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MILLENNIALS’ NATIONAL AND GLOBAL IDENTITIES AS DRIVERS OF
MATERIALISM AND CONSUMER ETHNOCENTRISM

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Abstract

A major effect of globalization is one that occurs on the self-concept. This is especially the case for young consumers and particularly for millennials. Despite this cohort’s idiosyncrasies, little attention has been paid to the study of their consumer identities, an important aspect of self-concept. The current research addresses this gap by examining the way millennial consumers’ global and national identities help explain two attitudinal outcomes associated with globalization: materialism and consumer ethnocentrism. Data were collected from millennials in two distinct socio-cultural contexts. A key finding suggests that distinct contexts (i.e., collectivist and ethnically homogeneous vs. individualistic and ethnically diverse) exhibit differences in the formation of materialism and consumer ethnocentrism among millennials. Additionally, results indicate that for similar consumer segments, each context’s configuration of millennials shows differences in global and national identities. Implications for future researchers and practitioners are discussed.

Keywords: Globalization, Millennials, Consumer Identity, Materialism, Consumer Ethnocentrism, National Identity, Global Identity.
As a result of globalization, people in postmodern capitalist societies are increasingly interacting with other cultures through their exposure to tourists, media, products, and ideas from multiple countries and regions across the world (Demangeot & Sankaran, 2012). According to Arnett (2002), the main psychological effect of globalization is the one that occurs on the self-concept or identity. This is especially the case for young consumers (Côté & Levine, 2016). Within this demographic group, those considered millennials (i.e. individuals born between 1980 and 1999) have become a particularly interesting consumer cohort for a number of reasons. Members of this group grew up in a marketplace characterized by the internationalization of products and brands (Parment, 2011), and a consumer culture that emphasizes the experiential aspects of shopping (Lissitsa & Kol, 2016).

People in consumer societies tend to give symbolic value to the goods they own or consume, using these possessions to maintain a positive self-image and build their identities (Davies & Fitchett, 2010). Markets provide consumers with a platform and the resources to build their identities. Research characterizes the process of consumer identity development in multicultural contexts as one in which cultural identities can be bought, sold, and utilized as needed (Côté, Mikozami, Roberts, & Nakama, 2016; Oswald, 1999). According to Berry (1997), culture change supports the selective adaptation of individuals to new environments. Culture shapes consumers’ attitudes and perceptions (Triandis, 1989), significantly influencing their emotions, thought processes, and actions (Cleveland & Laroche, 2007), and helping them to
develop their identities by attributing additional meaning to their possessions (Steenkamp, Batra, & Alden, 2003).

However, and despite millennials’ idiosyncrasies, little attention has been paid to the study of the consumer identities of this group (Thomas, 2013). The current research addresses this gap by examining the way that different elements of millennial consumers’ global and national identities help explain two attitudinal outcomes frequently associated with globalization: materialism and consumer ethnocentrism (Cleveland, Rojas-Mendez, Laroche, & Papadopoulos, 2016). By doing this, the current study contributes to the literature in a number of ways. First, this research adds to our understanding of the dynamics behind the formation of materialistic and consumer ethnocentric attitudes among millennials. Second, it examines the impact of globalization on consumer culture as the interaction between global and local forces rather than reducing it to the predominance of either one of these forces (Cleveland, Laroche, & Takahashi, 2015). Third, the current study answers the call for research focused on the heterogeneity within cultures, in addition to the heterogeneity found between cultures. Accordingly, two socio-cultural contexts are considered: collectivistic societies with ethnically homogeneous populations and individualistic contexts with ethnically diverse demographics.

**Conceptual development**

**Globalization and millennials’ consumer identities**

In the past few decades the world has witnessed substantial change. Borders are becoming increasingly blurry as a result of advances in transportation and, most particularly, in telecommunications. As a result of globalization, people around the world are increasingly being exposed to a wide variety of cultures and ways-of-life through the continuous and growing flow of tourists, ideas, and capital across the world (Appadurai, 1990; Demangeot & Sankaran, 2012).
In an interconnected world, the process of identity formation is influenced not only by the interactions between individuals and institutions at home, but also with individuals and institutions from other countries or cultures. According to Arnett (2002), the main psychological effect of globalization is the one that occurs on the self-concept or identity. This multinational interactive process challenges individuals’ views about consumption and its meanings, and triggers a process of cultural adaptation to a new social context.

In postmodern capitalist societies, consumption is a key aspect of an individual’s daily interactions with society and its institutions (Lerman & Maxwell, 2006). As a result, people in consumer societies tend to show a high degree of possession centrality. In other words, they give symbolic value to the goods they own or consume, using these possessions to maintain a positive self-image and build their identities (Davies & Fitchett, 2010). Consequently, markets provide means for individuals to construct narratives of themselves (Arnould & Thompson, 2005; Belk, 1988). In particular, young adults are characterized as possessing identities in flux and in constant adaptation (Côté & Levine, 2016), and with greater freedom to choose different lifestyles (Arnett, 2004) than at any other life-cycle stage. These features make this group an especially interesting population in which to study the role of globalization in the construction of consumer identities.

Within this group, millennials, a cohort that encompasses those born in between 1980 and 1999 (Lissitsa & Kol, 2016; Gurau, 2012), were brought up in a consumer culture in which shopping takes on a more experiential dimension (Lissitsa & Kol, 2016). They are portrayed as a generation introduced to a marketplace marked by internationalization and the influence of popular culture (Parment, 2011). Millennials are known for their larger disposable income than previous cohorts (Noble, Haytko, & Phillips, 2009), considered more assertive and with greater
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self-esteem than other generations at the same age (Twenge, Carter, & Campbell, 2017), and also more narcissistic (Giambatista, Hoover, & Tribble, 2017; Twenge et al., 2016).

Despite these idiosyncrasies, limited research concerning this group’s consumer identities exists (Thomas, 2013). Most of the existing literature has focused on the ethical and ecological aspects of this generation’s consumption (Bucic, Harris, & Arli, 2012); their decision-making styles (Bakewell & Mitchell, 2003); their attitudes toward advertising (Beard, 2003); and their underlying motivations for purchasing products and patronizing retailers (Noble et al., 2009).

**Consumer identities: The role of national and global identities**

The main premise of the literature on consumer identities is that the individual is understood as possessing a core and an extended self. The latter allows for the expansion of the self by adding elements pertaining to the individual’s attachment to or affiliation with other persons, places, or things. These affiliations include all levels of a group’s attachments, ranging from the close or more personal circles to the larger or more impersonal memberships (Ahuvia, 2005).

Erikson (1950) referred to this level of the self as social identity and conceived it as represented by our “locations” in society, or the groups to which we belong. Tajfel (2010) defined social identity as the part of a person’s self-concept attained by the realization of belonging to a social group together with the emotional significance of that membership. Markus and Kitayama (1991) characterized social identity as “the psychological locus of cultural effects” and as a frame of reference that systematically influences how individuals belonging to specific socio-cultural groups behave.

Markus and Kitayama’s (1991) characterization of this concept involving specific cultures calls attention to one category of social identity that is of particular interest to consumer
researchers: cultural identity. This dimension encompasses a number of traits that a culture recognizes as setting it apart from others. It indicates the degree to which a person identifies with a particular cultural group, or similarly, the degree to which an individual adheres to the values and norms embraced by said group (Schwartz, Montgomery, & Briones, 2006). Ethnic or national identity illustrates the case in which such a group is defined by the person’s ethnicity or nationality (Phinney, 1992). Global identity is, on the other hand, unassociated with a specific country and denotes an individual’s self-identification with the global culture and people around the world (Gao, Zhang, & Mittal, 2017). This type of identity reflects a positive attitude towards a multicultural mindset that transcends geographical borders as well as the embracement of a cosmopolitan view of the self (Westjohn, Arnold, Magnusson, Zdravkovic, & Zhou, 2009). Global identity is also conceived as people’s awareness of their relation to the global culture (Arnett, 2002) and the degree of psychological and emotional investment in the global community (Der-Karabetian & Ruiz, 1997).

A number of works characterize the process through which individuals develop their identities in multicultural contexts as one resembling markets in which they can buy, sell, and utilize cultural identities like any other product (Côté et al., 2016; Oswald, 1999). Following the seminal works of Peñaloza (1994) and Berry (1997), culture change is assumed to manifest the selective adaptation of individuals to new environments. Thus, acculturation is not unidirectional, finite, or fixed. New traits can be acquired without shedding any other traits or affiliations obtained in the past. In this sense, the construction of global and national identities is dynamic, multidimensional, and relational (Cleveland, Laroche & Papadopoulos, 2009) as well as fluid and adaptive (Laroche, Kim, Hui, & Joy, 1996).
Ultimately, consumers’ national and global identities influence their behavior given the central role that cultural context plays in the interactions between individuals and markets (Askegaard, Arnould, & Kjeldgaard, 2005; McCracken, 1986). In particular, culture shapes consumers’ attitudes and perceptions (Triandis, 1989), significantly influencing their emotions, thought processes, and actions (Cleveland & Laroche, 2007).

**Materialism and consumer ethnocentrism as outcomes of globalization**

Two key attitudinal outcomes associated with globalization are consumers’ degree of materialism and ethnocentrism (Alden, Steenkamp, & Batra, 2006; Cleveland et al., 2016). Materialism has been characterized as a value (Richins, 2004), a set of attitudes (Chan & Prendergast, 2007), and a personality trait (Belk, 1985). One of the most cited and broadly accepted definitions describes materialism as the importance people give to material possessions that accompany major life goals (Lerman & Maxwell, 2006; Richins, 2004). Accordingly, a materialistic consumer will give significant importance to owning or acquiring products, derive happiness and fulfillment from these possessions, and be able to use them to signal personal and social achievements.

Consumer ethnocentrism is a tendency towards consumption of product offerings originating from the culture considered as one’s own (Shimp & Sharma, 1987). Ethnocentric consumers tend to have more favorable assessments of domestic than of foreign products. In addition, they believe it is inappropriate to purchase foreign offerings because that would hurt the domestic economy (Jin et al., 2015), indicating an attitude of defiance towards globalization (Cleveland et al., 2009). Consumer ethnocentrism is especially relevant when alternatives from other origins are available alongside one’s own cultural offerings (Klein, 2002).
Individuals develop both of these attitudinal outcomes throughout their lifetimes and different generational cohorts display distinct dynamics in the development of values, attitudes, and preferences. Research has shown that these differences remain relatively unchanged throughout life (Parment, 2013). These studies highlight the stage of young adulthood as a pivotal point for this long-lasting impact (Holbrook & Schindler, 1994), and the role of mass media as a powerful influence during this life-cycle stage (Schindler & Holbrook, 1993). Millennials came of age amidst a strong emergence of social media and reality television fueled by the widespread internationalization of societies and popular culture, which resulted in a deep engagement in issues pertaining to globalization among their members (Parment, 2011). At the same time, and because of their upbringing in societies increasingly focused on the individual, millennials have greater self-esteem and display more independence, assertiveness, and agency than previous cohorts (Twenge, Carter, & Campbell, 2017). Thus, the study of consumer attitudes such as materialism and consumer ethnocentrism is particularly interesting and relevant for the case of millennials.

Since materialism and consumer ethnocentrism are socially constructed, or learned through the socialization process, they are conceptualized as varying across individuals and time (Cleveland et al., 2009; Kleine & Baker, 2004). In particular, higher materialism is linked to social and cultural contexts experiencing major changes (Ger & Belk, 1996). Additional evidence suggests that the level of attachment toward domestic offerings varies considerably among countries, especially those in the developing stage (Shankarmahesh, 2006).

Research comparing materialism and ethnocentrism across nations has been conducted (Cleveland et al., 2009; Jin et al., 2015). Many of these studies regard these two dimensions as mediators between globalization and consumer behavior, and hence focus on the distinct
consumption patterns exhibited by different countries. However, a lack of studies exists exploring the determinants of these two attitudinal outcomes in depth as well as comparing this process across cultures. Furthermore, a number of investigations have called for research to focus on the interaction between consumers’ local and global contexts, rather than determining which force predominates (Berry, 2008; Cleveland et al., 2015). Only a few studies address materialism and consumer ethnocentrism among millennials (Bevan-Dye, Garnett, & de Klerk, 2012; Kim & Jang, 2017) and none of them focus on the determinants of these two attitudes within millennials’ global and national identity components.

The current research fills these gaps by focusing on the way millennials’ global and local identities help explain their attitudes towards materialism and consumer ethnocentrism. By focusing on attitudinal outcomes rather than on consumer behaviors, this research contributes to the literature studying segmentation of international markets given the great potential that attitudes have as a way to express consumers’ values and lifestyles (Keillor, d’Amico, & Horton, 2001). For this purpose, a model developed by Cleveland et al. (2015) is used in which each of these attitudes is independently determined by a set of global and national identity components. Specifically, materialism and consumer ethnocentrism are each modeled separately as dependent variables explained by a series of independent variables representing different aspects of consumers’ global and national identities.

**Globalization as a driver of cultural change**

Currently, two positions dominate the academic debate on the effects of globalization on consumer culture. One position asserts that globalization has a standardizing influence on a number of attitudes and behaviors across regions and cultures. This perspective argues for globalization being an integrative force that homogenizes markets via the convergence of
consumers’ attitudes and preferences across cultures. The other position argues that regional and local differences have become a force that resists globalization and helps subgroups to reaffirm their identities (Laroche, 2017). According to this view, globalization may be stimulating consumers to assert their uniqueness by incorporating communal elements and practices in their interactions with the marketplace (Niezen, 2004).

Empirical evidence exists for both positions, indicating a multidirectional continuum in which consumers can develop hybrid identities that blend the distinct cultural contexts to which they have been significantly exposed (Peñaloza, 1994). The current research argues that globalization is having a dual and simultaneous process of homogenization and heterogenization of consumer culture through its effects on materialism and consumer ethnocentrism. Thus, this implies that millennials’ global and national identities may not have consistent and uniform effects over these two attitudinal outcomes. Some components of millennials’ global identities are expected to exhibit positive effects on materialism and consumer ethnocentrism while others may display negative effects. Higher exposure to the global consumer culture via mass media may promote materialism and, at the same time, more ethnocentric consumers seeking to assert distinctiveness in their consumption. Conversely, more cosmopolitan millennials, while expected to be less ethnocentric in their consumption, could also exhibit less materialistic views as they are more aware of global environmental issues. Some features of millennials’ national identities are expected to manifest different effects on materialism and consumer ethnocentrism, revealing the interplay of homogenization and heterogenization forces. Individuals with a strong desire to preserve their national heritage are expected to be less materialistic (Sobol, Cleveland, & Laroche, 2018), reflecting resistant forces to globalization in line with the heterogenization argument. However, not all features of their national identities with negative effects on
materialism are associated with the heterogenization view. For example, a social network predominantly formed by local members, although a symbol of higher identification with the national culture, also implies a less multicultural network. The same applies to the use of media outlets. For these features, a negative association with materialism may actually denote homogenization forces: the less local (or more diverse) social networks are, the higher the degree of materialism. These ideas are expressed in the following two hypotheses:

**H1:** Millennials’ global and local identities have differential effects on materialism.

**H2:** Millennials’ global and local identities have differential effects on consumer ethnocentrism.

**Acculturation to globalization in distinct socio-cultural contexts**

Materialism and consumer ethnocentrism are considered social constructs, or more particularly, attitudinal outcomes of the sociocultural context to which individuals have been significantly exposed (Cleveland et al., 2009). In addition, issues related to identity are influenced by the ethnic diversity of a society (Oyserman, 2009; Strebinger, Guo, Klauser, & Grant-Hay, 2018). An increasing number of researchers in the field of cross-cultural studies are calling attention to the heterogeneity found within different cultures, emphasizing the role of intra-country diversity in the distinct influence that globalization has in modern societies (Cleveland et al., 2016; Demangeot, Broderick, & Craig, 2015). In line with this, two different sociocultural contexts may present distinct configurations of materialistic and ethnocentric consumers with distinct combinations of global and national identities. Thus, the current study considers two distinct socio-cultural contexts: Collectivistic with an ethnically homogeneous population and individualistic with an ethnically diverse population.

In collectivistic societies, the experience of the self includes a sense of interdependence and of one’s status as a participant in a larger social unit (Markus & Kitayama, 1991).
Individualistic societies emphasize independent self-construals motivated to express themselves, which are separated from the social context. In contrast, collectivistic mindsets encourage interdependent self-construals that connect with the social setting and aim at maintaining harmony and balance among members of society (Nishimura & Sakurai, 2017). Ethnically homogeneous societies reinforce this sense of interdependence as well as the search for conformity. A number of studies have associated ethnically diverse contexts with lower levels of national identity (Keillor & Hult, 1999), a higher fragmentation of consumers (Peñaloza, 2015), and a need for differentiation approaches (Strebinger et al., 2018).

The acculturation to new environments is considered a process in which individuals have considerable agency to choose the adaptation strategies that best align with their beliefs and values (Berry, 1997; Schwartz et al., 2006). Research has found these strategies to range from those in which individuals integrate both their original and new context’s values to those in which they choose to remain detached, or marginalized, from both environments. Along this spectrum of adaptation outcomes, different combinations of affirmative and rejectionist attitudes towards the original and new environments are manifested (Luedicke, 2011).

Based on these ideas, millennials from ethnically homogeneous and collectivistic contexts may be characterized by integrative strategies that preserve local values while embracing the global views and lifestyles in an effort to blend with the rest of consumers. Alternatively, millennials from ethnically diverse and individualistic contexts may edge towards outcomes in which local features become salient elements to manifest unique and differentiated identities. The following two hypotheses summarize these ideas:

**H3:** Millennial consumers from collectivistic and ethnically homogeneous sociocultural contexts prefer more integrative strategies of adaptation to globalization.
H4: Millennial consumers from individualistic and ethnically diverse sociocultural contexts prefer more differentiated strategies of adaptation to globalization.

Method

Participants

The target population for this study is millennial consumers from two different sociocultural contexts, one collectivistic and ethnically homogenous, and the other individualistic and ethnically diverse. Millennials from Japan represent the former while those from the United States represent the latter. Both countries are two of the most advanced economies with relatively similar economic status, both globally and in per capita terms, yet with very different socio-cultural contexts (Lin & Kalwani, 2018).

The United States consistently scores higher than Japan on Hofstede’s individualism-collectivism dimension (Hofstede, Hofstede, & Minkov, 2010), indicating a society with a more individualistic mindset. Japan, on the other hand, is considered a collectivist society where individualism has negative connotations and interrelationships among the members of a group are prioritized (Triandis, 2018; Markus & Kitayama, 1991). As a result, both of these countries are consistently placed on opposite ends of the individualism-collectivism spectrum.

Japan represents one of a small number of advanced economies in which ethnic homogeneity is predominant (Cleveland et al., 2015) and ingrained in the notion of nationhood (Verkuyten, 2018). In contrast, the United States is characterized by the literature as a highly fragmented economy in terms of race (Montalvo & Reynal-Querol, 2005) as well as one of the top culturally and ethnically diverse societies in the world (Okediji, 2005). Given these
pronounced differences, these two socio-cultural contexts offer an appropriate setting to test the current study’s hypotheses.

Participants in this study were undergraduate students enrolled in academic programs at higher education institutions in Japan and the United States. Participants were asked to voluntarily provide their responses as part of a class. In total, 500 millennial students were contacted, resulting in 422 participants, 244 from Japan and 178 from the United States (American participants). The participants in this study are similar to those used in other studies targeting millennial consumers in that they are college students (e.g., Bevan-Dye et al., 2012; Blake et al., 2017; Cleveland et al., 2015; Detre, Mark, & Clark, 2010). The number of participants in this study provided a 95% level of power (Cohen, 1988). Females comprised 57.1% of participants while 42.9% were male. The distribution by year of birth is as follows: 1993-1995, 19.9%; 1996, 20.4%; 1997, 23.7%; 1998, 28.7%; and 1999, 7.3%.

Measures

Four scales from related prior research were used in the current study: Materialism, consumer ethnocentrism, ethnic (national) identity, and acculturation to the global consumer culture (global identity). Each scale contains items measured on a seven-point scale (1 = “strongly disagree,” to 7 = “strongly agree”). The four scales included a total of 91 items and were translated to Japanese for Japanese participants by an experienced native translator using back-translation and adjusting for consistency to reflect language idiosyncrasies. Data for all participants were collected using a combination of online and “paper and pencil” self-administered formats. In order to be congruent with prior research, each scale’s scores were calculated using participants’ average items score, following the protocol used by Cleveland et
al. (2015). All measures were tested for reliability, using Cronbach’s alpha ($\alpha$) for that purpose, and showed sufficient internal consistency based on Churchill’s (1979) criteria ($\alpha > 0.6$).

**Materialism (MVS; dependent variable)**

Richins & Dawson (1992)’s material values scale (MVS) was used. This scale has been widely validated and used extensively since its publication (Cleveland et al., 2009). For the current study, the nine-item shorter version of MVS was used ($\alpha = .79$, $M = 4.46$, $SD = .96$). A sample item is: “The things I own say a lot about how well I am doing in life.”

**Consumer Ethnocentrism (CET; dependent variable)**

The 4-item refined version of the CET scale (Klein, Ettenson, & Krishnan, 2006) was used in this study ($\alpha = .81$, $M = 2.69$, $SD = 1.11$). Developed by Shimp & Sharma (1987), the CET scale is one of the most widely used instruments in the literature to assess consumer ethnocentrism (Cleveland et al., 2009). A sample item is: “We should purchase products manufactured in our own country instead of letting other countries get rich off of us.”

**Global Identity (AGCC; independent variable)**

Cleveland & Laroche’s (2007) acculturation to the global consumer culture (AGCC) scale was used to estimate global identity. Other studies have discussed the suitability of the AGCC scale to measure the global orientation of consumers, highlighting the scale’s theoretical relevance for a number of cultures both inside and outside a Western context (Manrai & Manrai, 2011). This scale is comprised of five elements: Cosmopolitanism (COS; 6 items, $\alpha = .89$, $M = 5.67$, $SD = 1.02$), self-identification with (IDT; 6 items, $\alpha = .82$, $M = 3.72$, $SD = 1.27$), openness to (OPE; 6 items, $\alpha = .66$, $M = 3.43$, $SD = .87$) the global consumer culture, exposure to multinational marketing activities (EXM; 7 items, $\alpha = .86$, $M = 3.70$, $SD = 1.16$), and global mass media exposure (GMM; 18 items, $\alpha = .88$, $M = 3.53$, $SD = 1.10$). COS assesses
participants’ inclinations to learn from foreign cultures. IDT gauges to what extent participants perceive the influence that global culture has on their lifestyle choices, such as fashion and décor. OPE evaluates how accommodating participants are to foreign cultures. EXM measures the extent of participants’ interaction with multinational marketing activities in their lives. GMM indicates to what extent participants’ consumption of mass media such as cinema, music, news outlets, and television, is globalized. An example of one of the AGCC items is: “I think my lifestyle is almost the same as that of people of my social class in other countries.”

National Identity (EID; independent variable)

The Cleveland et al. (2015) ethnic identity (EID) scale was used to measure national identity. EID has been validated for a variety of countries (Carpenter, Moore, Alexander, & Doherty, 2013) and across different languages (Cleveland, Laroche, & Hallab, 2013). This scale contains 5 elements: Culture pride and participation (PPC; 7 items, $\alpha = .81$, $M = 4.60$, $SD = 1.05$); self-identification with, and desire to maintain, their culture (IDMC; 9 items $\alpha = .88$, $M = 4.93$, $SD = 1.01$); traditional family structure and gender roles (FAM; 5 items, $\alpha = .74$, $M = 3.43$, $SD = .92$); ethnic interpersonal relationships (LIR; 4 items, $\alpha = .74$, $M = 5.38$, $SD = 1.07$); and ethnic media use (LMU; 10 items, $\alpha = .89$, $M = 5.41$, $SD = 1.21$). PPC characterizes the degree to which participants embrace their local culture’s traditions and rituals. IDMC gauges participants’ attachment to their local culture’s values. FAM evaluates participants’ allegiance to their culture’s family and gender dynamics. LIR reflects the extent to which participants’ social circles and personal networks are insular. LMU appraises the level of parochialism in the participant’s media use. One example of an EID item is: “My country’s culture has the most positive impact on my life.”
Analytic approach

To test hypotheses H1 and H2, two sets of ordinary least-squares (OLS) regressions were run for both groups of participants. Each set is comprised of two estimated equations. MVS is the dependent variable in one equation while CET becomes the dependent variable in the second. For both models the same ten independent variables were used: the five components of EID and the five elements of AGCC. Thus, to determine if H1 and H2 were supported, the signs of the estimated betas for the independent variables were analyzed to determine if they are consistent with either the cultural homogenization or heterogenization effects of globalization.

In order to test hypotheses H3 and H4, first, a series of unsupervised two-step cluster algorithms was used. An unsupervised cluster algorithm assesses if there are discernible homogeneous segments of consumers from the diversity of data points displayed by the variables considered. The “unsupervised” feature implies that the algorithm performs this analysis without any input from the researcher regarding the number of clusters or segments it should find (Bruwer & Li, 2017). If the algorithm determines the existence of distinct clusters, then the information regarding the number of segments is used to estimate their compositional structure and size. This algorithm was run for three sets of variables separately for each group of participants. The three sets considered are: the five elements of EID, the five components of AGCC, and the attitudinal outcomes of materialism (MVS) and consumer ethnocentrism (CET).

Second, based on the results of the cluster analysis for MVS and CET, similar segments of consumers were identified across both groups of participants. These observations were mapped out according to their levels of global (AGCC) and local (EID) identities. The resulting scatterplots define four quadrants according to the combinations of low or high values of AGCC and EID. The concentration of data points across these quadrants indicate each group’s
preference for certain adaptation strategies to globalization, resembling Berry’s (1997) acculturation matrix. Specifically high values of EID suggest an integration strategy if paired with high values of AGCC and a separation strategy with low values of AGCC. An assimilation strategy shows a concentration of points with high AGCC and low EID values while low values for both variables are associated with a marginalization strategy. Confidence intervals for the proportion of points in these quadrants were calculated to determine each group’s preferences for distinct acculturation patterns by identifying those quadrants with percentages significantly higher than .5.

Results

An initial correlation matrix analysis showed no sign of serial correlations ($\rho > .75$) between pairs of independent variables considered for these models (Grewal, Cote, & Baumgartner, 2004). The bi-variate correlation matrix is presented in Table 1.

[Insert Table 1 here]

The estimation results for the OLS regressions used to test hypotheses H1 and H2 are shown in Table 2. To facilitate the comparison across socio-cultural contexts, both materialism and consumer ethnocentrism models are displayed side by side for Japanese and American participants.

In reviewing the results for materialism, only three variables have statistically significant ($p < .05$) beta coefficients in each context. For Japanese participants ($R_{adj.}^2 = .29$; $F(10, 233) = 10.90; p < .01$), these variables are: ethnic media use (LMU; $\beta = .10$, $t = 1.98$, $p < .05$), self-identification with the global consumer culture (IDT; $\beta = .29$, $t = 5.32$, $p < .01$), and ethnic interpersonal relationships (LIR; $\beta = .20$, $t = 3.81$, $p < .01$). All three variables show positive coefficients. Millennials in collectivistic and ethnically homogeneous contexts place more
importance on possessions as their media consumption becomes more locally based. The closer they identify with the global consumer culture (or the more influence they perceive this phenomenon has over their lifestyle consumer choices), the higher their degree of materialism. For this group of millennials, insular personal networks drive materialistic attitudes. That is, the less culturally diverse their social circles are, the more materialistic they become.

[Insert Table 2 here]

The results for IDT are congruent with the position that argues for globalization having a standardizing effect on culture through the spread of materialism. However, the positive beta coefficients on LIR and LMU indicate that as personal networks and media use become more diverse, millennials’ degree of materialism tends to decrease. This result contradicts the homogenization of cultures position and could be interpreted as evidence of resistant forces at play.

For the American participants, materialism ($R_{adj.}^2 = .22; F (10, 167) = 5.85; p < .01$) is positively affected by LMU ($\beta = .20, t = 3.04, p < .01$) and IDT ($\beta = .33, t = 3.96, p < .01$), and also by their openness to the global consumer culture (OPE; $\beta = .19, t = 2.06, p < .05$). The result for OPE indicates that, for millennials from individualistic and ethnically diverse societies, the more accommodating they are with the different manifestations of the global culture, the more they value possessions as part of their lives. Similar to the results for Japanese participants, the positive coefficients estimated for LIR and LMU are in line with the position arguing for globalization having a heterogenization effect on culture. H1 is supported given the results showing differential effects on materialism for both groups of participants.

Results show that consumer ethnocentrism is a more complex attitudinal outcome than materialism for the Japanese participants ($R_{adj.}^2 = .33; F (10, 233) = 12.96; p < .01$). Four out of
the five ethnic identity components have statistically significant coefficients (p < .05). The greater millennials’ participation in their culture’s traditions is (PPC; β = .35, t = 3.69, p < .01), and the more identified they are with their traditional family structures and gender roles (FAM; β = .24, t = 2.26, p < .05), the higher their degree of consumer ethnocentrism. Those consumers whose media use largely concentrates in domestic outlets (LMU; β = .15, t = 2.21, p < .05) tend to exhibit a higher degree of consumer ethnocentrism. Interestingly, the more local their personal network is (LIR; β = -.18, t = -2.54, p < .05), the less they exhibit consumer ethnocentrism.

Three components of Japanese participants’ global identities are reported as significant drivers of consumer ethnocentrism (p < .05). The first of these drivers, cosmopolitanism (COS; β = -.28, t = -3.54, p < .01), possesses the negative effect congruent with the argument in favor of cultural homogenization. This indicates that, for this group of participants, millennials who are inclined to learn from and experience other cultures favor less ethnocentric consumption. In contrast, their openness to globalization (OPE; β = .33, t = 4.23, p < .01) and exposure to global mass media (GMM; β = .19, t = 2.61, p < .01) increase their degree of consumer ethnocentrism. The direction of the estimated effects for LIR, OPE and GMM suggests the existence of resistant forces at play. More concretely, these effects reveal a defensive reaction by millennials from this group to the diversity experienced in their social circles, the increasing exposure to global mass media messages, and the inclusiveness displayed towards other cultures.

The results for millennials from ethnically diverse and individualistic societies (R adj.² = .25; F (10, 167) = 6.83; p < .01) also show signs of resistant forces albeit in a less multifaceted fashion. In contrast to Japanese participants, only two components of American participants’ global identities are significant drivers of consumer ethnocentrism (p < .05). The degree of
cosmopolitanism presents the negative beta (COS; $\beta = .31$, $t = -4.01$, $p < .01$), which supports the argument in favor of globalization engendering the homogenization of consumer culture. However, the direction of the estimated beta for self-identification to the global consumer culture (IDT; $\beta = .31$, $t = 3.50$, $p < .01$) reveals a source of resistant forces among American participants. The more they recognize a strong influence of this phenomenon in their lifestyle choices, the more parochial their consumer attitudes become.

The finding of resistant forces towards globalization coexisting with other effects more in line with the homogenization of consumer culture’s position for CET in both groups supports hypothesis H2. Thus, millennials in both socio-cultural contexts exhibit the interaction of homogenization and heterogenization effects of globalization in the formation of consumer ethnocentrism.

The results for the cluster analyses performed in order to test hypotheses H3 and H4 are shown in Tables 3 through 5. The clustering algorithm found no distinct segments in either group of participants for the five components of national identity. As for the five components of global identity, the procedure found no distinct segments among American participants but identified two clusters (AGCC-J1 and AGCC-J2) within Japanese participants ($SC = .4; k = 2$), displaying an average silhouette coefficient ($SC$) that indicates reasonable partitioning of data. The composition and sizes of these two clusters are shown in Table 3.

![Insert Table 3 here](https://example.com)

Clusters AGCC-J1 and AGCC-J2 differed significantly in all five components: IDT ($F (1, 242) = 326.88; p < .01$), GMM ($F (1, 242) = 185.77; p < .01$), EXM ($F (1, 242) = 142.77; p < .01$), COS ($F (1, 242) = 32.43; p < .01$) and OPE ($F (1, 242) = 30.18; p < .01$). One thing these clusters have in common is that they both portray highly cosmopolitan individuals given the high
scores displayed (greater than 4, the neutral point) in COS for both clusters. Yet in all the other indicators, cluster AGCC-J1 represents a segment of this group with low levels of acculturation to the global consumer culture. Cluster AGCC-J2, on the other hand, portrays a segment that shows high scores in the rest of components, except for OPE, and is indicative of an individual highly acculturated to the global consumer culture. These results reveal that millennials from ethnically homogeneous and collectivistic-minded contexts show a level of diversity in their global identities not exhibited by millennials from ethnically diverse and individualistic societies.

Tables 4 and 5 exhibit the results of a cluster analysis on each group of participants for materialism and consumer ethnocentrism after the unsupervised algorithm detected two distinct segments for the Japanese ($SC = .5; k = 2$) and the American ($SC = .5; k = 2$) participants.

The clusters found among participants representing individualistic and ethnically diverse societies differed significantly in their average values for MVS ($F (1, 176) = 54.15; p < .01$) and CET ($F (1, 176) = 172.63; p < .01$). In the case of American participants, two characteristic groups of consumers exist when it comes to their materialistic and ethnocentric tendencies. Those who tend to see themselves as non-materialistic and non-ethnocentric form one cluster (U2). The other segment (U1) represents participants who perceive themselves as materialistic but not ethnocentric consumers although their degree of ethnocentrism is higher than the one exhibited by cluster U2.

However, for millennials from ethnically homogeneous and collectivistic contexts, both clusters uncovered by the algorithm show the same degree of materialism ($F (1, 242) = .01; p = .93$). Their views regarding consumer ethnocentrism are more similar than in the case of their more individualistic and ethnically diverse counterparts. Both clusters regard themselves as non-
ethnocentric although one displays a higher degree of ethnocentrism (J1) than the other (J2). The difference between these two clusters’ CET scores is statistically significant ($F(1, 242) = 492.24; p < .01$).

Both of these clusters, J1 and J2, exhibit levels of materialism similar to the cluster with the highest value in this dimension among American participants (U1). This reveals overall higher materialistic tendencies among millennials from collectivistic and ethnically homogeneous societies than those from individualistic and ethnically diverse contexts. An ANOVA test comparing the MVS average scores between Japanese and American participants confirmed the latter observation ($F(1, 420) = 42.03; p < .01$).

Within this intra-context heterogeneity, two similar segments across the two groups of participants can be identified. Clusters U1 and J1 represent consumers with the same views regarding materialism and ethnocentrism despite their distinct socio-cultural contexts. Thus, to perform a consistent comparison of the adaptation strategies preferred by millennial consumers in these two socio-cultural contexts, further analysis carried out focused on these two clusters. The similarity of these two groups of consumers in their materialistic and ethnocentric attitudes facilitates an equivalent contrast of their global and national identities across contexts.

To determine whether there is empirical support for hypotheses H3 and H4, observations were plotted in separate scatterplots for each socio-cultural context. These scatterplots aim at emulating Berry’s (1997) four patterns of acculturation strategies. Figures 1 and 2 show these scatterplots for American and Japanese participants, respectively. The intensity of their ethnic identities (EID) is depicted on the horizontal axis, whereas for their global identities (AGCC) is represented on the vertical axis. The scatterplots display two lines drawn at the neutral points of both dimensions, dividing the graph effectively in the four different quadrants similar to Berry’s
Millennia’s Consumer Identities

The data points were categorized by the cluster number they belong to as shown in Tables 4 and 5.

[Insert Figure 1 here]

[Insert Figure 2 here]

Starting from the top left corner, the *assimilation* strategy implies adopting the global culture and shedding the local way of life. The quadrant to the right depicts an *integration* strategy, featuring a “bicultural” individual who has successfully combined both cultures. In the bottom right corner, the *separation* strategy represents the opposite to assimilation. The individual has chosen to keep the local culture and adopt only a few aspects of the global lifestyle. Finally, the *marginalization* acculturation strategy portrays cases that ostracize themselves by choosing neither the domestic nor the global culture.

The distribution displayed by clusters U1 and J1 across these quadrants reveals an interesting pattern of adaptation strategies. Cluster U1 displays a slightly higher concentration of millennials in the *separation-marginalization* (42/74; 56.8%) quadrants than in the one depicting *integration* outcomes (32/74; 43.2%). For J1, millennials appear to be more concentrated in the *integration* realm (64/104; 61.5%) than under the *separation* strategy (40/104; 38.5%).

Confidence interval calculations for these percentages provide support for H3. Millennial consumers from collectivistic and ethnically homogeneous societies prefer more integrative strategies to globalization (95% CI [.52; .71]), in which elements of both their local and global consumer identities are interchangeably manifested in their lives. Hypothesis H4 is not supported since the confidence interval for the proportion of U1 participants in the separation-marginalization quadrants is not significantly different from the share in the integration quadrant (95% CI [.45; .68]). In other words, there is no support to assert that millennials from
individualistic and ethnically diverse societies prefer more separatist strategies when adapting to globalization. However, there is sufficient evidence to assert that they are equally split between integrative and differentiated (separation-marginalization) strategies.

**Discussion**

The purpose of this study was to examine the role that ethnic and global identities play in the formation of millennials’ materialism and consumer ethnocentrism, and to determine if these processes are distinct for two different socio-cultural contexts. In addition, this research focused on the intra-context diversity of millennials to determine if these two groups of consumers follow distinct adaptation strategies towards globalization. The two contexts investigated were collectivistic with ethnically homogeneous populations and individualistic with ethnically diverse demographics. The current study’s results shed light on the dynamics of this interaction in the formation of materialism and consumer ethnocentrism for millennials.

This study’s findings revealed that for millennials from collectivistic and ethnically homogeneous societies, materialism is determined more markedly by their national identities. Two aspects of these identities, the degree of insularity of their personal networks and media use, drive the importance millennials place on material possessions in their lives. Only one element of their global selves acts as a determinant of this attitude: their self-identification with the global culture. In contrast, for millennials from individualistic and ethnically diverse societies, materialism is more prominently determined by the changes enacted in their global identities. Two of this dimension’s elements, openness to and the degree of identification with the global culture, help build millennials’ materialism. Correspondingly, only one aspect of millennials’
ethnic selves acts as a significant driver of materialism: the insularity of their media use and consumption.

In the case of consumer ethnocentrism, the dynamics of this process are more complex and multifaceted than materialism for millennials in collectivistic societies with ethnically homogeneous populations. Both global and ethnic identities play an important and balanced role in the formation of these attitudes. For millennials in ethnically diverse and individualistic contexts, consumer ethnocentrism is more markedly determined by their global identity, which parallels the pattern exhibited by materialism.

The results supported the contention that millennials’ global and national identities have differential effects on materialism and consumer ethnocentrism, indicating a simultaneous process of homogenization and heterogenization of consumer culture. The effects of both forces were supported for both socio-cultural contexts examined, suggesting this phenomenon may be more common worldwide than previously assumed. These findings supported the call for a more balanced approach when studying the impact of globalization on consumer culture, one that considers the confluence of national and global characterizations of consumers’ selves.

Prior research has highlighted the relatively high degree of materialism exhibit by millennials (Bevan-Dye et al., 2012; Fitzmaurice & Comegys, 2006) and reported mixed results for consumer ethnocentrism (Jin et al., 2015). This research provided further evidence for distinct socio-cultural contexts and the diversity exhibited within these contexts, as suggested by Cleveland et al. (2016) and Demangeot et al. (2015). This study revealed that distinct socio-cultural contexts bring about differences in the nature of how materialism and consumer ethnocentrism are formed among millennials. Specifically, national or domestic forces shaping millennials’ consumer identities are the driving influence of materialism in largely mono-ethnic
and more collectivistic-minded societies. Conversely, global forces are prominent drivers of both materialism and consumer ethnocentrism among millennials from multiethnic and individualistic contexts.

The importance of domestic forces may help explain why millennials’ degree of materialism, in this study, is on average higher in collectivistic and ethnically homogeneous contexts than in individualistic and racially heterogeneous environments. Societies may exert less resistance to ideas and attitudes that are cultivated within the culture, as opposed to those coming from external sources. Interestingly, both clusters found among Japanese participants show similarly materialistic individuals with distinct ethnocentric orientations. For American participants, by contrast, two divergent materialistic views emerge from their clusters.

Finally, an analysis of the configuration of national and global identities provided support for millennial consumers of different socio-cultural contexts differing in their adaptation strategies to globalization. Results showed millennials from collectivistic and ethnically homogeneous societies prefer more integrative strategies whereas those from individualistic and multiethnic societies are equally split between integrative and separatist strategies. These results are consistent with previous research (Cleveland et al., 2015).

This study’s findings pointed out an ongoing process of adaptation in which elements of millennials’ global and national identities play a role in the formation of materialism and consumer ethnocentrism. These findings provided empirical support for the notion that acculturation to new environments manifests an adaptation process that is not fixed or unidirectional but, rather, one that is selective, dynamic, and relational (Berry, 1997; Cleveland, Laroche, Pons, & Kastoun, 2009; Peñaloza, 1994). In addition, these results advanced our understanding of how similar segments across cultures may conceal important differences in
their adaptations to globalization that have relevant implications for the targeting and positioning of products and services.

**Implications for practitioners**

Given the predominance of domestic forces in the formation of materialism among millennials from collectivistic and ethnically homogeneous contexts, organizations may find domestic channels more effective in their communications of social status appeals. For marketers of luxury brands, the significant materialistic tendencies found for millennials in these contexts indicate an inclination towards aspirational and status-related cues. This is especially the case for the two similar clusters of millennial consumers found between the two contexts. These two segments encompass relatively high materialistic and ethnocentric consumers, indicating opportunities to develop national or domestic aspirational brands that could find a place in a market dominated by global brands.

Furthermore, the results supporting a preference for integrative strategies among millennials from ethnically homogeneous and collectivistic contexts indicate that hybridized strategies may be more successful than those in which offerings are globally standardized. These strategies should blend global appeals with local inflections rather than a monolithic view of consumers and products’ identities. As suggested by Oswald (1999), such consumers may swap between their local and global identities when evaluating how well aligned a product or brand appears to be with their beliefs and values.

For millennials from individualistic and ethnically diverse societies, a carefully segmented and distinctive approach may work best since consumers are split between two pathways. One can be addressed by the hybridized strategy described above while the other by an approach that looks to assert millennials’ local uniqueness and idiosyncrasies. For the latter
approach, the indigenization of products or brands that are perceived as predominantly foreign may be necessary to cater successfully to these consumers. Domestic brands that are associated with national pride or nostalgia may successfully thrive when catering to this group of consumers, especially if they develop premium or status symbol alternatives within their product or brand portfolios.

Limitations and directions for future research

There are several limitations to the current investigation that should be considered for future research. The first limitation concerns the characteristics of the participants. Future research should examine a greater range of age groups and education levels since millennials comprise a larger set than only those born during the 1990s. In particular, this line of research would benefit from investigations considering millennials without college education to account for different exposures to globalization and its manifestations.

Second, given the ethnic diversity present in developed countries such as the United States and a number of European nations, more research is needed to account for the potential heterogeneity across communities. A productive line of research could examine whether millennials from different ethnic or minority backgrounds display key distinguishing features or adaptation strategies that differ from those of the mainstream society. Moreover, an interesting avenue could focus on the study of immigrant communities and the distinct effects of globalization on their identities when a parallel process of acculturation to the host society is underway.

A third limitation of this study is the comparison of only two cultures with distinct ethnic compositions and cultural values such as collectivism and individualism. Future research should
focus on groups of participants that include a variety of countries in different locations of these and other spectrums envisioned by Hofstede’s five dimensions (Minkov and Hofstede, 2014), such as power distance and uncertainty avoidance. Further exploration of how different configurations of cultural values determine potentially distinct formation processes for materialism and consumer ethnocentrism may provide greater insights into the anatomy of the global citizen.

**Conclusions**

For consumers in the increasingly globalized marketplace, the tension between cultural homogenization and heterogenization may be promoting identities that combine their global and local selves. The current study explored the notion of a global consumer for millennials and addressed the question of what the distinguishing features of such a consumer may be. In particular, millennials’ materialistic and ethnocentric views of consumption were analyzed as outcomes of their global and national identities.

The findings from the current investigation suggested that distinct socio-cultural contexts bring about differences in the nature of how materialism and consumer ethnocentrism are formed among millennials. For similarly materialistic and ethnocentric segments of consumers, each context possesses a distinct configuration of millennials manifesting different enactment of their global and national identities. These findings have a number of implications for practitioners in the development of products and brands internationally that highlight the need for hybridized approaches to introduce foreign offerings in one context and a more segmented strategy in the other.

**References**


# Table 1

Pearson (bi-variate) correlation coefficients and Cronbach’s alpha (main diagonal)

<table>
<thead>
<tr>
<th>Variables</th>
<th>LIR</th>
<th>LMU</th>
<th>FAM</th>
<th>IDMC</th>
<th>PPC</th>
<th>COS</th>
<th>IDT</th>
<th>EXM</th>
<th>OPE</th>
<th>GMM</th>
<th>CET</th>
<th>MAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIR</td>
<td>.74***</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LMU</td>
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<td>.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAM</td>
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<td>.74</td>
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<td></td>
<td></td>
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<tr>
<td>IDMC</td>
<td>.342**</td>
<td>.129</td>
<td>.107*</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPC</td>
<td>.280**</td>
<td>.226</td>
<td>.124*</td>
<td>.714**</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>COS</td>
<td>.164**</td>
<td>-.140</td>
<td>-.076</td>
<td>.081</td>
<td>.046</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IDT</td>
<td>.118*</td>
<td>-.248</td>
<td>-.106*</td>
<td>.130**</td>
<td>.072</td>
<td>.259**</td>
<td>.82</td>
<td></td>
<td></td>
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<tr>
<td>EXM</td>
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<td>-.027</td>
<td>.088</td>
<td>.085</td>
<td>.182**</td>
<td>.615**</td>
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<tr>
<td>OPE</td>
<td>0.034</td>
<td>-.099</td>
<td>-.021</td>
<td>.138**</td>
<td>.127**</td>
<td>.164**</td>
<td>.446**</td>
<td>.294**</td>
<td>.66</td>
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<tr>
<td>GMM</td>
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<td>.089</td>
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<td>.325**</td>
<td>.635**</td>
<td>.509**</td>
<td>.377**</td>
<td>.88</td>
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<tr>
<td>CET</td>
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<td>.072</td>
<td>.257**</td>
<td>.324**</td>
<td>-.244**</td>
<td>.185**</td>
<td>.125**</td>
<td>.244**</td>
<td>.113*</td>
<td>.81</td>
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<tr>
<td>MVS</td>
<td>.250**</td>
<td>.063</td>
<td>-.105*</td>
<td>.282**</td>
<td>.146**</td>
<td>.022</td>
<td>.410**</td>
<td>.215**</td>
<td>.267**</td>
<td>.191**</td>
<td>.157**</td>
<td>.79</td>
</tr>
</tbody>
</table>

*** Cronbach’s alpha; ** Correlation is significant at the 0.01 significance level; * Correlation is significant at the 0.05 significance level.

LIR: Ethnic interpersonal relationships; LMU: Ethnic media use; FAM: Traditional family structure and gender roles; IDMC: Self-identification with one’s own culture; PPC: Pride and participation in one’s own culture; COS: Cosmopolitanism; IDT: Self-identification with the global consumer culture; EXM: Exposure to multinational marketing activities; OPE: Openness to the global consumer culture; GMM: Global mass media exposure; CET: Consumer ethnocentrism; MVS: Materialism.
Table 2
Ordinary least squares estimation (betas) for materialism and consumer ethnocentrism: American and Japanese participants

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Materialism (MVS)</th>
<th>Consumer Ethnocentrism (CET)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japanese</td>
<td>American</td>
</tr>
<tr>
<td>Intercept</td>
<td>2.031*</td>
<td>1.444*</td>
</tr>
<tr>
<td>Ethnic identity (EID)</td>
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<td></td>
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<tr>
<td>PPC</td>
<td>-0.024</td>
<td>0.200</td>
</tr>
<tr>
<td>IDMC</td>
<td>0.102</td>
<td>-0.017</td>
</tr>
<tr>
<td>LIR</td>
<td>0.201*</td>
<td>-0.034</td>
</tr>
<tr>
<td>LMU</td>
<td>0.100*</td>
<td>0.198*</td>
</tr>
<tr>
<td>FAM</td>
<td>-0.071</td>
<td>-0.046</td>
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<tr>
<td>Global identity (AGCC)</td>
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</tr>
<tr>
<td>COS</td>
<td>-0.048</td>
<td>-0.097</td>
</tr>
<tr>
<td>IDT</td>
<td>0.287*</td>
<td>0.332*</td>
</tr>
<tr>
<td>EXM</td>
<td>-0.063</td>
<td>-0.055</td>
</tr>
<tr>
<td>OPE</td>
<td>0.099</td>
<td>0.192*</td>
</tr>
<tr>
<td>GMM</td>
<td>-0.017</td>
<td>-0.025</td>
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<tr>
<td>F-test (d.f.)</td>
<td>10.90 (10, 233)</td>
<td>5.85 (10, 167)</td>
</tr>
<tr>
<td>Adjusted R-square</td>
<td>0.289</td>
<td>0.215</td>
</tr>
</tbody>
</table>

*: Significant at the 95% confidence level; d.f.: degrees of freedom.

MVS: Materialism; CET: Consumer ethnocentrism; PPC: Pride and participation in one’s own culture; IDMC: Self-identification with one’s own culture; LIR: Ethnic interpersonal relationships; LMU: Ethnic media use; FAM: Traditional family structure and gender roles; COS: Cosmopolitanism; IDT: Self-identification with the global consumer culture; EXM: Exposure to multinational marketing activities; OPE: Openness to the global consumer culture; GMM: Global mass media exposure.
### Table 3

**K-means cluster algorithm (K = 2) for AGCC components: Japanese participants**

<table>
<thead>
<tr>
<th>Cluster AGCC-J1</th>
<th>AGCC Elements - Japanese participants</th>
<th>Cluster AGCC-J2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.19</td>
<td>Self-identification with global consumer culture (IDT)</td>
<td>5.23</td>
</tr>
<tr>
<td>3.01</td>
<td>Global mass media exposure (GMM)</td>
<td>4.71</td>
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<tr>
<td>3.34</td>
<td>Exposure to multinational marketing activities (EXM)</td>
<td>4.64</td>
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<tr>
<td>5.38</td>
<td>Cosmopolitanism (COS)</td>
<td>6.08</td>
</tr>
<tr>
<td>3.27</td>
<td>Openness to global consumer culture (OPE)</td>
<td>3.85</td>
</tr>
</tbody>
</table>

| Size (%) of the total | 64%                        |
| Size (number of participants) | 157                      |

### Table 4

**K-means cluster algorithm (K = 2) for materialism and consumer ethnocentrism: Japanese participants**

<table>
<thead>
<tr>
<th>Cluster J1</th>
<th>Japanese participants</th>
<th>Cluster J2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.75</td>
<td>Consumer Ethnocentrism (CET)</td>
<td>1.94</td>
</tr>
<tr>
<td>4.71</td>
<td>Materialism (MVS)</td>
<td>4.70</td>
</tr>
</tbody>
</table>

| Size (%) of the total | 43%                        |
| Size (number of participants) | 104                      |

### Table 5

**K-means cluster algorithm (K = 2) for materialism and consumer ethnocentrism: American participants**

<table>
<thead>
<tr>
<th>Cluster U1</th>
<th>American participants</th>
<th>Cluster U2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.62</td>
<td>Consumer Ethnocentrism (CET)</td>
<td>2.00</td>
</tr>
<tr>
<td>4.72</td>
<td>Materialism (MVS)</td>
<td>3.69</td>
</tr>
</tbody>
</table>

| Size (%) of the total | 42%                        |
| Size (number of participants) | 74                       |
Figure 1
Scatterplot for EID and AGCC (American participants): Clusters U1 and U2

Figure 2
Scatterplot for EID and AGCC (Japanese participants): Clusters J1 and J2