

# Consumer ethnocentrism and buying intentions on electronic products: moderating effects of demographics

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## Abstract

**Purpose** – Consumer ethnocentrism (CE) is a matter of interest for marketers over the decades. However, buying intentions toward domestically produced household electronic products in developing and underdeveloped countries have not been examined sufficiently. Hence, this study investigated the consumers' ethnocentrism and attitude toward domestically-produced household electronic goods. The purpose of this study is to examine the influence of consumer demographic attributes on ethnocentrism and its moderating effect on choosing domestically produced household electronic goods in the context of Bangladesh.

**Design/methodology/approach** – Primary data have been collected from a sample of 172 respondents using a mall-intercept survey. Consumers' ethnocentrism level has been measured using CETSCALE on a five-point Likert scale. ANOVA and *t*-test were performed to compare different demographic groups regarding ethnocentrism levels. This study also applied the qualitative method by applying a manual approach.

**Findings** – The result shows that consumers' ethnocentrism levels do not vary with gender and income level. However, other demographic attributes, like occupation, age and education level, play a considerable role in CE tendency.

**Originality/value** – The study is one of the few that examines the consumers' ethnocentrism and attitudes toward electronic products produced in a developing country. The researchers expect that the outcome of the study would contribute to the domestic manufacturer focusing more rigorously on producing electronic products that would be accepted locally as well as globally.

**Keywords** Consumer ethnocentrism, CETSCALE, Demography, ANOVA

**Paper type** Research paper



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## Introduction

Globalization has introduced new trends in businesses. The national economies are turning into global economies, and the trend for free trade agreements is becoming more popular. Globalization has resulted in extending business operations from native markets to international markets. Marketers are showing an increasing interest in understanding the factors affecting consumer behavior in purchasing imported goods. Consumer ethnocentrism (CE) is playing a vital role in case of choosing between local products and global products.

The Oxford English Dictionary defines ethnocentrism as “regarding one’s own race or ethnic group as of supreme importance” (1989, p. 424). Ethnocentrism denotes a positive orientation toward those sharing the same ethnicity and a negative one toward others (Hales and Edmonds, 2019). Ethnocentrism implies a collection of structures that position one’s own culture as a middle for the assembly and distribution of information of different cultures that are too numerous degrees peripheral to that (Benson, 2002). Shimp and Sharma (1987) outlined CE as consumers’ belief concerning the appropriateness and morality of buying a foreign product. The essence of client ethnocentrism is that it is wrong to buy a foreign product because it hurts the native economy, causes loss of jobs and is disloyal. In distinction, nonethnocentric consumers tend to base their analysis and get of foreign products on their own merits disregarding wherever they are created.

CE will depend on country, values, customs and behavioral patterns (Matić, 2013). Ethnocentrism influences attitude which in turn influences purchase decisions (Thomas *et al.*, 2020). Millennials show differences in global and national identities (Gonzalez, 2019). An experimental study on 220 Chinese millennials, using fictitious advertisements found that the CE value has moderate effects on consumer purchase intentions for foreign brands, while it strongly influences consumer purchases of domestic brands (Han and Guo, 2018). Researchers confirm the positive impact of CE on consumers’ attitudes toward domestically produced luxury products, while cultural sensitivity has a significant but negative effect (Karoui and Khemakhem, 2019). The ethnocentric tendency of consumers is negatively correlated with the favorable attitudes of customers toward foreign beer brands in the Czech Republic and also that highly ethnocentric customers hold less favorable attitudes towards foreign brands (Wanninayake and Chovancova, 2012). Product quality judgment acts as a partial mediator between consumer racism, national identification, animosity, ethnocentrism and willingness to buy (Shoham and Gavish, 2016). Purchasing a foreign product will cause high emotional involvement, particularly if national security or job losses are involved, which led to the introduction of the conception of ethnocentrism on the far side of psychological and sociological frameworks together of the foremost necessary factors in consumer shopping for alternative (Renko *et al.*, 2012).

The subject has been examined from a number of perspectives, relating to lifestyles (Kucukemiroglu, 1999), shortage of domestic alternatives (Watson and Wright, 2000), corporate identity (Thomas and Hill, 1999), national identity (Keillor and Hult, 1999), nationalism (Wang, 2005), cultural structure (Altintas and Tokol, 2007), socio-psychological characteristics (Kvasina *et al.*, 2018) and consumer individualism (Han and Guo, 2018). Ethnocentrism is a considerably more complex construct than previously thought, advances our understanding of ethnicity and ethnocentrism and discusses the theoretical and managerial implications arising from dual ethnocentrism (El Banna *et al.*, 2018).

Globalization presents extensive challenges and opportunities for international marketers. The easement of trade policies has provided consumers with additional foreign product decisions than ever before. Consequently, their attitudes toward products originating from foreign countries are of interest to international business and consumer behavior researchers for many years. Generally, consumers must bear the mentality of patriotism, which is defined as love for or devotion to one’s country. But the question may arise whether they bear it practically or by heart rather than by lip? Do they feel prestigious to buy domestic

products? Do the dimensions of the domestic-made products worthy to compete with imported products? Based on those research questions, this study wants to explore the role of demographic attributes in choosing domestic-made electronic products and whether the consumers feel prestigious to buy those domestic-made electronic products.

### Review of the literature

[Shimp and Sharma \(1987\)](#), who approached ethnocentrism from the stance of the consumer, treated it as a belief developed within the method of buying foreign products. They found that ethnocentric consumers object to foreign goods; as a result, they are harmful to the financial setup and cause unemployment and so thought of the acquisition of foreign goods to be associated with a disloyal act. They conceptualized CE as one of the parts of a complex theoretical construct associated with the psychological feature, emotive and normative orientations of the consumer toward merchandise factory-made abroad.

#### *Demographic variables and ethnocentrism*

##### (1) Gender and marital status

Research has shown that the underlying demographic variables, like age, gender, income and degree of education, have an effect on the intensity of CE ([Acikdilli et al., 2018](#); [Han, 2016](#)). An awesome frame of evidence helps the proposition that ladies have better ethnocentric ratings than men ([Bruning, 1997](#)). The underlying logic is that ladies are greater conservative, conformist ([Eagly, 1978](#); [Han, 1988](#)) and collectivistic concerned about preserving social harmony and high-quality feelings amongst organization contributors ([Triandis et al., 1985](#)). Individualistic consumers were found to show a greater preference for foreign brands, and also their brand choices were less affected by the CE value and ethnocentric advertising ([Han and Guo, 2018](#)). Gender does not affect the relationship between CE and lifestyle ([Spillan et al., 2011](#)). The impact of CE on consumer behavior is mitigated by gender and marital status ([Akbarov 2021](#)).

*H1.* The level of CE between males and females is the same.

*H2.* Married and single respondents show a similar level of CE

##### (2) Age and education

CE toward domestically produced luxury products varies by age and gender ([Karoui and Khemakhem, 2019](#)). It has to also be noted that some studies did no longer find any statistically significant relationship between age and CE ([Festervand et al., 1985](#)), and different older studies in fact discovered a high-quality relationship between age and favorable overseas product evaluation ([Schooler, 1971](#); [Bannister and Saunders, 1978](#)). There are no significant differences between CE and all the demographic variables of Czech customers towards foreign beer brands ([Wanninayake and Chovancova, 2012](#)). It can be argued that there is sufficient evidence that the CE tendency of the younger age group is less noticeable ([Josiassen et al., 2011](#)). [Kvasina et al. \(2018\)](#) pointed out that hypotheses were tested in order to investigate differences in consumers' ethnocentric tendencies with regard to two demographic characteristics (age and level of education). Both hypotheses related to age and education were supported. Moreover, the findings show that respondents with a higher level of education have higher tendencies toward CE than those with a lower level of education. Findings also show that younger people have more pronounced tendencies toward CE than older people. Regardless of gender, the consumer who is expressing high ethnocentric

tendencies would be older, less educated, with low income, highly religious and is dissatisfied with their life (Matić, 2013). Nadiri and Tümer (2010) discovered significant differences in CE with respect to the level of education. Acikdilli *et al.* (2018) explained that this may be due to unique regional factors. In some studies, the results showed no association between CE and educational background (Jain and Jain, 2010; Javalgi *et al.*, 2005).

- H3. The level of CE among different age groups is the same.
- H4. CE level is the same among different educational qualifications.
- (3) Level of income and occupational categories

Sharma *et al.* (1994) proposed that people tend to travel abroad more often as their income increases and then tend to be exposed to a variety of other products, as opposed to those who do in the country of origin (COO). There is no or limited travel abroad that has suggested that it leads to greater openness to foreign products and attitudes. CE for domestic luxury products is consistent at different income levels (Karoui and Khemakhem, 2019). Akbarov (2021) found that personal income mitigates the impact of CE on purchasing behavior. Negative relationships were found in both groups (white and black) in the relationship between CE and income (Pentz *et al.*, 2014). According to Zafer and Uzokurt (2010), buyers with a high level of ethnocentrism tend to be less educated and have lower monthly incomes than buyers with a lower level of ethnocentrism. Again, people with low ethnocentrism are more positive about foreign products than people with high ethnocentrism.

- H5. Consumers' ethnocentrism levels do not vary with different income levels.
- H6. Respondents from different occupational categories display the same ethnocentrism level.

#### *Attitude towards foreign products and domestic products*

International trade activity is becoming a central part of the world economy, and it is recognized that there is a greater necessity to gauge consumers' attitudes toward both domestic and foreign products (Netemeyer *et al.*, 1991). Roth and Romeo (1992) found the impact of the COO effect, where consumers' perceptions of foreign products vary differently based on sourced countries. Durvasula *et al.* (1997) found that ethnocentric individuals had a strong positive attitude toward their own country. Ethnocentrism is thus one of the factors which affect the willingness of consumers to buy foreign and domestic products (Wang and Chen, 2004), and it has been found to exert a stronger influence than marketing strategies on those decisions (Herche, 1994). A study by Balabanis and Diamantopoulos (2004) reveals that consumers can define their positive intention toward domestic products better than their negative ethnocentric intentions toward products imported from specific countries. Kaynak and Kara (2002) noted that CE generates intentions in consumers to buy local products as well as products from the countries that are perceived to resemble their own cultural values. Highly ethnocentric consumers believe that purchasing foreign products or brands is disloyal; hence, they show their intentions to favor native products or brands. Even online, CE may relate to consumer reactions to foreign and local appeals on websites (Singh *et al.*, 2004). In a study, Gonzalez and Bello (2002) highlighted the importance of adopting consumers' patterns that will motivate them to purchase different types of products or services. In less-developed countries, such as Bangladesh, consumers prefer high durable products from developed countries rather than their homemade products (Uddin *et al.*, 2013). Perreault and McCarthy (2006) mentioned that the lifestyle of target customers induces businesses to implement a variety of ideas for developing their advertising strategies. They added that

feelings and emotions are very important in consumer purchase decisions and have an effect on the analysis of product attributes. [Hawkins et al. \(2004\)](#) argued that consumers exhibit unique lifestyles, which produce needs and desires that ultimately affect the decision-making of each consumer. CE is a major factor that influences the consumer's willingness to purchase foreign products. In the case of buying a product, some consumers are very much reluctant to consider products from foreign countries ([Akdogan et al., 2012](#)). Even though most research findings implied that CE has a direct positive relationship with the aforesaid outcomes, the degree of CE and its impact on consumer behavior can be varied in different contexts. For instance, some researchers from China, Hungary ([Papadopoulos et al., 1990](#)) and Russia ([Klein and Ettenson, 1999](#)), show that customers perceive those foreign products are better than locally made products.

Ethnocentric consumers believe that their country, as well as their homemade products, is superior to any other country on the globe. In some instances, it results in refusing or boycotting products from foreign countries. CE is one factor that influences consumer product quality perception. This influence is important for the products which are not necessary to daily life ([Huddleston et al., 2001](#)). However, consumers who exhibit a low level of ethnocentrism evaluate products from foreign countries using product attributes rather than COO. But ethnocentric consumers evaluate products from foreign countries according to their effect on the local economy. Especially, they believe that purchasing foreign products results in the loss of domestic jobs, and end of the day it affects negatively the local economy. Ethnocentric consumers' preference for products from culturally dissimilar countries is very low. It is advisable for importers from culturally dissimilar countries not to highlight their COO ([Watson and Wright, 2000](#)). CE, perceived quality, perceived price and perceived brand image are significantly associated with the willingness to buy domestic products ([Yen, 2018](#)). The investigation found that CE has a strong and positive impact on attitudes about domestic wine purchase, while attitudes have a partial mediating effect on the relationship between CE and intention to buy domestic wine. Attitudes have the strongest effect on the intention to buy domestic wine, while intention is the strongest predictor of the regular purchase of domestic wine ([Maksan et al., 2019](#)). Highly ethnocentric consumers have a strong preference to purchase domestic products, and they believe domestic products are superior to imported products. Consumer ethnocentrism is the major influencer to purchase intention. Moreover, they believe that purchasing foreign products can cause unemployment ([Tabassi et al., 2012](#)). [Huddleston et al. \(2001\)](#) noted that the COO indicates the quality of products based on intrinsic (style, material) and extrinsic (price and brands) cues. Furthermore, [Lantz and Loeb \(1996\)](#) explored that the COO is more important than the brand name, price and quality in shaping attitudes towards the particular product. However, some researchers argue that domestic customers may develop favorable attitudes towards the products that come from countries with similar cultural, political and economic conditions. People by showing some set of common cultural attributes try to validate their membership in an ethnic group ([Bentley, 1987](#)). If a domestically manufactured product is not available, the ethnocentric consumer will have no choice but to purchase imported goods. In countries such as New Zealand, the loyalty of consumers to domestic goods cannot encompass all product categories, because the domestic industry does not manufacture all types of products ([Garland and Coy, 1993](#); [Herche, 1992](#)). In certain countries, consumers prefer products manufactured locally, owing to ethnocentrism and patriotism ([Kalicharan, 2014](#)).

The underlying rationale is that more knowledgeable human beings are much less in all likelihood to have ethnic prejudices ([Watson and Johnson, 1966](#)) and tend to be less conservative ([Ray, 1990](#)). A majority of studies ([Bruning, 1997](#)) found a poor correlation between earnings ranges and CE. However, some studies ([Han, 1988](#)) observed no income effects, and different studies ([Tan and Farley, 1987](#)) stated an effective relationship between income and CE.

## Methodology

The purpose of this study is to get insight into CE in Bangladesh, and a cross-sectional research design has been appointed to address the purpose. This study aims to identify consumers' ethnocentrism levels for household electronic products in Bangladesh. A quantitative approach has been appointed on primary data that were collected through the mall-intercept personal survey.

*Survey items:* The structured questionnaire has been used for collecting data. CETSCALE (developed by [Shimp and Sharma, 1987](#)), a well-established scale, has been used for measuring CE. Moreover, a scale was developed by researchers to measure consumer attitudes towards domestic household electronic goods. The noncomparative scaling technique has been applied. A five-point Likert scale has been used for this purpose.

*Respondents' selection criteria:* Respondents were selected from retail outlets of household electronic products. As a mall-intercept survey was applied for data collection, a nonprobability sampling technique (convenience sampling) has been applied. The respondents have been chosen irrespective of gender, age, income, education, occupation, religion and location using the convenience sampling technique. The sample size of the study was determined at 175 respondents. However, three incomplete sample units have been left off. Therefore, the sample size is 172.

For analyzing, data several descriptive statistics have been used. ANOVA and *t*-test were performed to compare various demographic groups. Statistical software SPSS-21 has been used for data analysis.

## Analysis and discussion

[Table 1](#) shows the demographic characteristics of the respondents. They were chosen on the basis of the judgmental sampling technique. Initially, 175 respondents participated in the survey. However, three responses have been left off during the data preparation phase for error.

Respondents' level of ethnocentrism has been identified using CETSCALE. Data were collected using 17-item scale developed by [Shimp and Sharma \(1987\)](#) on a five-point Likert scale. Respondents were grouped into three categories (i.e. high, medium and low) on the basis of the overall mean value of the responses. Respondents whose mean value in CETSCALE is greater than 3.5 were denoted as high ethnocentric consumers. Mean values between 2.5 and 3.49 were termed as mid-level ethnocentric consumers, and values lower than 2.5 were stated as low ethnocentric. From [Table 2](#) it can be found that around 70% of the respondents showed they are ethnocentric, and only 2.3% displayed low ethnocentrism.

*T*-tests and ANOVA are performed to detect whether there is a significant difference between variables among groups. [Table 3](#) presents the summary of the *t*-test and ANOVA. From the first row, it is found that the mean value of summated CETSCALE is 62.05 for male and 60.2 for female respondents where  $t = 1.198$ ,  $p$ -value = 0.233 supports [H1](#). Thus, it is concluded that male and female respondents display similar ethnocentric tendencies, which can comply with the finding of [Spillan et al. \(2011\)](#). However, the outcome of studies by [Bruning \(1997\)](#) stated that women show more ethnocentricity than men. In several other studies, [Dornoff et al. \(1974\)](#), [Hult and Keillor \(1999\)](#) and [Schooler \(1971\)](#) found that women prefer foreign products to men. [Akbarov \(2021\)](#) and [Karoui and Khemakhem \(2019\)](#) also mentioned that CE level varies with gender. In the case of marital status, married respondents show higher ethnocentrism (mean value-65.1176) than single respondents. As the  $p$ -value (0.001) is less, 0.05 in this case, [H2](#) is not supported. So, it is stated that married and single respondents show different levels of CE. This finding is analogous to the outcomes of [Ishii \(2009\)](#).

**Table 1.**  
Demographic  
profile of the  
respondents ( $N = 172$ )

		Frequency	%			Frequency	%
Gender	Male	111	64.5	Monthly Family Income	10,000 or less	9	5.2
	Female	61	35.5		Above 10,000-30,000	51	29.7
Age	< 18 Years	3	1.7		Above 30,000- 50,000	62	36.0
	18- 25 Years	114	66.3		Above 50,000	49	28.5
	25- 30 Years	12	7.0		Missing	1	0.6
	31- 35 Years	7	4.1	Occupation	Student	118	68.6
	36- 40 Years	13	7.6		Business	7	4.1
	> 40	23	13.4		Service	40	23.3
Education level	SSC	3	1.7		Housewife	5	2.9
	HSC	49	28.5		others	2	1.2
	Graduate	84	48.8	Marital status	Single	120	69.8
	Post Graduate	34	19.8		Married	51	29.7
	Missing	2	1.2		Missing	1	0.6

**Table 2.**  
Level of ethnocentrism  
(CETSCALE)

	Frequency	Percent	Cumulative percent
High ethnocentric	122	70.9	70.9
Mid ethnocentric	46	26.7	97.6
Low ethnocentric	4	2.3	100.0
Total	172	100.0	

By carrying out an ANOVA analysis, it is found that there is a significant difference in the level of ethnocentrism among different age groups ( $F(5,166) = 3.869, p = 0.002$ ). Thus, H3 is not supported according to the obtained result. Several studies, like Karoui and Khemakhem (2019), Kvasina *et al.* (2018), Bannister and Saunders (1978) and Schooler (1971) also revealed similar outcomes while the findings of Festervand *et al.* (1985) are contradictory in this regard. Table 3 also shows the result of the ANOVA analysis, which shows whether there are statistically significant different educational levels. It is found that the significance value is 0.025 (i.e.  $p = 0.025$ ), which is below 0.05; therefore, H4 is not supported and concluded that consumers' ethnocentric behavior may vary with their educational level too. This result is supported by Kvasina *et al.* (2018) and Nadiri and Tümer (2010). However, the findings of Jain and Jain (2010) and Javalgi *et al.* (2005) do not match with current study.

Nevertheless, income is not an influential factor in CE as the  $p$ -value is 0.437, which is higher than 0.05 and support H5 (no significant difference among different income group in the level of CE). This result is not consistent with the findings of Akbarov (2021), Balabanis *et al.* (2002), Klein and Ettenson (1999) and Kucukemiroglu (1999). From the analysis of variance output, it can also be stated that respondents from different occupational categories have a different level of ethnocentrism ( $F(4,167) = 6.508, p = 0.00$ ), which does not support H6. This finding is comparable with Karoui and Khemakhem (2019), Akbarov (2021) and (Pentz *et al.*, 2014).

In this study, consumers' attitude toward domestic products compared to foreign products has also been attempted to identify. Three commonly used electronic items have been considered in this regard, namely, mobile phone, fan and refrigerator. These products were

		Mean*	F/t value	df	Sig (p-value)
Gender	Male	62.0450	1.198	(df = 170)	0.233
	Female	60.1967			
Marital status	Single	59.7083	-3.449	(df = 169)	0.001
	Married	65.1176			
Age	Below 18	62.0000	3.869	(df = 5, 166)	0.002
	18-less than 25	59.5965			
	25-less than 30	61.6667			
	31-less than 35	62.7143			
	36-less than 40	70.4615			
Education level	Above 40	64.5217	3.189	(df = 3, 166)	0.025
	SSC	62.0000			
	HSC	60.6939			
	Graduate	59.9762			
Monthly family income	Postgraduate	65.8529	0.912	(df = 3, 167)	0.437
	10,000 or less	58.0000			
	Above 10,000-30,000	60.1961			
	Above 30,000-50,000	62.2742			
Occupation	Above 50,000	62.2245	6.508	(df = 4, 167)	0.000
	Student	59.4576			
	Business	58.5714			
	Service	67.8000			
	Housewife	59.2000			
	Others	62.5000			

**Table 3.** Summary of t-test and ANOVA result

**Note(s):** \*Summated score of CETSCALE has been used

selected as these items are widely available in households, and alternative foreign brands are also available in the Bangladeshi market. Respondents' attitude toward these products has been assessed in six dimensions.

Table 4 shows the respondents' attitude toward domestic electronic products where responses have been collected using five-point Likert scale, and the mean value of the responses is presented in Table 4. In the case of domestic mobile phone brands, respondents have shown positive attitudes in all six dimensions. The durability of domestic mobile phones demonstrated the highest mean score. However, respondents believe that domestic fan brands have more attractive features than global brands (a mean score of 4.00). Similarly, for domestic refrigerators brands, respondents put the highest weight on the "attractive features' dimension" (a mean score of 3.89). Surprisingly, in all three types of products, respondents assigned the lowest weight on the "prestigious to buy domestic product" dimension. This implies that though respondents hold a positive attitude toward domestic electronic brands, they do not feel it is prestigious to buy domestic brands.

Products' dimensions	Mobile	Fan	Refrigerator
Technically advanced	3.63	3.44	3.56
Prestigious to buy	3.33	2.85	3.54
Less expensive	3.85	3.95	3.79
Attractive features	3.88	4.00	3.89
More durable	3.90	3.63	3.82
Easy serviceability	3.77	3.63	3.81

**Table 4.** Respondents' attitudes toward domestic products



Table 5 represents the correlation between consumers' level of ethnocentrism with an attitude toward different selected electronic products. In the case of correlation analysis, in the null hypothesis, it is assumed that there is no correlation between two variables. As for domestic mobile phones, the null hypothesis is accepted as the  $p$ -value is 0.427, which is higher than 0.05, and thus can be stated that there is no correlation between respondents' attitudes toward the domestic mobile phone and consumers' level of ethnocentrism. However, researchers failed to accept the null hypothesis for fans and refrigerators as the  $p$ -value is less than 0.05 for both cases. Therefore, it can be concluded that there is a moderate correlation between consumers' level of ethnocentrism with attitude toward domestic fans and refrigerators.

In addition to the quantitative analysis, this study also applied a qualitative approach. During the structured survey, interviewers were also involved in a short, informal and unstructured discussion with several respondents. Key facts of these unstructured discussions were recorded in Bengali text form by the interviewers. As numerical values and their meanings are used in qualitative analysis, qualitative analysis words are used as the units of analysis (Malhotra and Das, 2016). In this study, the qualitative data were investigated to identify any meaningful pattern or theme in the dataset. In analyzing qualitative data, the following three steps approach has been applied.

- (1) *Data reduction*: In the first step of qualitative textual data analysis, the collected were arranged according to their importance and relevancy to the study. The facts which are not directly related to CE have been left off. However, respondents' each statement that is connected with their perception or attitude toward CE was retained and sorted.
- (2) *Data display*: In the second step, the textual data were visually displayed for interpretation. In absence of any qualitative data analysis software, a manual approach has been taken. Here, the opinions of respondents were arranged in four segments. The first segment coincides with all the statements that affirm CE is necessary for the well-being of the home country and its economy. The second segment compiles that the quality of domestic products is directly related to CE. In the third segment, opinions related to the product price and ethnocentrism have been agglomerated. In the last segment, statements that are related to moral values, hereditary learning, belief and patriotism have been congregated.
- (3) *Verification and implication*: In this step, researchers attempted to consider the meaning of analyzed data, compare it with quantitative findings and assess its implication. Most of the respondents who took part in the unstructured discussion revealed that to protect and develop the home county's economy, citizens of the country must display CE. Preference must be given to the domestic made products. They also proposed that mandatory goods should be imported unless they are produced domestically. However, it has already been articulated from the text that consumers also put significant importance on the quality of products (i.e. technically advanced, features, durability, etc.). In this context, bipolarity has been found. A portion of the respondents argued that the quality of domestic household electronic

	Pearson correlation	Sig. (two-Tailed)	N
Consumers' level of ethnocentrism	1		172
Attitude toward domestic mobile phone	-0.061	0.427	172
Attitude toward domestic fan	0.332**	0.000	172
Attitude toward the domestic refrigerator	0.231**	0.002	172

**Note(s):** \*\*. Correlation is significant at the 0.01 level (two-tailed)

**Table 5.**  
Correlations

goods is comparably lower than global brands. Thus, in this regard, CE may not positively contribute to the buying decision. Another portion of the respondents mentioned that if domestic electronic brands are patronized irrespective of quality, domestic brands can avail the opportunity to improve. Respondents also portrayed that cost is a vital factor in consumers' ethnocentricity. In certain cases, consumers prefer foreign electronic goods as these are cheaper than domestic ones. Citing examples of several brands, few respondents said that foreign products are available at much lower prices than domestic electronic products, which steer their purchase decisions. In addition to that psychological attachment to domestic brands, patriotism and emotional belief may also generate ethnocentric consumers.

Though the majority of the respondents of this study displayed a high level of ethnocentrism, they showed a moderate attitude toward domestic mobile phones, fans and refrigerators (source: Table 4). In addition to that, the present study did not find any relationship between consumers' level of ethnocentrism and attitude toward the domestic mobile phone. Similarly, little correlation also had been found between consumers' level of ethnocentrism with attitude toward domestic fans and refrigerators (source: Table 5). So, it can be stated that though respondents show high ethnocentrism when asked structured or unstructured way, that is merely exhibited in their product evaluation or purchase decision behavior.

For a further articulation of qualitative data, sentiment analysis of the textual data has been attempted with a hybrid approach where the combination of the Lexicon approach and natural language processing (NLP) approach was applied. In this study, besides the structured data collection with fixed alternative questions, the informal discussion with respondents was recorded and converted into the written form using speech-to-text software. Later, these texts were analyzed to divulge the respondents' ethnocentric sentiments. Sentiment analysis was first studied by Hearst in 1992 and Kessler *et al.*, in 1997. Sentiment analysis is a widely used approach used to determine whether the data is positive, negative or neutral. In this study, textual data have been used for sentiment analysis regarding consumers' ethnocentrism. In order to perform sentiment analysis in an automated manner, there are two techniques that can be used: rule-based and machine learning based. In this study, a rule-based or lexicon-based approach was adopted. After extracting the data, tokenization of text has been performed where all the text was split into individual words. Then stop word removal was performed to remove words that do not carry any significant meaning. Valence Aware Dictionary and Sentiment Reasoner (VADER) was then used to analyze the sentiment of the consumers to measure both polarity and intensity of textual responses. The analysis scored unstructured opinions of consumers as {"neg": 0.026, "neu": 0.484, "pos": 0.516, "compound": 0.4927}. Thus, it can be concluded that respondents provided relatively more favorable opinion regarding CE, which is complied with the manual interpretation of their opinions.

## Conclusion

The present study aims to explore the CE and buying intentions on some selected electronic products that are commonly used in Bangladesh, an emerging Asian developing country. The result showed that demographic attributes influence significantly to choose the domestic-made electronic products. Moreover, different dimensions of electronic products, like technical advancement, prestige to buy, cost, attractive features, durability and serviceability, can act as possible mediators between CE and willingness to buy imported electronic products. Domestic marketing managers should take advantage of prevalent ethnocentric tendencies by studying the demography of the domestic people. Moreover, they

must look for significant mediators that can increase the intensity of buying domestically made electronic products.

### Implications of the study

Recent advancement in technology has dramatically changed the marketplace; thus, consumers can easily compare the different dimensions of the local and imported products. Our study indicates that demographic attributes of age, occupation, marital status and education level will influence favorably toward choosing electronics products produced in Bangladesh. Moreover, as per our knowledge, researchers around the globe paid little focus on ethnocentrism and attitude toward domestically-produced household electronic products, especially in South Asia; hence, this study contributes to advance literature. The present study provides a few managerial implications for local manufacturers. In the case of identifying the weights of different dimensions on domestic products, respondents assigned the lowest weight on the “prestigious to buy domestic product” dimension, which is contradictory to showing a positive attitude toward domestic electronic brands. Therefore, the local manufacturers should measure the esteem needs of the consumers and try to increase the brand values of domestic electronic brands.

### Limitations and directions for future research

Limitations of this analysis principally concern the sample size, which consists only of 172 individuals; it looks to be comparatively restricted to succeed in full generalization. Moreover, 66.3% of them are 18–25 years old; studies on CE show that the extent of ethnocentrism might vary with age within the same country.

Future studies of CE in Bangladesh should use a larger sample size with people selected from different age groups. In addition, and with regard to factors moderating the relationship between CE and willingness to purchase domestic products in developing countries, psychosocial factors, like religious tendencies, have been proved to enhance ethnocentric values or lead to more willingness to purchase domestic products over foreign ones (Haque *et al.*, 2015; Matic, 2013). Religiosity is remarkably a rising issue, especially for the South Asian region. Moreover, Olsen *et al.* (1993) offered perceived equity, empathy, costs and responsibility as possible mediators between CE and willingness to buy imported products.

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