance in BRIC

a) Country Rankings over 15 Years from
A Comparative Analysis of Global Competitiveness

2000 to 2014/15
Table 3 shows the country rank from 2000 to 2014/15 for each BRIC nation awarded by the WEF. The last column shows the average rank over the 15 years in one decimal place and the average rank will be rounded up in the continuing discussion. China has the highest average rank at 35th followed by India at 53rd, Brazil 56th and Russia 63rd. China is the only BRIC nation to have rankings in the last five years higher than its 15-year average.

Table 3. BRIC Global Competitiveness Rank over 15 Years from 2000 to 2014/15 (WEF)

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</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>45</td>
<td>44</td>
<td>46</td>
<td>54</td>
<td>57</td>
<td>65</td>
<td>66</td>
<td>72</td>
<td>64</td>
<td>56</td>
<td>58</td>
<td>53</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>56.1</td>
</tr>
<tr>
<td>Russia</td>
<td>54</td>
<td>63</td>
<td>64</td>
<td>70</td>
<td>70</td>
<td>75</td>
<td>59</td>
<td>58</td>
<td>51</td>
<td>63</td>
<td>63</td>
<td>66</td>
<td>67</td>
<td>64</td>
<td>53</td>
<td>62.7</td>
</tr>
<tr>
<td>India</td>
<td>48</td>
<td>57</td>
<td>48</td>
<td>56</td>
<td>55</td>
<td>50</td>
<td>42</td>
<td>48</td>
<td>50</td>
<td>49</td>
<td>51</td>
<td>56</td>
<td>59</td>
<td>60</td>
<td>71</td>
<td>53.3</td>
</tr>
<tr>
<td>China</td>
<td>40</td>
<td>39</td>
<td>33</td>
<td>44</td>
<td>46</td>
<td>49</td>
<td>35</td>
<td>34</td>
<td>30</td>
<td>29</td>
<td>27</td>
<td>26</td>
<td>29</td>
<td>29</td>
<td>28</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

Table 3 shows the fluctuations in rank over the 15 years of each BRIC nation. Combining the data from Table 3 and the trends in Figure 3, several observations could be made of the performance of each BRIC nation over the last 15 years.

- India has been declining in global competitiveness since 2006/2007 from 42nd rank to 71st rank in 2014/15 slipping by 29 places. India’s best performance was between 2006/07 and 2009/10 within the Top 50.
- Russia has been fluctuating in performance but managed to return to a rank within the range of the 50’s at 53rd in 2014/15, close to its highest rank in 2008/2009 at 51st. Russia’s best performance was in the Top 60.
- Brazil was declining in global competitiveness from 2001 to 2007/2008 but improved thereafter and managed to stay within the Top 60. Brazil’s highest rank was in 2001 at 44th.

China was fluctuating between Top 40 and Top 50 positions but progressed to Top 30 in the last five years since 2009/2010. China’s highest rank was in 2011/12 at 26th.

Figure 3. Global Competitiveness Rankings of BRIC from 2000 to 2014/15
Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

Throughout the 15 years from 2000 to 2014/15, China has maintained the best rankings in global competitiveness among the BRIC nations. India was a close second in 2003 but declined each year thereafter and by 2010/11, Brazil outperformed India. By 2014/15, India has become the weakest performer in global competitiveness among the BRIC countries. Russia has gone up and down but has beaten Brazil and India in rank by 2014/15. However, Russia’s economy is suffering from international sanctions for its role in the Ukraine civil war.

Table 3 and Figure 4 gives us a sense of the struggles of the BRIC nations through their fluctuating rank performance in global competitiveness.
competitiveness. Like corporate businesses which review assess their performance over five year periods, many countries have implemented five year economic plans to help them progress. The performance over the 15 years is next analyzed by five year segments to determine each BRIC nation’s progress from one five-year segment to the other.

b) Country Average Rankings over Three 5-Year Periods from 2000 to 2014/15

Figure 4 shows the average rank for three 5-year periods from 2000 to 2004, 2005 to 2009/10 and 2010/11 to 2014/15. India and Russia performed better between 2005 and 2009/10. The same period was Brazil’s worst performance, but Brazil reversed the decline and improved the average rank between 2010/11 and 2014/14. China has progressed from strength to strength over the three 5-year periods. China is the only country that has shown continuous improvement from 40th rank to 35th and 28th. The second best performer is Brazil, slipping from 49th to 65th and reversing the slide in the last five years to 54th. Although Russia fluctuated on a year to year basis, the average rank over the five-year periods showed little movement from 64th to 61st to 63rd. India became the worst performer by 2014/15 although it started well progressing from 53rd to 48th but slipped to 59th in the last five years.

![BRIC: 5-Year Average Rank (WEF)](image)

*Figure 4. Three 5-Year Average Rank from 2000 to 2014/15*

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

c) Country’s Rankings: WEF 12 Pillars and IMD Four Factors

The WEF 12 Pillars of Global Competitiveness

Figure 5 and Table 5 show the WEF’s rankings of the 12 pillars of competitiveness of each BRIC nation. While the Big Four enjoys a huge market size (Pillar 10) placing them among the Top 10 in the world, their similarity very much ends there. The WEF’s Global Competitiveness Report 2014/15 classifies India as a Factor-Driven economy, China as an Efficiency-Driven economy, Brazil and Russia as in transition from the second to third stage Innovation-Driven economy. Brazil leads the BRIC in Business Sophistication and Technological Readiness, while Russia leads in Higher Education and Training. India excels in Financial Market Sophistication. Overall, China leads in eight of the 12 pillars: Institution, Infrastructure, Macroeconomic Stability, Health and Primary Education, Goods Market Efficiency, Labour Market Efficiency, Market Size and Innovation. China is among the Top 10 in Market Size (2nd) and Macroeconomic Stability (9th) in the last five years.
A Comparative Analysis of Global

**Figure 5.** BRIC Average Performance in 12 Pillars of Competitiveness from 2010/11 to 2014/15
Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

**Table 4.** BRIC’s Average Performance in 12 Pillars of Competitiveness from 2010/11 to 2014/15

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>84.4</td>
<td>68.2</td>
<td>94.4</td>
<td>86.0</td>
<td>62.2</td>
<td>110.6</td>
<td>84.0</td>
<td>47.8</td>
<td>51.4</td>
<td>9.6</td>
<td>33.2</td>
<td>46.6</td>
</tr>
<tr>
<td>Russia</td>
<td>122.8</td>
<td>51.6</td>
<td>40.0</td>
<td>61.6</td>
<td>50.4</td>
<td>123.8</td>
<td>64.2</td>
<td>124.4</td>
<td>65.4</td>
<td>7.4</td>
<td>107.2</td>
<td>68.4</td>
</tr>
<tr>
<td>India</td>
<td>64.6</td>
<td>84.0</td>
<td>96.6</td>
<td>101.8</td>
<td>83.0</td>
<td>69.8</td>
<td>87.4</td>
<td>18.8</td>
<td>91.2</td>
<td>3.4</td>
<td>39.2</td>
<td>37.8</td>
</tr>
<tr>
<td>China</td>
<td>48.40</td>
<td>47.20</td>
<td>8.60</td>
<td>37.80</td>
<td>62.20</td>
<td>50.00</td>
<td>36.20</td>
<td>58.80</td>
<td>81.40</td>
<td>2.00</td>
<td>41.20</td>
<td>29.20</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

Does a nation’s political system influence the economic development of a nation? China and Russia rule by communist ideology while India and Brazil practise a democratic system. Although China is ahead in global competitiveness ranking, Russia is almost one stage ahead of China in economic development. Although India is English-speaking with the advantage for international business, Portuguese-speaking Brazil is almost two stages ahead of India in economic development.

The argument would have been that democratic countries espouse the virtues of capitalism and thus, should have soared ahead in economic growth. In the case of the BRIC, albeit among only four countries minus the rest of the world, Communist China is in the lead in capitalistic gains while India, a democratic and capitalistic nation is left lagging behind. Perhaps, the results could be explained by an ideologically classless communist society versus a religious caste-class system. The findings suggest that governments that share similar ideology may not necessarily administrate the country along similar lines. Each has their interpretation of how to administer communism or democracy that fit contemporary times and maximize economic gains for its people. The attention is now turned towards analyzing and comparing the BRIC...
nations’ pillars of competitiveness in each economic stage.

**First Economic Stage: Factor-Driven (20%)**

Figure 6 shows the first four pillars of competitiveness, weighted 20% for basic requirements that form the Factor-Driven economy, the first stage of economic development. On the average, each pillar is worth 5% weight.

China leads in each of the four pillars. Although China is criticized for human rights issues, China’s Pillar 1 Institution at 48th rank is far ahead of the other three nations. In terms of Pillar 2 Infrastructure, China leads at 47th rank with Russia a close second at 50th rank. China leads way ahead in Pillar 3 Macroeconomic Stability at 9th rank placing it among the world’s Top 10. China also leads in Pillar 4 Health and Primary Education at 39th rank.

![BRIC: Basic Requirements](image)

*Figure 6. BRIC’s Pillars of Competitiveness for Factor-Driven Economy*

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

**Second Economic Stage: Efficiency-Driven (50%)**

Figure 7 shows the six pillars of competitiveness, weighted 50% that enable the second stage of economic development, Efficiency-Driven Economy. On the average, each pillar is worth 8.3% weight.

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![BRIC: Efficiency Enhancers](image)

**Figure 7. BRIC’s Pillars of Competitiveness for Efficiency-Driven Economy**
Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

**Third Economic Stage: Innovation-Driven (30%)**

Figure 8 shows the last two pillars of competitiveness, weighted 30% that enable nations to move into the third stage of economic development, Innovation-Driven Economy. In this stage, each pillar is on the average worth 15% weight.

Brazil leads in Pillar 11 Business Sophistication at 36th rank but India and China are catching up both at 42nd rank, while Russia lags at 104th. China leads in Pillar 12 Innovation at 30th rank followed by India at 40th, Brazil at 49th and Russia at 68th.

![BRIC: Innovation and Sophistication](image)

**Figure 8. BRIC’s Pillars of Competitiveness for Innovation-Driven Economy**
Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

**Summary of BRIC Performance in the WEF 12 Pillars of Effectiveness**

As a summary, the findings from the annual Global Competitiveness Reports from the World Economic Forum shows that China leads in:

- All the four pillars which form the basic requirements for the first stage of economic development, known as Factor-Driven economy;
- Three of the six pillars in the second stage of economic development known as Efficiency-Driven; and
- One of the two pillars in the third stage
of economic development known as Innovation-Driven economy.

The discussion has thus far centered on the WEF findings. Next, the findings of another authoritative source, the IMD will be discussed.

The IMD Four Factors of Global Competitiveness

Figure 9 and Table 5 show the average performance of the BRIC in the four factors of global competitiveness measured by the IMD.

![Figure 9. BRIC’s Average Rank in Four Factors of Competitiveness 2010 to 2014](Image)

Source: World Competitiveness Yearbook from 2010 to 2014, Institute of Management and Development

Table 5. BRIC’s Average Rank in Four Factors of Competitiveness 2010 to 2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>46.6</td>
<td>39.8</td>
<td>55.6</td>
<td>32.6</td>
<td>49.4</td>
</tr>
<tr>
<td>Russia</td>
<td>45.6</td>
<td>42.2</td>
<td>42.2</td>
<td>53.2</td>
<td>37.6</td>
</tr>
<tr>
<td>India</td>
<td>36.4</td>
<td>21.4</td>
<td>38.8</td>
<td>25.8</td>
<td>53.6</td>
</tr>
<tr>
<td>China</td>
<td>20.8</td>
<td>3.4</td>
<td>33.4</td>
<td>27.6</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: World Competitiveness Yearbook from 2010 to 2014, Institute of Management and Development

The IMD findings show that China is ahead in three of the four factors of competitiveness: Economic Performance at 3rd rank, Government Efficiency at 33rd and Infrastructure at 28th. China is narrowing the gap with India in Business Efficiency with China at 28th rank and India at 26th.

Summary of WEF and IMD Findings

Thus, both the WEF and IMD findings concur that China is leading by 75% of the factors assessed: eight of 12 pillars of competitiveness in WEF and three of four factors of competitiveness in IMD. With the comparison of the average performance of the BRIC nations in the last five years completed, the investigation shifts to identifying the issues in China’s global competitiveness.

IDENTIFYING ISSUES IN CHINA’S COMPETITIVENESS

As stated earlier in the methodology section, China’s performance in the 12 pillars and four factors of competitiveness in the last five years will be analyzed as they will be the best predictor of China’s competitiveness in the next five years. The analysis seeks to identify the strong and weak pillars and factors of competitiveness. Subsequently, the weak factors and pillars will be the focus of study to identify the implications for policy that pertains to China’s sustainable growth.

Figure 10 shows a graphical comparison in China’s performance in the 12 pillars of global competitiveness over the last five years from 2010/11 to 2014/15.
Table 6 shows the ranks of each pillar achieved over the last five years.

Table 6. China’s 12 Pillars of Competitiveness from 2010/11 to 2014/15

<table>
<thead>
<tr>
<th>Year</th>
<th>Country’s Rank</th>
<th>Institution</th>
<th>Infrastructure</th>
<th>Macroeconomic stability</th>
<th>Health and primary education</th>
<th>Higher education and training</th>
<th>Goods market efficiency</th>
<th>Labour market efficiency</th>
<th>Financial market sophistication</th>
<th>Technological readiness</th>
<th>Market size</th>
<th>Business sophistication</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/2015</td>
<td>28</td>
<td>47</td>
<td>46</td>
<td>10</td>
<td>46</td>
<td>65</td>
<td>37</td>
<td>54</td>
<td>83</td>
<td>2</td>
<td>43</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>2013/2014</td>
<td>29</td>
<td>47</td>
<td>48</td>
<td>10</td>
<td>40</td>
<td>70</td>
<td>61</td>
<td>34</td>
<td>54</td>
<td>85</td>
<td>2</td>
<td>45</td>
<td>32</td>
</tr>
<tr>
<td>2012/2013</td>
<td>29</td>
<td>50</td>
<td>48</td>
<td>11</td>
<td>35</td>
<td>62</td>
<td>59</td>
<td>41</td>
<td>54</td>
<td>88</td>
<td>2</td>
<td>45</td>
<td>33</td>
</tr>
<tr>
<td>2011/2012</td>
<td>26</td>
<td>48</td>
<td>44</td>
<td>10</td>
<td>32</td>
<td>58</td>
<td>45</td>
<td>36</td>
<td>48</td>
<td>77</td>
<td>2</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>2010/2011</td>
<td>27</td>
<td>49</td>
<td>50</td>
<td>4</td>
<td>37</td>
<td>60</td>
<td>43</td>
<td>38</td>
<td>57</td>
<td>78</td>
<td>2</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>Average</td>
<td>27.8</td>
<td>48.2</td>
<td>47.2</td>
<td>9.0</td>
<td>38.0</td>
<td>63.0</td>
<td>52.8</td>
<td>37.2</td>
<td>53.4</td>
<td>82.2</td>
<td>2</td>
<td>42.2</td>
<td>30.4</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum

Table 7 and Table 8 shows the difference in rank between the average ranks of the country and each pillar or factor based on the WEF and IMD annual competitiveness reports respectively.

Table 7. Determining Strengths/Weaknesses and Prioritizing Issues (WEF)

<table>
<thead>
<tr>
<th>Issue</th>
<th>5-Year Average Rank</th>
<th>Difference with Country’s Rank</th>
<th>Difference %</th>
<th>Priority</th>
<th>*S/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>27.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P9 Technological readiness</td>
<td>82.2</td>
<td>-54.4</td>
<td>-195.68</td>
<td>1</td>
<td>W</td>
</tr>
<tr>
<td>P5 Higher education and training</td>
<td>63.0</td>
<td>-35.2</td>
<td>-126.62</td>
<td>1</td>
<td>W</td>
</tr>
<tr>
<td>P9 Financial market</td>
<td>53.4</td>
<td>-25.6</td>
<td>-92.09</td>
<td>2</td>
<td>W</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Reports from 2000 to 2014/15, World Economic Forum
The results are ranked from the greatest negative difference to the greatest positive difference. The negative differences are the weaknesses and the positive differences, the strengths. The pillars and factors that have lower average rank than the country’s average rank result in negative differences – weaknesses that deserve attention.

As resources are limited, the concerns have to be prioritized. Several approaches could be proposed to determine the prioritization of the issues. For example, one might argue that Pillars 11 and 12 Business Sophistication and Innovation deserve top priority as they are weighted heaviest at 30%, each worth an average 15% weight. However, the differences in rank between each of the two pillars and the country are lower than other pillars, indicating other pillars could weaken further without due attention. In addition, addressing the critical needs of Pillars 9 Technological Readiness and Pillar 5 Higher Education and Training could affect Business Sophistication and Innovation positively but focusing on Pillars 11 and 12 exclusively may not strengthen Pillars 5 and 9. Thus, the approach adopted in prioritizing issues is based on the greatest difference between the average ranks of China and each of its 12 pillars.

As the WEF’s 12 pillars are ranked among 144 countries in 2014/15, the negative differences exceeding 100% are ranked as Priority 1, negative differences exceeding 50% but less than 100% as Priority 2 and the rest Priority 3. There are two strengths and they are Priority 4.

The WEF sample country size at 144 is about 2.5 times larger than the IMD at around 60. Hence, there are smaller negative differences in the IMD analysis. Applying 2.5 times to the IMD difference percentage, there is one Priority 1, two Priority 2 and Priority 4 concerns.

Table 9 summarizes the priorities according to the magnitude of the negative differences from the WEF and IMD reports.

Table 8. Determining Strengths/Weaknesses and Prioritizing Issues (IMD)

<table>
<thead>
<tr>
<th>Issue</th>
<th>5-Year Average Rank</th>
<th>Difference with Country’s Rank</th>
<th>Difference %</th>
<th>Priority</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country’s Rank</td>
<td>20.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Efficiency</td>
<td>33.4</td>
<td>-12.6</td>
<td>-60.58</td>
<td>1</td>
<td>W</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>28.0</td>
<td>-7.2</td>
<td>-34.62</td>
<td>2</td>
<td>W</td>
</tr>
<tr>
<td>Business Efficiency</td>
<td>27.6</td>
<td>-6.8</td>
<td>-32.69</td>
<td>2</td>
<td>W</td>
</tr>
<tr>
<td>Economic Performance</td>
<td>3.4</td>
<td>17.4</td>
<td>83.65</td>
<td>4</td>
<td>S</td>
</tr>
</tbody>
</table>

Note: *S/W = Strength/Weakness

Table 9. Summary of China’s Global Competitiveness Issues

<table>
<thead>
<tr>
<th>Priority</th>
<th>WEF</th>
<th>IMD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P9 Technological Readiness</td>
<td>Government Efficiency</td>
</tr>
<tr>
<td></td>
<td>P5 Higher Education</td>
<td></td>
</tr>
</tbody>
</table>

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and Training

<table>
<thead>
<tr>
<th>2</th>
<th>P8 Financial market sophistication</th>
<th>Infrastructure Business Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>P6 Goods market efficiency</td>
<td>P11 Business sophistication</td>
</tr>
<tr>
<td>1</td>
<td>P1 Institution</td>
<td>P2 Infrastructure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3</th>
<th>P4 Health and primary education</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>P7 Labour market efficiency</td>
<td>P12 Innovation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>P3 Macroeconomic Stability</th>
<th>Economic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>P10 Market Size</td>
<td></td>
</tr>
</tbody>
</table>

**IMPLICATIONS FOR POLICY**

The recommendations for strengthening the pillars and factors are based on the Global Competitiveness Index in the WEF Global: Competitiveness Report 2014/15 which ranks the indicators of each pillar (Appendix 1), and the Factor Breakdown in the IMD World Competitiveness Yearbook 2014 (Appendix 2) which outlines the weaknesses of each factor.

**Priority 1**

Pillar 9 Technological Readiness: All seven indicators are below country’s rank of 28th of 144 countries with the highest rank at 51st for fixed broadband internet subscriptions/100 population, and the lowest at 120th for international internet bandwidth. The key recommendation is two-fold: (1) step up technology absorption and (2) promote internet usage. There should be incentives for foreign direct investors to effect technology transfer (ranked 81st), make available latest technologies (97th) and train firm-level technology absorptions, and policies that promote internet usage (75th) and mobile broadband subscriptions/100 population (78th). Pillar 9 is heavily dependent on Pillar 5 Education and Training to provide skilled manpower to operate and invent technology.

Pillar 5 Higher Education and Training: All eight indicators are below country’s rank. Secondary enrollment is ranked 72nd and tertiary education enrollment 85th. If there were a perception that China has excellent math and science education, the rank 56th dismisses it. The quality of education system at 52nd probably accounts for the poor rank in math and science education which in turn affects the quality of management school, 85th. The recommendation is that China increases enrolment at secondary and tertiary levels to improve quality of skilled workforce to enable technology absorption. The Organization for Economic Cooperation and Development (OECD) has identified Level 3 as the internationally-accepted level of literacy required to cope in a modern society. This roughly denotes the skill level required for successful high school completion and college entry (Reading the Future, n.d.). Level 3 literacy skills are needed to ensure investments can be recouped. Even in advanced countries such as Canada, about 48% of adults are below Level 3 affecting their ability to utilize new technologies, adapt to new responsibilities and absorb training effectively (Murray, McCraken, Williams, Jones, Shillington and Stucker, 2009).

Government Efficiency (IMD): Appendix 2 shows that the IMD ranked China in the last five among 60 economies or bottom 10% in social security contribution rate from employer (59th) and employee (58th), start-up procedures (56th) and start-up days (56th). The poor social security contribution rate means employees are not valued, resulting in little monetary support for retirement or disablement from a workplace accident. The high number of start-up days and procedures discourage entrepreneurship which limits business growth, maximizes employer power and minimizes employee value. China needs to upgrade the social security contribution rate to boost morale. The assurance of adequate financial support at retirement or disablement would enhance loyalty and promote creativity leading to higher productivity.

The capital markets (raising capital) are ranked 56th, state ownership of enterprises 54th, foreign investors 53rd, tariff barriers 52nd, redundancy costs (reduced need in demand for employees by a firm) 51st and cost of capital (total cost needed to bring a project to a commercially operable status) 51st. China has to reduce the high costs of operating a business and practise modern management with optimal number of skilled employees. In addition, China needs to implement policies that overcome the fear among investors and
entrepreneurs of state ownership of their businesses, especially when they become profitable.

**Priority 2**

P8 Financial Market Sophistication: Six of eight indicators are below country’s rank. Lowest ranked is legal rights index (the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, and thus, facilitate lending) at 85th and related are the soundness of banks 63rd as well as the regulation of securities exchanges 58th. Financial services are not readily available (63rd) or affordable (50th) and financing through local equity market (34th) could be improved. Although ease of access to loans (21st) and venture capital availability (13th) are performing better than the country’s rank, China needs continue to make available and affordable financial services as access to financing is the number one most problematic factor for doing business (Global Competitiveness Report 2014/14 p. 154).

P6 Goods Market Efficiency: 13 of the 16 indicators are below country’s rank and five indicators have sunk to the bottom 20% of the 144 economies. The number of procedures to start a business (135th), total tax rate (131st) and number of days to start a business (116th) reconfirm the IMD’s poor rankings in Government Efficiency discussed earlier. The low rank of imports as a percentage of GDP (130th) and trade tariffs (115th) to restrict imported goods and services may backfire when trade partner nations remove the General Preferential Tariff (GPT) status. For example, under Canada’s GPT rules, countries classified for two consecutive years as high or upper-middle income and have a share of world exports equal to or greater than one percent will have their GPT eligibility withdrawn. (Canada set to implement changes to General Preferential Tariff Treatment, n.d.). Other indicators that discourage trade include prevalence of trade barriers (54th) and burden of customs procedures (55th) – all these need rebalancing to enhance goods market efficiency.

Business Efficiency (IMD): Large corporation efficiency (57th) and international experience (57th) may be heavily influenced by national culture (14th) which is heavily egalitarian in a communistic environment. Poor auditing and accounting practices (55th), shareholder rights (54th) and regulatory compliance (51th) ultimately affect health, safety and environmental protection (50th), reflect poor finance skills (48th) and raise financial risks (48th). China has a critical need to improve transparency in these measures if it wants to gain international standing in global business community.

P1 Institution: 17 of the 21 indicators are below country’s rank and mostly between 40th and 80th rank among 144 economies compared to the extreme lower ranks discussed earlier. China has to improve in business costs of terrorism (85th) and provide better protection to investors (83rd). Similar to IMD findings, China needs to step up auditing and reporting standards (82nd), efficacy of corporate boards (78th) and ethical behaviour of firms (55th) to protect minority shareholders’ interest (67th). Police services have to increase in reliability to gain public trust (61st) to overcome organized crime (70th) and bribery (66th) and safeguard judicial independence (60th) against corruption. Further, China needs a more effective legal framework to settle disputes (49th), challenge regulations (47th) and enforce transparency in government policymaking (33rd), especially in diversion of public funds (45th). Other disconcerting policies that need redress is intellectual property protection (53rd) and property rights (50th).

P2 Infrastructure: Eight of the nine indicators are below country’s rank. The lowest rank is mobile telephone subscriptions/100 population (108th) crippling further technological readiness. As the second largest country in the world by land area, China has a critical need for an effective system of telecommunication. Even fixed telephone lines/100 population (59th) and quality of electricity (56th) are in short supply weakening communication and basic amenities for living. The quality of overall infrastructure (64th), air transport infrastructure (58th), port infrastructure (53th) and roads (49th) have to improve to match its railroad infrastructure (17th).

Infrastructure (IMD): By IMD competitiveness measurements, China’s internet bandwidth speed is the slowest among 60 economies, followed by subscriptions to mobile bandwidth speed is the slowest among 60 economies, followed by subscriptions to mobile
telephone (58th) and internet (52nd). Energy intensity, the measure of the energy efficiency of a nation's economy (57th) needs critical attention to drastically reduce pollution (60th), ranked the worst in the world. Human development index (54th) will be raised when medical assistance (52nd) and infrastructure for university education (55th) improve. Stricter intellectual property rights (52nd) have to be enforced to promote innovation. Inbound mobility (53rd) calls for transparency with information on mobile (foreign) students’ origin and their percentage of total tertiary enrollment.

P11 Business sophistication: Seven of the nine indicators are below country’s rank, but they are within the Top 40 among 144 economies. Local supplier quality (63th) is lowest ranked of the nine indicators, followed by production process sophistication (56th). Closing the gap between the country’s rank and business sophistication is not as wide as the indicators in the pillars under Priority 1. Talented managers from Hong Kong, Malaysia, Singapore and Taiwan as well as from Western nations could be recruited to help improve local managers’ ability to delegate (49th), broaden marketing (52nd), expand value chain (37th) and enhance competitive advantage (45th).

Priority 3

P4 Health and Primary Education: With a population of 1.36 billion (Data: China, World Bank, 2015), WEF’s health audit on China may indicate a tipping point after years of industrialization, placing China among the bottom 40 or bottom 30% of the 144 economies. Tuberculosis, an old foe is still lurking around (96th), and the difficult to cure HIV/AIDS (86th) are both impacting business. Although China has the lowest HIV prevalence (1st) by percentage of adult population, the infection rate has been rising. A serious outbreak in a country as large as China could significantly impact the economies of both China and the world. While China has achieved global tuberculosis (TB) control targets in 2005, there is still a relatively higher number of TB cases/100,000 population (84th) to eradicate. China has to inculcate personal hygiene habits against spitting and smoking in public which makes one more susceptible to TB while imposing stricter environmental pollution laws. Infant mortality/1,000 live births (62nd) should be effectively reduced to replace a greying workforce.

Although primary education enrollment is well ranked (4th), the quality of primary education is far behind (59th) resulting in lower enrollment in secondary education and even lower tertiary education as discussed under Pillar 5 Higher Education and Training. The Ministry of Education has to continue to ban gifting activities, fine teachers who accept gifts and parents who give gifts to teachers to ensure their children get “special treatment” (Zhao, 2014). Parents need the assurance that their children enjoy equal treatment at school and are taught by dedicated teachers who seek to educate and enhance the children’s intellectual abilities.

P7 Labour Market Efficiency: Eight of the 10 indicators are below country’s rank. The high redundancy costs (120th) are explained by the low hiring and firing (15th), especially with state firms. Flexibility of wage determination (84th) could be improved to respond faster to supply and demand of labour. Redundant workers in state enterprises should be upskilled with new trade skills that meet the needs of new industries. Gender diversity with women in labour force (60th), cooperation in labour-employer relations (58th) and reliance on professional management (43rd) ought to be promoted and enforced to enhance labour market efficiency.

P12 Innovation: Five of the seven indicators are below country’s rank. All indicators are within the top 30% of 144 economies, suggesting China is moving quickly in the innovation path. The ranks are close to each other with quality of scientific research institutions at 39th, capacity for innovation at 40th and availability of scientist and engineers at 43rd. University-industry collaboration in R & D is at an encouraging 32nd close to country’s rank, likewise PCT patents/applications per million people, 34th. Firm spending on R & D is 23rd and government procurement for advanced tech products at 10th which are higher than country’s rank. China should be commended for its aggressiveness in pursuing innovation. The need now is to step up manpower skills via secondary and tertiary education as well as re-skilling and up-skilling
to enable workers to utilize and operate technology related to the new innovations to speed up return on investment.

**Priority 4**

P3 Macroeconomic Stability: China has to be commended that only one of the five indicators in macroeconomic stability is below country’s rank. Government budget balance, % GDP ranked 50th is a head-scratcher considering China being ranked 1st in controlling inflation, 5th in gross national savings, 22nd in general government debt and 25th in country credit rating. The key recommendation would be regular, systematic and thorough checks to ensure expenditures do not exceed revenue. Some analysts suggested that showy investments such as the China’s glitzy Olympics at the cost of some US$40 million would cause a financial dent but the Olympics did not leave a debt legacy (Rabinovitch, 2008). However, unlike other countries that revealed budget details, it is difficult to access information on total costs vs. initial budget and taxpayer contribution. Checks, transparency and accountability would help improve the rank for budget balance.

P10 Market Size: Only one of four indicators are below country’s rank. China ranks 1st in foreign market size index, 2nd in domestic market size index and GDP (PPP$ billions) but exports as a percentage of GDP is a dismal 109th. Exports as a percentage of GDP is the exports of goods and services that represent the value of all goods and other market services provided to the rest of the world. Export growth has been a major component supporting China’s rapid economic growth. For example, China implemented policies that enabled foreign-invested factories to assemble imported components into consumer goods for export and liberalizing trading rights. In its 11th Five-year Plan, adopted in 2005, China placed greater emphasis on developing a consumer-driven economy to sustain economic growth and address imbalances. When then are exports as percentage of GDP ranked so low?

Horn, Singer and Woetzel (2010) found that China was one of the few countries that escaped the great 2008-09 global downturn without a major economic slowdown, suggesting that internal growth played an important role. Other analysts observed that China’s economy can be sustained by its big domestic market without a strong need for exports. For example, in 2007 net exports accounted for 18 percent of 14.2 percent GDP growth, but in the first half of 2011, they contributed a negative 0.7% of 9.6% growth but yet China is doing well (Perkowski, 2011). More recently, in the first quarter of 2013, China’s net exports equalled just 2.2 % of GDP down from levels of more than 8% during 2007.

Although China’s economy may not seem to be impacted by exports, Holland (2013) argues that the net export number does not tell much about the importance of external demand in driving China’s economy. Holland (2013) cited that Xing Yuqing and Manisha Pradhananga at the Asian Development Bank concluded that despite efforts to rebalance the economy towards domestic consumption, China is still highly dependent on demand from the rest of the world and that its growth remains highly vulnerable to external shocks. Thus, the key recommendation: China needs to generate demand from other countries for its products to sustain economic growth.

Economic Performance (IMD): Despite ranked number 1 in real GDP growth, China has several weaknesses that situate at the bottom 35% of 60 economies: direct investment stocks inward is 59th and abroad is 48th, exports of commercial services are 55th, GDP (PPP) per capita 55th, GDP per capita 53rd, tourism receipts 55th, food costs 48th and cost-of-living index 45th. These indicators do not augur well as China, the low-cost factory of the world is unable to hold down the high cost of living and drive demand for its products which suffer from a quality perception.

**CONCLUSIONS**

As this study is focused on global competitiveness, data may be over-reliant on the two most authoritative sources - the World Economic Forum’s annual Global Competitiveness Report and the Institute of Management and Development’s World Competitiveness Yearbook. Their different approaches and categorization of measurements render direct comparisons between them difficult. However, the advantage of their differences is that they enrich knowledge with
various perspectives and they serve to validate each other’s findings.

For example, while WEF surveys the most problematic factor for doing business, IMD asks respondents to rate the top five the most attractive factors of China’s economy. While WEF found access to financing, corruption, tax regulations, inadequate supply of infrastructure and inefficient government bureaucracy as the top five barriers to business, IMD found dynamism of the economy, cost competitiveness, policy stability and predictability, reliable infrastructure and competency of government as the top five most attractive factors. When examined, the two differing emphases are not that different as they are in reverse order of each other.

The discussion on economic competitiveness cannot negate other sources of information such as the World Bank (source to counter-check the definitions of the measurements of WEF and IMD), the International Monetary Fund and even Transparency International. The challenge then is to correlate the different categories of information of which much are similar. Further, the information from each source has been written for a specific audience, such as for investors, trade partner nations or non-governmental organizations and activist association, and in that respect, may not address the concerns of global competitiveness. China’s government sources of information, if accessible and reliable, would deserve attention, especially those related to the economic growth plans such as the 11th Five Year Plan from 2006 to 2010 and the present 12th Five Year Plan from 2011 to 2015 and the coming 13th Five Year Plan from 2016 to 2020. The 11th Plan was to sustain an annual growth of 8% and the 12th Plan is focused on clean energy sources for sustainable growth. The coming 13th Plan has been said to focus on China becoming a world leader in nuclear energy by 2020 (Asia Pacific Foundation of Canada, 2015).

The study of global competitiveness is extensive and continually evolving with nations rising and falling in ranks, year after year. Each factor, each pillar and each stage of development deserve more in-depth analysis to yield deeper insights to the challenges facing China. For example, Technological Readiness and Higher Education Training are two pressing needs and studies to address these issues would be of value to China. Scholars could attempt to identify correlations between factors such as between Government Efficiency and Business Efficiency. The studies on single factors/pillars or the correlation studies between factors/pillars may reveal significant findings that would help China move forward in the next decade.

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IMPRESSION MANAGEMENT FOR DIGITAL CORPORATE IMAGE

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Abstract

The official account of corporate social media is one tool in delivering campaign messages on social media through brand communication. Usually, the official account content of social media is made to attract public awareness about the company. This study aims to determine the impression of official social media accounts of service companies in Indonesia by using the concept of impression management in shaping digital corporate image. The research method used in this research is descriptive qualitative method. Primary data is collected by case study methods, observing the official YouTube account of telecommunications services and e-commerce services in Indonesia. The collected data is analyzed by reducing data, selecting data and categorizing the data obtained in accordance with the research objectives. The data validation used in this study is source triangulation, by interviewing social media practitioners to explore their opinions on how companies create content to form a certain impression. The results of this study show effective strategies that can be done to manage impressions on corporate social media accounts that can be applied in Indonesia. The research findings are known that impression management on corporate social media accounts can create digital corporate image, and the most effective social media platform for managing impression is YouTube, because the content in YouTube videos can have social value in life that is close to people's daily lives.

Keywords: Impression Management, Digital Corporate Image, Social Media, and YouTube

INTRODUCTION

At present almost all companies in Indonesia use social media to communicate with their internal and external public. Social media used for internal company communication is usually a type of chat room or social media which is a forum for users to interact or share information about something that is of mutual interest (Priansa, 2017). The platform used is usually the WhatsApp application, or even the message sharing network based on the company's official website. For external interactions, social media commonly used by companies are Facebook, Twitter, Instagram and YouTube. Digital growth has a significant influence on people's lives. People used to looking for information through conventional media, now most of them switch to using online media. This is showed by the increasing use of social media that continues to grow as the data is below. The ease and speed in the dissemination of information makes online media a means for the community to access information at this time.

Figure 1. Annual Digital Growth (Hootsuite, 2018)
Social media used by companies as an opportunity to get feedback, deliver messages with publications and promotions, analyze the characteristics of stakeholders, and interact. With this utilization, companies are helped to build perceptions and judgments of individuals or communities on the company or organization to be in accordance with the wishes, directed and effective.

The company that is the subject of this research is engaged in telecommunications and e-commerce in Indonesia. The two types of industries were chosen on the basis of consideration because e-commerce companies are the top in startup companies in Indonesia (Pratama, 2017) known as unicorn because they have a valuation above US $ 1 billion (IDR 13.5 trillion) in a relatively short time. Whereas the development of telecommunications companies in Indonesia in the digital era has faced considerable challenges in maintaining market share among increasingly diverse competitors.

Each social media company has to communicate with the public is tailored to the goals and characteristics of each social media platform. Social media can be a place to build a digital identity for a company. Managing performance displayed on corporate social media will affect the impression seen by followers and influence the company's self-presentation. This study aims to describe impression management on corporate social media to form corporate digital image by exploring (1) What social media are used by companies; (2) and impression management on social media in telecommunications and e-commerce companies in shaping digital corporate image.

LITERATURE REVIEW

This section will explain the concept of managing impressions in social media by looking at motivation and construction of impression management. This concept of image management uses a humanistic approach to the ways people manage their symbolic experiences. Public Relations plays a role in fostering relationships with the concepts of corporate image and ingrain (Ardianto, 2010). Social media is an Internet-based channel that allows users to interact opportunistically and selectively on their own, both in real-time and asynchronously, with a broad and narrow audience that gets value from the content that users bring up and the perception of interaction with others (Carr & Hayes, 2015).

Impression management in this study focuses on activities directed at the goal to shape the image and strength of the company (Kim, 2008) which is used as a guiding concept to examine what impression management is done by companies in the digital domain through their social media accounts

Users of social networking sites can choose their self-presentational rather than face-to-face communication, which provides an ideal arrangement for the management of the right shows as described by Goffman (1959). By making self-presentations online, users have the opportunity to think about which aspects of personality should be presented or which photos are delivered so that they can manage self-presentation more strategically than in face-to-face situations (Winter & Neubaum, 2016). Motivations that encourage the management of certain impressions and constructs such as where they are formed are two important components of impression management (Leary & Kowalski, 1990).

Motivation for Management of Impressions

Impression motivation in this study used to see what motivates the management of the impression that the company must have. Impression motivation is formed from aspects, impression relevance to goals, values of expected goals, and differences between desired and formed images. Motivation to manage impressions will increase when the impression you want to form is to fulfill certain goals. Purpose has a psychological effect in the formation of impressions because it can create hope, and form interpretations and memories (Uleman & Kressel, 2013).

Value of Expected Goals

The more specific objectives to be achieved in impression management, the motivation to manage the material presented in impression formation become stronger (Merkl-Davies &
The expected goals will be valuable in shaping motivation, so messages that can form an image must have a value that is understood and accepted by society.

**The Difference between The Desired and Formed Image**

Self-image of the company that has been formed can be different from the self-image desired by the company. The difference in images can be the motivation of the company in managing impressions, specifically that the self-image that has been formed is in accordance with the desired self-image. The emotional response caused by this mismatch of images can motivate activities to reduce mismatches (Vartanian, 2012).

**Construction Impression**

The impression construction in this study is used to find out what the impression of construction is done by the company through its social media accounts. The construction of impressions is formed from certain aspects such as self-concept, desirable and undesirable identity, limitation of role, target value, and the image that is currently owned and wanted to be formed (Leary & Kowalski, 1990).

Based on this concept, in this study, the construction of the impression of the company will be assessed based on the aspects of the desired company identity, online identity and digital corporate image in constructing the message on the company’s social media account.

**Desired and unwanted company identity**

The corporate identity referred to in this study are the components that facilitate the introduction of public targets towards companies such as logos, colors, and slogans (Khasali, 2009).

In managing impressions, companies limit their desired and unwanted identities. Desired identity is an identity that provides a positive image of the company on social media formed from (Ruslan, 2012) as desired by the target audience, showing impressive quality and quantity of service for the audience, presented with values of honesty, trustworthiness, and easily understood by the target audience. from the public response to the activities, achievements, and reputation of the company while conducting activities also arise from the aspect of the company carrying out social responsibility by caring about environmental sustainability, the use of environmentally friendly technologies and in improving the welfare of the surrounding communities.

Companies can develop the desired identity by claiming attributes that are consistent with that identity digitally through social media while remaining within the limits of reality. Whereas unwanted identity will cause a crisis in the company with widening conversations between followers and creating a negative impression on the company. The role played by the company in impression management is limited to creating interactive messages, the company constructs a message that raises people's curiosity further towards the particular impression they want to display.

**Online Identity**

Social media users are creative actors who use digital media as a tool to form, explore and develop themselves, sometimes in innovative ways. Social media users become agents who control, and master social media to shape the image (Bechmann & Lomborg, 2012). Online identity is formed in accordance with what is displayed by companies in the digital domain, through corporate social media.

**Digital corporate image**

Company image is an impression, feeling and public image of a company created from an object, society or organization itself (Ardianto, 2010). Various corporate images come from customers, company employees, competitors, distributors, suppliers, merchant associations and other public who have a view of the company. The task of the company in shaping its image is to identify the image like what it wants to form in the public eye.

Associated with this research, corporate image can be formed through online activities. Corporate images formed online are impressions, feelings and public images created by the community or organization from messages and interactions done in the digital domain (Feher, 2015), especially in corporate social media.
MATERIALS AND METHODS

The method used in this study is descriptive qualitative. Creswell (2013) said that the research must be able to develop relevant and true statements that can explain the actual situation or describe the causal relationship of a problem. Primary data was collected through observations of YouTube official account on both service companies and interviews with corporate public relations.

Primary data was collected through observations on the two official YouTube accounts of the companies and conducted interviews with public relations of each company. This research method uses a case study which is to provide a company description. Naturalistic observation studies are also called case studies (Cozby, 2009). Whereas According to Kriyantono (2012) Case studies are research methods that use various data sources to describe and explain comprehensively various aspects systematically (Kriyantono, 2012). In this case study that will be explored is YouTube video content from both companies. To complete the case study, secondary data was added from the journal literature related to social media.

Data analysis is done through data reduction. Data reduction clarifies into certain categories, sorting out data that is less valid and gives meaning to data, researchers theorize to explain and debate (Kriyantono, 2012). Data obtained from observations Video content is grouped according to the purpose of the research, which is to find out how to manage video content for Digital Corporate Image.

After analyzing the data, the next step is data validation using triangulation of sources from social media practitioners. Triangulation sources compare or check the degree of trust in information obtained from different sources (Kriyantono, 2012).

RESULT AND DISCUSSION

The results of this study answer the problem questions about the selection of effective social media companies and how the management of impressions carried out by telecommunication and e-commerce companies that are the subject of this research through the company's YouTube social media account.

Effective Social Media

Social media has developed into a very broad platform. Not only as a resources for exchanging messages from one individual to another, but a company currently uses social media as a resources of disseminating information to the public and vice versa.

Based on this research, the subject research (telecommunication company and e-commerce) using YouTube to become their company main social media for their digital campaign.

YouTube is a popular video sharing website where users can load, watch and share video clips for free (Faiqah, Nadjib, & Amir, 2016). YouTube founded by Jawed Karim, Chad Hurley, and Steve Chen, who were three former PayPal employees in 2005. YouTube has a mission, giving freedom to express opinions and show everyone, and the values YouTube upholds regarding freedom of expression, freedom of information, freedom to use opportunities, and freedom to have a place to work, make many people use the container they provide (YouTube, 2018).

Based on this research, YouTube is used by companies as the main social media platform because (1) Effective for Promoting Business because of the large number of users. YouTube is the most social media with active users in Indonesia, at 43% (Hootsuite, 2018).

![Figure 2. Most Active Social Platforms (Hootsuite, 2018)](image)

(2) The content presented on the YouTube platform can be maximized because it is a combination of text, video and audiovisual with the quality of images and sound above the standard of other social media platforms. This platform also allows the company to choose unique and optimized themes and titles.
Impression Management for Digital

According to the potential keywords that are most likely to be typed in a search (hash tag).

(3) Can Maximize Website SEO (Search Engine Optimization). Since YouTube acquired by the Google Company in November 2006, this video-based social network has indeed been placed and will always appear on the top page of Google search engines as a special menu. With the combination of website content and YouTube channels that the company has, the great potential seen on the top page of Google search will be even more wide open. By being the top in Google search, of course, it will be more likely to attract more consumers and customers for the business.

YouTube's growth is one of the most amazing things and is a characteristic development of new media networks. In one year the formation of YouTube, this platform was purchased by Google at a price of 1.6 billion US dollars. YouTube was developed in response to a growing online video ecology. The total active YouTube users in a month reached up to 1.9 billion users (Aslam, 2018).

YouTube's mission, giving freedom to express opinions and show everyone, and the values YouTube has upheld, namely freedom of expression, freedom of information, freedom to use opportunities, and freedom to have a place to work, make many people, especially in Indonesia take advantage of the platforms they provide (YouTube, 2018).

In addition, the results of the study indicate that the use of the YouTube platform is felt more appropriate to the target market that actively meets information needs through watching on YouTube.

Impression Management

One that motivates impression management is the relevant goal. The goals in social media campaigns can be as follows (Dodson, 2016): (1) Business goals, namely the goal of increasing sales and lowering costs such as the cost of advertising; (2) Customer service goals, namely for the purpose of increasing customer satisfaction, an opportunity to be referenced; (3) The product goals are social media campaigns aimed at research, product design or product quality improvement; (4) Communication goals, to build a reputation and brand personality; (5) Marketing goals, for the purpose of branding, increase awareness or engagement.

Based on the results of the study, the goal that motivates companies to manage impressions is to achieve business goals in the form of increasing sales and communication goals to shape the company's digital image.

Furthermore, the company was motivated by the goal of harmonizing the current image with the image formed on social media, for which the company constructed an impression.

Construction Impression

Based on research, there are differences between the construction of messages in mainstream media and social media. Social media emphasizes the interaction between the company and its stakeholders and the communication is multi-directional. Messages on social media do not need to use the 5 W + 1 H principle and contain complete information from the company.

The important thing to consider is the element that can lead to interaction between fellow followers rather than the interaction between companies and followers. Unlike the case with mainstream media (TV, Newspapers, Magazines) whose communication is one-way and contains complete information using the complete writing principle of 5 W + 1 H.

In the digital age, almost all companies utilize digital technology and carry out their promotions using social media. To win competition in the digital world, companies need to have their own digital corporate image.

Construction of Impression forms a digital corporate image of a telecommunications company

The telecommunication mini series video company that is the subject of this research tells the story of several job profession representatives in carrying out their duties in various areas that are difficult to reach. Videos are presented in the form of pictures that tell stories equipped with narratives that explain the story of each character told.

Based on the results of the research on mini series videos, the message was conveyed through YouTube videos and has tag (#) in a
transparent manner, which is free, clear and easy to understand; with the internet porosity concept, that is, videos provide information about products, and become a medium for corporate communication with the community, the internet as a message agent is widely conveyed through online networks, the rich in content and reach information presented in videos is diverse and is expected to touch every level of society.

The impression formed through the video is the reliability that the company provides the best services and has superior products, credibility that the company has a good history and consistently provides good service in the form of stable signals in each region, trustworthiness companies have superior products the responsibility of the company to carry out social responsibility properly.

Based on this research, the company's digital image formed from impression construction is a strong corporate character in facing challenges with optimism, the company is fully committed to service and customer satisfaction and always wants to be the best so that it can become a reliable telecommunications company to be used throughout Indonesia.

Construction of Impression forms an e-commerce company's digital corporate image

The mini video series by e-commerce companies tells the story of young people who have aspirations but because of various things doubtful in trying to realize these ideals. E-commerce companies appear to be encouraging young people to dare to start a business to realize those ideals. Videos are presented in the form of pictures that tell stories equipped with narratives and texts that explain the stories of each character told.

Based on the results of the research on mini series videos, the impression in construction is through the message delivered and the has tag (#) that is used simply, which is easy to understand and easy to remember; unexpected video created with the concept of stories that are out of the box, different from others, not predictable, persuasive makes people want to use the services offered by the company, curious about platforms provided by companies, entertaining and arousing emotions or feelings of the people, relevant to use associations, analogies, metaphors, hyperboles contained in videos with advertised services, acceptable, videos can be well received by the community because they are in accordance with the prevailing culture in Indonesian society. Based on the results of the research, through the video mini series that are on the official YouTube account of the company can create a good impression on the company,

Based on the results of the research, the good impression constructed based on the message of the video above is the personality of a young, cheerful, dynamic, and trustworthy company, a company that is committed to supporting the optimism of young people to achieve their goals, values/corporate culture that cares for customers and makes it easy to achieve its ideals and corporate identity in a video logo that is easily visible throughout the video playback, has tag (#) and slogans used are easily understood and ingenious because they are implemented throughout the video, the colors of the clothes, accessories and backgrounds in this video use the color of corporate identity making it easy to recognized.

Digital corporate image that formed is that the company is close to young people, and has a concern to realize the dreams of young people, not just being an e-commerce company that provides the need to support those ideals.

Based on the results of research and discussion, an impression management model can be formed in social media to form the digital corporate image as follows:
Impressions formed by the company are influenced by the motivation of how the public sees so that the company maintains the image that has been formed now to form an online identity. Online identity maintained to be consistent with the way people perceive the impression of the company to create digital corporate image. Based on this research the management of impressions on YouTube corporate official accounts is one of the effective ways to shape digital corporate image in Services Company in Indonesia.

CONCLUSIONS
Based on the results of the study, it can be concluded that the social media platform YouTube is the main choice for forming the company's online identity. Impression management by knowing the goals that motivate and construct impressions with values that can be understood by society in social media can form digital corporate images. The impression of being managed by the company on social media is to attract interaction between followers who ultimately fulfill the goals that motivate the management of these impressions.

Effective management of impressions on corporate social media is expected to have positive implications for the business. The ultimate goal in image management is to persuade the public to make purchasing decisions. Based on the results of the study, in practice the management of impressions on corporate social media has not directly presented data on its effect on sales recall. Although it is recognized by the informants that the purpose is implicitly also expected by the company and not impossible to achieve and measured in the future if the technology is increasingly sophisticated and there are applications that can support it.

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THE TATTOO AS ANCESTRAL LEGACY AND DICHOTOMIC ELEMENT OF NATIONAL IDENTITY

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Abstract

Nowadays, tattoos are associated mostly with fashion; nevertheless, tattooing can constitute a tool of national identity due to its ancestral relation with the Latin American native culture. With regard to the art of the state, no work can be found that analyzes this specific topic. This paper discusses the determinant footprint of ancient symbols in the culture and its actual use as a national identity element. The study uses a deductive method and qualitative analysis to clear the situated premises and ascertain the problem solution through the use of ancient icons in tattoos as identity symbols, which may be reconstructed from the consideration that supports the national proud and development. Although the results still present a low percentage of users, there are citizens who don tattoos. The concept about its representation is positive, and the use of tattoo as an element of identity was found among 50% of citizens. This leads us to conclude that it is, indeed, used in this sense and that the trend could progressively increase. In order to validate this premise, a quarter of the population was necessary.

Keywords: Tattoo, identity, ancestral Ecuadorian tattoos, ancestral American tattoos, Semiotics.

INTRODUCTION

The tattoo corresponds to the traditional practice of tracing systems of signs in the body, modifying the skin with multiple faiths, and considering social and antisocial objectives. This ritual is manifested worldwide, which shows the sequence of its migration as well as its historical and geographical distribution. Tattooing, the process of inserting pigment into the skin to create permanent designs and patterns, appeared on human mummies in 3200 BCE and was practiced by ancient cultures throughout the world. (Krutak & Deter-Wolf, 2017). View of tattoos and tattooed people in the Western world has improved dramatically, as opposed to twenty to thirty years ago, when tattoos were primarily seen as a trademark of the working class (construction workers, sailors, soldiers, and so on) individuals or criminal elements (DeMello, 2000). The aim of this study involves defining its changes until it became an element of national identity.

The objective established the tattoo as a dichotomic element of the national identity. In other words, clearing the hypothesis about the ancestral relationship of the same, as it relates to our aboriginal cultures, through the determination of the art of the state in order to generate a possible mitigation related to the problem, which represents the absence of identity in the development of people.

The general objectives are situated in the determination of the most representative or known tattoo parlors through Google search engines. To ascertain if individuals wearing tattoos existed, which were associated with the rescue of the national culture, surveys of
representative samples were conducted to obtain more rigorous results that validated the fact that the tattoo is a mechanism to increase the identity. Carrying out qualitative analysis is a common practice in cultural studies, which is supported by Semiotics. Nevertheless, a comparative analysis was carried out in this work to determine if tattoo use is prevalent in the American continent and the kinds of signs used, with the deductive method employed to collect more rigorous data.

LITERATURE REVIEW

Tattooing, the practice of inscribing the skin with permanent designs and patterns, is a global and indefinably ancient practice. Historical and archeological evidence shows tattooing was practiced throughout the world in the ancient times, and indigenous cultures from every continent except Antarctica included tattooing as an essential element of their cultural fabric. Both the body marks and the tattooing process acted with the aim of negotiating relationships between individuals and their society, nature, and the spiritual realm. Depending on the culture and time period, indigenous tattoo traditions have functioned to signal entry into adulthood, reflect social status, document martial achievement, demonstrate lineage and group affiliation, and channel and direct preternatural forces (Krutak, 2007; 2012; 2014a, 2014b). Tattooing in the West was a common practice among the first sailors of Captain J. Cook, who arrived in the territories of Oceania, popularizing it in the other places visited by these sailors (Ganter, 2005). Although in the West, the tattoo has had other functions apart from the hierarchical and aesthetic. Technically speaking, a tattoo is a lasting pattern, picture, or mark accomplished by making punctures in the skin, into which pigments are inserted. In the past, tattoos were not used to create individual identities. They were a collective cultural project, which constituted particular social markers. Sometimes, they conceived a spectacular appearance when everyone shared the same design in a tribe; in other cases, they were used as initiation rites or symbols, which constitute the fact of having reached the age of majority (Simons, 2015).

The oldest actual tattoo identified to date appears ca. 8000 BP as a “moustache” on the upper lip of a mummy from the Chinchorro culture of South America (Allison, 1996), which shows that the tattoo is neither a recent element, nor an alien practice. In Ecuador, tattooing dates back to the period of the Coast Development, 500 years before, up to 500 years after Christ, and is evidenced through the Jama Coaque, Bahía, and Guangala cultures and their corresponding vestiges of tattooing tools found. The tattoo had its beginnings in the Amazonian indigenous tribes as healing and religious symbols. Tattoos reflect a journey through the symbology of the human being. They are traces which shape our identities from the resistance of not detaching ourselves from our roots to raising new imaginaries that improve pride and appreciation of our own. America (considered a continent and not a country) is an appropriate example to show the journey of the tattoo from the icon, because the research considers U.S. and reviews Mexico too, as a case study of identity through tattoos to finally reach Ecuador.

Considering what was mentioned above, evidently, the topic is an issue that deserves treatment from the generation of identity and the struggle for sociocultural claims, identifying previous ancestral relationship, as was done in this introduction. Tattoos were found in the studies of Alison in Chinchorro, in the Tarapaca region of Chile, which considered the oldest evidence on mummies in world history. (Arriazza, 2003). The studies in the paper The World’s Oldest Tattoos confirm that Tyrolean Iceman, which is known as Ötzi, presents the world’s oldest preserved tattoos. (Deter-Wolf, Robitaille, Krutak, & Galliot, 2016).

The point is that, according to this study, if the Chinchorro mummy is not the oldest, whose mention has been disputed with Latin America, and constitutes an ancestral legacy and not a mere alienation. Globally, the real intention of the tattoo has been transgressed, which in a way creates stigma and segregation. The evidence of it is on those people who have chosen to wear it, not only for fashion or other aesthetic reasons, but symbolic causes too. One would constitute the national identity and the elements of its respective semiosphere, since the tattoo is...
a mechanism of cultural identity, as long as it is testimony that there are users who carry symbols of ancestral character in their skin as a symbol supporting this argument. Semiosphere space is a condition and necessary prerequisite for the implementation of communications and the existence of languages and their work. Language in this context is considered as a function, a clot of semiotic space. It is about the space in which all participants of communication are initially immersed, and which ensures the operation of the device consisting of the addressee, the addressee and the channel connects them.

Only in this space is semiosis possible (Lotman, 2005). In this sense, the tattoo is analog to the language, because it communicates something. It has its own space with a system of signs, which is decoded during this work, constituted in its semiosphere, and is concerned with nationalism. National identity involves one’s identity or sense of belonging to one state or to one nation (Tajfel & Turner, 1986). It is the sense of a nation as a cohesive whole, represented by distinctive traditions, culture, language and politics. National identity may refer to the subjective feeling that one shares with a group of people about a nation, regardless of one’s legal citizenship status (Guibernau & Smith, 2004). National identity is viewed in psychological terms as “an awareness of difference,” and a “feeling and recognition of ‘we’ and ‘they’” (Lee, 2012). The expression of one’s national identity is viewed in a positive light as patriotism, which is characterized by national pride and the positive emotion of love for one’s country (Ashmore, Lee, & Wilder, 2001). The importance of cultural identities in development processes is crucial to encouraging people in building their personal human experiences and values, defining their requirements, and dealing with them to find the opposite satisfactory solutions. But often, the self-determination opportunities depend on the power of identity in the socio-political system (Cucina, 2015).

There exists an engaging discussion involving several authors about the concept of identity. Among the most notable are Enrique Adoum (1998) and Pareja (2004). Another author Ulloa promotes the debate on the construction of Ecuadorianity, of the Ecuadorian, and of the country in which these people live. One of the phenomena that impedes this construction is the negation of what Ecuadorians are, since people live on appearances by concealing their own roots (Ulloa, 2010). In this sense, we pretend to be others many times, as our own origins are unknown, and when the rejection of others by their surnames and economic position becomes evident, calling them: “longos,” “montubios,” “cholos,” “runas,” “blacks,” “colorados,” “morenos,” “indios,” and “monos”, all the words are denominations, produced by the racial mixture. (Ulloa, 2010). Ecuador’s identity problems do not only go through ignorance, but also through the denial of the ancestors, roots, and so on. Equatoriality must be thought of as the possibility of generating meanings of belonging, inclusion of respect, and pride in what the Ecuadorians are, what they have, and how they value it (Ulloa, 2010). According to Enrique, Adoum (1998) is the deepest and most vigorous root that the people and the individual have cast in history, which is made up of the following: ethnicity, language, religion, and ethic conscience of nation; that is to say, feeling Ecuadorian. (Adoum, 1998). It establishes the way in which an Ecuadorian sees other Ecuadorians, places a reflection on the anti-Ecuadorian, that is the Ecuadorian, based on historical, social, economic and unfortunately political facts that led to be what these people are nowadays (Adoum, 1998). Although works such as these pretend to help reconstruct this obligatory identity, as people, who have an emergency to have it, generate a real development around it. The book Ecuador particulates signs, deals with the individual identity of the inhabitants, often determined by the geographical zones of Ecuador, as well as the language, because this one communicates something, has its own space within a system of signs, decodes during this work, and constitutes its semiosphere, which concerns nationalism.

According to Pareja (2004), the schizophrenic national identity can lead a country to its dissolution, to crumble, and fall apart. “Ecuador is a schizophrenic country, mentally and emotionally split. This psychiatric concept refers to a fragmented personality of...
the individual that, due to this dysfunction, can reach absolute madness” (Pareja, 2004). Both Adoum (1998) and Pareja (2004) focus on identity as an engine for development or for the failure of a country. However, there are authors who pose a different position. Ivan Carvajal mentions that the basic problem of Adoum (1998) and Pareja (2004) essays is that they presuppose the existence of an “Ecuadorian being,” a “national subject” already given and established, when in fact what exists is a sociological fictionalization of a conceptual character on an imaginary: “the Ecuadorian,” “the Ecuador,” and “the Ecuadorianism.”. The images that are chosen to be tattooed in some way leave an undiscovered identity with a view to help the identity emerge through its affirmation of the image.

These signs acquire several characteristics depending on the use and subjectivities of each one of the modified bodies coexisting as identity symbols (Santillán & Javier, 2011). In Costa Rica, there are 400,000 people with at least one permanent tattoo on their body, that is 12.5% of the total population; also, 20% of the young people between 18 and 29 have at least one tattoo. Nevertheless, that percentage drops to 3% among those who are 50 years old or older (Universidad de Costa Rica, 2016). The Strategic Communications Office of Mexico (GCE) conducted a survey, which indicates that 74.2% of people tattooed or pierced think that it was an obstacle for them to get work. This data contrasts with what the companies said: 55.3% said that would hire someone with piercings or tattoos, while 36.6% answered in favor of not doing it for any reason (“Al 74% de las personas tatuadas o con piercing se les dificulta encontrar empleo", 2013).

In the U.S., 36% of military veterans and those that currently serve the army have tattoos and 30% of all college graduates in the U.S. have tattoos, 36% of the population between 18 and 25 years have at least one tattoo, the percentage increases to 40% among the population of 25 and 40 years, and decreases to 10% among Americans aged between 41 and 64 years. The U.S. has more than 20,000 tattoo parlors. This number increases by one every day, and its citizens spend 1.65 billion dollars a year on tattoos. (History of Tattoos, 2018)

According to data from the Canadian Medical Association (CMAJ) and the community executive, 12% of Europeans are tattooed. Spain is among the countries of the European Union (EU) with stricter legislation when it comes to regulating tattoos. (The National, 2017). Currently, like in Mexico, in Ecuador, religious subjects are chosen by the clients of tattoo parlors. People who opt for this decision affirm that religious images provide a spiritual and protective value. Each country has its religious icons: Mexico has the Virgin of Guadalupe, Ecuador has la Virgen Dolorosa (Sorrowfull Virgen) or el Sagrado Corazón de Jesús (The Sacred Heart of Jesus). The national identity is not so marked, as in some neighboring countries, but there are different representative designs such as Aya Huma (from kichwa: energetical origin guide) or those cited in the results, as the most symbolic of the moment of embodying the love of the homeland (Santiago & Loco, 2017). Nicholas Thomas, director of the Museum of Archeology and Anthropology at the University of Cambridge, says “People are not just British or Australian or Californian, our identities are much more particular, are linked to our interests, related to cultural or spiritual traditions, tastes in music and subcultural loyalties.” The tattoo has become a vehicle for that particular type of identification (Simons, 2015).

**MATERIALS AND METHODS**

The proposed methodology is supported across 50 search engines to determine the most popular tattoo parlor. Surveys would be conducted to obtain information of one representative sample relative to 3,400 individuals of both genres, between students and professionals of the different Ecuadorian careers and universities, and between an age range of 17 to 61 years of several professions.

The paper is organized as follows: Section II situates the study context in which the phenomenon was observed. Section III carries the description of the methodology used, Section IV presents the results obtained from this study. A discussion of the results is presented in Section V. Finally, the literary support is presented in the bibliography.
RESULTS AND DISCUSSIONS

These show that the tattoo maintains a close ancestral relationship, as was validated in the art of the state. Utilizing the advantage of the search engines by the social networking site, it was possible to know about the work of tattooists from five countries: Ecuador, Mexico, the U.S., Jamaica, and Venezuela. It was possible to situate the tattoo semiosphere, which is decoded by the system of signs and manifested in different semiotician proposes: the ritual where the master tattoo translates with great care the sign selected for the client. In practice, is possible to distinguish “sender-receiver,” signified-signifier, if it is thought like dyad, or if is the triad case: referent, representamen, an interpretamen, an anchorage (tattoo-by tattooist) (the client original idea: signifier) and relay (tattoo-symbol-client: signified) (personal sign, the tattooist is an actant, and the client is the actor).

The basic semiosphere is manifested in the system of signs present to represent the tattoo as a nationalist way, in icons and symbols like: religious images, ancestral images (aborigine symbols), and the representative images, which provide a proud character to the citizen (personages, soccer teams, known objects between these landscapes, plants, animals, paintings like Guayasamín motives, among those found at work.

Venezuelan Tattoos

Figure 1. Flag of Venezuela.
Source: Madrid art tattoo

Mexican Tattoos

Figure 2. A watercolor macaw
Source: Shaman body modifications

Figure 3. Virgin of Guadalupe
Source: +deMX, 2016

Figure 4. Catrina
Source: fraktalstudio, 2017

USA Tattoos

Figure 5. Army
Source: Patrotic, 2017
Trujillo, Mónica S., Alvarez, Víctor V., Morales, Lorena C., Ayala, Eunice, & Manosalvas, Teresa S.

Figure 6. Army 2
Source: world_tattoos_magazine, 2018

Figure 7. Liberty statue
Source: Patrotic, 2017

Figure 8. Uncle Sam gas mask

Jamaican Tattoos

Figure 9. Jamaican flag and island

Figure 10. Bob Marley

Ecuatorian Tattoos

Figure 11. Dolorosa virgin

Figure 12. Soccer teams supporters (Coast & Highland)

Regionals

Figure 13. Highland: Ava Huma
Source: El Ajicero
The results obtained in the tabulation of surveys in relation to the first question defines the tattoo in a word: Art with 27%, expression, drawing and mark with 5%, and 55% use different words according to their concept (Figure 19).

For the question number two, 80% of the population considers that having a tattoo is acceptable, which demonstrates a tolerant society, open to the ancestral exposed in the last question. The 20% who gave a negative response stick to social stereotypes like if having a tattoo generates problems getting a job, as a symbol of crime and generates rejection societally (Figure 20).

Next, the population was asked what they would tattoo on their body, which gave the following results: 13% have not defined the
tattoo on their skin, while 9% would tattoo letters, words or phrases, 4% animal population, and 3% an element of nature such as flowers, sun or moon, and finally 55% of the population opt for personalized designs that represent experiences, memories or personal tastes (Figure 21).

![Figure 21](image1)

In the question five, do you will wearing a tattoo with an ancestral design like a “diablo huma, o Inty,” evil 28.2% would choose an ancestral motive for a feeling of identity and patriotism, while 72.8% would not consider this option because they did not like this kind of elements (Figure 22).

![Figure 22](image2)

In the last question: Do you consider that spreading the ancestral motives in the art of tattooing could support to generate national identity? 50% of the population provided an affirmative answer. Since it considers that it could be a way to promote culture in addition to rescuing an ancestral art, the repowering would be given through diffusion: when the meaning of the chosen design is asked, or when is just appreciated like a tendency. Negative responses are supported by religious beliefs, tastes, and other alternatives to promote national identity. (Figure 23).

![Figure 23](image3)

CONCLUSIONS

It is concluded that, in fact, the tattoo constitutes an ancestral legacy in Latin America. Although the group of researchers, who are cited in the first part of this work, affirm that Otzi is the oldest mummy, this is not the case, having not been mummified as such, but frozen. For this reason, it is not constituted as mummy, so there is a difference between mummy and vestige. Then, the mustache mummy of the Chinchorro should be still considered as the oldest mummy, surpassing those of Egypt. Finally, as it was mentioned before, in fact, the tattoo would be considered an ancestral element.

Regarding whether it constitutes a dichotomous element that contributes to national identity, this premise has also been validated, as shown in the results, in the American continent. In Mexico and the U.S., there are samples about traditional icons and symbols considered as tattoo election. In the case of the U.S., as was shown, the rates are quite high. Ecuador is a country that is not an exception, although the percentage is still low; therefore, it constitutes a dichotomous element for its national identity.

The religious themes as symbols of protection are the most chosen and the images vary according to the country. For example in Mexico, people wear Guadalupe Virgin tattoos and in Ecuador, the Dolorosa virgin, but they have the same meaning: protection, gratitude, blessing and success. Hence, the diffusion is born when the tattoo acquires a strong meaning for people and expresses it freely without realizing that they are part of a culture that has years of history and meaning, according the
tattooists’ point of view. More than a national identity, it is possible to say that exists a “regional identity,” as is evident that each individual loves and goes out of his way for his cradle. This is the case of the Ecuadorian people, and this criteria is also evident, for example, with soccer teams tattoos.

Specifically, the symbols that represent the national identity in the country are specific: Highlander (Diablo Huma), Amazon (Jaguar), Coast (Dios Sol, Ecuadorian beaches) and Insular Region—Galapagos (turtles, the islands, Charles Darwin), as these constitute motives of nationalism that are expressed through an image that the client proudly carries all through his or her life. Many people, who choose traditional national symbols, get in the skin of the Ecuadorian culture, of the national identity, national symbols, get in the skin of the her life. Many people, who choose

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INSTRUCTION TO AUTHORS

MANUSCRIPT PREPARATION

Regular articles are full-length original empirical investigations, consisting of introduction, materials and methods, results and discussion, conclusions. Original work must provide references and an explanation on research findings that contain new and significant findings.

Generally, these are expected to be between 6 and 12 journal pages (excluding the abstract, references, tables and/or figures), a maximum of 80 references, and an abstract of 100–200 words. Articles must be in English and they must be competently written and argued in clear and concise grammatical English. Contributors are strongly advised to have the manuscript checked by a colleague with ample experience in writing English manuscripts or a competent English language editor. Linguistically hopeless manuscripts will be rejected straightaway (e.g., when the language is so poor that one cannot be sure of what the authors really mean). This process, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

Empirical research is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief.

Key characteristics to look for:

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- Definition of the population, behavior, or phenomena being studied.

Description of the process used to study this population or phenomena, including selection criteria, controls, and testing instruments (such as surveys).

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This page should start with the full title of your manuscript, NOT exceeding 25 words. The title then should be followed by complete names of all authors, institutions of each ones, full address (street names, telephone number including extension, mobile phone number and e-mail address) for editorial correspondence. For manuscript with multiple authors, name of the first author should be indicated by putting it in the first place, followed by the rest of co-authors’ names. To indicate the corresponding author, put a (*) mark after the name.

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Multiple authors with different addresses should be indicated by putting superscript numbers after each of their names as well as on their addresses.

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Page 3: Abstract
This page should begin with repeating the full title of your manuscript, followed by the abstract and keywords.

Abstract should contain the aim of the study, research methods (data collection procedure, data analysis procedure) and research findings/results. Abstract should NOT be more than 250 words. Use Times New Roman, 12pt. and 1.0 line spacing.

Keywords: should be provided in alphabetical order to describe the contents of the research, NOT more than eight words.

Page 4: Introduction and the rest
This page starts with the Introduction, and then followed by the rest of the body text of your manuscript.

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The manuscript should be composed with the headings:
Introduction
Literature Review
Materials and Methods
Results and Discussion
Conclusions
Acknowledgement
References
Supplementary Data (if available)

Introduction should contain the background of study supported by citations taken from books, newspapers, journal articles, internet, etc. Introduction also explains the scope and objective of the study which are related to current knowledge and issues.

Literature Review consists of a summary of key sources, usually has an organizational pattern and combines both summary and synthesis with specific conceptual categories. A summary is a
recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information in a way that informs how you are planning to investigate a research problem. The analytical features of a literature review might include to:

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Depending on the situation, evaluate the sources and advise the reader on the most pertinent or relevant research. Usually in the conclusion of a literature review, identify where gaps exist in how a problem has been researched to date. Use Times New Roman font type, 12pt in size and 1.5 line spacing.

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**Acknowledgement.** Individuals and entities that have provided essential support such as research grants and fellowships and other sources of funding should be acknowledged. Contributions that do not involve researching (clerical assistance or personal acknowledgements) should not appear in acknowledgements.

List all **References** cited in your research. References should be in their own new page and be listed alphabetically based on first author’s last name. Follow the **APA style referencing** (6th edition). Use Times New Roman font type, 12pt., and double (2.0) spacing. You may refer to the Publication Manual of the American Psychological Association for further details (http://www.apastyle.org/).

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Bachtiar H. Simamora

Factors Influencing Purchase Intention on Cosmetic Products of Female Consumers in Yangon, Myanmar
Santhaya Kittikowit, Kittiya Suwanabubpa and Sophat Sithisomwong

Analysis of Supplier Selection Criteria Using Fuzzy AHP in Textile Industry in Indonesia
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A Comparative Analysis of Global Competitiveness among BRIC Nations: Implications For China
Mark Kam Loon Loo

Impression Management for Digital Corporate Image
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The Tattoo as Ancestral Legacy and Dichotomic Element of National Identity
Mónica Santillán Trujillo, Victor Villavicencio Alvarez, Lorena Caiza Morales, Eunice Ayala and Teresa Sánchez Manosalvas