"WHAT'S FOREIGN IS BETTER": A FUZZY AHP ANALYSIS TO EVALUATE FACTORS THAT INFLUENCE FOREIGN PRODUCT CHOICE AMONG INDIAN CONSUMERS

Amanish Lohan
O. P. Jindal Global University
alohan@jgu.edu.in

Anirban Ganguly
O. P. Jindal Global University
aganguly@jgu.edu.in

Chitresh Kumar
O. P. Jindal Global University
ckumar@jgu.edu.in

ABSTRACT

Emerging economies across the globe have observed drastic changes in consumer purchasing behavior in the last three decades. This has been attributed to rapid globalization, coupled with technological advancement that has led to consumer affinity towards foreign brands. In this paper an attempt has been made to understand this affinity towards foreign brands across product categories. We used the Fuzzy Analytic Hierarchy Process to evaluate the factors that influence foreign product purchasing behavior among Indian consumers. A set of five important influencing factors were identified and responses from over 100 Indian consumers were collected across five product categories (automobiles, home appliances, apparel, cosmetics and watches). It was found that for apparel, watches and cosmetics, perceived quality of the brand/product was the most valued attribute. Whereas, for home appliances the country of origin mattered the most, and for watches perceived quality as well as country of manufacture were equally important. The findings of this study will help shape marketing strategies for foreign brands trying to make inroads or gain market share in emerging markets like India

Keywords: foreign products; foreign product purchasing behavior; foreign brands; Fuzzy Analytic Hierarchy Process (F-AHP); multi-criteria decision-making (MCDM); Analytic Hierarchy Process (AHP)

1. Introduction

Globalization and technological advancement, along with the ever-competitive business environment has resulted in developing countries (emerging markets) becoming important for multinational corporations (MNCs). In addition, a rising standard of living in these locations, coupled with competitive product pricing and information accessibility through advanced technologies has exposed consumers to a wider range of competitively priced foreign products and brands (Kaynak and Kara, 2002; Lee and Nguyen, 2017) and transformed their purchasing behavior. Prior studies in the area of consumer behavior have documented this changing preference

for foreign products as opposed to their domestic counterparts (Balabanis and Diamantopoulos, 2016; Batra et al., 2000; Diamantopoulos et al., 2018; Ger and Belk, 1996; Winit et al., 2014; Zhou and Hui, 2003). This preference can be attributed to perceived higher quality and the prestige attached to global/foreign brands that leads to high self-esteem (Özsomer, 2012).

Balabanis and Diamontopoulos (2016) studied consumer preference for foreign products over domestic products and found that multiple factors form the basis of such preferential purchase behavior such as perceived inferiority of domestic products and social aggrandizement, among others. Perceived inferiority demonstrates an individual's need to differentiate oneself from their in-group (Kent and Burnight, 1951), while social aggrandizement stems from consumers' preference for a foreign group, which can also include foreign products (Arora et al., 2019; Balabanis and Diamontopoulos, 2016). Further, consumer product preference depends on multiple other factors like country of origin, product typologies, quality, symbolic value, brand image, self-identity, and self-congruency, among others (Balabanis and Diamontopoulos, 2004; Carpenter and Nakamoto, 1989; Ismail et al., 2012; Yasin, 2007). Additionally, factors like the image of the country the brand belongs to (Halkias et al., 2016) and purchasing power of the consumer also affect overall purchase behavior (Mockaitis et al., 2013).

Although prior studies have identified these factors and their effect on foreign brand purchases, these studies have used different methods and different factors across different product categories, which did not allow for common comparison benchmarks. Therefore, this paper attempts to compare a common set of factors that influence foreign product purchasing across multiple product categories using a common method. To achieve the intended objective, the study identified five factors that influence foreign product purchases based on a review of the extant literature and discussions with subject matter experts. These factors are as follows: perceived quality, country of origin, the country image of the brand, country of manufacture and foreign sounding name as major determinants affecting the choice of foreign products among Indian customers. To assess the relative importance of the identified factors that influence foreign product preference, the authors decided to use the Fuzzy Analytic Hierarchy Process (F-AHP), a multi-criteria decision-making (MCDM) model. Prior studies involving the AHP have observed that representing the linguistic term through an exact, crisp number often fails to exhibit a true reflection of a decision maker's judgment (Kahraman, 2018), and therefore might reflect inaccurate judgements on the part of the evaluators. On the contrary, the F-AHP allows the respondents to provide relatively imprecise (or vague) responses while undergoing pair wise comparison of alternatives in a hierarchical analysis (Buckley, 1985). Keeping this in mind, the authors chose to use the F-AHP, instead of the traditional AHP, as the preferred method for their study.

The study encompassed five product categories namely, apparel, automobiles, watches, cosmetics, and home appliances. India was chosen as the target audience due to its expanding economy and the stiff market competition between domestic and foreign brands in all of the aforementioned categories.

Beginning with an overview of the literature on foreign product preference and F-AHP, the paper then identifies a set of critical factors that might influence foreign product purchases among Indian consumers. Next, the multi-criteria decision-making (MCDM) technique F-AHP is used to prioritize the identified factors. Subsequently,

the findings are discussed in relation to the extant literature. Limitations and future research paths are also discussed. The findings of this study will help foreign MNCs that are attempting to make inroads into emerging economies like India understand the relative importance of factors that influence foreign product purchasing behavior, enabling them to design their business and marketing strategies more effectively.

2. Review of the extant literature

This section discusses consumers' foreign product preference in general and then foreign product preference among Indian consumers in particular. Further, it provides an overview of the F-AHP and reasons why it was the chosen technique, providing the much-needed foundation for discussing the methodology and the shortlisted factors for analyzing the foreign product purchase behavior.

2.1 Foreign product preference

The System Justification Theory (SJT), developed by Jost and Banaji (1994), is often considered the foundation of consumers' foreign product preference (Balabanis and Diamantopoulos, 2016). Further, cosmopolitanism, which is defined as consumers' preference for products outside their own culture/country, can lead to an affinity for foreign products over domestic products (Rojas-Méndez and Chapa, 2019). This is especially true for consumers in emerging markets who choose foreign products over domestic ones, and often represents a consumer's social status and self-esteem (Khan et al., 2012; Kinra, 2006; Rodrigo et al., 2019).

One of the major factors behind the preference of foreign products lies in the image of the country where the product is manufactured, the country of origin (COO). Comparable products with similar features and functionalities are often chosen based on their COO since there is an unwritten norm associating COO to superior (or inferior) quality of products (Elliott and Cameron, 1994; Rodrigo et al., 2019; Wilcox, 2015). The country of origin develops an association for a certain product type and varies across individuals in different countries. For example, Japanese electronics are considered reliable and of superior quality globally (Pappu et al., 2006). This is due to the perception of quality ingrained because of the COO, i.e., the quality of electronics produced in Japan which has been built over a period of time. Furthermore, the image of a foreign country can enhance consumers' beliefs about product quality and can influence its evaluation (Yasin, 2007), in turn influencing the consumers' decision-making process.

Another critical determinant of foreign product preference is the foreign sounding name of the product. This stems from the brand association literature and states that consumers often associate a certain product with specific characteristics based on name, type, and image (James, 2005). Foreign sounding brands are those that use certain attributes associated with a specific country or region to tap into consumers' evaluations of the product (Leclerc et al., 1994; Kinra, 2006). Examples include American jeans, Milano bags, French perfumes, and so on. Since Indian consumers perceive domestic brands to be inferior in terms of technology and quality in comparison to foreign brands, foreign sounding names have a positive effect on product image (Kinra, 2006). This makes it crucial to investigate the effect of foreign sounding brands separate from other factors like COO, country image or product quality.

Another critical determinant of foreign product preference is the country of manufacture which is different from the country of origin (COO) of the brand. In a globalized world, a product's brand name is often associated with a certain country even though the manufacturing takes place in another country. Such products are known as bi-national products (Zhou and Hui, 2003). The perception sometimes changes if the 'made in' tags display a different country (Hui and Zhou, 2003). Although for brands emanating from developing countries and manufactured in the same country, the effect is negligible; research shows that country of manufacture influences the relationship between the consumer and perceived product quality (Iyer and Kalita, 1997).

2.2 Indian consumers and foreign product preference

The demand for foreign brands in India has grown exponentially in the last three decades. This is primarily due to liberalization and removal of trade barriers in the early 1990s. Automobile, electronics, apparel, home appliance, and toiletry companies from multiple countries ranging from Germany, France, the USA, Korea, Japan, China, and the UK among others have made inroads (Kinra, 2006). Kinra (2006) further observed that in India foreign brands were preferred over domestic ones due to superior technology, quality, status, and esteem. This is in line with the findings of Nes and Bilkey (1993) that showed products from less developed countries were regarded as low quality. However, research exhibits mixed findings concerning Indian consumers. Some research shows that Indian consumers are moderately ethnocentric (Bawa, 2004) while some shows that they are highly ethnocentric without any confounding effect from age, gender or educational level (Upadhyay, 2006). Post-2010 research shows that Indian consumers tend to be moderately ethnocentric and their behavior is driven by certain socio-psychological factors (Jain and Jain, 2013). A study by Kumar et al. (2011) found that consumers who scored high on an ethnocentric scale prefer domestic products; however, a large proportion of the population prefers foreign products. It could be stated that foreign product preferences of Indian consumers tend to change over time, due to factors such as changing demographics and social identity. The contemporary Indian consumer has access to a multitude of foreign brands with more than 50 entering the market post-2015 (Economic Times, 2017). As mentioned earlier, limited research has been done in the Indian context that encompasses all of the factors that influence consumers' purchase of foreign goods across different product categories. This study attempts to fill this research gap using the F-AHP as a single method adopted across all product categories. Further sections provide an overview of the method.

2.3 Overview of Fuzzy AHP

The Analytical Hierarchy Process (AHP) is a multi-criteria decision-making technique used for prioritizing attributes that affect decision-making and identifying alternatives based on the relative importance of the attributes (Saaty, 1980; Macharis et al., 2004; Ganguly and Merino, 2015). The AHP requires constructing hierarchies to describe the problem across attributes and alternatives (Yadav and Sharma, 2016). Then, the AHP attempts to conclusively reach pairwise judgments using reciprocal matrices ranking the actions, criteria or any attribute relevant to the decision across the alternatives (Hugher, 2009). The AHP (and F-AHP) can also accommodate both quantitative as well as qualitative factors (Goyal et al., 2015). There can be multiple levels within the hierarchical structure as part of the problem. The primary problem statement is placed at the top of the hierarchical structure, with attributes and sub-attributes in subsequently lower levels (Figure 1). The AHP model is elaborated once the hierarchy is constructed (Figure 1). Through pairwise comparison of attributes, a

matrix containing relative importance (weights) is formulated. This relative importance is developed on the basis of a nine-point scale with attributes on each side (Figure 2). By selecting any attribute, the respondent can weigh the pair and provide a relative importance for one of the attributes. The respondent can also choose to stay neutral (Figure 2).

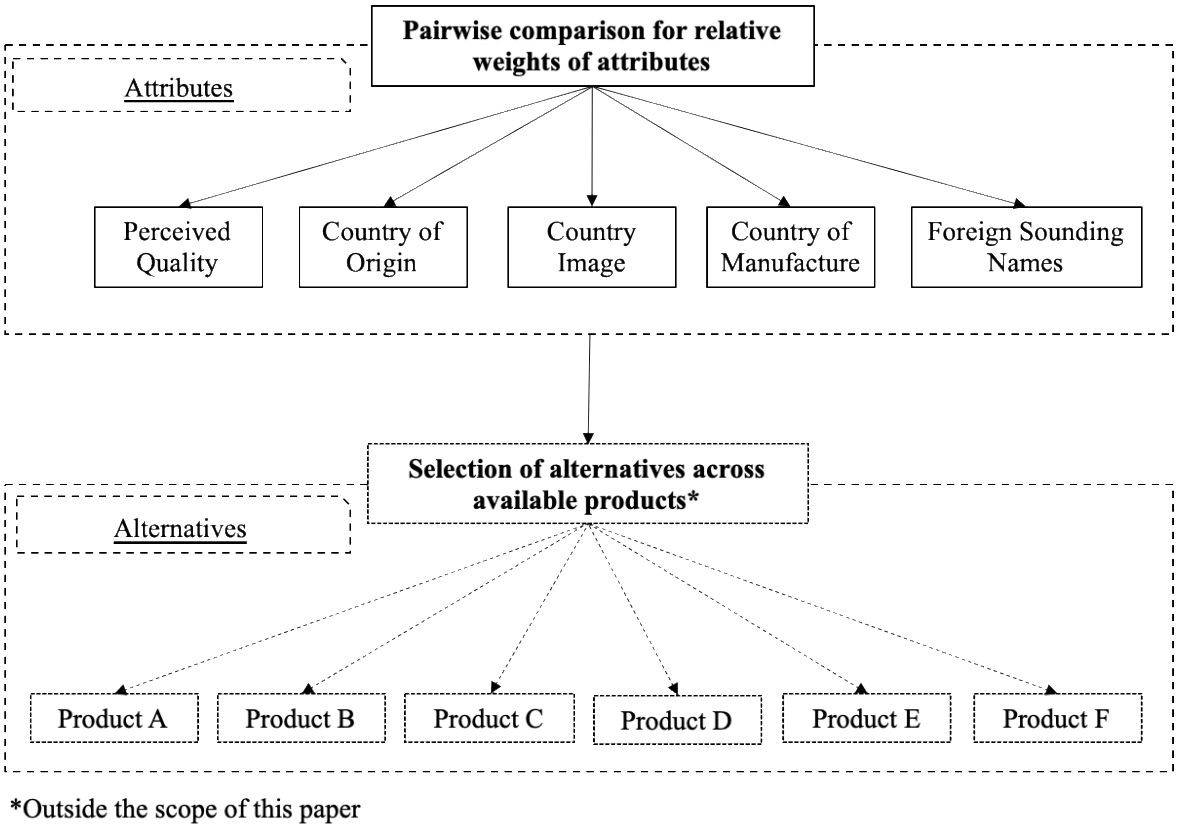

Figure 1 Hierarchal structure of the alternatives and attributes

As mentioned, the final level of the AHP hierarchical tree is comprised of the final alternatives for selection using the pairwise comparison of the attributes (and the sub-attributes). For example, if the same consumer was to choose between three foreign brands of apparel based on the same set of attributes (perceived quality, country of origin, country image, country of manufacture, and foreign sounding names), the last level of the hierarchy would be the three foreign brands of apparel (the three alternatives). However, since the current study focuses on identifying a set of attributes and assessing their relative criticality on the choice of five different types of products, the final level of alternatives was beyond the scope of this study, and therefore was not considered.

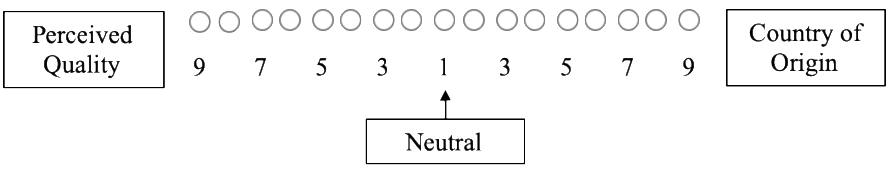

Figure 2 AHP nine-point pairwise comparison scale (presented for two attributes)

The AHP has been widely used in decision-making processes, but it does have shortcomings. The nine-point scale used for this process is considered ambiguous to an extent as it does not fully encompass the uncertainty of the decision-making process (Kilinci and Onal, 2011). Also, the AHP does not allow decision-making in certain situations where determining a preference is not the objective due to information asymmetry of other confounding factors (Nieto-Morote and Ruz-Vila, 2011). To overcome this challenge, fuzzy numbers and scales are developed and have been extended to methods like type-2 fuzzy sets, hesitant fuzzy sets and Pythagorean fuzzy sets (Kahraman, 2018).

In the case of the F-AHP, the selection of the alternatives is conducted using the fuzzy set theory in conventional AHP (Kumar and Rahman, 2017). The F-AHP allows the use of fuzzy ratios which makes it possible for the respondents to provide imprecise or vague responses when comparing two attributes (Buckley, 1985; Buckley et al., 2001; Saaty, 1990). This allows the researcher to consider the uncertainty in the respondent's judgment (Ayhan, 2013; Ganguly and Kumar, 2019). The F-AHP technique was used effectively by Buckley (1985, 1990) and Buckley et al. (2001) provided a three-step process of decision-making using the F-AHP. The F-AHP uses triangular fuzzy numbers as a replacement for the nine-point scale used in the AHP. Therefore, due to these advantages of the F-AHP, this method was used for the current study. Once the weights are finalized, normalized weights are calculated for all the attributes/factors. Finally, the alternatives are ranked through the use of these varied weights of attributes/factors. The alternative with the highest value is the preferred option.

3. Research model and methodology

This research work intended to explore the following research questions:

RQ1: What factors dominate consumer decision-making while purchasing products of foreign brands across different product categories?

RQ2: What are the different ways these identified factors influence consumer decision-making while purchasing products of foreign brands across different product categories?

Based on these research questions, the objective of this study was to identify and prioritize factors that influence consumer decision-making for foreign brands. The first step entailed the identification of a set of relevant and critical factors that might influence foreign product choice among Indian customers. These initial factors were identified based on an in-depth review of the extant literature, along with discussions with experts in the areas of consumer behavior and marketing. After identifying the factors, the next phase was to refine (and condense) the identified factors in order to determine the few important factors from the entire set. This was done through a second round of iteration with the experts. Once the set of shortlisted (five) factors was identified, they were used in the structured AHP questionnaire for the final ranking (Figures 1 and 2).

Further, the current study also investigated the product choice factors for five different categories of products. These categories are automobiles, home appliances,

watches, apparel, and cosmetics. All of these categories have considerable representation in both domestic and foreign brands in the Indian market. The authors also visited industry and retail experts in all of the product categories to reconfirm the relevance of the shortlisted factors. For each product category, consumers from the dominant demography for that category were chosen. This was done according to the recommendations of the industry retail experts. The respondents were briefed about the format of the AHP questionnaire and the pairwise comparison (Appendix 1). All of the data was gathered through survey questionnaires individually administered to respondents to eliminate any potential response bias. The following sections of the paper discuss the identified factors. Table 1 provides the number of responses collected for each of the product categories.

Table 1
Number of respondents from each of the identified sectors

Product categories	Number of respondents
Automobile	21
Home appliances	20
Apparel	21
Watches	23
Cosmetics	22
Total	***107***

4. Identifying attributes that affect consumer preference for foreign products

The final set of factors was obtained after reiterations and relevance based on discussions held with experts with research and industry experience in the area of consumer choice, including industry retail experts. These final set of five factors are discussed in detail below.

4.1 Perceived quality

The intention of product quality is to provide a competitive advantage for any particular product or brand within the market (Jacobsen and Aaker, 1987). High product quality improves market share as well as lowers costs to the firm (Crosby, 1979). Ouchi (1981) identified product quality as the primary factor for the high demand for Japanese products. The foreign product preference research has also concluded that brands strive to attain the highest level of product quality (Thakor and Lavack, 2003; Koh et al., 2010). Recently, researchers have focused on what attributes are responsible for foreign product purchase and perceived quality was found to be intrinsically associated with most of these attributes (Rodrigo, et al., 2019). As Kinra (2006) observed, consumers in developing markets perceive foreign products as superior in terms of quality. Therefore, this kind of brand association is driven by the fact that consumers perceive certain countries of origin to be synonymous with higher quality. For these reasons, perceived product quality is considered as a separate factor while assessing foreign product preference.

4.2 Country image

The image of a country is assessed from an outsider's perspective for a foreign brand and leads to a perception about a brand or product from that country. Until 2010, there was limited understanding about this construct and its conceptual development (Fan, 2010). Country image is similar to COO, yet distinct, as the former is based on perceptions and the latter on associations (Han and Terpstra, 1988). If the image of a country is negatively perceived by a consumer, it is bound to have a negative effect on product preference. The relevance of a country's image was initially researched in the area of tourism (Tasci and Gartner, 2007), but its scope has expanded to foreign products in cases where the perceived image of a country was negative (Maher and Carter, 2011). This has led to further research in the field of international marketing on the possible effects of a country's image on foreign product purchases as an independent construct, although most researchers still combine it with COO literature (Papadopoulos and Heslop, 2014). Therefore, the authors thought it was critical to consider country image as one of the factors for foreign product preference.

4.3 Country of origin

The effect of COO was first explored by Bilkey and Nes (1982) who researched how buyer evaluations are influenced by the source of the product. Another critical addition to this effect was made by Roth and Romeo (1992) who examined how a specific product fits the perception of the country it comes from. Prior research has shown that COO significantly influences consumers' evaluations (Costa et al., 2016; Koubaa et al., 2015). There are several products in the market that have established dominance using their country-based association with the brand name (Kinra, 2006). These studies on the effect of COO have been conducted in various contexts with a focus on distinct customer segments (Bhaskaran and Sukumaran, 2007). Other aspects like culture and symbolic meanings (Guo, 2013) can affect COO in emerging markets. These associations can impact strategies for any firm looking to make inroads into developing markets or looking to expand their existing market share. Therefore, the country of origin is one of the factors being used to assess foreign product preference for consumers.

Here, it should be noted that we have segregated country of origin (COO) from the country of manufacture since there are certain products whose brand, design, production, and consumption are spread across multiple countries which causes consumers' perceptions to change accordingly (Roth and Romeo, 1992).

4.4 Country of manufacture

Every product originating from one country and being manufactured or assembled in another is considered a "bi-national product" (Iyer and Kalita, 1997). Because of an ease in government regulations and low wages in certain countries, Western brands have the option of shifting their manufacturing base to developing countries (Kurtulus and Bozbay, 2015). These products, when sold in the market, usually contain a 'made in' tag providing the name of the country in which it was manufactured (Ulgado and Loee, 1993). For example, at one point in time, Chinese firms from the fashion industry started manufacturing in Italy simply to procure the 'Made in Italy' tag (Donadio, 2010). This can create a secondary perception in the consumer's mind regarding the product quality, as the COO is different than the manufacturing country. If the image of the manufacturing country is perceived negatively by the consumer, it can create discontent and negative perceptions about the product as well. This product bias (Schooler, 1965) is not caused by the perceived quality of the product, but because of the source of its manufacturing. Although,

research also shows that manufacturing in a country with a favorable image does not always lead to positive brand image evaluation (Allman et al., 2016). Hence, it is essential to observe consumer perceptions towards foreign products based on the country of manufacture and its importance across all product categories. For this reason, the country of manufacture has been considered as one of the factors for analysis.

4.5 Foreign sounding name

Since most brands market themselves domestically and internationally to position themselves as a global brand (Brown and Hagel, 2005), the purpose of having a foreign sounding name for a brand is to create a brand image that enhances the overall brand equity for the product (Leclerc et al., 1994). Kinra (2006) established the consumer's product association based on the name of the brand. These names are derived from certain geographical regions or languages which make them foreign for non-native speakers of that language. There is also a tendency to use foreign names to induce 'perception of higher quality and greater social status' for a brand (Melnyk et al., 2012; Zhou et al., 2010). If the country has a positive image in the consumer's mind about certain products, then using a foreign sounding name may enhance that effect. On the contrary, if the consumer has a negative perception of the country, then the foreign sounding name can also have a negative effect. In developing economies like India, there are several domestic brands like Allen Solly, Da Milano, and Louis Philippe who use this strategy to attract consumers based on the foreign sounding name of the brand (Business Today, 2017). This makes it imperative to consider the foreign sounding name as one of the factors influencing foreign product preference.

5. Using Fuzzy AHP to prioritize foreign product preference factors

The current study adapted and modified studies conducted by Badri and Abdulla (2004) and Ayhan (2013) and developed a five-step process to conduct the F-AHP analysis. This section details the analysis step-by-step.

Step 1: The first step of the F-AHP analysis involved developing the objective and the AHP hierarchical structure (Figure 1). The basic objective of the study was to identify and prioritize a set of important factors that might influence foreign product purchasing behavior among Indian consumers. The final set of factors was identified based on the review of the literature and discussions with subject matter experts (research and industry).

Step 2: Once the basic hierarchy was developed, the next stage comprised of constructing the pairwise matrix and putting the choices in a structured AHP questionnaire. The responses collected through a traditional AHP scale were converted to the F-AHP scale and further analysis was done. The identified factors were compared to the overall objective of the study and Table 2 provides the fuzzy pairwise comparison matrix for the identified factors for one of the responses for the automobile product category[1]. Additionally, as there were multiple responses for each

[1] Tables 2, 3 and 4 provide the responses of one of the respondents out of the 21 respondents surveyed for the automobile product category. Other individual's responses are not provided as the AHP response matrix for all of the respondents surveyed has the same structure with different values. Table 4 illustrates the final weights calculated as an average of all 21 responses.

of the product categories, the preferences were averaged to calculate the final prioritized values of each of the factors for all product categories.

Table 2
Factors that influence foreign product purchase (Automobile): Pairwise comparison matrix

	Perceived Quality	Country of Origin	Country Image	Country of Manufacture	Foreign sounding names
Perceived Quality	(1,1,1)	(7,8,9)	(9,9,9)	(7,8,9)	(9,9,9)
Country of Origin	(1/9,1/8,1/7)	(1,1,1)	(9,9,9)	(1,1,1)	(7,8,9)
Country Image	(1/9,1/9,1/9)	(1/9,1/9,1/9)	(1,1,1)	(1/9,1/9,1/9)	(1,1,1)
Country of Manufacture	(1/9,1/8,1/7)	(1,1,1)	(9,9,9)	(1,1,1)	(9,9,9)
Foreign sounding names	(1/9,1/9,1/9)	(1/9,1/8,1/7)	(1,1,1)	(1/9,1/9,1/9)	(1,1,1)

Step 3: After prioritization of the factors by the respondents, the next step comprised of determining the geometric mean of the fuzzy comparison value for each of the factors using Equation (1) below:

$$\widetilde{r_i} = \left[\prod_{j=1}^{n} \tilde{x}_{ij}\right]^{\frac{1}{n}} \qquad (1)$$

Where,
$\widetilde{r_i} = \text{Geometric mean}$
$\tilde{x}_{ij} = \text{Weights of the attributes and or sub} - \text{attributes}$
n = Number of attributes / sub-attributes

Therefore, following Equation (1), the geometric mean of fuzzy comparison values of 'perceived quality' is calculated as follows:

$$\widetilde{r_i} = \left[\prod_{j=1}^{n} \tilde{x}_{ij}\right]^{\frac{1}{n}} = \left[(1*7*9*7*9)^{\frac{1}{5}}; (1*8*9*8*9)^{\frac{1}{5}}; (1*9*9*9*9)^{\frac{1}{5}}\right]$$
$$= (5.24; 5.83; 5.80)$$

The geometric means of the fuzzy comparison values of all of the criteria are subsequently exhibited in Table 3 including their total and reversed values. Additionally, in the last row of the table, as the fuzzy triangular numbers have to be arranged in increasing order, the order of the numbers is changed.

Table 3
The geometric means of the fuzzy comparison values

	Geometric Mean ($\tilde{r}_i$)		
Perceived Quality	5.24	5.53	5.80
Country of Origin	1.48	1.55	1.63
Country Image	0.27	0.27	0.27
Country of Manufacture	1.55	1.59	1.63
Foreign sounding names	0.27	0.27	0.28
Total	8.81	9.21	9.61
Inverse (power of -1)	0.114	0.109	0.104
Increasing order	0.104	0.109	0.114

Step 4: After determining the geometric means, fuzzy weights for each of the factors were calculated. This involved multiplying the geometric mean ($\tilde{r}_i$) by the reverse Fuzzy Triangular Numbers (FTNs) that were arranged in ascending order as shown in Equation (2).

$$w_i = \tilde{r}_i \otimes (\tilde{r}_1 \oplus \tilde{r}_2 \oplus \ldots\ldots\ldots \oplus \tilde{r}_n)^{-1} = (aw, bw, cw) \quad (2)$$

Step 5: This step comprised of de-fuzzing the fuzzy weights for the factors, normalizing them, and arriving at the final weights of the identified factors[2] as illustrated in Table 4.

Table 4
Factors that influence foreign product purchase (Automobile): Geometric mean and normalized weights

	Geometric Mean ($\tilde{r}_i$)			Fuzzy weights ($w_{i)}$			M_i	N_i
Perceived Quality	5.24	5.53	5.80	0.255	0.325	0.331	0.304	***0.613***
Country of Origin	1.48	1.55	1.63	0.318	0.421	0.601	0.447	***0.231***
Country Image	0.27	0.27	0.27	0.143	0.182	0.262	0.196	***0.021***
Country of Manufacture	1.55	1.59	1.63	0.055	0.071	0.103	0.077	***0.070***
Foreign sounding names	0.27	0.27	0.28	0.030	0.037	0.055	0.041	***0.065***
Total	8.81	9.21	9.61					
Inverse (power of -1)	0.114	0.109	0.104					
Increasing order	0.104	0.109	0.114					

M_i = Non-fuzzy weights and N_i = Normalized weights

[2] For a more in-depth discussion of the F-AHP process and the Fuzzy Triangular Distribution, kindly refer to Ayhan (2013) and Sing and Prasher (2017).

The final normalized weights for the identified factors that influence foreign product purchase (Automobile) for one of the 21 responses are shown in Table 4. Table 5 displays the average of all of the experts surveyed for the study along with the rankings of the factors. The discussion regarding the results has been provided in the Results and Findings section.

Table 5
Ranking the factors that influence foreign product purchase and their normalized weights for 21 respondents (N=21) for the automobile sector

Factors influencing foreign product purchase	**Mean normalized weights**	**Rank**
Perceived Quality	0.512	1
Country of Origin	0.270	2
Country Image	0.039	5
Country of Manufacture	0.134	3
Foreign sounding name	0.044	4

As mentioned earlier, the information exhibited in Tables 2, 3 and 4 deals with one of the five product categories identified as a part of this study. Tables 6 and 7 and Figure 3 provide the average prioritized weights and ranking of the factors for all five product categories.

Table 6
Final weights of the factors for each of the five categories

Product Category	**Identified factors**				
	Perceived quality	Country of origin	Country image	Country of manufacture	Foreign sounding names
Automobile	0.512	0.270	0.039	0.134	0.044
Home appliances	0.167	0.237	0.040	0.495	0.061
Apparel	0.426	0.039	0.082	0.083	0.370
Cosmetics	0.521	0.164	0.044	0.035	0.236
Watches	0.233	0.083	0.326	0.033	0.324

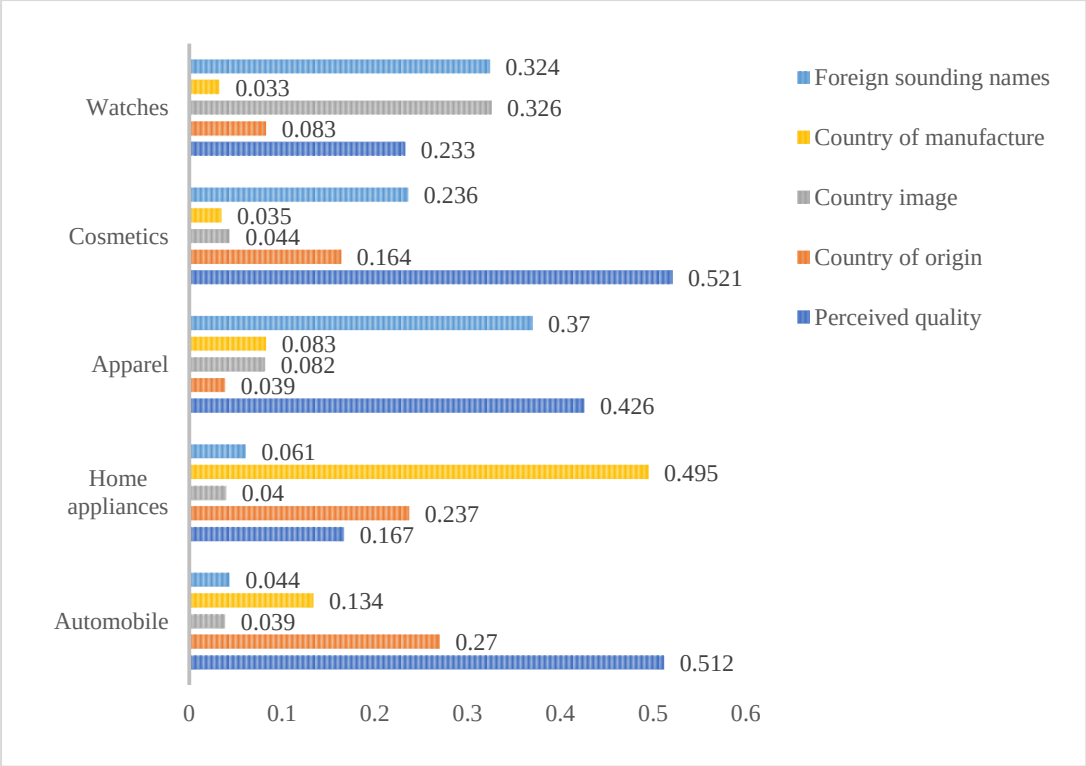

Figure 3 Final weights of the factors along for each of the five categories

Table 7
Ranking of the factors for each of the five categories

Product Category	**Identified factors**				
	Perceived quality	Country of origin	Country image	Country of manufacture	Foreign sounding name
Automobile	1	2	5	3	4
Home appliances	3	2	5	1	4
Apparel	1	5	4	3	2
Cosmetics	1	3	4	5	2
Watches	3	4	1	5	2

Finally, it should also be mentioned that the results of the analysis were aggregated using the method of aggregating individual judgements (AIJ), which aggregates the pairwise comparison results (Forman and Peniwati, 1998; Wang and Chen, 2019). The AIJ, which can also be called an '*anterior aggregation'*, significantly simplifies the computation since the fuzzy weights are assessed only once, and is therefore considered a more widespread popular methodology for aggregation (Wang and Chen, 2019; Wang et al., 2019). Additionally, following the methodology suggested by Leung and Cao (2000), a consistency test for the pairwise judgments was performed, and the consistencies were within the permissible limits. Section 6 of this paper discusses the findings in the context of the extant literature.

6. Results and findings

6.1 Descriptive statistics

Data were collected from 107 respondents and distributed equally across all five categories (Table 1). Overall both males and females were equally represented in the sample except in the automobile (male 56%) and cosmetics (female 71%) categories. In all of the categories, nearly 80% of the respondents belonged to the 25-35 years old age group. Similarly, nearly 80% of the respondents in all of the categories had a graduate or postgraduate education. In all of the categories, nearly 70% of the respondents were employed in services or had their own business. Work experience was distributed similarly, with a majority of respondents working at the mid or senior level. Table 8 provides the demographic details of the data collected across product categories. The homogenous nature of the respondents across all of the categories allowed us to compare and contrast the factors with higher confidence.

Table 8
Demographic characteristics of the respondents

	Automobile (N= 21)	**Cosmetics (N=22)**	**Apparel (N=21)**	**Home Appliances (N=20)**	**Watches (N=23)**	**Total (N=107)**
Gender (%)						
Male	64.7	29.4	52.9	55.0	40.0	48.8
Female	35.3	70.6	47.1	45.0	60.0	51.2
Age (%)						
< 25 years	11.8	41.2	35.3	10.0	40.0	26.7
25-30 years	23.5	29.4	35.3	20.0	33.3	27.9
31-35 years	35.3	11.8	23.5	40.0	26.7	27.9
36-40 years	11.8	11.8	5.9	15.0	0.0	9.3
> 40 years	17.6	5.9	0.0	15.0	0.0	8.1
Education Level (%)						
High School	0.0	11.8	5.9	5.0	13.3	7.0
Graduation	41.2	41.2	41.2	40.0	40.0	40.7
Post-Graduate	52.9	47.1	47.1	35.0	40.0	44.2
Doctorate	5.9	0.0	5.9	20.0	6.7	8.1
Post Doctorate	0.0	0.0	0.0	0.0	0.0	0.0
Occupation (%)						
Service	47.1	47.1	35.3	40.0	40.0	41.9
Business	23.5	11.8	23.5	15.0	26.7	19.8
Self	11.8	23.5	23.5	30.0	26.7	23.3
Freelancing	17.6	17.6	17.6	10.0	0.0	12.8
Between Jobs	0.0	0.0	0.0	5.0	6.7	2.3
Work Experience (%)						
Director	11.8	0.0	5.9	15.0	6.7	8.1
Senior Level	41.2	41.2	35.3	25.0	20.0	32.6

	Automobile (N= 21)	**Cosmetics (N=22)**	**Apparel (N=21)**	**Home Appliances (N=20)**	**Watches (N=23)**	**Total (N=107)**
Middle Level	29.4	29.4	23.5	30.0	40.0	30.2
Junior Level	17.6	17.6	23.5	20.0	26.7	20.9
Consultant	0.0	11.8	11.8	10.0	6.7	8.1

Further sections discuss the factors that affect foreign product preference across five product categories namely, automobiles, apparel, cosmetics, home appliances, and watches. The following discussion references Tables 5 and 6.

6.2 Automobiles

For the purchase of automobiles, product quality is the most important factor that influences nearly half (0.512) of the decision-making process (Table 5). Product quality was followed by country of origin (0.27) and country of manufacture (0.134). This is in line with the findings of Balabanis and Siamagka (2017) who found that the country of origin has a significant impact on consumer purchase behavior for expensive products. Further, considering that automobile usage has a higher risk factor compared with other categories and therefore consumers would emphasize the quality of the vehicle they buy, the results are consistent with other similar studies, i.e., Wu et al. (2019). This study showed that the quality of a product was a factor that was further influenced by if the brand name was Chinese or European, highlighting the quality of Chinese cars in relation to European cars in both the luxury and non-luxury segment. Even among males, 78% gave the highest preference to product quality, while among females the figure was around 55%. On the contrary, the country image of the brand was the least preferred factor. This is interesting as consumers, although worried about the origin of the brand, do not care about the country image of the brand. Individuals under the age of 25 gave the highest weight to country image (32%). This shows that an automobile brand from a country with even a negative image would be preferred by Indian consumers due to its quality and reputation; however, such cases are rare. One such example is the Dacia Car, sold as Duster by Nissan in India, which originated in Romania. Since Romania is an Eastern European country, it has no image in Indian consumers' mind. However, the product has been a success in India, mostly due to the product quality. These findings support Wu et al. (2019) whose study on car purchase behavior by Chinese consumers based on names of the company/cars found that country of origin and English sounding names are a signal of quality. However, these findings are in contrast to the findings of Triandis (1995) who found that favorable perception of a country would lead to a higher preference for that country's brands. Our study shows that consumers of automobiles in India prefer certain companies that hold a favorable reputation in terms of their quality and not the country image. Also, these findings were consistent among all age groups, education levels and occupations with a few exceptions discussed above. Therefore, automobile makers should focus on building their brands through product quality rather than through the creation of appeal for a country or any other dimension.

6.3 Apparel

For apparel, the most influential factor was product quality (0.426) which is similar to the automobile sector (0.426). After this, a foreign sounding name was the most preferred factor with a weight of 0.370. The other three factors combined for the

remaining weight (0.204). In the case of apparel, country of origin was the least preferred factor (0.039). These results are very much consistent with the outcomes of Giridhar et al. (2017), whose study of Indian consumer preferences for foreign apparel found that perceived quality was a significant factor, whereas, need for uniqueness was not. These results are also somewhat similar to the study done by Kinra (2006) which established that foreign sounding names have a positive effect on consumers. The preference for a foreign sounding name strongly resonated with individuals below the age of 30 (78%) and those working at a middle-level or lower (69%). Further, the need for Indian consumers to be a part of the out-group is showcased by several Indian apparel brands selling under the aegis of a foreign sounding brand (e.g., Peter England, Louis Philippe and Allen Solly, etc.). This can be attributed to the probable perceived in-group (Indian sounding brands) based inferiority of Indian consumers and a favorable preference for out-groups (foreign sounding brands) (Balabanis and Diamontopoulos, 2004). Interestingly, the factor with the least weight, country of origin, was most dominant for individuals who were running their own businesses (65%) compared to salaried individuals (24%).

6.4 Home appliances

While the automobile and apparel product categories were most highly influenced by the perceived quality of foreign brands, for home appliances the highest level of importance was given to the country of manufacture (0.495) followed by country of origin (0.237) and perceived quality (0.167). Consumers seem to be willing to judge the quality of a home appliance based on its country of manufacture. However, among the female respondents (45%), a majority preferred quality over the country of manufacture (61%). Also, for individuals above the age of 30 (70%), country of origin was almost as important (56%) as country of manufacture. Hui and Zhou (2003) showed that the 'made in' tag on a product tends to shift the perception of the consumer, although, that shift was in comparison to the country of origin or country image. A probable explanation for such consumer preference could be that the consumer perceives certain countries as superior in terms of manufacturing prowess when compared to others for home appliances. This can only be measured by its origin of manufacture.

6.5 Cosmetics

For cosmetics, the highest weight was given to perceived quality (0.521) followed by a foreign sounding name (0.236). This was followed by country of origin (0.164). The country of manufacture, in this case, was least important for consumers. Once again, this shows the variance in consumer preference across different product categories. Although perceived quality is important for consumers of cosmetics, the name of the brand has a massive influence on their decision-making. Interestingly, among the female respondents (71%), the majority who were under the age of 25 gave the highest preference to a foreign sounding name (65%). This is also corroborated by Indian cosmetics brands like Lakmé (an Indian brand conceived by the Tata Group, now owned by Hindustan Unilever; it is a take on the French word for the Hindi word 'Lakshmi, the goddess of wealth who was very beautiful') or Nykaa (Indian brand conceived in 2012) who both use foreign sounding names. This also shows that millennials have a higher sense of names and the status associated with them as well as with the actual usability of the product. Although, in this case, even though the name is important, the country image is the second least important factor. The foreign sounding names that consumers prefer are associated with certain countries even though the consumer might not be aware of that association. For them, the non-Indianness of the name itself is enough for it to be perceived as superior to its

Indian counterparts. This is proven by the dominance of the Lakmé brand which holds almost 18% of the Indian cosmetics market (Economic Times, 2020). For an Indian consumer, this name may have a sense of superiority since it sounds Western. The results could differ if names from Asian or East Asian countries are compared with Western names as shown by Wu et al. (2019) for the Chinese automobile market.

6.6 Watches

For watches, the country image of the brand had the highest relevance (0.326) followed very closely by a foreign sounding name (0.324) and perceived quality (0.233). It is difficult to comprehend the relationship between perceived quality and a country's image without considering the country of manufacture. These findings are similar to the findings of Diamantopoulos et al. (2019) for Russian consumers, who had low acceptance for domestic watches, but considered similar products from foreign brands the 'real thing.' Interestingly, the country of manufacture was least important with a weight of 0.033. In a completely different context, this higher association of brand names and foreign sounding names and a low association with perceived quality and country of manufacture can be justification for counterfeit products or watches, where utility at a lower price is considered more important than having nothing at all (Tang et al., 2014). For individuals above the age of 25 (60%), almost half preferred product quality (48%) above any other factor.

The majority of foreign watches in India are Swiss or American followed by countries like Japan and Italy. The factor of foreign sounding names is almost as important for consumers. This once again confirms past research on the perceived superiority of out-groups (Kent and Burnight, 1951; Kinra, 2006). Even Indian watch brands are named after Greek mythology (Titan) or musical instruments of Italian lineage (Sonata). The preference for watches is in stark contrast to automobiles and home appliances where the country of origin and country of manufacture, respectively were most important after perceived quality. Here, the perceived quality was the third most important factor. One explanation could be the country of origin or country image associated with superior quality. In this case, the country's image and the brand's foreign sounding name are crucial for consumers' decision making. It should also be noted that the majority of respondents in this category worked at a middle or junior level in a company (70%). For these individuals, the foreign sounding name had the highest preference (78%), especially for those below the age of 25 (70%). This corroborates the fact that millennials are looking for a superior out-group which exemplifies a sense of superiority in terms of name and image of the country.

Further, for watches, near equal importance was given to the three following factors: country image, foreign sounding name and perceived quality. This also depicts the interrelationship among these three factors as perceived quality over a period of time by certain brands of the same country will lead to increased country image. Then, the adoption of foreign sounding names by domestic brands will be a strategy to compete with the foreign brands from those countries e.g., Swiss watches known for their quality and precision, German cars known for their engineering or Japanese cars known for their build quality and durability.

7. Limitations of the current study

One of the limitations of the study comes from the choice of method. Even though the F-AHP is a robust tool, the consistency ratio tends to rise for larger data groups, grouped data or any attribute matrix of more than four (Saaty, 1990). Our study only used data points with a consistency ratio of less than 0.20, which is within the acceptable limits considering our data size of 105 for a five-attribute comparison matrix across five different product categories. We followed Wedley (1993) who recommended 0.2 or less as an acceptable limit for large attribute matrix sizes.

The consistency ratios (CRs) were from 4% to 20% for the selected set of responses. Responses that had ratios greater than 20% were not used for the analysis. This was in line with the recommendations of Wedley (1993) where a CR of 20% or less is accepted for aggregated large sample sizes. Except for cosmetics, most of the average CRs were within the permissible limit of 10%. The average CR for foreign apparel was 5.5% (21 survey responses), cosmetics was 10.2% (22 survey responses), automobiles was 5.8% (21 survey responses) and home appliances was 9.4% (20 survey responses).

Further, we collected data based on the number of respondents considered adequate for performing the F-AHP analysis. Adding data for more product categories as well as looking at multiple locations will provide a more robust analytical framework for extending the results outside the product categories and in the field of consumer preference.

Further, we have only looked at foreign product preference and not domestic products. There could be variations in the results if domestic brands are also considered. Additionally, the study does not differentiate between foreign brands from different locations, i.e., from North America, Europe or South-east Asia. The addition of this layer in the analysis might give more in-depth insights. Finally, the sample size for this study was based on convenience sampling over a certain geographical region. These results cannot be generalized for other countries at the moment. Finally, a basic disadvantage of using the AHP is the fact that rank reversals as well as the subjective nature of the technique are constraints of the technique (Oguzitimur, 2011). Further, the transitive nature of the technique often plays a role in increasing the value of the consistency ratio, which was also partially reflected in this study.

8. Conclusions and further research

The current study used the F-AHP to analyze the identified factors that influence foreign brand product purchase among Indian consumers across five product categories. The factors were identified through an extant literature review and shortlisted using expert opinions. Further, the study found that the relative importance of the factors varied across product categories. Perceived quality is important for the purchase of automobiles, apparel, and cosmetics; the country of origin is important for home appliances and country image is important for watches. The relative importance of various foreign product preference factors can help managers and companies create a more efficient strategy to gain market share. Foreign companies looking to make inroads into the Indian market can use this study to design and develop their product according to consumers' preferences, whereas, Indian

companies can strategize ways to be more globally appealing among the domestic consumers.

The results of the study, which can be seen from the evolutionary perspective, were consistent with research prior to 2010 that found that Indian consumers attach value to qualities that are not closely related to the product but with the larger image of the country (Godey et al., 2012). These qualities vary significantly across countries and the differences are more related to cultural identities and economic development. Further, our findings are also aligned with the research done by Hsu et al. (2017) that found that cosmetics product purchase was moderated by country of origin and price sensitivity. Further, we also established that the identity of the product, i.e., its ethnographic dimension is also valuable and sometimes matters more than other factors which is similar to the findings of Fischer and Zeugner-Roth (2017) who found that ethnicity and country of origin of the product are related to the consumer market country and their interrelationships.

Studies done by Hsu et al. (2017), Godey et al. (2012) and Fischer and Zeugner-Roth (2017) etc. are not product specific, whereas studies done by Wu et al. (2019) and Diamantopoulos et al. (2019) were limited to one or two products. In this regard we have provided a study of five different products and found that the attributes and their relative significance vary across different product categories. This shows academics as well as managers that it is necessary to study different product choice evaluations separately.

For future research, this study can be extended across continents in multiple locations among developed and developing countries to understand foreign brand preference across multiple cultures with varied socio-economic backgrounds. Further, the study can also be extended to more product categories so that wide generalizations can be made for the field of consumer behavior. The study can be replicated for the product categories using different decision-making techniques to identify the relative importance of the same factors. A comparison of such studies will allow the development of more robust theories in the field of consumer product preference.

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APPENDIX 1

QUESTIONNAIRE
USING ANALYTICAL HIERARCHY PROCESS (AHP) TO DETERMINE FACTORS FOR CHOOSING FOREIGN APPAREL BRANDS

Part- I – Basic information

Please share some information about yourself to put your answers in context. Please tick the appropriate box.

(Please highlight / circle the preferred option)

Gender	Male			Female	
Age (in years)	< 25 years	25 – 30 years	31 – 35 years	36 – 40 years	> 40 years
Qualification	High school	Graduation	Post – Graduate	Doctorate	Post Doctorate
Occupation	Service	Business	Self	Freelancing	Between jobs
Position	Director	Senior level	Middle level	Junior level	Consultant

Part- II – Ranking the foreign product selection attributes

Given below is a set of factors we have carefully chosen which might be critical for a consumer when choosing a foreign brand. Please provide us with the pair-wise comparison between the attributes to determine their relative importance. The details of the attributes and the AHP scale are provided below:

The AHP scale:

Relative Intensity	Definition	Explanation
1	Equally Preferred	The two attributes in question *(i and j)* are of equal importance
3	A Little More Preferred	One variable is a little more important than the other
5	Moderately Preferred	One variable is much more important than the other
7	Highly Preferred	One variable is very much more important than the other
9	Extremely Preferred	One variable is extremely more important than the other
Reciprocal	If attribute *i* has one of the above numbers assigned to it when compared with attribute *j*, then *j* has the value 1/number assigned to it when compared with *i*. More	

Relative Intensity	Definition	Explanation
	formally if $n_{ij} = x$ then $n_{ji} = 1/x$.	

Part- III – Pairwise Comparison

Pairwise comparison of attributes

Attribute i	FOREIGN APPAREL SELECTION CRITERIA																	Attribute j
Perceived Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country of Origin
Perceived Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country Image of Brand
Perceived Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country of Manufacture
Perceived Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Foreign Sounding Name
Country of Origin	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country Image of Brand
Country of Origin	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country of Manufacture
Country of Origin	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Foreign Sounding Name
Country Image of Brand	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Country of Manufacture
Country Image of Brand	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Foreign Sounding Name
Country of Manufacture	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Foreign Sounding Name