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► **To cite this version:**

Ubedullah Khoso, Eric Tafani, Asim Qazi Shabir. SCARCITY APPEALS IN CROSS-CULTURAL SETTINGS: A COMPREHENSIVE FRAMEWORK. *Journal of International Marketing*, In press, 31 (4), pp.53-75. 10.1177/1069031X231191100 . hal-04261221

HAL Id: hal-04261221

<https://amu.hal.science/hal-04261221v1>

Submitted on 26 Oct 2023

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SCARCITY APPEALS IN CROSS-CULTURAL SETTINGS: A COMPREHENSIVEFRAMEWORK

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ABSTRACT

Scarcity appeals in marketing have long captured the attention of scholars and practitioners, yet we know little about their effectiveness across different cultures. Drawing on cultural differences (i.e., self-concept, need for uniqueness, and susceptibility to normative influence), the authors investigated the impact of culture on the effectiveness of (demand vs. supply-based) scarcity appeal. The authors also studied the impact of product visibility while considering the moderating effect of culture on the effectiveness of scarcity appeals (demand vs. supply-based). In doing so, the authors conducted an experimental research based on the participants from Pakistan and France. The authors found that (i) demand-based scarcity appeals were more effective than supply-based scarcity appeals in Eastern cultures, whereas the reverse was found in Western cultures; (ii) such moderating role of culture was stronger for high visibility products as compared to low visibility products; and (iii) the respective prevalence of interdependent (vs. independent) self and its subsequent impact on susceptibility to normative influence (SNI) and need for uniqueness (NFU) mediated the moderating role of culture. The authors concluded by discussing these findings' key theoretical contributions and managerial implications and suggesting future research directions.

Keywords: *Ad effectiveness, scarcity appeal, culture, self-construal, need for uniqueness, susceptibility to normative influence, product visibility*

Top brands allocate substantial expenditures to advertising (Guolla, Belch, and Belch 2017). Many of these operate internationally (Okazaki, Mueller, and Taylor 2010). Thus, they need to know how to promote their brands with a highly effective advertising strategy by choosing the most appropriate advertising appeal (Marshall and Roberts 2014) and considering cross-cultural consumer behaviour (Mooij 2014). Scarcity appeals are among the most commonly used advertising appeals (Aguirre-Rodriguez 2013; Barton, Zlatevska, and Oppewal 2022; Cialdini 1993; Gupta et al. 2023; Jung and Kellaris 2004). These appeals indicate restrictions on the available quantity of a product (Mukherjee and Lee 2016).

Scarcity appeals in marketing have long captured the attention of scholars and practitioners, yet we know little about their effectiveness across different cultures. Thus, this research aims to investigate the effectiveness of scarcity appeals in cross-cultural settings.

Despite the frequent use of scarcity appeals, these appeals are not used in a single standard form. Verhallen (1982) classified scarcity appeals into two categories: scarcity appeals based on supply and scarcity appeals based on demand. Existing literature differentiates the effects of supply-based and demand-based scarcity appeals (Gierl and Huettl 2010; Eisend 2008; Roy and Sharma 2015). The supply-based scarcity appeals communicate a shortage due to limited production or distribution of a product, while demand-based scarcity appeals communicate a shortage caused by higher product demand. Consequently, these two appeals send a different signal to the marketplace, i.e., demand-based scarcity appeals signal bandwagon consumption, whereas supply-based scarcity appeals signal snob consumption (Irmak, Vallen, and Sen 2010; Roy and Sharma 2015). In bandwagon consumption, the consumer perceives that other consumers' demand for the product infers value (Worchel, Lee, and Adewole 1975). Thus, demand-based scarcity appeals increase product desirability. On the other hand, in snob consumption, consumers want to differentiate themselves from

others (Worchel, Lee, and Adewole 1975). Therefore, a limited edition or exclusive supply increases product desirability (Leibenstein 1950). The most common example of supply-based scarcity is '*limited editions*', which refers to limited production, and '*at a selected store only*'. On the other hand, the most common example of demand-based scarcity is '*due to high demand nearly sold out*' and '*already 80% of our stock sold*'.

Understanding culture's impact on advertising effectiveness is one of the most important factors in the international marketing literature (Özsomer and Simonin 2004; Walsh, Shiu, and Hassan 2014). Hofstede (1980, p. 24) referred to culture as "*the collective programming of the human mind*". The definition of self is one of the most culturally significant elements programmed in people's minds (Shavitt and Barnes 2020). It is one of the core concepts of cross-cultural psychology (Santamaría et al. 2010). The difference between Western and Eastern cultures relates to the opposition between individualism and collectivism, based on the respective primacy of the self vs. the group (Hofstede 2001; Triandis 1989). In this research, we specifically investigated the effectiveness of supply-based and demand-based scarcity appeals in Eastern and Western cultures.

To further understand the cross-cultural differences in the effectiveness of scarcity appeals, we investigated how consumers viewed themselves and their relation to others. These differences could be attributed to consumers' varying types of self-construals, which reflect the degree to which people differentiate or connect themselves to others (Bolton, Keh, and Alba 2018; Gardner, Gabriel, and Lee 1999; Liu, Zhang, and Keh 2019; Markus and Kitayama 1991). Researchers have widely used these self-construals in cross-cultural studies as independent and interdependent self-construals. People with dominant independent self-construal consider themselves as autonomous, independent, and distinct from others, whereas people with dominant interdependent self-construal consider themselves as members of a social group and tend to focus on the connectedness with others (Madan, Basu, Ng, and

Ching Lim 2018; Markus and Kitayama 1991). Although these two self-construals may coexist within any individual or culture, Western cultures indicate a higher degree of independent self-construal, whereas Eastern cultures indicate a higher degree of interdependent self-construals (Madan et al. 2018; Markus and Kitayama 1991).

In addition to self-construals, we also studied the cross-cultural effects of the need for uniqueness (NFU) and susceptibility to normative influence (SNI) on the effectiveness of scarcity appeals (supply vs. demand). NFU is a psychological construct to measure snob and counter conformity behavior (Tian, Bearden, and Hunter 2001; Kastanakis and Balabanis 2012), whereas SNI is a psychological construct to measure confirmatory behaviour (Bearden, Netemeyer, and Teel 1989) which is related to bandwagon consumption (Kastanakis and Balabanis 2012). The degree of NFU and SNI also varies based on culture. Consumers from Western cultures have a higher NFU as compared to Eastern cultures (Bian and Forsythe 2012; Eisend 2008; Schumpe, Herzberg, and Erb 2016; Tafarodi, Marshall, and Katsura 2004), while consumers from Eastern cultures have higher SNI as compared to Western cultures (Bian and Forsythe 2012; Eisend 2008; Schumpe, Herzberg, and Erb 2016; Tafarodi, Marshall, and Katsura 2004).

Also, consumers' motives to buy the same products may vary from Eastern to Western cultures (Wong and Ahuvia 1998). Consumers from Eastern cultures, which are based on interdependent self, value group norms and focus more on the outer self; this motivates them to have visible possessions or products to conform and display their group membership. In contrast, consumers from Western cultures, which focus more on one's independent and inner self (Wong and Ahuvia 1998) tend to reflect in their purchase habits as they buy and use products to express their inner values (Chiou 2000). Moreover, motives to conform or differentiate vary from Eastern to Western cultures (Triandis 1989; Markus and Kitayama 1991; Burn and Brady 1992; Kim and Markus 1999; Lynn and Snyder, 2002; Khare, Mishra,

Parveen, and Srivastava 2011; Murali, Laroche, and Pons 2005; Tsai, Yang, and Liu 2013).

For example, compared to their Western counterparts, people from Eastern cultures have higher motives to conform to others.

In contrast, people from Western cultures have higher motives to differentiate from others than people from Eastern cultures. These motives to conform to or to distinguish from others depend on the visibility of the behavior (Tian et al. 2001; Burnkrant and Cousineau 1975).

Based on this notion, we can argue that product visibility may affect the consumers' motives to conform or differentiate.

This discussion leads to two fundamental questions: firstly, does culture moderate the effectiveness of scarcity appeals, and if so, how? Secondly, does product visibility moderate the interaction of culture and scarcity appeal?

This research addresses the above questions and fills the gaps in the existing literature regarding the effectiveness of scarcity appeals, as identified by Eisend (2008), Roy and Sharma (2015), Shi et al. (2020), and Ladeira et al. (2023). Specifically, Eisend (2008) and Roy and Sharma (2015) highlight the potential influence of culture on the effectiveness of scarcity appeals in their limitations. In a recent meta-analysis, Ladeira et al. (2023) highlighted the need to consider the differences in the effectiveness of scarcity appeals across various segments. To address these gaps, this research investigates the effectiveness of scarcity appeals in two key segments: geographic (Eastern vs. Western cultures) and psychographic (interdependent vs. independent self-construals). Additionally, we expand on Shi et al.'s (2020) suggestion by examining the comprehensive understanding of scarcity's various uses and its generalization and validation across different product categories (high vs. low visibility). Considering the multifaceted nature of scarcity appeals and the lack of comprehensive understanding of the effectiveness of scarcity appeals (Ladeira et al. 2023; Shi, Li, and Chumnumpan 2020).

Therefore, this research aims to investigate the moderating effect of culture on the effectiveness of scarcity appeals via the impact of culture on NFU and SNI and self-construal as mediators of this effect. Furthermore, it also investigates the moderating effect of product visibility on the impact of culture on the effectiveness of scarcity appeals.

CONCEPTUAL BACKGROUND AND HYPOTHESIS

Culture and Scarcity Appeals

In this research, we aim to compare the two groups (Eastern vs. Western cultures) based on their psychological construct (i.e., self-construals, SNI, and NFU) and their subsequent effects on the effectiveness of scarcity appeal. The main difference between Western and Eastern cultures relates to the opposition between individualism and collectivism, based on the primacy of self versus group (Hofstede 2001; Triandis 1990). From the psychological and cultural point of view, individualism and collectivism summarize the fundamental differences that explain the relationship between individual and society, whether an individual or a social group is considered to be a basic unit of analysis, and how this relationship should be interpreted (Oyserman, Coon, and Kemmelmeier 2002).

The differences between individualism and collectivism can impact the effectiveness of demand-based versus supply-based scarcity appeals. This notion can be attributed to the differences in the inferences of these two types of appeals, i.e., bandwagon and snob consumption. As mentioned, these two appeals signal differently to the marketplace, i.e., demand-based scarcity appeals signal bandwagon consumption, whereas supply-based scarcity appeals signal snob consumption (Irmak et al. 2010; Roy and Sharma 2015). In the cross-cultural context, Mason (1993) suggests that cultural differences can affect the nature and pattern of snob and bandwagon consumption. For instance, in bandwagon consumption, consumers purchase products to conform with members of a group they want to be associated with (Leibenstein 1950). Triandis (1989) notes that in Eastern cultures, obedience,

conformity, and reliability are particularly emphasized (Triandis 1989). Therefore, we can synthesize that demand-based scarcity appeals would be more effective in Eastern cultures. On the other hand, snob consumption reflects consumers' desire to be special and different and to dissociate oneself from others (Tsai, Yang, and Liu 2013; Leibenstein 1950). Thus, based on this synthesis, we can argue that supply-based appeals would be more effective in Western cultures.

In line with the above argument, there has been some discussion on whether cultural differences exist in susceptibility to scarcity claims. For instance, recently, Shi, Li, and Chumnumpan (2020) conducted a comprehensive review on scarcity appeals and covered a wide range of consumer characteristics relating to product scarcity. In one of their knowledge gaps, they specifically highlighted that there is a strong need to understand the effects of scarcity appeals in different countries and cultures. They further suggest that the usefulness of scarcity can vary based on different cultures. Moreover, according to Mi, Jeon, Li, and Park (2015), culture can be one of the most critical factors to impact the effectiveness of scarcity appeals. In addition, Eisend (2008) also suggests that the effectiveness of scarcity appeals may depend on various cultural factors. In this regard, Jung and Kellaris (2004) indicate that individualists may consider scarcity as an expression of individuality, whereas collectivists may consider scarcity as social proof by inferring it as a product's popularity.

Despite strong theoretical support, no study has explored the effectiveness of scarcity appeals (supply vs. demand) as a function of culture (Western vs. Eastern).

In this research, we studied the effect of supply vs. demand based scarcity appeals on ad responses (i.e., attitude towards ad, attitude towards brand, and perceived value) and purchase intentions and how culture moderates this relationship. These constructs represent the ad effectiveness as used by Roy and Sharma (2015). Building on this, we hypothesize:

Hypothesis 1: Culture moderates the effectiveness of scarcity appeal.

- In Western cultures, supply-based scarcity appeals are more effective than demand-based scarcity appeals (H1a).
- In Eastern cultures, demand-based scarcity appeals are more effective than supply-based scarcity appeals (H1b).

Self-construals, Culture, and Scarcity Appeals

The concept of self plays an essential role in evaluating and consuming products and services (Alden, He, and Chen 2010; Sirgy 1985). Self-construal is one of the most critical aspects of the self-concept; it has been widely studied in cross-cultural studies as independent and interdependent self-construals (Markus and Kitayama 1991). These self-construals define the degree to which people differentiate or connect themselves to others.

Markus and Kitayama (1991) view culture and self as mutually constituted. They suggest that culture influences an individual's focus on self versus others when making a decision.

Mainly, individuals from collectivist cultures depend on interdependent self-construct, and individuals from individualist cultures depend on independent self-construct in any situation (Usunier, Lee, and Lee 2005). Moreover, it is believed that individuals in Western cultures hold a more independent self-concept than non-Western individuals (Markus and Kitayama 1991).

Research suggests that in Eastern cultures, individuals tend to have a higher interdependent self; they focus more on their social roles and relationships and care more about how people around them judge their behaviors (Kim et al. 2018; Markus and Kitayama 1991). Considering this view, people from Eastern cultures will try to conform with the people around them.

According to Leibenstein (1950), they will, consequently, engage in bandwagon consumption. These consumers will find demand-based scarcity appeals more attractive because it infers bandwagon consumption. In contrast, in Western cultures, the independent

self is emphasized, and people tend to pay more attention to themselves than others (Kim et al. 2018; Markus and Kitayama 1991).

Moreover, people from Western cultures rely more on self-affirmation and differentiation from others (Markus and Kitayama 1991). Consequently, they engage in snob consumption, which, according to Leibenstein (1950) reflects their consumers' desire to be different. Therefore, they would find supply-based scarcity appeals more attractive.

NFU, Culture, and Scarcity Appeals

Need for uniqueness (NFU) refers to consumers' need to differentiate themselves from others (Sharma, Verma, and Sharma 2018; Tian et al. 2001). The NFU varies across different cultures and the degree to which it varies will also be different based on the particular culture. (Snyder and Fromkin 1980). NFU has been considered one of the defining factors of individualism (e.g., Markus and Kitayama 1991; Kim and Markus 1999; Lynn and Snyder 2002; Oyserman et al. 2002; Cai, Zou, Feng, Liu, and Jing 2018). For instance, Kim and Markus (1999) found that the respondents from Eastern cultures valued conformity behavior. In contrast, respondents from Western cultures valued uniqueness behavior. Similarly, Burns and Brady (1992) found that NFU varies from Western to Eastern cultures; consumers from the USA (Western) show a higher degree of NFU than consumers from Malaysia (Eastern). NFU also relates to the self-construals. Kastanakis and Balabanis (2014) found that individuals with a higher independent self-construal score higher on NFU and engage in snob luxury consumption. In addition, several research streams discuss the relationship between NFU and scarcity appeals. For instance, a stream of research suggests that consumers with high NFU are more persuaded by the scarcity appeals than consumers with low NFU (Eisend 2008; Fromkin 1970; Snyder 1992). Another stream of the literature argues that NFU's impact varies based on the type of scarcity appeal, i.e., scarcity due to excess demand versus scarcity due to limited supply (Gierl and Huettl 2010; Herpen et al. 2005; Roy and Sharma

2015). For instance, Gierl and Huetl (2010) suggest that consumers satisfy their NFU by using products that are scarce due to supply. This notion was empirically tested by Roy and Sharma (2015). Their findings confirmed that the supply-based scarcity appeals were effective for consumers with higher NFU than consumers with low NFU. It means that consumers with higher NFU choose scarce products based on supply which can ultimately help them stand out from others (Tian, Bearden, and Hunter 2001).

The research mentioned above indicates several streams within NFU: it varies based on culture (Burns and Brady 1992; Snyder and Fromkin 1977), is positively associated with independent self (Kastanakis and Balabanis 2012, 2014), and impacts the effectiveness of scarcity appeals (Herpen, Pieters, and Zeelenberg 2005; Lynn 1991; Roy and Sharma 2015). A close review of these streams establishes a need to develop an integrated framework for assessing the moderating role of NFU on the effectiveness of scarcity appeals in cross-cultural settings by using the existing framework of Roy and Sharma (2015) and Kastanakis and Balabanis (2012, 2014). This research aims to fill this gap by developing an integrated framework which draws from both of these researches. We propose that the impact of NFU on the effectiveness of scarcity appeals depends on culture (Eastern vs. Western) and self-construal (interdependent vs. independent). We also put forth the idea that the supply-based scarcity appeals will be more effective in Western cultures because independent-self prevails in Western cultures (Markus and Kitayama 1991) which leads to higher NFU and therefore, increases (positively moderates) the effectiveness of supply-based scarcity appeals than demand based scarcity appeals (see Figure 1).

Figure 1

Conceptual model explaining moderating effect of culture through self-construals and NFU

[Figure 1 about here]

SNI, Culture, and Scarcity Appeals

Social influence is one of the most powerful determinants of consumer behavior. It affects consumer choice during decision-making (e.g., Cohen and Golden 1972; Kassarian and Robertson 1981; Khare et al. 2011; Moscovici, Mugny, and Avermaet 1985; Sherif 1935).

Social influence is generally called conformity or an act of going along with a visible majority (Jahoda 2016). It can be measured through normative influence (Burnkrant and Cousineau 1975).

Bearden et al. (1989) developed a scale to measure the susceptibility to social influence through a construct 'susceptibility to interpersonal influence'. Susceptibility to interpersonal influence is further categorized as informative or normative (Bearden et al. 1989).

Susceptibility to normative influence is defined as "*influence to conform to the expectations of another person or group*" (Burnkrant and Cousineau 1975, p. 207). Susceptibility to informational influence is "*an influence to accept information obtained from another as evidence about reality*" (Deutsch and Gerard 1955, p. 629). Informational influence depends on the receiver's judgement about the credibility of information, whereas normative influence implies social pressure to conform to the expectations of social groups (Deutsch and Gerard 1955; Filieri 2015). Research suggests susceptibility to normative influence (SNI) indicates cross-cultural differences, but susceptibility to informational influence (SII) is indifferent (see Murali et al. 2005, p.169). For instance, Ebnen (2009) found a direct negative impact of individualism on SNI, but they did not find any significant effect of individualism on SSI. Similarly, Murali et al. (2005) found Western orientation has a negative influence on SNI, whereas they did not find any significant effect of individualistic orientation on SII. Oh (2013) specifically found that SNI was higher in Eastern cultures, whereas SSI remained indifferent across both cultures. Therefore, they suggested that cross-cultural differences only

exist in the case of normative influence and not in informational influence. Thus, in this research, we only took SNI into account.

Thus, the cross-cultural variations of SNI may also indicate the cross-cultural variations in bandwagon consumption, which in turn may increase the effectiveness of demand-based versus supply-based scarcity appeal. Moreover, relational bandwagon consumption enhances interdependent self-concept, which is mediated by SNI (Kastanakis and Balabanis 2012). Based on this discussion, we postulate that the SNI would increase the effectiveness of demand-based scarcity appeals and decrease the effectiveness of supply-based scarcity appeals. Our research aimed to extend the cross-cultural research of Murali et al. (2005) and Yim et al. (2014) by using the SNI construct used by Kastanakis and Balabanis (2012) to understand its moderating effect on the effectiveness of scarcity appeals in cross-cultural settings. To the best of our knowledge, SNI has never been studied in the context of scarcity appeals. Thus, the moderating effect of SNI will further extend the framework to understanding the effect demand versus supply based scarcity appeals.

Figure 2

Conceptual model explaining moderating effect of culture through self-construals and SNI

[Figure 2 about here]

Altogether, our above discussion on theoretical background and framework has led to the following hypothesis, which postulates the serial mediation of the moderating effect of culture. Such that the moderating effect of culture (Eastern vs. Western) is mediated by serial mediation of interdependent self vs. independent self, susceptibility to normative influence (SNI), and need for uniqueness (NFU).

Hypothesis 2: The cultural prevalence of interdependent self vs. independent self mediates the moderating role of culture *via* subsequent effects on SNI and (NFU).

- In Eastern cultures, interdependent self prevails over independent self (H2a), whereas the reverse occurs in Western cultures (H2b).
- SNI and NFU moderate the effectiveness of scarcity appeals in opposite directions: SNI favors higher effectiveness of demand-based rather than supply-based scarcity appeals (H2c), whereas NFU favors higher effectiveness of supply-based rather than demand-based scarcity appeals (H2d).
- The prevalence of interdependent (vs. independent) self favors (vs. limits) SNI (H2e), but limits (vs. strengthens) NFU (H2f), and thus moderates the effectiveness of scarcity appeal, leading to higher (vs. lower) effectiveness of demand-based rather than supply-based scarcity appeals (H2g).
- Altogether, previous hypotheses suppose a serial mediation of the moderating role of culture (see Figure 3): culture exerts an indirect moderating effect on the effectiveness of scarcity appeals via the prevalence of interdependent (vs. independent) self and its impact on both SNI and NFU (H2h).

Product Visibility, Culture, and Scarcity Appeals

Research suggests that situational factors can affect consumers' behavioural intentions (e.g., Bourne 1957; Belk 1975; Dickson 1982; Stayman and Deshpande 1989). Product visibility is a situational factor that may affect consumers' behavioural intentions. It refers to “*the consumption of items that are readily observable in anonymous social interactions, and that are portable across those interactions*” (Charles et al. 2009, p. 1). The consumption of products ranges from high visibility to low visibility (Gierl and Huettl 2010; Jang et al. 2015). For example, Toothpaste, shampoo, soap, and perfumes are low-visibility products. On the other hand, mobile phones, cars, sunglasses, clothes, and handbags are examples of high-visibility products.

Literature suggests that product visibility is one of the factors that enhances conformity and the effect of social influence on product or brand choice (Bourne 1957; Fisher and Price 1992; Lascu and Zinkhan 1999). This is because normative social influence is achieved through compliance, and compliance will only occur if the consumer believes that his behavior is visible or known to others (Burnkrant and Cousineau 1975). Moreover, the degree to which a consumer believes that the consumption of a product is socially visible enhances the effects of social influence on purchase intentions (Graeff 1996).

Apart from conformity, product visibility is also related to the need for uniqueness.

According to uniqueness theory, NFU is based on counter-conformity motivation, which refers to “*a motivation for differentiating the self via consumer goods and the visual display of these goods*” (Tian et al. 2001, p. 52). This suggests the underlying goal of NFU is to enhance the social image, which can only occur by displaying the consumption or use of products. Since consumers with high NFU try to differentiate themselves through product choices that are exclusive and highly visible, they are more likely to purchase high-visibility products over low-visibility products.

Based on the literature mentioned above, we can say that the visibility of the behavior makes the motivation to conform or differentiate salient. It also suggests that the previously proposed moderating effect of SNI and NFU on the effectiveness of scarcity appeals (demand vs. supply) may vary depending on the product's visibility. Specifically, it supports the view that the influence of both moderating variables will be stronger when the product's visibility is high compared to when it is low (Bourne 1957; Burnkrant and Cousineau 1975; Fisher and Price 1992; Graeff 1996; Lascu and Zinkhan 1999; Tian et al. 2001). Despite the substantial conceptual foundation for this view, it has not been empirically tested in cross-cultural settings regarding scarcity appeals. Considering these foundations, we propose the following hypotheses:

Hypothesis 3a: The moderating effect of culture on the effectiveness of scarcity appeals is stronger when product visibility is high rather than low.

Hypothesis 3b: The moderating effect of SNI on the effectiveness of scarcity appeals is stronger when product visibility is high rather than low.

Hypothesis 3c: The moderating effect of NFU on the effectiveness of scarcity appeals is stronger when product visibility is high rather than low.

Figure 3

Serial mediation of the moderating role of culture.

[Figure 3 about here]

METHODOLOGY

This research is based on 2(Culture: Western vs. Eastern) X 2(Product visibility: high vs. low) X 2(Scarcity appeal: demand vs. supply) between-subjects experimental design, resulting in 8 experimental conditions in which participants were randomly assigned (except for culture). The sample of this research is based on one country from Western cultures and one country from Eastern cultures, i.e. France and Pakistan, respectively. As this study relates to two different products (high and low visibility), initially, a pre-test was carried out to select products based on their respective visibility, after which the actual experiment was conducted.

Pre-test: Product Selection

A pre-test was carried out to select two products characterized by high vs. low visibility. We recruited adults at shopping malls, bus stands, and railway stations and offered them compensation for their participation. Our sample for the pre-test consisted of 40 participants (20 from France and 20 from Pakistan). The sample was strictly balanced on gender and included consumers with ages ranging from 20 to 39. We classified education in two categories, one with a university education (Bachelors, Masters, and Ph.D./ Doctorate) and

the other with education below the university degree (No Diploma, High School Diploma, and Associate Degree). All the Pakistani respondents selected had a university education, while 18 out of 20 French respondents had a university education.

Regarding the profession of respondents, we used 15 categories to capture the profession of respondents. We coded these professions according to the INSEE (Institut National de la Statistique et des Études Économiques) typology of socio-professional categories (PCS) that opposes lower (PCS -) vs. upper classes (PCS +). Out of the Pakistani participants included in the study, 40% of the participants were in the category of PCS + (public or private section senior executives, liberal profession, high intellectual professions, police officer) and 60% of PCS- (intermediate profession, farmer, craftsman, workers, employees, shopkeeper, policeman, housewife/husband, searching for a job and students). On the other hand, 35% of French participants were in category PCS+, and 65% were in category PCS-.

First, we defined visibility as “*Product visibility refers to the fact that others can easily see a product and know its brand when someone uses it*”. Then, participants were asked to rate the visibility of 17 products (see Table 1) issued by Gierl and Huettl (2010) and Jang et al. (2015). Responses were collected on 11-point scales ranging from 0 = ‘very low visibility’ to 10 = ‘very high visibility’.

Ratings indicated that the automobile was perceived as the most visible, and the mp3 player was perceived as the least visible among the other products (see Table 1). However, given that the research considers purchase intent as an essential output, we needed to select two products that significantly differ in visibility but are priced similarly, avoiding obvious bias. So, we decided to select a shirt (High visibility: $M = 7.35$) and perfume (Low visibility: $M = 4.82$; $t_{(39)} = 3.66$, $p < .001$), which meet this condition. In addition, it should be noted that the respective visibility of these two products did not significantly vary as a function of culture

(High visibility: $t_{(38)} = .824, p = .415$; Low visibility: $t_{(38)} = -1.73, p = .098$), which is an obvious prerequisite.

Table 3.1

Means (Standard Deviations) of product visibility across countries.

[Table 1 about here]

Participants, Design, and Procedure

The research participants were between 24 to 35 years. The choice was guided by the learning that market-based reports about perfumes, and clothes suggest that this is the age group which contributes most to the markets of both products (CBRE: ViewPoint 2014¹; Euromonitor 2008²; Future Market Insights 2016³; Global Data Report Store 2017⁴; Mintel 2016⁵; Mintel 2010⁶; Shopify 2018⁷; Statista 2017⁸; Statista 2018⁹).

The random sample approach was adopted to collect the data from both countries using face to face questionnaire. Questionnaires were administrated in English (original version) in Pakistan and French in France, using the translation back translation method, with native speakers. Data were collected from two cities in France (Aix-en-Provence and Marseille) and one city in Pakistan (Karachi). The participants were recruited at shopping malls, bus stands, and railway stations and were offered compensation for their participation.

The total sample includes 417 participants, 211 from France and 206 from Pakistan. Four demographics were considered: gender, age, education, and social class. In the total sample,

¹ Retrieved June 26, 2018, from http://www.cbre.eu/fr_fr/etudes/viewpoint/

² Retrieved June 26, 2018, from <https://blog.euromonitor.com/2008/02/growth-upturn-in-the-global-fragrances-market-1.html>

^{3,15} Retrieved June 25, 2018, from <https://www.futuremarketinsights.com/reports/global-fragrances-market>

⁴ Retrieved June 26, 2018, from <https://www.globaldata.com/store/report/vr0121sr--the-uk-clothing-market-2017-2022/>

⁵ Retrieved June 26, 2018, from <http://reports.mintel.com/display/748789/#>

⁶ Retrieved June 25, 2018, from <https://store.mintel.com/mens-fragrances-uk-september-2010>

⁷ Retrieved June 26, 2018, from <https://www.shopify.com/enterprise/ecommerce-fashion-industry>

⁸ Retrieved June 26, 2018, from <https://www.statista.com/statistics/286096/clothes-and-sports-goods-online-purchasing-in-great-britain-by-demographic/>

⁹ Retrieved June 26, 2018, from <https://www.statista.com/outlook/244/136/fashion/france>

223 of the participants were male and 194 were female. Country-wise, 133 were male participants, 73 were female participants from Pakistan, whereas 90 were male and 121 were female from France. In the sample from Pakistan, most of the respondents were in the age class from 25 to 29 years old (54% of total respondents), whereas in the French sample, most of the respondents were in the age class from 30 to 34 years (33% of the total respondent). We classified participants in terms of education into two categories, one with university education (Bachelors, Masters, and Ph.D./ Doctorate) and the other with education below the university degree (No Diploma, High School Diploma, and Associate Degree). Most of the participants had a university education in both countries, i.e., 175 of the participants from Pakistan had a university education, and the remaining 31 participants were below university education; and 181 participants from France had a university education, and the remaining 30 participants were below university education. We used 15 categories to capture the profession of respondents (See Table 3). We coded these professions according to the INSEE (Institut National de la Statistique et des Études Économiques) typology of socio-professional categories (PCS) that opposes lower (PCS -) vs. upper classes (PCS +). Study 1 includes 31% PCS + (public or private section senior executives, liberal profession, high intellectual professions, police officer¹⁰) and 69% of PCS- (intermediate profession, farmer, craftsman, workers, employees, shopkeeper, policeman, housewife/husband, searching for a job and students) from both the countries. Most of the respondents from Pakistan and France belong to PCS - (73% and 65%, respectively of total respondents).

Table 3

Social Class distribution across countries.

[Table 3 about here]

We used an experimental research design. In line with Roy and Sharma's (2015) procedure, we used different scenarios to manipulate product visibility and scarcity appeal. On the one hand, participants were asked to imagine “*you want to buy a perfume (vs. a casual shirt), and*

¹⁰ two respondents were police officers and one was a policeman

you are looking around in the market. You do not have any preference regarding the brand. Suddenly, you see an advertisement for an Italian brand, 'Fabio Lorenzi', at one of the Perfume (vs. shirt) stores, which has newly joined the Pakistani (vs. French) market". Next, participants were presented with a print ad (see Web Appendix) about a high-visibility product (that is, a shirt, $N = 200$), vs. a low-visibility product (that is, a perfume $N = 217$). In both cases, we used a fictitious Italian brand called 'Fabio Lorenzi' that was supposed to have been launched very recently. The choice of an Italian brand aimed to limit a possible ethnocentric bias resulting from a country-of-origin effect (see, e.g., Balabanis and Diamantopoulos 2004), especially for French participants, given that there are many French brands in both the perfume and shirt market. Based on Roy and Sharma's procedure, scarcity appeals were manipulated by explicitly pointing out high demand for ($N = 203$) vs. limited product distribution ($N = 214$). In addition to that, the English versions of the print ads were given to Pakistani respondents and the French versions of the print ads were given to the French participants. In the English version, in the first case (demand-based scarcity), the ad stated that "*Almost all the stock is already sold*" and "*Only few copies of this perfume (shirt) are still available*". In the second case (supply-based scarcity), the ad stated, "*Very limited distribution*" and "*Perfume (shirt) in exclusive sale in a very small number of selected stores*". Other elements were held constant across conditions (e.g., color, font, picture, logo, and brand claim). In the French version, first case (demand-based scarcity), the ad stated that "*Quasi-totalité des stocks déjà vendue*" and "*Seulement quelques exemplaires de ce parfum (ces chemises), encore disponibles*". In the second case (supply-based scarcity), the ad stated, "*Distribution très limitée*" and "*Parfum (chemises) en vente exclusive dans un très petit nombre de boutiques sélectionnées*" (see Web Appendix).

Measures and Manipulation Checks

After exposure to the ad print, four measures captured the effectiveness of the ad: (i) attitude toward the ad, (ii) attitude toward the brand, (iii) perceived value and (iv) purchase intents of the advertised product. Then, interdependent and independent self-construals, need for uniqueness, susceptibility to normative influence and product involvement were measured. Monroe (1973) suggests, price influences consumers' choice because, to a consumer, it indicates the cost of purchasing. Therefore, price perception was measured and the item used to measure price perception was adapted from the study of Urbany, Bearden, Kaicker, and Borrero (1997). To do so, participants were asked to rate the price of the advertised product on an 11-point scale ranging from 0 = 'Affordable' to 10 = 'Expensive'. In the end, participants were individually debriefed about the study's objectives. Unless otherwise specified, all ratings were collected on 11-point scales ranging from 0 = '*totally disagree*' to 10 = '*totally agree*'.

Dependent Variable

Ad effectiveness was the dependent variable in this study. According to Brown and Stayman (1992), attitude toward the ad and attitude toward the brand were considered as two major indicators of ad effectiveness. These two constructs were measured by rating both the ad and the brand on three items issued by Roy and Sharma (2015): '*interesting/attractive/favorable*'. Given that it was found that scarcity may increase the perceived value of products (Eisend 2008; Lynn 1991, 1992), the perceived value of the advertised product was also measured using three items from Eisend (2008): '*attractive/favorable/desirable*'. Besides, we considered purchase intentions to get a conative measure of brand effectiveness, which is regarded as more predictive of actual behaviors than attitudinal measures (see e.g., Ajzen and Fishbein 1977; Webb and Sheeran 2006). To do so, Juster's (1966) probability scale was used to measure the purchase intents of the advertised product on an 11-point scale ranging from 0

= ‘no chance, almost no chance (1 in 100)’ to 10 = ‘certain, practically certain (99 in 100)’.

Such a scale that associates each point with both a statement and a probability offers higher validity and better predicts behavior compared to other scales (Brennan and Esslemont 1994; McDonald, Karg, and Lock 2010).

Control Variables

Participants’ independent and interdependent self-construals were each measured by six items issued from Singelis’ (1994) scale. Apart from that, participants’ need for uniqueness was measured using items issued from the scale developed by Ruvio et al. (2008). Furthermore, the six items forming the sub-scale of susceptibility to normative influence developed by Bearden et al. (1989) were used to measure this construct. We also measured product involvement using items issued by Roy and Sharma (2015) to control for this variable that was found to influence attitude toward the ad and the brand (e.g., Vakratsras and Ambler 1999). For details refer to Table 2.

Manipulation Checks

We checked the manipulation of product visibility by asking participants to rate the visibility of the advertised product (Perfume vs. shirt) on an 11-point scale ranging from 0 = ‘low visibility’ product’ to 10 = ‘High visibility’. All participants rated two items to check the manipulation of scarcity: one for demand-based scarcity: ‘the advertised product seems to be highly demanded’, and one for supply-based scarcity ‘there seems to be limited supplies of the advertised product’.

Table 2

Constructs, full phrasing of items, coding, and authors

[Table 2 about here]

ANALYSIS AND RESULTS

Measurement model

Cross-Cultural Measurement Invariance

To make a meaningful comparison between France and Pakistan, we tested measurement invariance. In measurement invariance, we test the equivalence of constructs in two or more groups to ensure that the constructs are being assessed the same in each group (Chen, Sousa, and West 2005). To test whether our measurement model of latent variables is equivalent in France and Pakistan, we considered three levels of measurement invariance: configural invariance, metric invariance, and scalar invariance.

Configural Invariance and Model Respecifications

Configural invariance is a test of the null hypothesis pertaining to confirming that the pattern of free and fixed parameters imposed on the items (i.e. observed variables) is equivalent across groups (Horn and McArdle 1992). This test aims to measure that the same constructs (latent variables) are measured across the groups.

Hu and Bentler (1999) recommend that the values of TLI and CFI greater than .95 indicate a good model fit. They further recommend that RMSEA lesser than .06 and SRMR lesser than .08 reveal a good fit. Our first model (Model 1) did not meet these criteria (see Table 4).

Therefore, we did successive respecifications of the initial model by deleting items that did not load enough of the considered latent variable. According to Comrey and Lee (1992), the cut-off value was fixed to loading not greater than .70 in both samples. However, we kept at least 3 items per latent variables, as recommended (Hair, Anderson, Black, and Babin 2016; Little, Lingenberger, Nesselroade 1999; MacCallum, Widaman, Zhang, and Hong 1999; Raubenheimer 2004). Table 4 presents items that were successively dropped off and fit indices of the related model. On the basis of such procedure, five items were dropped off to

improve model fit (see Table 4). Specifically, the dropped items are Its6, Its3, Ids6, Sni3, and Sni6. The full questions for these items are given in Table 2.

Lastly, as Byrne (2013) suggested, we also improved the measurement model by adding correlations among some residual errors of items related to the same latent variable. Two correlations were added, on the one hand, between measurement errors of Ids 2 and 3 (items of independent self-construct) (Model 3) that were positively correlated for both Pakistan and France and on the other hand, between measurement errors of Its 1 and 2 (items of interdependent self-construct) (Model 4) that were positively correlated for both Pakistan and France. Model 4 met all cut-off criteria suggested by Hu and Bentler (1999): TLI was .953, CFI was .959, RMSEA was .029, and SRMR was .0531, indicating that configural invariance was achieved.

Table 4

Fit indices for the measurement model and respecifications

[Table 4 about here]

After model comparison, we checked for Convergent and Discriminant Validity. We assessed convergent validity on the bases of Joreskog's (1971) rho and Average Variance Extracted (AVE) from Fornell and Larcker (1981). Ringle, Sinkovics, and Henseler (2009) suggest that the AVE should be above .50 to achieve sufficient convergent validity. Table 5 indicated that all the latent variables met these criteria in both countries, except AVE of SNI in Pakistan, which was .44. However, given that AVE is a very conservative test, some values greater than .40 can be acceptable (Malhotra and Dash 2011).

In addition, according to Fornell and Larcker (1981) discriminant validity is achieved when all squared correlations among latent variables are lower than the AVE. Table 4.2 indicates that this was not the case with Attitude towards ad (AAD), Attitude towards the brand (ABR), and Perceived value (PV) in the French sample. Similarly, for the French sample (see

Table 6) the Hetero-Trait Multi-Trait ratios, which constitute an approximate of correlations among latent variables, were greater than .85, with respect to relationships among Attitude towards the ad, Attitude towards the brand, and Perceived value. Henseler, Ringle, and Sarstedt (2015) suggested that such a pattern revealed that discriminant validity was not achieved in the French sample due to collinearity among these three latent variables. We fixed that problem by grouping these three latent variables related to ad effectiveness onto a second-order factor (Model 5) as ad responses using the method suggested by Kock and Lynn (2012). This second-order factor was named Ad Responses (ADRES). Model 5 achieves a good fit, meeting all cut-off values suggested by Hu and Bentler (1999), indicating that configural invariance was achieved, (see Table 4).

Table 5

Convergent and discriminant validity for Pakistan (France)

[Table 5 about here]

Table 6

Hetero-Trait Multi-Trait ratio for Pakistan (France)

[Table 6 about here]

The convergent validity of Ad responses was achieved in both countries, with rho value above .70 and AVE above .50 (see Table 7). Furthermore, discriminant validity was also achieved, on the one hand, all squared correlations among latent variables were lower than the AVE (see Table 7), and on the other hand, all HTMT ratios were below .85 (see Table 8).

Table 7

Convergent and discriminant validity of Model 5 for Pakistan (France)

[Table 7 about here]

Table 8

Hetero-Trait Multi-Trait ratio in Model 5 for Pakistan (France)

[Table 8 about here]

Metric Invariance and Scalar Invariance

Metric invariance implies that the difference in an item associated with a latent variable indicates the same differences across the groups (Rudnev et al. 2018). It is verified when the factor loadings are equivalent across groups. Model 6 that constrained all loadings to be equivalent across groups (Full metric invariance) met Hu and Bentler's (1999) cut-off values (see Table 9). However, Model 6 fit the data worse than Model 5 (Configural invariance), indicating that full metric invariance was not achieved. Thus, according to Byrne et al. (1989), we relied on partial metric invariance. Model 7 represents the partial metric invariance in Table 9.

We also tested scalar invariance. Scalar invariance relates to the equivalence of intercepts across groups (Widaman and Reise 1997). It is achieved when constraining intercepts of observed variables (factors) for first- (second) order latent variables do not significantly decrease the model fit. Model 8 (scalar invariance) that constrains all intercepts to be equivalent across groups and fits the data well, but worse than Model 7 (See Table 9). This indicates that scalar invariance is not achieved. Therefore, as recommended by Byrne et al. (1989), we relied on partial scalar invariance. Model 9 in Table 9 shows the partial scalar invariance is achieved.

Table 9

Model Fit and Model Comparisons for testing Metric and Scalar Invariance

[Table 9 about here]

Structural model

Manipulation-checks

First, we run a 2 (Culture: France vs. Pakistan) x 2 (Scarcity appeal: demand-based vs. supply-based) x 2 (Product visibility: low vs. high) between-group General Linear Model (GLM) on manipulation-checks of scarcity appeals and product visibility, controlling for the effects of gender, age and social classes, and product involvement. On one hand, this model shows that the supply of the advertised product was regarded as more limited when scarcity appeals were supply-based ($M = 6.46$, $SD = 2.48$) rather than demand based ($M = 4.69$, $SD = 2.25$), $F(1, 405) = 60.82$, $p < .001$, partial $\eta^2 = .13$, whereas the perceived demand for the advertised product was seen as higher when scarcity appeals were demand-based ($M = 6.45$, $SD = 2.32$) rather than supply based ($M = 4.16$, $SD = 2.46$), $F(1, 405) = 102.27$, partial $\eta^2 = .20$. The values of partial η^2 indicate the effect size was larger in the condition of demand based scarcity appeals (partial $\eta^2 = .20$) as compared to supply based scarcity appeals (partial $\eta^2 = .13$). On the other hand, it confirmed that the product visibility was higher for shirts ($M = 6.25$, $SD = 2.06$) rather than perfumes ($M = 4.26$, $SD = 2.41$), $F(1, 405) = 82.93$, $p < .001$, partial $\eta^2 = .17$. No significant effect of culture (including possible interactions) was observed (F 's < 2), indicating that the effectiveness of manipulations did not vary across culture. Thus, the manipulation of scarcity appeals and product visibility was successful in both cultures. No other effect reached significance (F 's < 3), except product involvement, which was positively related to limited supply ($\beta = .25$, $t = 3.85$, $p < .001$, partial $\eta^2 = .04$), to demand prominence ($\beta = .25$, $t = 3.62$, $p < .001$, partial $\eta^2 = .03$), and to product visibility ($\beta = .19$, $t = 3.15$, $p < .001$, partial $\eta^2 = .02$). This pattern of results suggested that involved consumers pay more attention to information related to the advertised product (see e.g., Dhokolia 1998), and overestimate product visibility because they consider the product category as a means of self-expression (Michaelidou and Dibb 2006). In addition, the results

related to price revealed that the mean (SD) of price perception in Pakistan was 4.41 (2.62) and the mean in France was 4.02 (2.47), and the difference between these two countries was not significant ($p = .124$). Suggesting the price perception in both countries was almost the same.

Ad Responses

A similar between-group GLM was performed on composite scores of ad responses, controlling for the effects of gender, age and social classes, and product involvement (here, higher scores indicate higher ad response). This model (see Table 10) revealed that ad responses were positively related to product involvement ($\beta = .16, t = 3.98, p < .001$, partial $\eta^2 = .04$), but they were negatively related to age class ($\beta = -.10, t = -2.16, p < .04$, partial $\eta^2 = .01$), suggesting that involved and younger consumers were more prone to accept new brands and products. Moreover, we controlled product involvement because product involvement can influence consumers' attitude towards brand and advertisement as Roy and Sharma (2015) suggested. The effects of gender and social class did not reach significance (F 's < 3).

Table 10

Mean (Standard Deviation) of ad response as a function of culture, scarcity appeal, and product visibility.

[Table 10 about here]

Although overall ad responses were more favorable among Pakistani ($M = 5.40$) rather than French ($M = 4.34$) consumers, $F(1, 405) = 33.96, p < .001$, partial $\eta^2 = .08$, the two-way interaction of culture and scarcity appeals also reached significance, $F(1, 405) = 35.20, p < .001$, partial $\eta^2 = .08$. Using the partial η^2 as the measure of effect size, the interaction between scarcity appeals and culture accounted for 8% of the total variability in the ad response. Indeed, in France, supply-based scarcity ($M = 4.97$) was more effective than

demand-based scarcity ($M = 3.71$), $t = 5.12$, $p < .001$, confirming H1a. Conversely, in Pakistan, demand-based scarcity ($M = 5.80$) was more effective than supply-based scarcity ($M = 4.99$), $t = 2.91$, $p < .01$, supporting H1b.

As predicted, the three-way interaction was significant, $F(1, 405) = 6.84$, $p < .01$, partial $\eta^2 = .02$, indicating that product visibility moderated the interaction of scarcity appeals and culture. The value of partial η^2 indicates that the three-way interaction between the culture, the product visibility, and the scarcity appeals accounted for 2% of the total variability in the ad response. Indeed, planned contrasts showed that such two-way interaction reached significance for both high visible, $t = 5.77$, $p < .001$, partial $\eta^2 = .09$, and low visible products, $t = 2.38$, $p < .02$, partial $\eta^2 = .01$. However, this interaction was stronger when product visibility was high rather than low, $t = 6.30$, $p < .001$, supporting H3a. All other effects did not reach significance (F 's < 3).

Purchase Intentions

A similar between-group GLM was run on purchase intentions (Table 11) which provided a complementary measure for the effectiveness of scarcity appeals: the higher purchase intentions, the higher scarcity appeals effectiveness. Similar to ad response, purchase intentions were positively related to product involvement ($\beta = .17$, $t = 2.35$, $p < .02$, partial $\eta^2 = .01$), whereas the effects of gender, age class and social class did not reach significance (F 's < 3).

Table 11

Mean (Standard Deviation) of purchase intentions as a function of culture, scarcity appeals and product visibility.

[Table 11 about here]

Overall, purchase intentions were higher with respect to Pakistani ($M = 5.46$) compared to French consumers ($M = 3.93$), $F(1, 405) = 37.06$, $p < .001$, partial $\eta^2 = .08$. In addition, the main effect of scarcity appeals, $F(1, 405) = 5.33$, $p < .03$, partial $\eta^2 = .01$, revealed that

supply-based scarcity appeals ($M = 4.97$) were more effective than demand-based scarcity appeals ($M = 4.41$). However, as predicted, the two-way interaction between culture and scarcity appeals reached significance, $F(1, 405) = 35.70, p < .001$, partial $\eta^2 = .08$. The measure of effect size indicates that the interaction between scarcity appeals and culture accounted for 8% of the total variability in the purchase intention. Such interaction indicated that in France, supply-based scarcity ($M = 4.92$) was more effective than demand-based scarcity ($M = 2.93$), $t = 5.79, p < .001$, confirming H1a. In contrast, in Pakistan, demand-based scarcity ($M = 5.90$) was more effective than supply-based scarcity ($M = 5.02$), $t = 2.16, p < .03$, supporting H1b.

As predicted, the three-way interaction was significant, $F(1, 405) = 8.77, p < .01$, partial $\eta^2 = .02$, confirming that product visibility moderated the interaction of scarcity appeals and culture. The partial η^2 indicates that the three-way interaction between the culture, the product visibility, and the scarcity appeals accounted for 2% of the total variability in the purchase intention. Planned contrasts show that such two-way interaction reached significance for both high visible, $t = 6.06, p < .001$, partial $\eta^2 = .10$, and low visible products, $t = 2.02, p < .05$, partial $\eta^2 = .01$. However, this interaction was stronger when product visibility was high rather than low, $t = 6.37, p < .001$, supporting H3. All other effects do not reach significance ($F^2s < 3$).

The findings on ad response and purchase intents were very similar and provided significant support for both H1 and H3.

Mediation of The Moderating Role of Culture

First, one-way Anovas controlling for product involvement, gender, age and social classes indicated that Pakistani ($M = 7.58, SD = 1.64$) reported higher interdependent self than French consumers ($M = 6.05, SD = 1.47$), $F(1, 411) = 89.55, p < .001$, partial $\eta^2 = .18$, whereas the reverse was found regarding reported independent self: respectively, $M = 5.75$,

$SD = 1.66$ vs. $M = 6.27$, $SD = 1.87$, $F(1, 411) = 8.53$, $p < .01$, partial $\eta^2 = .02$. Given that advanced hypotheses relate to the prevalence of one self-construal over the other one, the composite score of independent self was subtracted to the composite score of interdependent self to create a new variable that captured the prevalence of interdependent self. A one-way Anova indicated that such prevalence was stronger among Pakistani ($M = 1.83$, $SD = 1.59$) rather than French consumers who tend to favor independent self ($M = -.22$, $SD = 2.31$), $F(1, 411) = 99.59$, $p < .001$, partial $\eta^2 = .20$, supporting H2a and H2b respectively.

Consistently, SNI was higher among Pakistani ($M = 5.45$, $SD = 1.32$), rather than French consumers ($M = 3.44$, $SD = 1.63$), $F(1, 411) = 247.45$, $p < .001$, partial $\eta^2 = .38$, whereas the reverse was found regarding NFU: respectively, $M = 4.90$, $SD = 1.64$ vs. $M = 5.79$, $SD = 1.87$, $F(1, 411) = 41.09$, $p < .001$, partial $\eta^2 = .09$. As predicted, the prevalence of interdependent self was positively related to SNI ($r_{bp} = .43$, $p < .001$), but it was negatively related to NFU ($r_{bp} = -.23$, $p < .001$), thus supporting H2e and H2f.

Then, a path-analysis was conducted to further investigate such relationships and their impact on ad response and purchase intentions. To do so, culture and scarcity appeals were contrast-coded (respectively: -1 for France vs. +1 for Pakistan, and -1 for supply-based appeals vs. +1 for demand-based appeals). Next, the interaction term (that is the product of culture and scarcity appeal) was residual-centered to orthogonalize main and interaction effects as Little, Bovaird and Widaman (2006) recommended. Residual-centering was also applied to interaction terms implying culture and each of the following three numerical variables: SNI, NFU, and prevalence of interdependent self. In addition, according to Hayes (2009), 5,000 bias-corrected bootstraps were performed to determine 95% confidence intervals around total, direct and indirect effects and to estimate their significance. This path-analysis confirmed that culture moderates the effect of scarcity appeals on both ad responses ($\gamma = .15$, $p < .001$) and intentions ($\gamma = .15$, $p < .001$), supporting H1: as predicted, Eastern cultures

increased the effectiveness of demand-based appeals at the expense of supply-based appeals. SNI and NFU also moderated the impact of scarcity appeals on both ad responses (respectively: $\gamma = .21, p < .001$, and $\gamma = -.08, p < .05$), and purchase intentions (respectively: $\gamma = .17, p < .001$, and $\gamma = -.18, p < .001$), confirming H2c and H2d. As predicted, these two moderations operated in opposite directions: SNI increased the effectiveness of demand-based appeals at the expense of supply-based appeals, whereas the reverse is found with regard to NFU. In addition, the prevalence of interdependent self favored SNI ($\gamma = .39, p < .001$), but limited NFU ($\gamma = -.30, p < .001$), supporting H2e and H2f. Consequently, the moderating role of the prevalence of interdependent self reached significance for ad responses ($\gamma = .13, p < .01$) and purchase intentions ($\gamma = .12, p < .01$), supporting H2g: the prevalence of interdependent self increased the effectiveness of demand-based appeals at the expense of supply-based appeal.

Figure 4

Standardized regression weights in path-analysis of the impact of scarcity appeals on ad responses and purchase intentions

[Figure 4 about here]

Based on these findings, the indirect moderating effect of culture on the effectiveness of scarcity appeal, *via* the prevalence of interdependent self and its impact on both SNI and NFU, was tested using bootstrapping (Table 12). This indirect moderating effect achieved significance for ad responses ($\gamma = .10, p < .02$), and purchase intentions ($\gamma = .08, p < .03$), confirming H2h. As the direct moderating effect of culture was also significant with regards to ad responses ($\gamma = .15, p < .01$) and purchase intentions ($\gamma = .15, p < .01$), this pattern of results indicated partial mediation of the moderating role of culture. More particularly, on the one hand, Eastern cultures directly increased the effectiveness of demand-based appeals at the expense of supply-based appeals. On the other hand, Eastern cultures fostered a

prevalence of interdependent self that, in turn, favored SNI, which increased the effectiveness of demand-based appeal but limited NFU, which increased the effectiveness of supply-based appeal. Thus, these two additive effects strengthened the effectiveness of demand-based scarcity appeal. In other words, these findings suggested that the moderating role of culture was partially resulting from a serial mediation: the first level related to the prevalence of interdependent (vs. independent) self, the second level related to its positive (vs. negative) impact on SNI, but negative (vs. positive) impact on NFU. Finally, it should be noted that such model predicted well both ad responses ($R^2 = .37$) and purchase intentions ($R^2 = .46$).

Table 12

Estimates [95% confidence interval] of standardized total, direct and indirect effects of the moderating role of culture on ad response and purchase intentions.

[Table 12 about here]

The Moderating Effect of Product Visibility on The Moderating Effect of SNI and NFU

Another path analysis was carried to investigate the moderating effect of product visibility on the moderating effect of SNI and NFU on the ad effectiveness. In the case of ad response, the findings indicated the moderating effect of SNI and NFU was moderated by product visibility (respectively: $\gamma = .18, p < .01$, and $\gamma = -.27, p < .001$), confirming hypothesis 3b. As predicted earlier, these two moderations operated in opposite directions: suggesting when the product visibility was high, the moderating effect of SNI was stronger in the case of demand-based appeals at the expense of supply-based scarcity appeal, whereas the moderating effect of NFU was stronger when the product visibility was high in the case of supply-based scarcity appeals versus demand-based scarcity appeals. Similarly, in the case of purchase intentions, the results revealed the moderating effect of SNI and NFU is moderated by product visibility (respectively: $\gamma = .14, p < .001$, and $\gamma = -.18, p < .001$), confirming hypothesis 3c. It is worth noting that the addition of this interaction improved the R^2 value in both cases, namely, ad

response ($R^2 = .44$) and purchase intentions ($R^2 = .54$). Other results are mentioned in Figure 5. Overall, these results suggest that product visibility plays a crucial role in shaping consumers' responses to scarcity appeals.

[Figure 5 about here]

DISCUSSION AND IMPLICATIONS

This research addresses whether the culture moderates the effectiveness of scarcity appeals. If yes, then how? Moreover, it also addresses whether product visibility moderates the interaction of culture and scarcity appeal. To address these questions, we developed a comprehensive framework based on different streams of research (e.g., Gierl and Huettl 2010; Herpen et al. 2005; Jang et al. 2015; Kastanakis 2010; Ku et al. 2012; Markus and Kitayama 1991; Roy and Sharma 2015; etc.). Three main hypotheses were formulated and tested to address the research questions and the subsequent objectives.

First, the moderating role of culture on the effectiveness of scarcity appeals was confirmed, as higher effectiveness of demand-based (vs. supply-based) scarcity appeals were observed in Eastern (vs. Western) culture. On the other hand, higher effectiveness of supply-based (vs. demand-based) scarcity appeals were observed in Western (vs. Eastern) culture. This means Eastern consumers were influenced by popularity inference and inferred value from other consumers' demand of the product as suggested. On the other hand, supply-based scarcity appeals were effective in Western cultures, which means that Western consumers inferred the value of a product based on shortage, which signals exclusivity.

Second, the results showed that interdependent self prevailed in Eastern cultures, whereas independent self prevailed in Western cultures. In addition, the respective prevalence of interdependent (vs. independent) self in Eastern (vs. Western) cultures made demand-based (vs. supply-based) scarcity appeals more effective. As hypothesized, results also indicated

that SNI and NFU moderated the effectiveness of scarcity appeals in opposite directions: SNI favored higher effectiveness of demand-based rather than supply-based scarcity appeals, whereas NFU favored higher effectiveness of supply-based rather than demand-based scarcity appeals. Altogether, the path analysis confirmed the indirect moderating effect of culture on the effectiveness of scarcity appeals via the prevalence of interdependent (vs. independent) self and its impact on both SNI and NFU. This suggests that people with higher interdependent self would be concerned about other members of the ingroup while making a purchase decision and would try to conform with them through buying popular or high demand products. Subsequently, they would engage in bandwagon consumption and find demand-based scarcity appeals more attractive.

In contrast, people with higher independent self would not be concerned about other members of the ingroup, pay more attention to personal goals, and rely on self-affirmation and differentiation from significant. Therefore, they preferred supply-based. Thus, demand-based scarcity appeals provide Eastern consumers with means to ensure group affiliation and conformation. In contrast, supply-based scarcity appeals provide Western consumers means to satisfy self-differentiation.

Third, the moderating role of product visibility on the interaction of scarcity appeals and culture was also confirmed, indicating that the cultural effect was higher when product visibility was high rather than low. Moreover, the findings also confirmed that the product visibility moderated the moderating effect of SNI and NFU on the effectiveness of scarcity appeals. The moderating effects of SNI and NFU were stronger when product visibility was high as compared to low. Additionally, the R^2 value improved in both cases, suggesting that the addition of the interaction between product visibility and the moderating variables improved the overall model's explanatory power. Thus, the results confirmed that consumer

behavior to conform to or to differentiate from others depends on the visibility of the behavior (Tian et al. 2001; Burnkrant and Cousineau 1975).

Theoretical contribution

Based on the developed framework and findings, this study made several significant contributions to knowledge in the domain of consumer behavior. This study's first and most significant theoretical contribution is extending the marketing literature on scarcity appeals by investigating culture as a new moderator of the effectiveness of scarcity appeals based on its types. This study mainly addressed the gap highlighted by Eisend (2008), Roy and Sharma (2015), and Shi et al. (2020). Eisend (2008) specifically highlighted that supply-based scarcity appeals may be effective in individualist culture due to high NFU, and demand-based scarcity appeals may be effective in Eastern cultures due to low NFU. Roy and Sharma (2015) also suggested their model, which explains the moderating role of NFU on the effectiveness of supply-based and demand-based scarcity appeals, should be tested in different cultures. After reviewing product scarcity comprehensively, Shi et al. (2020) highlight this as one of the knowledge gaps in this literature. Apart from that, studies on the effectiveness of scarcity appeals were carried out in Western (vs. Eastern) culture. We considered these gaps and investigated the effectiveness of supply-based and demand-based scarcity appeals in Eastern and Western cultures. Indeed, this study demonstrated that the relative effectiveness of demand-based and supply-based scarcity appeals were sensitive to culture. During this research, we concluded that demand-based (vs. supply-based) scarcity appeals were effective for Eastern cultures, whereas supply-based (vs. demand) scarcity appeals were effective for Western cultures.

Second, this study enriched the literature by providing a comprehensive framework to understand the effectiveness of scarcity appeals in Eastern and Western cultures. The existing literature mainly focused on the impact of NFU on the effectiveness of scarcity appeals based

on its types (supply-based and demand-based) (see e.g., Herpen et al. 2005; Jang et al. 2015; Roy and Sharma 2015; Snyder 1992; etc.). However, cross-cultural differences can arise from different psychological factors, leading to a difference in the effectiveness of demand-based (vs. supply) scarcity appeals. So, to further understand the effects of culture on the effectiveness of scarcity appeals, this study materialized cultural nuances that could explain the moderating effect of culture and advances the theory of scarcity appeals by investigating the impact of other constructs, such as culture, self-construals, SNI, and product visibility, as new moderators for the effectiveness of scarcity appeals. To do so, we integrated two different streams of research. We integrated the models proposed by Roy and Sharma (2015) and Kastanakis and Balabanis (2012, 2014). Roy and Sharma (2015) proposed a model in which they investigated the moderating role of NFU on the effectiveness of scarcity appeals. On the other hand, Kastanakis and Balabanis (2012, 2014) proposed a framework that highlighted self-construals, NFU, and SNI as constructs to predict the snob effect and bandwagon effect. Our adapted model successfully investigated constructs (self-construals, NFU, and SNI) that explained the moderating role of culture and their subsequent effects on the effectiveness of scarcity appeals.

Third, this research is the first that empirically tested the moderating effect of product visibility on the interaction of scarcity appeals and culture. Notably, the results show that the effect of culture on the effectiveness of scarcity appeals is stronger for high-visibility products as compared to low-visibility products.

Managerial Implication

Considering the frequency of scarcity appeals, it is essential to document the impact of scarcity appeals on the business performance, particularly for the information of the WHAT (i.e. the product), the WHO (i.e. customers), the WHERE (i.e. culture, country, and context), and the HOW (i.e. type of appeals) can add to the success of a firm (Shi et al. 2020). This

research tries to aid practitioners in almost all of these dimensions. Specifically, we suggest marketers should deploy demand-based scarcity appeals in Eastern cultures to promote their products. In contrast, they should deploy supply-based appeals in Western cultures to promote their products. Specially, this research is important for the fashion industry, especially, the apparel industry in Eastern and Western countries. The apparel industry is one of the important industries. According to OECD¹¹, consumers in France spent almost 35.5 billion euros (almost 3% of total annual spending) on clothing in 2019. There is no such data indicating the annual spending of Pakistani consumers on clothing, but the recent report by Brandsynario¹² indicated the highest spend in OOH (out of home) was by the clothing industry (such as Junaid Jamshed and Gul Ahmed). Our research contributes to this segment by providing working guidelines to use scarcity appeals in the clothing industry. In particular, we suggest that marketers should use demand-based scarcity appeals in Eastern cultures. There are some Pakistani brands which already use these appeals. For instance, Gul Ahmed, one of the famous clothing brands in Pakistan, quite often uses demand-based scarcity appeals, such as *'be fast, not all designs last'*¹³ and *'twenty designs sold out, in the pre-booking now'*¹⁴.

We also suggest that marketers should use supply-based scarcity appeals in Western cultures. H&M is the market leader in apparel brands in France (15% market share)¹⁵. Sometimes it uses supply-based scarcity appeals. In 2005 it started selling limited edition products that continue till today, such as Lagerfeld for H&M (Strouvens 2018)¹⁶. These examples indicate

¹¹ Retrieved August 20, 2020, from https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE5

¹² Retrieved August 20, 2020, from <https://www.brandsynario.com/158-mn-spent-on-fashion-industry-outdoor-ads-in-feb-2015/>

¹³ Retrieved August 20, 2020, from <https://www.brandsynario.com/the-biggest-ideas-sale-by-gulahmed-is-not-to-be-missed/>

¹⁴ Retrieved August 20, 2020, from <https://propakistani.pk/2020/02/21/gulahmed-lawn-collection-receives-overwhelming-response-from-online-shoppers/>

¹⁵ Retrieved August 20, 2020, from <https://www.statista.com/outlook/90040000/136/apparel/france#market-aru>

¹⁶ Strouvens, A. (2018, October 30). Retrieved August 21, 2020, from <https://www.stylight.fr/Magazine/Fashion/Tout-Sur-14-Ans-De-Collab-Designers-X-Hm/>

some of the clothing companies already deploy demand-based and supply-based scarcity appeals based on culture. We suggest other apparel companies can also use these appeals by keeping respective culture and scarcity appeals in mind. In addition, this study provides advertising and marketing practitioners with a critical insight to consider consumers' self-others (independent vs. interdependent self) focus while choosing the type of scarcity appeals. Specifically, marketers and advertisers should choose demand-based scarcity appeals for consumers with dominant interdependent self. In contrast, they should choose supply-based scarcity appeals for consumers with a dominant independent self.

Limitations and Future Research

The effects of self-construals on the effectiveness of scarcity appeals were directly measured by using the scale proposed by Singelis (1994), and we did not manipulate the salience of independent versus interdependent self. Priming the self-construals can further explain the causal role of self-construals (Gardner, et al. 1999). Thus, future research should manipulate the salience of self-construals to be sure about their causal effect on the effectiveness of scarcity appeals. Moreover, our findings are bound to two cultural samples (France and Pakistan) and two cultural dimensions (individualism and collectivism). These countries were selected based on scores of the individualism/collectivism dimension. It would be interesting to collect data from other countries to validate our findings and framework.

Conclusion

This study contributed to the literature by studying the effectiveness of scarcity appeals across various cross-cultural settings. In a nutshell, we found that culture significantly moderates the effectiveness of scarcity appeals; and culturally prevailing self-construal, NFU, and SNI successfully explained this moderation. We also found that product visibility moderated the impact of culture on the effectiveness of scarcity appeals.

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TABLES

Table 1

Means (Standard Deviations) of product visibility across countries.

Product Category	Pakistan		France		Overall	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Mobile	55	26.70%	74	35.07%	129	30.94%
Watch	151	73.30%	137	64.93%	288	69.06%
MP3	206	100%	211	100%	417	100%
Laptop						
Sunglasses						
Automobile						
Handbag						
Headphone						
Shirt						
Soda						
Iron						
Beer						
Yogurt						
Shampoo						
Coffee						
Deodorant						
Perfume						

Table 3

Social class distribution across countries

Social Class	Pakistan		France		Tot	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
PCS +	55	26.70%	74	35.07%	129	30.94%
PCS -	151	73.30%	137	64.93%	288	69.06%
Total	206	100%	211	100%	417	100%

Table 4*Fit indices for the measurement model and respecifications*

	χ^2	<i>df</i>	<i>p</i>	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model 1	2191.933	1590	.001	.935	.943	.030	.0567
Model 2 (Its6, Its3, Ids6, Sni3, and Sni6 dropped off)	1653.320	1200	.001	.947	.955	.030	.0544
Model 3 (correlation among Ids 2 & 3 error added)	1625.283	1198	.001	.950	.957	.029	.0525
Model 4 (correlation among Its 1 & 2 error added)	1604.723	1196	.001	.952	.959	.029	.0523
Model 5 (2nd order factor)	1671.895	1232	.001	.950	.956	.029	.0546

Note. Its: items of interdependent self-construct; Sni: items of susceptibility to normative influence; Ids: items of independent self-construct.

Table 5
Convergent and discriminant validity for Pakistan (France)

	Composite Reliability (ρ de Jöreskog)	Reliability Chronbach's Alpha	Average Variance Extracted AVE (ρ_{vc})	(Squared) Maximal Factorial Correlation
Product Involvement	.91 (.95)	.91 (.95)	.77 (.86)	.07 (.13)
Interdependent Self-construct	.84 (.87)	.85 (.88)	.57 (.63)	.23 (.01)
Independent Self-construct	.84 (.91)	.84 (.91)	.51 (.67)	.24 (.09)
Susceptibility to Normative Influence	.75 (.83)	.75 (.83)	.43 (.55)	.09 (.09)
Need for Uniqueness	.89 (.87)	.86 (.88)	.72 (.68)	.24 (.13)
Attitude towards Ad	.87 (.92)	.87 (.91)	.69 (.79)	.68 (.91)
Attitude towards Brand	.89 (.87)	.88 (.83)	.73 (.70)	.68 (.91)
Perceived Value	.91 (.96)	.91 (.95)	.77 (.88)	.55 (.88)

Table 6
Hetero-Trait Multi-Trait ratio for Pakistan (France)

	Interdependent Self-construct	Independent Self-construct	Susceptibility Influence	Need for Uniqueness	Attitude towards Ad	Attitude towards Brand	Perceived Value
Product Involvement	.26 (-.08)	.17 (.30)	.04 (.11)	.08 (.37)	.00 (.29)	.07 (.23)	.09 (.31)
Interdependent Self-construct		.48 (.06)	.29 (.01)	-.03 (.00)	.13 (-.06)	.17 (-.04)	.12 (-.02)
Independent Self-construct			.24 (-.06)	.49 (.21)	.26 (.06)	.18 (.09)	.25 (.12)
Susceptibility to Normative Influence				.06 (.09)	.30 (.26)	.24 (.25)	.30 (.30)
Need for Uniqueness					.07 (.07)	.08 (.13)	.18 (.10)
Attitude towards Ad						.82 (.95)	.74 (.92)
Attitude towards Brand							.74 (.94)

Table 7
Convergent and discriminant validity of Model 5 for Pakistan (France)

	Composite Reliability (ρ de Jöreskog)	Average Variance Extracted AVE (ρ_{vc})	(Squared) Maximal Factorial Correlation
Ad Responses	.91 (.98)	.77 (.93)	.10 (.08)
Interdependent Self-construct	.84 (.87)	.57 (.63)	.23 (.01)
Independent Self-construct	.84 (.91)	.51 (.67)	.24 (.09)
Susceptibility to Normative Influence	.75 (.83)	.43 (.55)	.10 (.08)
Need for Uniqueness	.89 (.87)	.72 (.68)	.24 (.13)
Product Involvement	.91 (.95)	.77 (.86)	.07 (.13)

Table 8*Hetero-Trait Multi-Trait ratio in Model 5 for Pakistan (France)*

	Interdependent Self-construct	Indepen dent Self- construct	Susceptibility to Normative Influence	Need for Uniqueness	Product Involvement
Ad Response	.16 (-.04)	.26 (.10)	.32 (.28)	.12 (.11)	.06 (.29)
Interdependent Self-construct		.48 (.06)	.29 (.02)	-.03 (.00)	.26 (-.08)
Independent Self-construct			.24 (-.06)	.49 (.21)	.17 (.30)
Susceptibility to Normative				.07 (.09)	.04 (.11)
Need for Uniqueness					.08 (.37)

Table 9*Model Fit and Model Comparisons for testing Metric and Scalar Invariance*

	χ^2	<i>df</i>	<i>p</i>		$\Delta\chi^2$	Δdf	<i>p</i>	<i>TLI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>SRMR</i>
M5: Configural Invariance	1671.895	1232	.001					.950	.956	.029	.0546
M6: Full metric invariance	1748.308	1260	.001	M5 vs. M6	76.413	28	.001	.946	.951	.031	.0535
M7: Partial metric Invariance (Nfu3, Unpopular Choice Counter-confirmatory, Its1, Aad1, Abr3, and Pv3 relaxed)	1697.631	1254	.001	M5 vs. M7	25.736	22	.263	.950	.956	.029	.0543
M8: Full scalar Invariance	1817.470	1273	.001	M7 vs. M8	119.839	19	.001	.940	.946	.032	.0541
M9: Partial scalar invariance (Nfu3, Unpopular Choice Counter-confirmatory, Its1, Aad1, Abr3, Pv3, Nfu1, Nfu4, Nfu6, Sni5, Ids1, Ids2, Ids5, Pin3, and Pv1)	1702.935	1264	.001	M7 vs. M9	5.313	10	.869	.951	.956	.029	.0542

Table 10

Mean (Standard Deviation) of ad response as a function of culture, scarcity appeal, and product visibility.

Country	Product Visibility	Scarcity Appeal	M	SD	95% CI	
					LI	UI
Pakistan	Low Visibility Product	Supply Scarcity	4.68 ^a	1.76	4.22	5.15
		Demand Scarcity	5.68 ^a	1.73	5.20	6.16
	High Visibility Product	Supply Scarcity	5.31 ^a	1.75	4.82	5.79
		Demand Scarcity	5.92 ^a	1.76	5.43	6.41
France	Low Visibility Product	Supply Scarcity	4.40 ^a	1.78	3.94	4.86
		Demand Scarcity	4.23 ^a	1.83	3.73	4.72
	High Visibility Product	Supply Scarcity	5.53 ^a	1.73	5.05	6.01
		Demand Scarcity	3.20 ^a	1.76	2.71	3.69

a. Covariates appearing in the model are evaluated at the following values: Gen = 1.47, Age = 2.22, PCS = 2.38, INV = 5.92

Table 11

Mean (Standard Deviation) of purchase intents as a function of culture, scarcity appeal and product visibility.

Country	Product Visibility	Scarcity Appeal	M	SD	95% CI	
					LI	UI
Pakistan	Low Visibility Product	Supply Scarcity	4.96 ^a	2.44	4.32	5.61
		Demand Scarcity	5.58 ^a	2.40	4.91	6.25
	High Visibility Product	Supply Scarcity	5.07 ^a	2.44	4.39	5.74
		Demand Scarcity	6.23 ^a	2.44	5.55	6.90
France	Low Visibility Product	Supply Scarcity	4.20 ^a	2.47	3.56	4.83
		Demand Scarcity	3.33 ^a	2.55	2.64	4.02
	High Visibility Product	Supply Scarcity	5.65 ^a	2.41	4.98	6.32
		Demand Scarcity	2.52 ^a	2.45	1.84	3.20

a. Covariates appearing in the model are evaluated at the following values: Gen = 1.47, Age = 2.22, PCS = 2.38, INV = 5.9150.

Table 12

Estimates [95% confidence interval] of standardized total, direct and indirect effects of the moderating role of culture on ad response and purchase intentions.

	Total Effect	Direct Effect	Indirect Effect
Moderating role of Culture on Ad Response (via Prevalence of Interdependent self, SNI, and NFU)	.25*** [.16 ; .34]	.15** [.03 ; .28]	.10*** [.02 ; .17]
Moderating role of Culture on Purchase Intention (via Prevalence of Interdependent self, SNI, and NFU)	.23*** [.13 ; .33]	.15** [.04 ; .29]	.08* [.01 ; .16]

Note: * p < .05, ** p < .01, *** p < .001.

FIGURES

Figure 1

Conceptual model explaining moderating effect of culture through self-construals and NFU

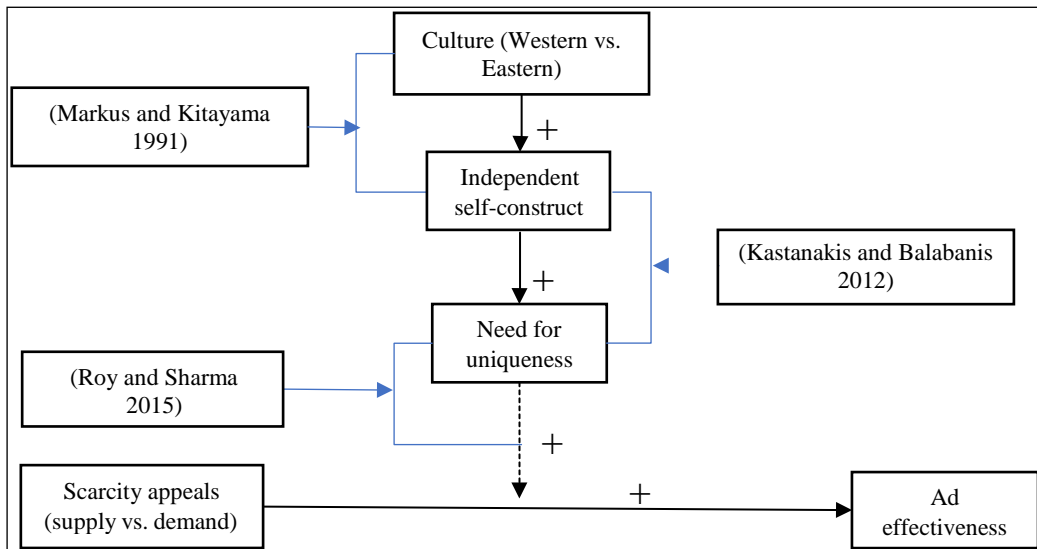


Figure 2

Conceptual model explaining moderating effect of culture through self-construals and SNI

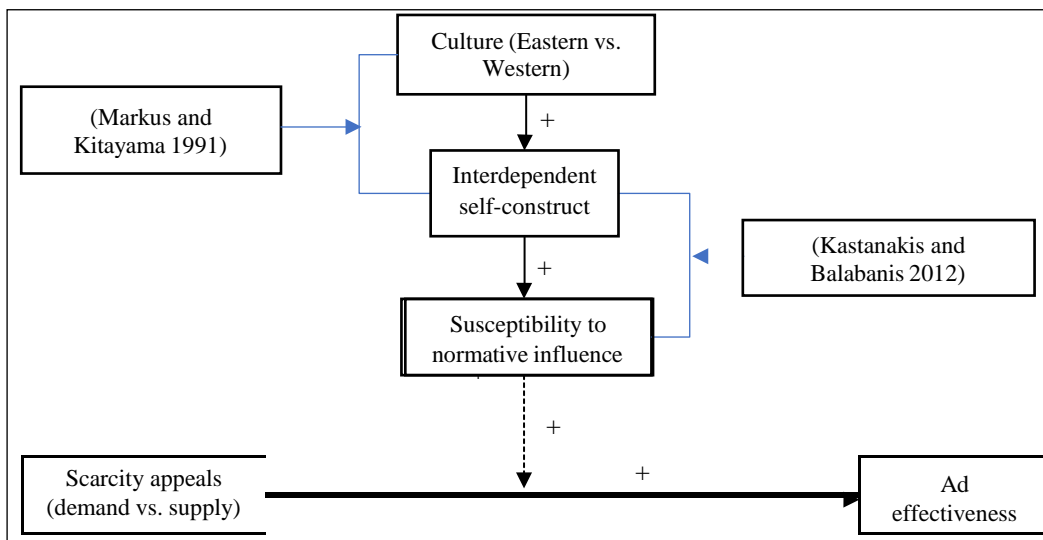


Figure 3

Chain mediation of the moderating role of culture.

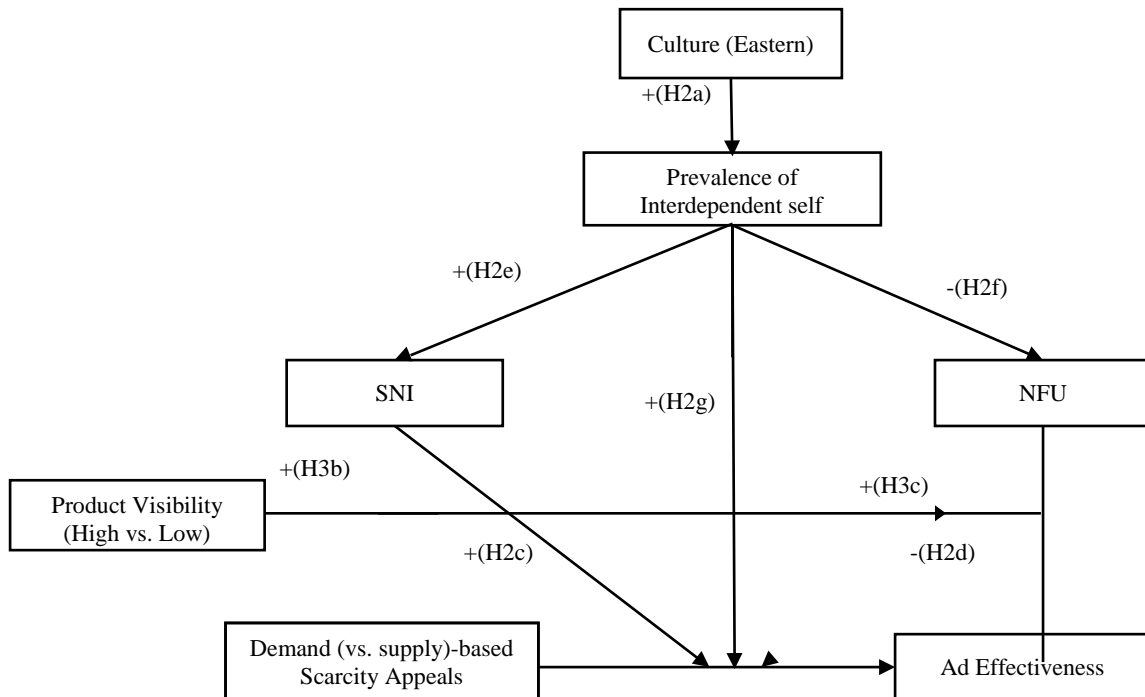
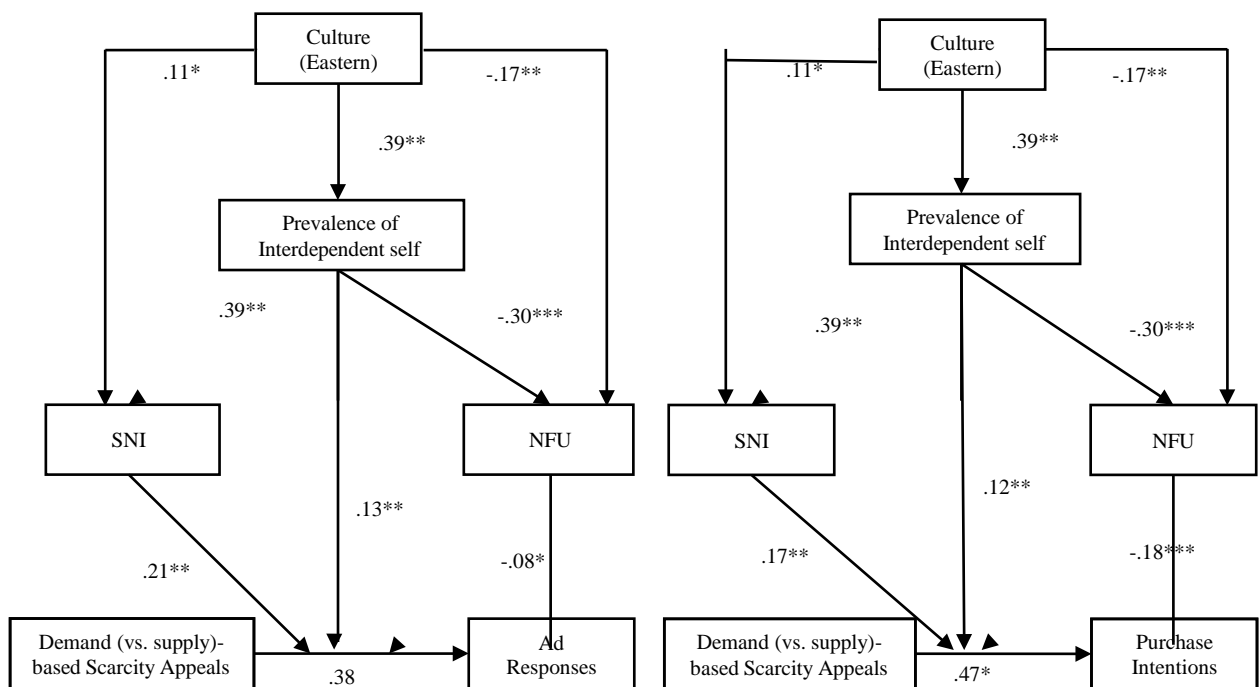


Figure 4

Standardized regression weights in path-analysis of the impact of scarcity appeal on ad responses and purchase intentions



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5

Standardized regression weights in path-analysis of the impact of scarcity appeal on adresponses and purchase intentions (moderating effect of product visibility included)

Note: * $p < .05$, ** $p < .01$, ***

