THE RELATIONSHIP BETWEEN COSMOPOLITANISM AND BRAND ORIGIN RECOGNITION ACCURACY: THE MODERATING EFFECT OF NEED FOR COGNITION

A THESIS IN THE JOHN MOLSON SCHOOL OF BUSINESS MASTER OF SCIENCE IN ADMINISTRATION (MARKETING)

Presented in partial fulfillment of the requirements for the Master of Science in Administration at Concordia University, Montreal, Quebec (CANADA)

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ABSTRACT

In this thesis, we are interested in investigating whether cosmopolitan individuals have greater knowledge of brand origins as compared to non-cosmopolitans. We also looked at the possible moderating effect of need for cognition on the latter relationship. Additionally, we investigated whether the level of confidence in assigning a country of origin to a brand affects brand attitude. And finally, we decided to look at the different type of industries and see if those influence brand recognition accuracy. Our analysis shows that cosmopolitan individuals have significantly higher brand origin recognition accuracy scores than non-cosmopolitans. Secondly, we found an interaction effect between need for cognition and cosmopolitanism; which means that there is a moderating effect of need for cognition on our main relationship. Thirdly, we found that when individuals are less confident about the origin of a brand, brand attitude decreases and vice versa. Finally, we found that industry type does seem to influence brand origin knowledge. Indeed, the automobile industry has the highest brand origin recognition accuracy scores as compared to other industries such as electronics or apparel.

ACKNOWLEDGEMENT

First, I would like to thank my supervisor, Professor Michel Laroche, for his patience and his guidance throughout this journey and most importantly, for understanding that sometimes you need a break from the thesis. I would also like to thank him for always being available and for answering my questions very rapidly. Secondly, I would like to thank Professor Arsel Zeynep and Professor Caroline Roux who both accommodated me on a very short notice and for their valuable comments and for their kindness. Lastly, I would like to thank my friends Jérémie Peloso and Jiabin Zhou, who gave me the motivation and support to finish this thesis, as well as, my parents who made this journey possible for me.

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I. INTRODUCTION

Globalization, technological breakthroughs such as the Internet or the enhanced travel and logistic, along with new free trade agreements being undertaken, have enabled barriers to be rapidly taken down. This permits both individuals and companies to move around the globe with ease and at low costs. This phenomenon has led to more and more people travelling to foreign countries as well as the emergence of global corporations. Those travelling individuals are exploring and experiencing the world outside of their home-countries and home-culture; this includes being exposed to foreign products as consumers. Unfamiliar places and cultures have made them more tolerant towards foreign products and brand names. All these circumstances have worked together towards what Levitt (1983) calls the "homogenization" of the world. Indeed, he observed that consumers from diverse part of the world were becoming more and more similar in their tastes and consumptions habits and that the world was becoming one "common place". Consumers from France and China desire the exact same products and brands from North America for instance. This is what Dawar and Parker (1994) and Hassan and Katsanis (1994) observed as the rise of global consumer segments. Holt et al. (2004), also observed the same phenomenon regarding the emerge of global consumer segments and Keillor et al. (2001) found that these global consumers actually share common similarities in terms of ethnocentrism for example.

At the same time, globalization has enabled companies to tap into economies of scale opportunities and push their products into different foreign markets across the globe more easily. This led to the emergence of numerous global companies. These global companies often market the same products in a consistent manner no matter which country they are entering (Quelch, 2003). Naturally, globalization drove companies to take advantage of lower production costs in foreign countries where labor costs were cheaper for instance. Therefore companies were outsourcing part or all of their activities to different places for manufacturing, assembling, design, etc. Lower costs seem ideal since the lower costs were passed on to consumers, However, outsourcing their activities has lead to brand confusion on the part of the consumers. Hence, country of origin was no longer a reliable source of information for customers (Jin *et al.*, 2006; Pharr, 2005).

Thus, brand origin became the only "stable" information available to consumers in their product evaluations (Jin *et al.*, 2006; Pharr, 2005). Brand origin is the "country a brand is associated with or the headquarters of where the brands' owner is perceived to be located, regardless of where is it manufactured" (Samiee *et al.*, 2005). Brand origin is a valuable piece of information for consumers; indeed, Balabanis and Diamantopoulos (2008) have found that on average consumers expressed more positive appreciations whenever they could name a country they believe the brand originated from as compared to brands for which they failed to associate with a country of origin.

Brand origin confusion is not to be overlooked because brand origin can affect the consumer's quality perceptions even when consumers' believed origin of a brand is wrong. Indeed, perceived brand origin, correct or incorrect matters. The consumer will use that information to guide his evaluation of the product regardless of correctness (Magnusson *et al.*, 2011).

Focusing our interest back to the world traveller, Cleveland *et al.* (2009) have studied a new segment of consumers, namely the cosmopolitans. Cosmopolitans distinguish themselves with a "conscious openness to the world and to cultural differences" (Cleveland *et al.*, 2009) and as such represent an interesting segment for global companies since global products are advertised similarly in all countries (Cleveland *et al.*, 2014). Cosmopolitans have been widely examined in the literature and are a meaningful segment since they tend to express more positive attitudes towards foreign brands as opposed to non-cosmopolitan consumers (Cleveland and Laroche, 2012; Rawwas *et al.*, 1996). Furthermore, global brands seem to appeal to cosmopolitan consumers at a greater level than non-global brands (Thompson and Tambyah, 1999); thus they tend to prefer to buy global foreign brands to local ones (Parts and Vida, 2011).

This confirms Alden *et al.* (1999) findings that cosmopolitan consumers are more willing to accept foreign products, as well as companies' global strategies, such as advertising messages and promotions. A great deal of companies still value brand origin effects and adopt brand origin perceptions for their marketing strategy. Moreover, the emergence of global brands has brought an acute number of global advertisements targeted towards the "largely middle class of global consumers" across the globe (Alden *et al.*, 1999).

In this present thesis, we are interested in brand origin rather than country of origin. Indeed, as previously mentioned, brand origin appears to be the only reliable extrinsic information consumers rely on (Jin *et al.*, 2006; Pharr, 2005). Therefore, we are focusing our attention on brand origin recognition accuracy (BORA) (Samiee *et al.*, 2005); more precisely we will investigate the relationship between brand origin knowledge and cosmopolitanism. Liefeld (2004) and Balabanis and Diamantopoulos (2008) previously established that consumers are urged to become "amateur detectives" when it came to finding country of origin information. Furthermore, Hong and Wyer (1990) demonstrated that consumers are likely to guess the country of origin of a product from memory since they had knowledge of the country of origin information for an array of brands.

Extending this thinking from country of origin to brand origin, it is most likely that cosmopolitan consumers will have greater knowledge of global brands' origin as compared to their non-cosmopolitan counterparts. This makes sense since cosmopolitans have been found to be more appreciative of foreign brands and more likely to buy foreign brands over local ones in comparison with non-cosmopolitans consumers (Alden *et al.*, 1999; Cleveland and Laroche, 2012; Parts and Vida, 2011; Rawwas *et al.*, 1996; Thompson and Tambyah, 1999).

Nonetheless, we predict that the consumer's personality, i.e. its need for cognition, should influence the relationship between brand origin recognition accuracy and cosmopolitanism. Surely, consumers' own "inclination to enjoy and engage in thought" (Cacioppo and Petty, 1982) plays a role in their ability to correctly identify a brand's origin. The vast array of research on need for cognition, cognitive elaboration and information recall leads to the conclusion that individuals high in need for cognition process more information and are able to recall brand

messages at a higher level than individuals who rate lower in need for cognition (Burnkrant and Sawyer, 1983; Cacioppo *et al.*, 1983; Cacioppo *et al.*, 1986; Celsi and Olson, 1988; Greenwald and Leavitt, 1984; Kassin *et al.*, 1990; Petty *et al.*, 1983).

Thus, we will proceed to review the literature on brand origin recognition accuracy first, then move to cosmopolitanism and finally examine previous findings in the overlapping fields of psychology and marketing regarding need for cognition.

II. LITERATURE REVIEW

A. BRAND ORIGIN RECOGNITION ACCURACY

What is brand origin (BO)? Brand origin is simply the perceived origin of a specific brand by customers and, more precisely, is it where the "corporate headquarters of the company" are perceived to be located (Johansson *et al.*, 1985, p389). Thakor (1996) also highlighted the differences between country of origin and brand origin, which are not to be confused. While country of origin concerns the product, brand origin relates to the brand itself.

Why is brand origin important? There has been a shift in importance in using country of origin as a cue to using brand origin. Indeed country of origin information is more and more difficult to establish since products are made, assembled and designed in various and distinct places. Liefeld (2004) and Balabanis and Diamantopoulos (2008) have observed the need for customers to actively investigate country of origin information. Pharr (2005) and Jin *et al.* (2006) confirmed that rationale and noted that consumers regarded brand origin as a more reliable diagnostic piece of information. However, the importance of brand origin has been highly doubted and many affirmed that brand origin knowledge and brand origin recognition accuracy have been inflated (Liefeld, 2004; Samiee *et al.*, 2005, Samiee, 2010). Magnusson *et al.* (2011) argue that regardless of correctness, customers use their perceived country of origin of a brand to

form their opinions of the brand and guide their purchase decisions. Furthermore, it is critical for companies, especially for those associated with high equity country image, to make sure customers are able to link their brand with a country. Brands that fail to be associated with a country in the customer's minds suffer from less positive opinions because they appear more dubious (Balabanis and Diamantopoulos, 2008). And, so far, global brands have been using the origin of their brand in their marketing strategy successfully. For instance, brands in the automobile industry heavily advertise their products using brand origin as a selling point.

Why are we interested in brand origin recognition accuracy? In this thesis, we will be looking at brand recognition accuracy, which assesses how much consumers actually know about the origin of a set of widely distributed global brands. The literature on brand origin recognition accuracy identified several factors that can help us predict the level of brand origin knowledge of an individual and influences his or her brand origin recognition accuracy score:

- Samiee *et al.* (2005) pointed out that consumers attach less importance to brand origin information for low involvement products as compared to high involvement products.
- Samiee *et al.* (2005) also found that consumers were often able to infer a brand's origin from the language in which the brand name is written.
- Income has also been found to influence brand origin recognition accuracy. First, higher income consumers have a more positive stance when it comes to foreign brands (Dornoff *et al.*, 1974; Schooler, 1971; Wall and Heslop, 1986). Second, consumers with a lower income may be more price-sensitive than higher income consumers, and therefore find price information more important than extrinsic cues such as brand origin (Samiee *et al.*, 2005).

B. COSMOPOLITANISM

What is cosmopolitanism (COS)? Cosmopolitans are a new global consumer segment and they seem to have similar takes on foreign consumption. From Beck's (2002) point of view, cosmopolitans place cosmopolitan values at a higher level than national ones. This is similar to Yegenoglu's (2005) findings: cosmopolitans do not have a strong sense of appurtenance to any

specific culture, but rather to the higher entity, and see themselves as citizens of the world. Indeed cosmopolitanism comes with certain open-mindedness about the world outside of one's own home country and culture. The definition of cosmopolitanism has changed throughout the years, or rather it has evolved. For instance, transnationalism is no longer synonymous of cosmopolitanism (Cleveland and Laroche, 2012). Indeed, traveling abroad and being in direct contact with foreign cultures, people or even products is not a prerequisite to cosmopolitanism anymore in today's world. Foreign products and even services are available locally and virtually everywhere on the planet (Hannerz, 1990). Additionally, people are more aware of other cultures through the numerous different media outlets and information channels (Craig and Douglas, 2006). However, most researchers agree that sex, age, education and sometimes income appear to be the main predictors of cosmopolitanism (Cleveland *et al.*, 2009; Cleveland *et al.*, 2011). For instance, females tend to be more cosmopolitan than males. Also education was found to be positively related to cosmopolitanism and age, negatively related to age (Cleveland *et al.*, 2009; Cleveland *et al.*, 2009; Cleveland *et al.*, 2011).

Cosmopolitanism scale: Cannon *et al.* (1994) first developed the CYMYC scale to tackle the notion of consumer cosmopolitanism. However, to date this scale has not been widely adopted. Later, Cleveland and Laroche (2006) developed a cosmopolitan scale (COS) within their study of acculturation. Finally, a 7 item version of the original 2006 COS scale was validated (Cleveland *et al.*, 2011).

Why are we interested in cosmopolitanism? In this present study, we are interested in looking at how cosmopolitanism may affect one's brand origin knowledge. Indeed we argue that the more cosmopolitan a consumer is, the more knowledgeable with regards to global brands origins and therefore, the less likely he or she will confuse brand origins of global brands. We also predict the opposite to be true. We believe this argument to hold since cosmopolitan consumers are more open-minded when it comes to global brands and consume more foreign products compared to non-cosmopolitan consumers (Thompson and Tambyah, 1999; Skrbis *et al.*, 2004). Alden *et al.* (1990) found that cosmopolitan consumers were more responsive to foreign brands than their non-cosmopolitan counterparts. Additionally, Thompson and Tambyah (1999) were able to demonstrate that cosmopolitans have a preference for brand they perceive as

global. Not only cosmopolitans are attracted to global brands, they tend to have greater quality perceptions of global products as well (Rawwas *et al.*, 1996). Cosmopolitans across the globe share common characteristics, such as a preference for global brands and greater quality perceptions of foreign and global brands, and therefore this makes cosmopolitanism a valuable segmentation tool for marketing purposes. This is especially true for positioning and promotion strategies (Cleveland *et al.*, 2013). And, according to Dawar and Parker (1994), as well as Hassan and Katsanis (1994), the global consumer segment is a growing segment that keeps expanding and is worth studying. Finally, although we argue that cosmopolitanism positively affects brand origin recognition accuracy, we believe that this relationship is not that simple. As a matter of fact, we posit that need for cognition, a concept borrowed from psychology research; moderates the latter relationship.

C. NEED FOR COGNITION

What is need for cognition (NFC)? Cohen *et al.* (1955) defined need for cognition as "a need to structure relevant situations in meaningful integrated ways" (Cohen *et al.*, 1955, p. 291). It is basically the need and willingness of individuals to understand and make sense of things. Cacioppo *et al.* (1984) later referred to it as "effortful cognitive endeavours"; indeed high in need for cognition individuals tend to enjoy engaging in cognitive thinking.

Need for cognition scale: The original need for cognition scale is composed of a total of 34 bipolar items (Cacioppo and Petty, 1982); a shorter and more efficient version of the original scale was later developed (Cacioppo *et al.*, 1984). This short form need for cognition scale is composed of 18 items, half of which are reversed-worded items. We decided to exclude the 9 reversed-worded items from our analysis and will therefore be using only the 9 positive-worded items from the short form need for cognition scale. The use of mixed items has been widely accepted in psychology research to counter issues such as respondent acquiescence (Heaven, 1983). However, Schriesheim and Hill (1981) have called the use of reversed items into question as early as 1981. Indeed they observed that reversed items were not as reliable as positive items and impact the validity of the measure. Reversed items were also found to pose a threat to the

unidimensionality of scales (Bensen and Hocevar, 1985; Herche and Engelland, 1996). Therefore we will be using a revised form of the short form need for cognition scale, which, will be checked for reliability in our methodology section.

Why is need for cognition important? We decided to include need for cognition in our analysis because we believe that a person's need for cognition level influences his or her ability to correctly recognize a brand's origin since high NFC individuals can recall information at a greater level than low NFC individuals (Burnkrant and Sawyer, 1983; Cacioppo *et al.*, 1986; Celsi and Olson, 1988; Greenwald and Leavitt, 1984; Kassin *et al.*, 1990; Petty *et al.*, 1983). Thus need for cognition is hypothesized to work as a moderator in the main relationship between our independent variable, cosmopolitanism and our dependent variable, brand origin recognition accuracy. Additionally, high need for cognition individuals are more cautious in their decision-making process (Lin, Yen, and Chuang, 2006); therefore it makes sense to presume that the same applies to buying decisions. This means that high need for cognition consumers are more likely to look for attribute information about the product such as brand origin recognition accuracy.

Why are we interested in need for cognition? In an exploratory study involving catalogue shopping, Jones (1998) found that high need for cognition individuals paid more attention to catalogue information and were also more willing to search for additional information in comparison with low need for cognition individuals. Peletier and Schibrowsky (1994) also found that high need for cognition individuals processed and recalled brands and claims (better recall of brand names and longer processing time) at a higher level than low need for cognition individuals. This confirms Cacioppo *et al.* (1983, 1986), earlier work involving messages recall. Indeed they declared that high need for cognition individuals recalled more arguments than low need for cognition individuals. Kassin *et al.* (1990) arrived at the same conclusion that high need for cognition individuals. Taking all this into account, we believe that high NFC individuals will have greater brand origin knowledge than low NFC individuals since they can recall brand information at a greater level (Peletier and Schibrowsky, 1994) and because they need to understand their environment and are more willing to put efforts into thinking (Cohen *et al.*, 1000).

1955).

D. EXPLORATORY STUDY

Similarly to Balabanis and Diamantopoulos (2008) work on brand evaluation and brand origin identification, we are interested in looking at whether confidence in brand origin identification leads to higher appreciation of the brand. Although Balabanis and Diamantopoulos (2008) were not able to reach conclusive results, they did find that, on average, consumers had more positive brand evaluations when they were able to associate a brand with a specific country of origin as opposed to brands they didn't know the origin of. However, Balabanis and Diamantopoulos (2008) were looking at three different categories of brand origin assignation: (a) correct country of origin assigned, (b) wrong country of origin assigned, and (c) failure to assign to any country of origin, and their impact on brand evaluation. We decided instead to look at different levels of confidence in assigning a country of origin to a brand. We believe that while Balabanis and Diamantopoulos (2008) failed to find significant results, looking at levels of confidence rather than truncate consumer's responses into categories may help us reach more conclusive results. Indeed, confidence appears to be a more precise measure than the categories Balabanis and Diamantopoulos (2008) used. In their study they found that whenever a consumer could associate a brand with a country of origin, the brand would benefit from higher brand evaluation regardless of whether the country of origin assigned was correct or erroneous. This means that brands should make more effort to make sure consumers are able to associate their brand with the country of origin by educating them through advertisement campagins, for instance. Brands which cannot be assigned to any country of origin have lower brand evaluations because in their cases, brand attitude cannot be influenced by country of origin effects (Balabanis and Diamantopoulos, 2008).

Consequently, we will be adding a confidence measure, as well as a brand attitude measure, in our study in order to test our aforementioned hypothesis. Both confidence and brand attitude will be measured using a single-item measure. Given the 30 brands in our brand origin recognition accuracy measure, we believe that using multi-item measures would affect the

reliability and quality due to respondent bias. This would be mostly due to participants' tendency for acquiescence, as well as fatigue. Furthermore, since confidence and brand attitude are fairly simple constructs and our study only requires an overall measure, it is deemed acceptable to measure confidence and brand attitude using a single-item each (Bergkvist and Rossiter, 2007; Loo, 2002; Poon *et al.*, 2002).

Additionally, we will investigate whether the industry of the brand affects BORA. The 3 biggest industries in our sample are automobile (17%), electronics (23%) and apparel (17%). All three industries are industries for which brand origin is of high importance, due to quality expectations and conspicuous consumption in the case of apparel, for instance. Therefore we expect higher BORA for these three industries.

III. HYPOTHESES

A. HYPOTHESES BUILDING

As discussed thoroughly above, we are involved in the task of determining whether cosmopolitanism (COS) and brand origin recognition accuracy (BORA) are related, as well as finding out whether need for cognition (NFC) could possibly moderate the relationship between the former two. Indeed, as Rawwas *et al.* (1996), as well as Cleveland and Laroche (2012), were able to demonstrate, cosmopolitan individuals tend to bear greater attitude towards foreign brands. Additionally, cosmopolitans also report grater consumption of these foreign brands in comparison to non-cosmopolitans. Therefore this leads us to believe that it will be simpler for cosmopolitan consumers than for non-cosmopolitan consumers to recognize the country of origin of a foreign brand. As such, cosmopolitanism is hypothesized to affect brand origin recognition accuracy.

Secondly, we borrow Cacioppo and Petty's (1982) concept of need for cognition from psychology. Indeed, higher in need for cognition individuals were found to recall more brand messages, as well as process more information (Burnkrant and Sawyer, 1983; Caccioppo *et al.*, 1983; Caccioppo *et al.*, 1986; Celsi et Olson, 1988; Greenwald and Leavitt, 1984; Kassin *et al.*, 1990; Petty *et al.*, 1983), as compared to low need for cognition individuals. Thus, we conclude that the relationship between cosmopolitanism and brand origin recognition accuracy is moderated by need for cognition.

In addition to these two main hypotheses, we are interested in adding to Balabanis and Diamantopoulos' (2008) exploratory study on brand attitude and consumers' ability to associate a brand with a country of origin. However, we will be looking at level of confidence in choosing a country of origin for a brand instead of brand origin association. Similarly, we hypothesize that level of confidence will positively affect brand attitude.

Finally, we will investigate whether the type of industry affects brand origin recognition accuracy. We believe that for industries such as automobile, electronics and apparel, brand origin matters much more than for other industries in our sample. Automobiles and most electronics are high-involvement products and, as such, require much though and consideration from the consumers, this is also true for obvious quality reasons since both these category are highly technical. Apparel is considered conspicuous consumption, thus consumers may pay more attention to the brand origin image that is reflects on themselves.



Table 1. Statement of hypotheses

B. STATEMENT OF HYPOTHESES

H1: Cosmopolitanism (COS) affects brand origin recognition accuracy (BORA), more specifically: cosmopolitan individuals will have higher BORA scores as compared to non-cosmopolitan individuals and vice versa.

H2: The relationship between cosmopolitanism (COS) and brand origin recognition accuracy (BORA) is moderated by need for cognition (NFC).

Exploratory study:

H3: The Level of confidence (LOC) in the origin of a brand affects Brand Attitude (BA), regardless of correctness: The more confident in the origin of a brand an individual, the higher the brand attitude and vice versa.

H4: The type of industry of the brand influences brand origin recognition accuracy (BORA): Industries such as automobiles, electronics and apparel will lead to higher BORA as compared to other brands.

IV. METHODOLOGY

A. MEASURES AND DESIGN OF THE STUDY

Measures: We were able to work only with existing and validated scales to measure cosmopolitanism and need for cognition. As for brand origin recognition accuracy, we followed the procedures applied by Samiee *et al.* (2005).

Cosmopolitanism (COS): We decided to use Cleveland and Laroche's (2007) 7-item scale for cosmopolitanism. Similarly to their study on cosmopolitanism involving consumer ethnocentrism and materialism (Cleveland and Laroche, 2009), we judged that the items related to food were unnecessary in our current study.

Need for cognition (NFC): The 18-item abbreviated form (Cacioppo et al., 1984) of the original NFC 34 items scale (Cacioppo and Petty, 1984) was found to cause issues pertaining to the reliability of responses and unidimensionality of the measure (Stark *et al.*, 1991; Hevey *et al.*, 2012). Furthermore, scales with both positive and negative items were found to be less reliable (Benson and Hocaevar, 1985; Schriesheim and Hill, 1981). For these reasons, a revised version, using only positive-worded items of the short form need for cognition scale was used and deemed more appropriate as well as more efficient for our research. Additionally, since we are measuring 5 concepts in total, cutting down on the NFC scale would help decrease fatigue for participants.

Brand origin recognition accuracy (BORA): We followed Samiee *et al.* (2005) process for assessing BORA and selected 30 global brand names out of an original pool of 60 global brands. The majority of the brands in the original pool were selected from the Interbrand® list or from Forbes®' list of the World's most valuable brands. This way, we made sure all the brands were well known and consequent in size (in terms of brand value and brand revenues). Participants were asked the following question: "What is the country of origin of the brand?". Each brand name was followed by its logo, which made identification easier for participants. We also made sure participants could not infer the country of origin using the logo, therefore, none of the logos displays the colours of the country of origin flag or any specific clue that would give away the brand origin.

Level of confidence (LOC): As previously discussed, a single-item measure was used to assess confidence. Participants were asked how confident they were in choosing a country of origin for each of the 30 brands in our sample. Using a 7-item Likert scale, participant answered the following question: "How confident are you in your choosing this country (1-7)?"

Brand attitude (BA): A single-item measure was used to assess brand attitude on a 7item Likert scale. Participants were asked the following question: "How much do you like the brand (1-7)?" Participants also had the choice to choose the option "Not familiar with this brand" in order to control for familiarity.

Design: The design used in this study is a cross-sectional design in which all the variables were measured at one time and all participants were faced with the same questionnaire. The questionnaire has been developed using an online research software (Qualtrics). The questionnaire was comprised of a total of 112 items and took participants about 15 minutes to complete on average. Participants were first asked to answer the BORA questions, which consisted of a list of 30 global brands names along with their logo, which participants had to associate with a country of origin. Participants had to choose the correct country of origin from a scroll-down list of 32 countries, "not listed" and "don't know" were also added to the list. Participants also had to answer questions regarding confidence in choosing a brand origin and brand attitude for each brand. Then, participants were exposed to the 9 questions of the revised NFC short form scale (Cacioppo et al., 1984) and the 7 questions of the COS scale (Cleveland and Laroche, 2007). Lastly, participants were asked to answer questions about their demographics including age, sex, education, and income.

Pretest: A pretest was conducted in order to select a total of 30 brands to be part of our brand origin recognition accuracy investigation. The purpose of the pretest was selection but most importantly, we needed to make sure the brands included in the study were truly perceived to be global and well known. Again, given the number of 60 brands we decided that a single item was deemed appropriate to measure globalness (Bergkvist and Rossiter, 2007; Loo, 2002; Poon *et al.*, 2002). Finally, a total of 14 Master of Science in Administration students at Concordia University completed the pretest online questionnaire using Qualtrics. We proceeded to choose the 30 brands using a single selection criterion: only brands rated at least 4 out of 7 on the Likert-scale could be selected for our final questionnaire.

B. SAMPLE FOR THE STUDY

Research Now, an Online Research company, was hired to recruit and gather data from Canadian citizen participants. A total of 341 participants from the Research Now panels were approached, of which 41 questionnaires were either incomplete or invalid due to non-Canadian citizenship. Every participant was instructed to answer the online questionnaire using the link provided to Qualtrics. Within 1 week of field time, Research Now had gathered 300 usable completed questionnaires. The final sample is composed of 145 male participants and 155 female participants, all of whom are Canadian citizens. In term of age, participants are homogeneously spread starting from age 18 to above 60 (Table 2). In terms of education, the distribution is also fairly homogeneously. However, in terms of income, up to 40% of the participants declared earning between CAD\$30.000 and CAD\$79.000 per year.

| Age | | Education | | Salary | |
|-----------|----|---------------|----|-------------------|-----|
| <20 | 12 | High school | 60 | <\$30,000 | 56 |
| 21-30 | 54 | College | 82 | \$30,000-\$79,000 | 118 |
| 31-40 | 59 | Undergraduate | 93 | >\$80,000 | 94 |
| 41-50 | 62 | Graduate | 60 | No answer | 32 |
| 51-60 | 62 | No answer | 5 | | |
| >60 | 50 | | | | |
| No answer | 1 | | | | |

 Table 2. Sample distribution

V. DISCUSSION

A. ANALYSIS OF THE RESULTS

Scales reliability: Scales used for need for cognition (Cacioppo *et al.*, 1984) and cosmopolitanism (Cleveland *et al.*, 2011), were validated and existing scales. Therefore, in order to test the NFC and the COS scales for reliability, we simply computed Cronbach's alphas for each scale. Although our shortened and revised version of the need for cognition scale consisted of a total of 9 positively-worded items, the scale resulted in a relatively high level of internal consistency as determined by a Cronbach's alpha of 0.902 (Appendix 1); well above the recommended value of 0.7 (DeVillis, 2003; Kline, 2005). As for cosmopolitanism, the scale was composed of 7 items and the scale also appeared to be highly reliable when it comes to internal consistency. Indeed, Cronbach's alpha for COS is 0.963 (Appendix 2). Finally and as mentioned earlier, in order to measure for brand origin recognition accuracy, we followed procedures applied in the literature by Samiee et al. (2005).

Variable classification: Both the COS and the NFC variables were composed of two levels: cosmopolitans and non-cosmopolitans, and high need for cognition individuals and Low need for cognition individuals. We used the median-split method to assign participants to each category. Participants who rated above the median on the COS (148 participants) and the NFC (150 participants) scales were respectively assigned to the cosmopolitans and the high NFC groups. Participants who rated below the median on the COS (152 participants) and the NFC (150 participants) scales were respectively assigned to the non-cosmopolitans and the NFC (150 participants) scales were respectively assigned to the non-cosmopolitans and the low NFC groups. Finally, for analyses purposes, we simply labelled correct answers 1 and incorrect answers 2 for the BORA measure.

Hypothesis 1: We were first interested in determining whether cosmopolitanism (COS) and brand origin recognition accuracy (BORA) were positively related. In order to do so, we conducted an independent sample t-test. The dependent variable BORA was transformed using the square root transformation in order to respect the assumption of no outliers, and only 2

outliers were found afterwards. We later conducted the independent sample t-test with and without the 2 outliers and the results were consistent; therefore we decided to keep the outliers and report the results of the test including the outliers. BORA scores were normally distributed for non-cosmopolitans, with a skewness of -0.269 (SD=0.197) and a kurtosis of 0.461 (SD=0.391), as well as for cosmopolitans, with a skewness of -0.280 (SD=0.199) and a kurtosis of 0.195 (SD=0.396) (Appendix 3). The homogeneity of variance assumption was also respected for BORA scores for non-cosmopolitans and cosmopolitans, as assessed by Levene's test for equality of variances (p=0.534) (Appendix 4).

Finally, the independent t-test revealed that cosmopolitans' mean BORA scores are 0.32 (95%=[0.076;0.573]) higher than non-cosmopolitans' mean BORA scores. Further, there is a statistically significant difference in mean BORA scores between non-cosmopolitans and cosmopolitans, t(298)=-2,578, p=0.010, d=0.02 (Appendix 4).

In addition to the independent t-test, a linear regression was calculated in order to predict BORA scores based on cosmopolitanism. A significant regression equation was found (F(1,298)=, p<0.016), with an R² of 5.827 (Appendix 5).

Therefore we can conclude that Hypothesis 1 is supported: cosmopolitan individuals have higher BORA scores as compared to non-cosmopolitan individuals and cosmopolitanism leads to higher BORA scores. However, the effect size was rather small (d=0.02).

Hypothesis 2: After assessing that there is a relationship between cosmopolitanism (COS) and brand origin recognition accuracy (BORA), we are now interested in knowing whether this relationship is influenced by individuals' need for cognition (NFC) level. We first needed to make sure the assumptions of the two-way ANOVA analysis were not violated; therefore, we proceeded to test for outliers, normality and homogeneity of variance of the errors of the model. As per inspection of boxplots (Appendices 6, 7, 8, 9), we recognized the existence of outliers. Our second step was then to transform the residuals of the dependent variable, BORA similarly to what we did for Hypothesis 1. The residuals were transformed using square root. After transformation, we were left with 3 outliers. The two-way ANOVA was conducted with and

without the 3 outliers and the result of the test were relatively unchanged. Therefore we decided to use the results of the two-way ANOVA including the outliers. We then continued on and tested the residuals for normality. BORA scores were normally distributed for low NFC non-cosmopolitans, with a skewness of -0.177 (SD=0.234) and a kurtosis of 0.296 (SD=0.463), for low NFC cosmopolitans, with a skewness of -0.167 (SD=0.361) and a kurtosis of -0.091 (SD=0.709). BORA scores were also normally distributed for high NFC non-cosmopolitans, with a skewness of -0.313 (SD=0.354) and a kurtosis of 1.384 (standard error=0.695) and for high NFC cosmopolitans, with a skewness of -0.286 (SD=0.236) and a kurtosis of 0.231 (SD=0.467) (Appendix 9). Additionally, there was homogeneity of variances, as assessed by Levene's test for equality of variances, p=0.359 (Appendix 11).

After testing for assumptions, we proceeded with the two-way ANOVA. We first checked for interaction effects (Appendix 12), and there was a statistically significant interaction between NFC and COS for BORA scores, F(1, 296)=4.251, p=0.04, partial $\eta 2=0.014$ (Appendix 13). We then checked for simple main effects for NFC, and there was a statistically significant difference in mean BORA scores between high and low NFC individuals who are not cosmopolitan, F(1,296)=4.593, p=0.03, partial n2=0.015 (Appendix 14). However, there was no statistically significant difference in mean BORA scores between high and low NFC individuals who are cosmopolitan. As for pairwise comparisons for NFC, we were able to establish that for both low and high NFC individuals who are not cosmopolitan, mean BORA scores are 0.413 (95% CI, 0.34 to 0.793) points higher for high NFC individuals than for low NFC individuals, F(1,296)=4.593, p=.03, partial η 2=0.015 (Appendix 15). We then checked for simple main effects and did a pairwise comparison for COS. There is a statistically significant difference in mean BORA scores between cosmopolitans and non-cosmopolitans who are low in NFC, F(1, 296)=8.071, p=0.005, partial $\eta 2=0.027$ (Appendix 16). Finally, for both cosmopolitans and noncosmopolitans who are low in NFC, mean BORA scores are 0.557 (95% CI, 0.171 to 0.943) points higher for cosmopolitans than for non-cosmopolitans, F(1, 296)=8.071, p=0.005, partial η2=0.027 (Appendix 17).

Therefore, we can conclude that Hypothesis 2 is partially supported since the relationship between COS and BORA is affected by NFC, and cosmopolitans who are high in NFC have greater knowledge of brand origins than non-cosmopolitans who are low in NFC.

Hypothesis 3: We were also interested in determining whether level of confidence (LOC) was related to brand attitude (BA) and we believe that the more confident an individual is in choosing a country of origin for a brand, the more he or she will like the brand. In order to test this hypothesis we conducted a Spearman's rank-order correlation test. Both the dependent and independent variable, BA and LOC were transformed using square root in order to respect the assumption of a monotonic relationship of the Spearman's rank-order correlation test.

After transformation of the variables, there is a positive correlation between LOC and BA, $r_s=(298)=0.334$, p<0.0005 (Appendix 18).

In addition to the Spearman's rank-order correlation test, a linear regression was calculated in order to predict brand attitude based on level of confidence. A significant regression equation was found (F(1,8998)=, p<0.000), with an R² of 0.041 (Appendix 19).

Therefore we can conclude that Hypothesis 3 is supported, there is a correlation between level of confidence and brand attitude and higher level of confidence does lead to higher brand attitude.

Hypothesis 4: For Hypothesis 4, we were interested in knowing whether a brand's industry would influence brand origin recognition accuracy. We hypothesized that industries such as automobiles, electronics or apparel could lead to higher BORA scores. In order to test this last hypothesis, we conducted a chi-square test for association between BORA and industry type (2x4 crosstabulation).

All cell frequencies were greater than five and there was a statistically significant association between BORA and kndustry type, $\chi^2(3)=832.422$, p=0.000 (Appendix 20). And the association between BORA and industry type is moderately strong, $\varphi=0.304$, p=0.000 (Appendix

21). However the chi-square test for association alone does not tell us which cells are statistically different. Therefore we followed Beasley and Schumacker's (1995) as well as Garcia-Perez and Nunez-Anton's procedures for z and p-values, which helped us determine where the significant differences between industry type lie. Additionally, there are 8 cells in total, which means there is a chance we have committed Type 1 error; therefore we next applied corrections to these analyses. We first transformed the adjusted z scores into actual chi-square values and then estimated the *p*-value for each chi-square value. We then compared each *p*-value against the Bonferroni corrected *p*-value of 0.00625 to test for significance. All *p*-values were <0.00625, meaning that the significance is actually happening in all the 8 cells and for all different types of industries. This is especially true for automobiles, electronics and apparel for which *p*-values are 0.000. Similarly, we can look at the adjusted residuals, which are all above ± 1.96 . This reveals that the differences between the number of cases in each cell and the expected number of cases are significant. Finally, if we look at the percentages of correct and incorrect brand origins, we can see that only automobiles BORA scores seems to be higher than BORA scores for brands in the "Other" category (not automobiles, electronics or apparel) with 63.4% of correct answers against 31.3%. Interestingly, apparel has the least number of correct answers with only 16.3% of correct brand origins (Appendix 22).

Therefore we can conclude that Hypothesis 4 is partially supported since there seems to be a relationship between BORA scores and industry type. However our Hypothesis 4 clearly stated that automobiles, electronics and apparel industries would result in greater BORA scores than brands in the "Other" category. And this turned out to be true only for the automobiles industry.

B. INTERPRETATION OF RESULTS

We were first able to determine that a positive relationship between cosmopolitanism and brand origin recognition accuracy does exist, and that individuals that are cosmopolitan have better knowledge of the origin of global brands when compared to individuals that are not cosmopolitan. This difference in mean BORA scores is statistically significant (p=0.01) as

determined by the independent t-test. This result supports our first hypothesis. Indeed, we hypothesized that cosmopolitan individuals are more open-minded when it comes to foreign products and they also consume more foreign products than their non-cosmopolitan counterparts (Cleveland and Laroche, 2012; Rawwas *et al.*, 1996). Therefore, they would confuse brand origin of global products less than non-cosmopolitans.

After determining the relationship between COS and BORA, we assessed the variable need for cognition as a possible moderator of the above relationship. The two-way ANOVA analysis helped us determine that an interaction effect existed between COS and NFC. However NFC seemed to moderate the relationship between COS and BORA only for low NFC individuals. There was no significant change in BORA for high NFC individuals. Given these mixed results, we were able to only partially support our second hypothesis. The absence of a moderating effect between COS and BORA for high NFC individuals is nonetheless interesting. Indeed, there seems to be a threshold or ceiling effect of NFC on the relationship between COS and BORA. Such that high NFC cosmopolitans have a mean BORA score of 10.76 versus 10.48 for high NFC cosmopolitans (Appendix 23). Surprisingly, the mean BORA score of high NFC cosmopolitans (Table 3). One explanation for these results is that individuals low in NFC use peripheral cues to help them assign a country of origin to a brand (Petty and Cacioppo, 1988, 1992).

| Table 3. Mean | brand | origin | recognition | accuracy scores |
|---------------|-------|----------|-------------|-----------------|
| | | <u> </u> | U | 2 |

| | Mean | Std. Dev. | N |
|----------------------|-------|-----------|-----|
| <u>Cosmopolitans</u> | | | |
| High NFC | 10.76 | 6.67 | 105 |
| Low NFC | 11.5 | 6.33 | 43 |
| <u>Non-Cosmopoli</u> | tans | | |
| High NFC | 10.47 | 6.00 | 45 |
| Low NFC | 8.58 | 6.34 | 107 |

As an exploratory study, we looked at the relationship between level of confidence in choosing a country of origin for a brand and brand attitude. Using Spearman's correlation method and a linear regression analysis we were able to determine that the more confident one is about the brand origin, the more he or she likes the brand. Therefore the third hypothesis was supported as well and confirmed Balabanis and Diamantopoulos' (2008) results.

Finally, we tested the fourth hypothesis that stated that different types of industries would result in different BORA scores. Specifically, we hypothesized that the automobile, the electronics and the apparel industry would lead to greater brand origin recognition accuracy than brands under the "Other" category. Using a simple chi-square test, we were able to determine that BORA scores were significantly different across industry type. However we were only able to confirm our hypothesis for the automobile industry, which had significantly more correct brand origin answers than the "Other" category. Interestingly, the electronics and apparel industry both had more incorrect brand origin answers than expected. A possible reason for these unexpected results; given that our sample of 300 participants are Canadians, is that among brands under the electronics category, only 2 brands were North American against 4 Asian brands and 2 European brands (Appendix 24). The same reason may lie behind the poor results for the apparel industry since all apparel brands of our sample of brands are European. Additionally, there were no apparel luxury brands included in sample, and the majority of the brands under the apparel industry category were sportswear apparel, for which, brand origin matters less.

VI. LIMITATIONS, FUTURE RESEARCH AND IMPLICATIONS

A. LIMITATIONS AND FUTURE RESEARCH

Limitations: The first limitation of this study is the actual length of the questionnaire: although we attempted to cut the questionnaire as much as possible, the questionnaire still consisted of 112 questions in total. The length of the questionnaire could have led to participant fatigue and

acquiescence.

The second limitation of this study also lies on the design of the questionnaire. Due to efficiency reasons, and because of the length of the actual questionnaire, we decided to measure brand origin recognition accuracy, level of confidence, and brand attitude all at the same time. However, doing so could have induced artificial results in the relationship between level of confidence and brand attitude. If we were to ask for brand attitude for each of the 30 brands separately of the brand origin recognition accuracy and the level of confidence measure, participants would have to read 30 additional questions, which may have led to fatigue and acquiescence.

Another limitation pertains to the sample of 30 brands chosen for the BORA measure. Although a pretest was conducted to make sure all the brands in the sample were considered to be truly global brands, we realized that 12.9% of the time participants answered "Not familiar with this brand." This may be a reflection of the population who participated in the pretest. Indeed, a total of 14 students of Concordia University's Master of Science in Administration program participated in the pretest and most of them are international students and well as business students. Therefore the issue with this sample is that it may be too different from our actual sample of 300 participants; the 14 participants in the pretest may have greater knowledge of global brands as compared to the Canadian citizens of our sample since they are international students and, most importantly, business majors.

Additionally, one other limitation is that we decided to use all the answers to the BORA measure, even when participants answered that they were not familiar with the brand later on. Indeed some participants preferred to guess the country of origin of a brand instead of answering "Don't know" and later answered "Not familiar with this brand."

Finally, this study shows that people in general have very little knowledge of brand origins, which is actually what Peterson and Jolibert (1995) and Lee and Ganesh (1999) are arguing. Indeed, the mean BORA score for our sample of 300 participants is only 10 out of 30.

Future research: Future research could focus on cosmopolitan consumers and see if they behave the same way as any other consumer. For instance, one interesting avenue for research would be to look at the effects of country of origin: such effects have long been assessed and agreed upon, however one could wonder if those effects would hold true for cosmopolitan consumers. Indeed, cosmopolitans are open-minded individuals when it comes to foreign countries, cultures and consumption; we would thus believe that they are less prejudiced against other countries, which in turn could weaken country of origin effects for this specific target group. Furthermore, future research could look at brand origin recognition accuracy and hedonic versus utilitarian products. This could be very interesting given Melnyk *et al.*'s (2012) findings. They found that utilitarian brands could use a foreign sounding name from a greater equity country, for instance a Chinese brand could sell their products under a French name. However, for hedonic products, customers were less accepting of products sold under foreign sounding name from a greater equity country.

Also, similarly to Aboulnasr (2006), who was interested in country of origin effects and high versus low involvement, we could look at the relationship between BORA and product involvement. It may be that for higher involvement products, information such as country of origin or brand origin is more important in product evaluation, such that brand origin knowledge is stored in customers' memory. If this were true, we could expect BORA scores to be higher for high involvement products as compared to low involvement products.

Finally, we could continue and look further at the relationship between BORA and industry type. Indeed, our study showed us mixed results. There seems to be a relationship between BORA and industry type; however, we hypothesized that industries such as automobile, electronics and apparel would lead to greater BORA scores but this turned out to be true only for brands in the automobile industry. Therefore, future research should concentrate on the differences among more industries and attempt to find the reasons behind these differences in BORA. For instance, the category "Other" was the second category with the highest percentage of correct brand origins assigned and 73% of the brands in the "Other" category were food or beverages brands.

B. PRACTICAL IMPLICATIONS

Cosmopolitanism is a valuable tool for segmentation and companies can benefit from learning about this segment of consumers. They have specific characteristics in terms of consumer behaviour such as consumption of foreign products, for instance, that may set them apart from non-cosmopolitan consumers. Our study reveals that cosmopolitan consumers have better knowledge of brand origin of global brands than non-cosmopolitan consumers. Therefore companies can cater and adapt their advertising campaigns and positioning strategies to the different segment of consumers or even to different areas such as cosmopolitan cities versus less cosmopolitan cities, thus making a better and more economic use of their advertisements. A concrete example would be less waste of important advertising space and copy. For instance, if a brand is from the United States of America but non-cosmopolitans think the brand comes from China, it is an example where the brand origin is mistaken for a lesser equity country. In such an instance, the brand should focus on using its marketing mix to inform the customer about its brand origin, especially in the case where the brand origin is a high equity country. Alternatively, for brands targeting those cosmopolitan segments, companies can use valuable advertising space and money to focus on other aspects of their brand and or product, since brand origin knowledge is greater for cosmopolitans.

The same applies to packaging, although for packaging it is more difficult and more costly to create different packaging for different geographic areas, for instance. But again, for brands targeting cosmopolitan segments, a different packaging can be used, for which, it won't be necessary to include brand origin information.

Additionally, our study revealed that Level of confidence positively affects Brand Attitude regardless of brand origin correctness. Therefore, it is that much more important to make sure the consumers knows the origin of a brand, since attitude towards the brand is negatively affected when consumers are not able to assign a country of origin to the brand. Furthermore, in the case where your brand is believed to be from a low equity country, when in fact, it is from a higher equity country; the brand suffers consequently from that brand origin confusion.

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APPENDICES

Appendix 1. Cronbach's Alpha for the Need for Cognition Scale

| F | Reliability Statistics | |
|------------------|------------------------|------------|
| | Cronbach's Alpha | |
| | Based on | |
| Cronbach's Alpha | Standardized Items | N of Items |
| ,902 | ,903 | 9 |

Appendix 2. Cronbach's Alpha for the cosmopolitan Scale

| F | Reliability Statistics | |
|------------------|------------------------|------------|
| | Cronbach's Alpha | |
| | Based on | |
| Cronbach's Alpha | Standardized Items | N of Items |
| ,963 | ,963 | 7 |

| | | Descriptives | | | |
|-----------|----------|---------------------------------|------------|-----------|------------|
| | COScat | | | Statistic | Std. Error |
| BORA_sqrt | Low-COS | Mean | | 2,8135 | ,09094 |
| | | 95% Confidence Interval for Low | wer Bound | 2,6338 | |
| | | Mean Up | oper Bound | 2,9932 | |
| | | 5% Trimmed Mean | | 2,8385 | |
| | | Median | | 3,0000 | |
| | | Variance | | 1,257 | |
| | | Std. Deviation | | 1,12118 | |
| | | Minimum | | ,00 | |
| | | Maximum | | 5,48 | |
| | | Range | | 5,48 | |
| | | Interquartile Range | | 1,46 | |
| | | Skewness | | -,269 | ,197 |
| | | Kurtosis | | ,461 | ,391 |
| | High-COS | Mean | | 3,1384 | ,08715 |
| | | 95% Confidence Interval for Low | wer Bound | 2,9662 | |
| | | Mean Up | oper Bound | 3,3107 | |
| | | 5% Trimmed Mean | | 3,1588 | |
| | | Median | | 3,1623 | |
| | | Variance | | 1,124 | |
| | | Std. Deviation | | 1,06022 | |
| | | Minimum | | ,00 | |
| | | Maximum | | 5,29 | |
| | | Range | | 5,29 | |
| | | Interquartile Range | | 1,24 | |
| | | Skewness | | -,280 | ,199 |
| | | Kurtosis | | ,195 | ,396 |

Appendix 3. Skewness and Kurtosis values for BORA_sqrt

Appendix 4. Levene's Test for Equality of Variances and Independent Samples Test

| Equality of Variances Sig. ,534 | Levene's Test for E F ,388 | |
|---------------------------------------|----------------------------------|--|
| | | |

Independent Samples Test

Appendix 5. Results of the Linear regression: brand origin recognition accuracy on cosmopolitanism

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|----------------------|-------------------------------|
| 1 | ,138ª | ,019 | ,016 | 6,411 |

a. Predictors: (Constant), COScon

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|-------------------|-----|-------------|-------|-------------------|
| 1 | Regression | 239,482 | 1 | 239,482 | 5,827 | ,016 ^b |
| | Residual | 12247,664 | 298 | 41,100 | | |
| | Total | 12487,147 | 299 | | | |

a. Dependent Variable: BORA

b. Predictors: (Constant), COScon

Coefficients^a

| | | Unstandardize | d Coefficients | Standardized Coefficients | | |
|-------|------------|---------------|----------------|------------------------------|-------|------|
| Model | | В | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 5,986 | 1,725 | | 3,470 | ,001 |
| | COScon | ,107 | ,044 | ,138 | 2,414 | ,016 |

a. Dependent Variable: BORA



Appendix 6. Boxplot of brand origin recognition accuracy for low NFC non-cosmopolitans

BORA

Appendix 7. Boxplot of brand origin recognition accuracy for low NFC cosmopolitans



NFCcat: Low-NFC, COScat: High-COS

BORA

Appendix 8. Boxplot of brand origin recognition accuracy for high NFC non-cosmopolitans



NFCcat: High-NFC, COScat: Low-COS





NFCcat: High-NFC, COScat: High-COS

BORA

Appendix 10. Skewness and Kurtosis values for BORA_sqrt Residuals

| NECast | | | 2000 | | Chatiatia | |
|----------|----------|------------------------|-----------------------------|-------------|-----------|-----------|
| | | Pesidual for BOPA sart | Mean | | | 50. EITOT |
| | L0W-003 | | 95% Confidence Interval for | Lower Bound | ,0000 | ,11255 |
| | | | Mean | Lower Bound | -,2227 | |
| | | | 5% Trimmed Mean | Opper Bound | ,2227 | |
| | | | Median | | ,0143 | |
| | | | | | ,1373 | |
| | | | Variance | | 1,350 | |
| | | | Std. Deviation | | 1,16192 | |
| | | | Minimum | | -2,69 | |
| | | | Maximum | | 2,79 | |
| | | | Range | | 5,48 | |
| | | | Interquartile Range | | 1,46 | |
| | | | Skewness | | -,177 | ,234 |
| | | | Kurtosis | | ,296 | ,463 |
| | High-COS | Residual for BORA_sqrt | Mean | | ,0000 | ,14764 |
| | | | 95% Confidence Interval for | Lower Bound | -,2979 | |
| | | | Mean | Upper Bound | ,2979 | |
| | | | 5% Trimmed Mean | | ,0101 | |
| | | | Median | | ,0686 | |
| | | | Variance | | ,937 | |
| | | | Std. Deviation | | ,96814 | |
| | | | Minimum | | -2,25 | |
| | | | Maximum | | 1,85 | |
| | | | Range | | 4,10 | |
| | | | Interquartile Range | | 1,23 | |
| | | | Skewness | | -,167 | ,361 |
| | | | Kurtosis | | -,091 | ,709 |
| High-NFC | Low-COS | Residual for BORA_sqrt | Mean | | ,0000 | ,14442 |
| | | | 95% Confidence Interval for | Lower Bound | -,2911 | · |
| | | | Mean | Upper Bound | ,2911 | |
| | | | 5% Trimmed Mean | | ,0112 | |
| | | | Median | | -,1045 | |
| | | | Variance | | .939 | |
| | | | Std. Deviation | | .96878 | |
| | | | Minimum | | -3.10 | |
| | | | Maximum | | 2 19 | |
| | | | Range | | 5 29 | |
| | | | Interguartile Range | | 1 29 | |
| | | | Skewness | | - 313 | 354 |
| | | | Kurtosis | | 1 384 | 695 |
| | High-COS | Residual for BORA sort | Mean | | 0000 | 10705 |
| | | | 95% Confidence Interval for | Lower Bound | - 2123 | , |
| | | | Mean | Upper Bound | ,2123 | |
| | | | 5% Trimmed Mean | oppor Dound | ,2120 | |
| | | | Median | | ,0212 | |
| | | | Variance | | ,0007 | |
| | | | Std Deviation | | 1,205 | |
| | | | Minimum | | 3 00 | |
| | | | Maximum | | -3,09 | |
| | | | Range | | 2,20 | |
| | | | Interguartile Pango | | 5,29 | |
| | | | Skowpoop | | 1,29 | |
| | | | Skewness | | -,286 | ,236 |
| | | | NUITOSIS | | ,231 | ,467 |

Descriptives

Appendix 11. Levene's Test of Equality of Variances for BORA_sqrt

| Levene's Test of Equalit | ty of Error Variances |
|--------------------------|-----------------------|
|--------------------------|-----------------------|

| Dependent | Variable [.] | BORA | sart |
|-----------|-----------------------|------|------|

| F | df1 | df2 | Sig. | | | | |
|-------|-----|-----|------|--|--|--|--|
| 1,076 | 3 | 296 | ,359 | | | | |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + NFCcat + COScat + NFCcat * COScat

Appendix 12. BORA_sqrt Profile Plots for interaction effects between COS and NFC



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Appendix 13. Two-way ANOVA interaction effect for NFC and COS

| Dependent Variable: BORA_sqrt | | | | | | | |
|-------------------------------|----------------------------|-----|-------------|----------|------|---------------------|--|
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared | |
| Corrected Model | 14,059 ^a | 3 | 4,686 | 3,976 | ,008 | ,039 | |
| Intercept | 2289,294 | 1 | 2289,294 | 1942,133 | ,000 | ,868 | |
| NFCcat | 1,042 | 1 | 1,042 | ,884 | ,348 | ,003 | |
| COScat | 4,633 | 1 | 4,633 | 3,930 | ,048 | ,013 | |
| NFCcat * COScat | 5,011 | 1 | 5,011 | 4,251 | ,040 | ,014 | |
| Error | 348,911 | 296 | 1,179 | | | | |
| Total | 3016,000 | 300 | | | | | |
| Corrected Total | 362,970 | 299 | | | | | |

Tests of Between-Subjects Effects

a. R Squared = ,039 (Adjusted R Squared = ,029)

Appendix 14. Simple Main Effects for NFC

Univariate Tests

| COScat | | Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|----------|----------|----------------|-----|-------------|-------|------|---------------------|
| Low-COS | Contrast | 5,414 | 1 | 5,414 | 4,593 | ,033 | ,015 |
| | Error | 348,911 | 296 | 1,179 | | | |
| High-COS | Contrast | ,728 | 1 | ,728 | ,617 | ,433 | ,002 |
| | Error | 348,911 | 296 | 1,179 | | | |

Dependent Variable: BORA_sqrt

Each F tests the simple effects of NFCcat within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Appendix 15. Pairwise Comparisons for NFC

Pairwise Comparisons

| Bopondone | | | | | | | |
|-----------|------------|------------|---------------------|------------|-------------------|--------------------|-----------------------------------|
| | | | Mean Difference (I- | | | 95% Confidence Int | erval for Difference ^b |
| COScat | (I) NFCcat | (J) NFCcat | J) | Std. Error | Sig. ^b | Lower Bound | Upper Bound |
| Low-COS | Low-NFC | High-NFC | -,413 | ,193 | ,033 | -,793 | -,034 |
| | High-NFC | Low-NFC | ,413 | ,193 | ,033 | ,034 | ,793 |
| High-COS | Low-NFC | High-NFC | ,154 | ,197 | ,433 | -,232 | ,541 |
| | High-NFC | Low-NFC | -,154 | ,197 | ,433 | -,541 | ,232 |

Based on estimated marginal means

Dependent Variable: BORA sort

*. The mean difference is significant at the

b. Adjustment for multiple comparisons: Bonferroni.

Appendix 16. Simple Main Effects for COS

Univariate Tests

| Dependent Variable: BORA_sqrt | | | | | | | |
|-------------------------------|----------|----------------|-----|-------------|-------|------|---------------------|
| NFCcat | | Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Low-NFC | Contrast | 9,514 | 1 | 9,514 | 8,071 | ,005 | ,027 |
| | Error | 348,911 | 296 | 1,179 | | | |
| High-NFC | Contrast | ,004 | 1 | ,004 | ,003 | ,955 | ,000 |
| | Error | 348,911 | 296 | 1,179 | | | |

Each F tests the simple effects of COScat within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Appendix 17. Pairwise Comparisons for COS

Pairwise Comparisons

Dependent Variable: BORA_sqrt

| | | | Mean Difference (I- | | | 95% Confidence Int | erval for Difference ^b |
|----------|------------|------------|---------------------|------------|-------------------|--------------------|-----------------------------------|
| NFCcat | (I) COScat | (J) COScat | J) | Std. Error | Sig. ^b | Lower Bound | Upper Bound |
| Low-NFC | Low-COS | High-COS | -,557 | ,196 | ,005 | -,943 | -,171 |
| | High-COS | Low-COS | ,557 | ,196 | ,005 | ,171 | ,943 |
| High-NFC | Low-COS | High-COS | ,011 | ,193 | ,955 | -,370 | ,392 |
| | High-COS | Low-COS | -,011 | ,193 | ,955 | -,392 | ,370 |

Based on estimated marginal means

*. The mean difference is significant at the

b. Adjustment for multiple comparisons: Bonferroni.

Appendix 18. Spearman's Rank-Order Correlation for LOC and BA

| | | Correlations | | |
|----------------|----------|-------------------------|----------|---------|
| | | | LoC_Sqrt | Ba_Sqrt |
| Spearman's rho | LoC_Sqrt | Correlation Coefficient | 1,000 | ,334** |
| | | Sig. (2-tailed) | | ,000 |
| | | Ν | 300 | 300 |
| | Ba_Sqrt | Correlation Coefficient | ,334** | 1,000 |
| | | Sig. (2-tailed) | ,000 | |
| | | Ν | 300 | 300 |

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

Appendix 19. Results of the Linear regression: brand attitude on level of confidence

| Model | Summary |
|-------|---------|
| nouci | Summary |

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|----------------------|----------------------------|
| 1 | ,202ª | ,041 | ,041 | 2,1239 |

a. Predictors: (Constant), LOC

Coefficients^a

| | | Unstandardize | d Coefficients | Standardized Coefficients | | |
|-------|------------|---------------|----------------|------------------------------|--------|-------|
| Model | | В | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 4,040 | ,045 | | 90,291 | ,000 |
| | LOC | ,189 | ,010 | ,202 | 19,577 | ,000, |

a. Dependent Variable: Ba

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|-------------------|------|-------------|---------|-------------------|
| 1 | Regression | 1728,815 | 1 | 1728,815 | 383,243 | ,000 ^b |
| | Residual | 40590,160 | 8998 | 4,511 | | |
| | Total | 42318,975 | 8999 | | | |

a. Dependent Variable: Ba

b. Predictors: (Constant), LOC

Appendix 20. Chi-square Test for Association between industry type and BORA

| Chi-Square Tests | | | | | | | |
|------------------------------|-----------------|----|--------|--|--|--|--|
| | Asymp. Sig. (2- | | | | | | |
| | Value | df | sided) | | | | |
| Pearson Chi-Square | 832,422ª | 3 | ,000 | | | | |
| Likelihood Ratio | 815,256 | 3 | ,000 | | | | |
| Linear-by-Linear Association | 287,665 | 1 | ,000 | | | | |
| N of Valid Cases | 9000 | | | | | | |

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 502,67.

Appendix 21. Symmetric Measures for Strength of Association for industry type and BORA

| Symmetric Measures | | | | | |
|--------------------|------------|--------------|------|--|--|
| | Value | Approx. Sig. | | | |
| Nominal by Nominal | Phi | ,304 | ,000 | | |
| | Cramer's V | ,304 | ,000 | | |
| N of Valid Cases | | 9000 | | | |

Appendix 22. Crosstabs for industry type and correct vs. incorrect brand origin

| | | | CC | 00 | | | | |
|----------|-------------|-------------------|---------|-----------|--------|--|--|--|
| | | | Correct | Incorrect | Total | | | |
| Industry | Automobile | Count | 951 | 549 | 1500 | | | |
| | | % within Industry | 63,4% | 36,6% | 100,0% | | | |
| | | Adjusted Residual | 26,9 | -26,9 | | | | |
| | Electronics | Count | 693 | 1707 | 2400 | | | |
| | | % within Industry | 28,9% | 71,1% | 100,0% | | | |
| | | Adjusted Residual | -5,6 | 5,6 | | | | |
| | Apparel | Count | 244 | 1256 | 1500 | | | |
| | | % within Industry | 16,3% | 83,7% | 100,0% | | | |
| | | Adjusted Residual | -15,5 | 15,5 | | | | |
| | Other | Count | 1128 | 2472 | 3600 | | | |
| | | % within Industry | 31,3% | 68,7% | 100,0% | | | |
| | | Adjusted Residual | -3,6 | 3,6 | | | | |
| Total | | Count | 3016 | 5984 | 9000 | | | |
| | | % within Industry | 33,5% | 66,5% | 100,0% | | | |

Industry * COO Crosstabulation

| Brand list | | | | |
|-------------|--------------------------|---|--|--|
| Brand | Brand origin | Industry type (as categorized in analysis) | | |
| 3M | United States of America | Other | | |
| Adidas | Germany | Apparel | | |
| Asus | Taiwan | Electronics | | |
| Bose | United States of America | Electronics | | |
| Budweiser | United States of America | Other | | |
| Danone | France | Other | | |
| Dell | United States of America | Electronics | | |
| H&M | Sweden | Apparel | | |
| Häagen-Dazs | United States of America | Other | | |
| Heineken | Netherlands | Other | | |
| HTC | Taiwan | Electronics | | |
| Ikea | Sweden | Other | | |
| Lego | Denmark | Other | | |
| Lenovo | China | Electronics | | |
| Lexus | Japan | Automobile | | |
| Mazda | Japan | Automobile | | |
| Nespresso | Switzerland | Other | | |
| Nestlé | Switzerland | Other | | |
| Nissan | Japan | Automobile | | |
| Nivea | Germany | Other | | |
| Nokia | Finland | Electronics | | |
| Nutella | Italy | Other | | |
| Philips | Netherlands | Electronics | | |
| Puma | Germany | Apparel | | |
| RedBull | Austria | Other | | |
| Reebok | United Kingdom | Apparel | | |
| Samsung | South Korea | Electronics | | |
| Volkswagen | Germany | Automobile | | |
| Volvo | Sweden | Automobile | | |
| Zara | Spain | Apparel | | |

Appendix 23. List of brands, brand origin and industry type

PARTICIPATION INFORMATION AND CONSENT

You are being invited to participate in this research. This form provides information about what participating entails. Please read it carefully before agreeing or refusing to participate.

A. PURPOSE

The purpose of the research is to investigate how well you know brands.

B. PROCEDURES

If you participate, you will be asked to answer a series of questions including questions to assess brand knowledge. This questionnaire will take you about 15 minutes to complete.

C. CONFIDENTIALITY

The information and answers to the questions gathered are only accessible to the researcher and the faculty supervisor. The information collected is protected and anonymous, therefore cannot be identifiable. To verify that the research is being conducted properly, regulatory authorities might examine the information gathered. By participating, you agree to let these authorities have access to the information.

D. CONDITIONS OF PARTICIPATION

Participation is optional and you can stop at any time. However, once the questionnaire has been completed and submitted, the results will be included in the study.

If you have questions about the scientific or scholarly aspects of this research, please contact the researcher or the faculty supervisor. Or if you have concerns about ethical issues in this research, please contact the Manager of Research Ethics at Concordia University by phone: (514) 848-2424 ext. 7481 or by e-mail: oor.ethics@concordia.ca.

RESEARCHER Alice Sambath, M.Sc. in Administration +1 (514) 573-8051 <u>al samba@jmsb.concordia.ca</u>

FACULTY SUPERVISOR Dr. Michel Laroche, Professor in Marketing +1 (514) 848-2424 ext. 2942 <u>michel.laroche@concordia.ca</u>

PARTICIPANT'S DECLARATION

In order to continue, please indicate whether you agree or disagree to participate in this research:

- **O** I have read and understood the conditions and I agree to participate.
- **O** I have read and understood the conditions and I do not agree to participate.

PART 1 OF 3

Please assign the brands to their country of origin and answer all questions for each brand: For instance, McDonald's is from the United States of America and Toyota is from Japan. Select 7, if you are extremely confident in your choice or if you like the brand very much. Select 1, if you are not confident at all in your choice or if you dislike the brand very much.

| Brands |
|------------|
| Philips |
| Puma |
| Dell |
| Red Bull |
| Reebok |
| Samsung |
| Bose |
| Budweiser |
| 3M |
| Zara |
| Ikea |
| Volkswagen |
| Mazda |
| Nissan |
| H&M |

PART 1 OF 3 – CONTINUED

Please assign the brands to their country of origin and answer all questions for each brand: For instance, McDonald's is from the United States of America and Toyota is from Japan. Select 7, if you are extremely confident in your choice or if you like the brand very much. Select 1, if you are not confident at all in your choice or if you dislike the brand very much.

| Brands |
|-------------|
| Häagen-Dazs |
| Asus |
| Nivea |
| Adidas |
| Danone |
| Volvo |
| Lenovo |
| Lego |
| Lexus |
| НТС |
| Heineken |
| Nespresso |
| Nestlé |
| Nokia |
| Nutella |

PART 2 OF 3

Please indicate to which extent you agree with the following statements (-4 to +4): Select +4, if you agree very strongly with the statement. Select -4, if you disagree very strongly with the statement.

| | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
|---|----|----|----|----|---|----|----|----|----|
| 1. I really enjoy a task that involves coming up with solutions to problems. | О | О | О | 0 | ο | 0 | О | О | 0 |
| 2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. I usually end up deliberating about issues even when they do not affect me personally. | О | О | О | О | 0 | 0 | О | 0 | О |
| 4. The idea of relying on thought to make my way to the top appeals to me. | 0 | 0 | О | 0 | 0 | О | О | О | 0 |
| 5. The notion of thinking abstractly is appealing to me. | О | О | О | О | О | 0 | О | О | 0 |
| 6. I find satisfaction in deliberating hard for long hours. | О | О | О | О | О | 0 | О | 0 | 0 |
| 7. I like to have the responsibility of handling a situation that requires a lot of thinking. | О | О | О | О | 0 | 0 | О | 0 | О |
| 8. I prefer my life to be filled with puzzles that I must solve. | О | О | О | О | О | О | О | О | О |
| 9. I would prefer complex to simple problems. | О | О | О | ο | ο | 0 | О | 0 | 0 |

PART 3 OF 3

Please indicate to which extent you agree with the following statements (1 to 7): *Select 7, if you agree very strongly with the statement. Select 1, if you disagree very strongly with the statement.*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. I am interested in learning more about people who live in other countries. | ο | 0 | 0 | 0 | 0 | 0 | О |
| 2. I like to learn about other ways of life. | O | 0 | 0 | О | O | 0 | О |
| 3. I enjoy being with people from other countries to learn about their unique views and approaches. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. I enjoy exchanging ideas with people from other cultures or countries. | ο | 0 | 0 | 0 | 0 | 0 | О |
| 5. I like to observe people of other cultures, to see what I can learn from them. | ο | 0 | 0 | 0 | 0 | 0 | О |
| 6. I find people from other cultures stimulating. | O | 0 | 0 | О | O | 0 | О |
| 7. Coming into contact with people of other cultures has greatly benefited me. | o | О | 0 | О | О | О | О |

PERSONAL INFORMATION

Please answer all the following questions:

What is your gender?

- O Male
- O Female
- **O** Other

Which age group do you fall under?

- **O** 18-20
- **O** 21-30
- **O** 31-40
- **O** 41-50
- **O** 51-60
- **O** >60
- **O** I prefer not to say.

Which ethnic group do you associate with the most?

What is your education level?

- High School
- O College/Technical/Diploma
- **O** Undergraduate degree
- **O** Graduate degree and above
- **O** I prefer not to say.

What is your annual income level (in CAD\$)?

- **O** < \$30,000
- **O** \$30,000 \$79,000
- **O** > \$80,000
- **O** I prefer not to say.

THANK YOU FOR YOUR PARTICIPATION

This research is part of the requirements for completing my M.Sc. program at Concordia University and your participation is much appreciated.

If you wish to know more about this research and if you have any questions regarding the study, do not hesitate to contact me by e-mail at al_samba@jmsb.concordia.ca or my faculty supervisor, Dr. Michel Laroche at michel.laroche@concordia.ca.

Alice Sambath