Three Essays on the Role of Indulgence vs. Restraint in
Consumer Behavior

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A Thesis

in the Department of
Marketing

Presented in Partial Fulfillment of the Requirements
For the Degree of
Doctor of Philosophy (Business Administration) at
Concordia University
Montreal, Quebec, Canada

August 2020

CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

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Entitled: Three Essays on the Role of Indulgence vs. Restraint in Consumer Behavior

and submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (Business Administration)

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ABSTRACT

Three Essays on the Role of Indulgence vs. Restraint in Consumer Behavior

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The purpose of this thesis was to conceptualize and develop a valid and reliable scale for the sixth dimension of Hofstede's cultural framework (Hofstede 1980; 2001; Hofstede *et al*. 2010), indulgence vs. restraint, at the individual level. It also examined the impact of individual-level indulgence vs. restraint on two areas of consumer behavior, hedonic-utilitarian attitudes and vice-virtue consumption. Despite the importance of indulgence vs. restraint culture influence on consumer behavior and human behaviors, little research has been done to measure this dimension at the individual level. *Essay 1*. Following Churchill's (1979) approach, a first data collection served to reduce an initial pool of 40 items to a final 6-item scale for indulgence vs. restraint at the individual level. A second data collection confirmed the strong reliability of the scale. *Essay 2*. Through an online survey using three different contexts (restaurant re-visited, car or cellphone repurchase) to capture the variance, the results demonstrated the nomological validity of the construct at the individual-level indulgence. The hedonic and utilitarian attitudes mediated the impact of individual-level indulgence on repurchase intentions and WOM intention. The impact of individual-level indulgence on hedonic and utilitarian attitudes was also mediated by positive post-purchase emotions (confidence and delight). *Essay 3*. Using an online survey, we demonstrated that the scale had a significant correlation with constructs associated with indulgence vs. restraint, establishing the criterion validity of the scale. We investigated the influence of individual-level indulgence on vice and virtue consumption behavior in the context of food consumption. The results of binary logistic regression showed that indulgence vs. restraint was a strong predictor of preference between vice and virtue (for all three pairs of snacks used in the study). Compared to low-indulgence people, high-indulgence people were more likely to choose vice over virtue. *Essays 1 to 3* demonstrated the individual-level indulgence scale's convergent validity and the discriminant validity against hyperopia and self-control.

RÉSUMÉ

Trois essais sur le rôle de l'indulgence par rapport à la retenue dans le comportement du consommateur

Le but de cette thèse était de conceptualiser et de développer une échelle valide et fiable pour la sixième dimension du cadre culturel de Hofstede (Hofstede 1980; 2001; Hofstede et al. 2010), indulgence vs retenue au niveau individuel. Nous avons examiné l'impact de l'indulgence au niveau individuel par rapport à la retenue sur deux domaines du comportement du consommateur, les attitudes hédoniques-utilitaires et la consommation vice-vertu. Malgré l'importance de l'influence de la culture d'indulgence par rapport à la culture de retenue sur le comportement des consommateurs et les comportements humains, peu de recherches ont mesuré cette dimension au niveau individuel. Essai 1. Suivant l'approche de Churchill (1979), une première collecte de données a servi à réduire un pool initial de 40 items à une échelle finale de 6 items pour l'indulgence vs la retenue au niveau individuel. Une deuxième collecte de données a confirmé la forte fiabilité de l'échelle. Essai 2. Nous avons collecté des données à l'aide d'une enquête en ligne utilisant trois contextes différents (restaurant revisité, rachat de voiture ou de téléphone portable). Les résultats ont démontré la validité nomologique du construit au niveau individuel de l'indulgence. Les attitudes hédonique et utilitariste ont médié l'impact de l'indulgence sur les intentions de rachat et l'intention du bouche-à-oreille. L'impact de l'indulgence au niveau individuel sur les attitudes hédoniques et utilitaires a également été médié par des émotions positives après l'achat (confiance et plaisir). Essai 3. À l'aide d'une enquête en ligne, nous avons démontré que l'échelle développée avait une corrélation significative avec les concepts associés à l'indulgence par rapport à la retenue, établissant le critère de validité de l'échelle. Dans le contexte de la consommation alimentaire, nous avons étudié l'influence de l'indulgence au niveau individuel sur le comportement de consommation de vice et de vertu. Les résultats de la régression logistique binaire ont démontré que l'indulgence par rapport à la retenue était un prédicteur puissant de la préférence entre le vice et la vertu (pour les trois paires de collations utilisées dans l'étude). Par rapport aux personnes peu indulgentes, les personnes très indulgentes étaient plus susceptibles de choisir le vice plutôt

que la vertu. Les trois Essais ont démontré la validité convergente de l'échelle d'indulgence au niveau individuel, et la validité discriminante contre l'hypermétropie et la maîtrise de soi.

DEDICATION

To my parents, Zahra and Nemat

ACKNOWLEDGEMENTS

The journey of my Ph.D. has been the most challenging but rewarding experience of my life. Completing my Ph.D. and this dissertation could not have been achieved without the support and guidance that I received from several people. I would like to take this opportunity to thank them.

First, I would like to express my deepest gratitude to my mentor and co-supervisor, Dr. Michel Laroche, for his continuous and timely support, patience, and encouragement. I feel very honored to have the chance to work with him. None of this work would have been possible without his remarkable insight, flexibility, and professionalism. Dr. Laroche always believed in me and helped me to believe in myself. I was fortunate to have him as my supervisor.

I would like to extend my sincerest appreciation to my other co-supervisor, Dr. Michèle Paulin. Her kind support and encouragement were what helped me to move forward during tough times. Dr. Paulin was always cheerful and approachable, and helped me with her brilliant comments and suggestions. I cannot thank her enough for her support and guidance.

In addition to my advisors, I would like to thank the other member of my dissertation committee, Dr. Marc Tomiuk, for his insightful comments and support through my doctoral program and dissertation work. I would also like to thank my examination committee members, Dr. Nicolas Papadopoulos, Dr. Harold Boeck, Dr. SunAh Kim, and Dr. Michael Conway, who helped me improve my work with their thoughtful comments and valuable suggestions.

I am also grateful to both the former and present marketing department chairs, Dr. Jooseop Lim and Dr. Darlene Walsh, and the friendly staff of the department of marketing, who made my Ph.D. studies at John Molson School of Business a great experience. In particular, I want to thank Norma Paradis, Maria Dolores Mosquera, and Beverley Benderoff, who willingly went beyond their scope of responsibilities and helped me through different stages of my studies. Finally, I like to thank my amazing friends that made this journey much more pleasant.

Table of Contents

List of tables

List of figures

General introduction

Despite the essential role of culture in human behavior research in general, and particularly in consumer behavior research (Markus and Kitayama 1991; Steenkamp 2001; Triandis 1989; Tse *et al.* 1988), which is mainly investigated by using Hofstede's cultural framework (Hofstede 1980; 2001; Hofstede *et al.* 2010), the role of the sixth and the most recently added dimension of this cultural framework, indulgence vs. restraint, has remained largely unexamined in human behavior studies. Hofstede's cultural values framework is accepted as the most comprehensive and the most widely used framework with the major influence and substantial contributions in behavioral science and provides the theoretical foundation for much cross-cultural research (Beugelsdijk and Welzel 2018; Beugelsdijk *et al.* 2017; Shamkarmahesh *et al.,* 2003; Soares *et al.* 2007).

Particularly, the sixth dimension of this framework, indulgence vs. restraint, is of high importance with high potential for impact in cross-cultural research in different areas of human behavior such as consumer behavior, as the core of indulgence vs. restraint is people's attitude toward happiness, pleasure, and pleasure-seeking, and toward the importance of fun and leisure in life (Hofstede *et al.* 2010; Minkov 2007). According to Hofstede (2011), "Indulgence stands for a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun, while restraint stands for a society that controls gratification of needs and regulates it using strict social norms."

However, despite this importance, relevance, and potential, indulgence vs. restraint has remained neglected in cross-cultural research, while much attention has been placed on the role of the other five dimensions of Hofstede's framework (i.e., individualism/collectivism, long-term orientation, masculinity/femininity, power distance, and uncertainty avoidance). This is mainly due to the lack of conceptualization and an appropriate scale for measuring this dimension at the individual level since indulgence vs. restraint is quite a newly added dimension of this framework. Hofstede acknowledged that this framework's dimensions are useful for assessing cultural values at the national level, and their corresponding scores describe the national averages, which should never be interpreted as representative for individuals. Indeed, applying this framework to the individual level of analysis is an example of ecological fallacy and has faced extensive criticism from scholars regarding the lack of sufficient validity and reliability (Blodgett *et al.* 2008; Brewer and Venaik 2014; McCoy *et al.* 2005; McSweeney 2002; Spector *et al.* 2001).

So far, there have been some attempts for measuring only the first five cultural dimensions of Hofstede's framework (Donthu and Yoo 1998; Dorfman and Howell 1988; Erdem *et al.* 2006; Sharma 2010; Yoo *et al.* 2001; 2011). However, to date, there has been no attempt in the literature to conceptualize and measure indulgence vs. restraint at the individual level, since indulgence vs. restraint is the most recently added dimension to Hofstede's cultural framework. As a result, cross-cultural research efforts have ruled out this dimension and have limited their studies to Hofstede's framework's other five dimensions.

Therefore, the lack of a valid and reliable scale for capturing this cultural dimension at the individual level is an important gap in the behavioral research literature. Particularly, this gap seems even more critical in consumer behavior literature, as indulgence vs. restraint is directly related to allowing vs. suppressing the attitude toward happiness and pleasure in life (Hofstede *et*

al. 2010; Minkov 2007), which greatly influences people's desires and wants and their decision-making process (Bathaee 2014).

The aim of this dissertation is mainly to address this important gap by conceptualizing and developing a valid and reliable scale for measuring indulgence vs. restraint at the individual level. Moreover, it demonstrates the nomological validity of this construct via developing and testing a nomological network, which shows an important implication of individual-level indulgence vs. restraint in consumer behavior regarding its relationship with hedonic and utilitarian attitudes, post-purchase emotions, and repurchase and WOM intentions. Finally, this dissertation seeks to understand the role of individual-level indulgence vs. restraint in the vice and virtue consumption behavior.

Accordingly, this dissertation is comprised of three essays on conceptualization and developing a valid and reliable scale to measure individual-level indulgence, on proving the nomological validity of this construct concerning hedonic and utilitarian attitudes, and on investigating its impact on vice and virtue consumption.

ESSAY 1. The first essay consists of three survey research studies. In this essay, we first elaborate in more detail on the influence of culture and Hofstede's dimensions in consumer behavior research, the importance of indulgence vs. restraint, and the need for a psychometrically sound scale to measure it at the individual level. Then, using Churchill's (1979) method, we start with a thorough literature review to generate a comprehensive pool of items to conceptualize indulgence vs restraint at the individual level. Building on that pool of items, we use three survey studies to purify the items and develop the final scale, which demonstrates excellent reliability and criterion, discriminant, and convergent validity. The scale developed in this dissertation measures individual-level indulgence. High individual-level indulgence means low individual-level restraint and vice versa.

ESSAY 2. In the second essay, we turn our attention to establish the nomological validity of the individual-level indulgence construct, which is developed in the first essay. Following a thorough literature review, we build a comprehensive nomological network, which also demonstrates a crucial implication of this dimension in consumer behavior. In this model, it is hypothesized that the impact of individual-level indulgence on WOM intention and post-purchase intention is mediated through hedonic and utilitarian attitudes. We also investigate the role of individual-level indulgence on post-purchase emotions, and consequently, in the model, it is hypothesized that the impact of individual-level indulgence on hedonic and utilitarian attitudes is mediated through post-purchase positive emotions (i.e., delight and confidence). We test the nomological model through a survey study in the context of car and cell phone purchase and restaurant visits at the post-purchase stage. The results of this study support the hypotheses of the nomological network and therefore establish the nomological validity of the individual-level indulgence, and again prove its reliability. A more thorough explanation of the findings is presented in the results and discussion sections of the second essay. Lastly, detailed theoretical and managerial implications are provided, limitations of the research study are discussed, and several recommendations for future research are pointed out.

ESSAY 3. In essay three, using the individual-level indulgence construct developed in essay one and the findings of essay two, we empirically test the impact of individual-level indulgence on vice and virtue consumption behavior. We test this impact through a survey study

examining the relationship between individual-level indulgence and the consumer's attitude toward
and the consumer's choice between vice and virtue options in the context of snack consumption.

Essay 1: Hofstede's individual-level indulgence dimension: Scale development and validation

Introduction

Culture is one of the main factors influencing human behavior (Markus and Kitayama 1991; Shweder and Bourne 1982; Triandis 1989), and it is widely studied in consumer behavior and marketing (McCort and Malhotra 1993; McCracken 1986; Shaw and Clarke 1998; Steenkamp 2001). To study the impact of culture on behavior, the first step is to measure it reliably. So far, there have been several attempts to conceptualize and measure cultural values, both at the national and individual levels (Dorfman and Howell 1988; Hofstede 1980; 2001; Hofstede *et al*. 2010; House *et al*. 2004; Smith *et al*. 1996; Schwartz 1994; 1997). Several studies confirmed that Hofstede's cultural framework (Hofstede 1980; 2001; Hofstede *et al*. 2010) is the most influential, comprehensive, and widely used model in studying the role of culture within various areas of research such as marketing, management, and psychology (Hofstede and McCrae 2004; Leung *et al*. 2005; Soares *et al*. 2007; Sondergaard 1994; Steenkamp 2001).

Over time, Hofstede developed a framework consisting of six dimensions: power distance, individualism/collectivism, uncertainty avoidance, masculinity/femininity, long-term orientation, and indulgence/restraint (Hofstede 1980; 2001; Hofstede *et al*. 2010). This cultural framework has been very useful in studying the impact of culture on almost all areas of research in marketing.

Originally, Hofstede developed his cultural dimensions at the national level. Although these dimensions are very useful for comparing national cultures and investigating various impacts of national culture, several studies have shown that they are not appropriate for studying human behavior at the individual level (Bond 1988; McCoy *et al*. 2005; McSweeney 2002), and are causing unreliable and invalid results (Bearden *et al*. 2006; Blodgett *et al*. 2008; Spector *et al*. 2001). In fact, ascribing the national-level cultural dimensions to individual-level characteristics is a kind of ecological fallacy (Brewer and Venaik 2014). The ecological fallacy occurs when one assumes that statistical relationships at a group-level also hold for the individuals belonging to that group (King *et al*. 2004; Schwartz 1994). In other words, cultural heterogeneity exists among the people of each country due to several reasons such as immigration, global media, international trade and finance, tourism, and technological flows (Cleveland and Laroche 2007). Therefore, there is a strong need for scales to measure Hofstede's cultural dimensions at the individual level. So far, there have been some attempts for measuring only the first five cultural dimensions of Hofstede's framework. However, since indulgence vs. restraint is the most recently added dimension to Hofstede's cultural framework, there has been no attempt in the academic literature to date to conceptualize and measure it at the individual level.

It makes sense to say that of Hofstede's six cultural dimensions, the indulgence vs. restraint dimension, is of high importance and influence in consumer behavior, as the core of the indulgence vs. restraint dimension is people's attitude toward happiness, pleasure, and pleasure-seeking, and toward the importance of fun, leisure, and entertainment in life (Hofstede *et al.* 2010; Minkov 2007), which greatly influences people's desires and wants and their decision-making process (Bathaee 2014). Indulgence vs. restraint also affects both pre-purchase-related concepts, such as trust and evaluation, and post-purchase-related ones, such as satisfaction (Bathaee 2014; Hofstede *et al.* 2010). Moreover, indulgence vs. restraint affects thrift, which is a determinant of consumer

spending behavior (De Mooij 2015). Lastly, indulgent societies are different in their consumption behaviors compared to restrained societies (Bathaee 2014). For example, indulgent societies have a greater tendency for unrestrained consumption such as junk foods, and therefore have more obese people relative to restrained societies (Hofstede *et al.* 2010). Therefore, we expect that indulgence vs. restraint to be a dimension of great importance in consumer behavior, and in other areas of human behavior, with vast implications (e.g., policymaking, theories, and applications).

Despite the importance and relevance of indulgence vs. restraint as a cultural dimension, its impact on consumer behavior and other areas of human behavior has remained largely unexamined. This is mainly because of the lack of an appropriate scale for measuring indulgence vs. restraint at the individual level. In fact, even after Hofstede *et al.* (2010) added indulgence vs. restraint as the newest (sixth) dimension to Hofstede's framework, most of the cross-cultural research in consumer behavior and other areas of human behavior still have not included this dimension in their research and limited their study to the impact of only the first five dimensions. The few researchers who tried to study the impact of indulgence vs. restraint on different areas of consumer behavior such as online customer experience (Shobeiri *et al.* 2018), perception of luxury goods (Beata *et al.* 2016; Le Monkhouse *et al.* 2012), purchase intentions for luxury brands (Bian and Forsythe 2012), green purchasing behavior (Liobikienė *et al.* 2016), and tourist satisfaction (Huang and Crotts 2019) have used national-level scores for studying the impact of this cultural dimension. As mentioned earlier, using national-level scores for studying the impact of culture on human behavior at the individual level is an example of ecological fallacy and results in inaccurate, invalid, and unreliable results. Therefore, there is a strong need for a scale to conceptualize and measure indulgence vs. restraint at the individual level.

Also, there has been a significant amount of research on different aspects of indulgent behavior, without taking into account the role of the decision-maker, or more accurately, the role of indulgence vs. restraint as the individual-level cultural trait of the decision-maker or customer. For example, research on indulgent behaviors has shed light on its different aspects, such as mechanisms to avoid or to justify indulgent behavior like pre-commitment to indulgence (Kivetz and Simonson 2002), considering prior decisions (Mukhopadhyay and Johar 2009), and distorting the memories of past behavior (May and Irmak 2014); consequences of indulgent behavior like emotional responses after indulgent consumption (Ramanathan and Williams 2007); and context or situation like the level at which a consumer construes information (Mehta *et al.* 2014), incidental pride (Wilcox *et al.* 2010), temporal distance (Laran 2009), and reminding of valued social relationships from marketers (Cavanaugh 2014). Few of these researchers took into account some characteristics of the decision-maker, such as individuals' prudence or impulsivity (Ramanathan and Williams 2007), hyperopia (Haws and Poynor 2008), and gender (Lewis *et al.* 2006). However, no research on indulgent behavior has yet considered the role of individuals' indulgence vs. restraint as a cultural trait. We believe that considering the role of individual-level indulgence vs. restraint helps these models be more comprehensive. Therefore, there is a need for an individual-level indulgence scale to help the research on indulgent behavior have a more accurate picture of this phenomenon.

This essay addresses these important gaps in the consumer behavior literature by conceptualizing and developing a valid and reliable scale for measuring indulgence vs. restraint at the individual level. The scale developed in this essay measures individual-level indulgence. High

individual-level indulgence means low individual-level restraint and vice versa, which is the same as how these two concepts are treated at the national-level in Hofstede's framework.

The sixth dimension: indulgence vs. restraint

Based on a thorough analysis of the world value surveys of 2007-2008, Minkov (2007; 2011) identified a new dimension of culture; indulgence vs. restraint. Then, since it was covering a new aspect of culture, Hofstede *et al*. (2010) added it as the sixth dimension to Hofstede's framework. According to this framework, "Indulgence stands for a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun. Restraint stands for a society that controls the gratification of needs and regulates it using strict social norms." (Hofstede 2011). In general, societies with higher scores on indulgence (lower scores on restraint) are associated with more declarations of happiness, perception of higher life control, higher importance of freedom of speech and leisure, and more likelihood to remember positive emotions. Such societies also have higher birthrates, more involvement in sports, higher percentages of obese people, more lenient sexual norms, and lower numbers of police officers per 100,000 inhabitants (Hofstede 2011). On the other hand, societies with lower scores on indulgence (higher scores on restraint) are associated with a perception of helplessness, less importance of freedom of speech, less importance of leisure, less likelihood of remembering positive emotions, lower birthrates, less involvement in sports, fewer obese people, higher numbers of police officers per 100,000 inhabitants (Hofstede 2011). Indulgence is more often higher in countries in South and North America and Western Europe, while restraint is more often higher in Eastern Europe and Asia.

Individual-level scales for Hofstede's cultural framework

Indulgence vs. restraint is a new dimension of culture at the individual level. To our knowledge, no scale has been developed at that level, although some efforts were made for the other five dimensions of Hofstede's framework. In fact, most of these scales were somewhat flawed or incomplete. Erdem *et al*. (2006) developed a reliable and valid individual-level scale for Hofstede's framework, but their scale comprised only three dimensions: collectivism, uncertainty avoidance, and power distance. Dorfman and Howell (1988) used a 22-item scale to measure Hofstede's four cultural dimensions (i.e., all the Hofstede's dimensions except long-term orientation and indulgence). Despite satisfactory reliability and validity, their scale was developed with a worker-orientation focus, not necessarily suitable for general research purposes. Sharma (2010) proposed a valid and reliable 40-items scale for measuring cultural characteristics at the individual level. However, this scale had ten dimensions, not corresponding exactly to Hofstede's framework. Finally, Yoo *et al.* (2011) developed the CVSCALE, i.e., Hofstede's scale at the individual level with good reliability and validity. At the time, Hofstede's framework consisted of five dimensions. The CVSCALE did not include the sixth dimension (i.e., indulgence vs. restraint). Hence, there is no individual-level scale for the sixth dimension, Indulgence vs. restraint. This research intends to complement past research by developing a valid and reliable scale for individual-level indulgence.

Developing and validating the scale

Items generation and testing

To develop a psychometrically sound scale, we first thoroughly reviewed the main literature related to the indulgence concept (e.g., Hofstede *et al*. 2010; Minkov 2007; 2011). At this stage, the goal was to generate enough items (an initial pool of 50 items) to capture all aspects of the indulgence/restraint construct. Then, we presented these initial items to an expert in the field and two Ph.D. candidates in marketing to identify the redundant items and those with ambiguous wording. Based on respondents' answers, ten were removed from the original fifty items (40 items remained). See the pool of items in the Appendix.

Next, we evaluated these 40 items and validated the final scale through three consecutive studies: Study 1: Item purification, Study 2: Reliability test, Study 3: Establishing the criterion validity.

Study 1: Item purification

We collected survey data from a sample of 294 undergraduate students in a major North American business school in return for small course credit. Overall, 271 of the filled questionnaires were valid and useful. The items were evaluated using seven-point Likert scales anchored to 1= "strongly disagree" and 7 = "strongly agree". Using the domain sampling method (Churchill 1979), we took several steps for the item purification: reliability assessment and item-to-total correlation, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA).

First, we tested the reliability of the initial scale via SPSS. The Cronbach's alpha for the initial set of 40 items was 0.854, which is good reliability. Then, we eliminated 28 items with item-to-total correlations below 0.4 (Leong and Austin 2006); hence 12 items remained. Next, through a series of iterative exploratory factor analyses (principal components analysis with Oblimin rotation), we purified the items by dropping those with loadings below 0.50 and cross-loadings above 0.40 (Hair *et al.* 1998). The final EFA resulted in a 6-item factor with an eigenvalue of 2.92. The Kaiser–Meyer Olkin (KMO) value of 0.814 and the significance of Bartlett's test of sphericity (χ^2=434.38, p<0.001) indicate the appropriateness of the EFA for the data. The final list of 6 items and their loadings resulting from the EFA is presented in Table 1.1. To provide further validation for the single-factor scale shown in Table 1.1, a confirmatory factor analysis (CFA) was conducted using Amos 22, followed by an assessment of reliability. The results of the confirmatory factor analyses revealed a good fit for the 6-item scale: $\chi^2(9)$=18.42, p<0.05; χ^2/df=2.05; CFI=0.978, RMSEA=0.062, SRMR=0.037 (Baumgartner and Homburg 1996; Hair *et al.* 2010; Hu and Bentler 1999). The Cronbach's alpha for the scale is 0.782, which shows a good level of reliability for the scale.

Table 1.1: The final 6-item scale for the individual-level indulgence scale and their item-loadings resulting from the final EFA

Items	Item-loadings
1. I seek every chance I can to have fun	0.532
2. Feeling and desires related to merrymaking with friends should be gratified freely	0.565
3. There should not be any limits on individuals' enjoyment	0.793
4. Societies should value relatively free gratification of desires and feelings	0.824
5. Desires, especially concerning sensual pleasure, should not be suppressed	0.695
6. Gratification of desires should not be delayed	0.729

Study 2: Reliability test

Following Churchill (1979), the next step is to examine the reliability of the scale with a new sample. For this purpose, we tested the scale with a new sample of 541 ungraduated students enrolled in a major North American business school. They participated in the study in return for some extra credit. Overall, 489 of the filled questionnaires were valid and useful. The results of the CFA on the new sample shows an acceptable fit for the 6-item scale for individual-level indulgence: CFI= 0.905, RMSEA=0.157, SRMR=0.057. Here the RMSEA exceeds 0.08, which is the suggested cut-off value. However, according to Kenny *et al.* (2015), the RMSEA for models with small degrees of freedom is problematic and potentially misleading, and it is better not to rely on the RMSEA for these models. Therefore, our six-item individual-level indulgence scale shows a satisfactory fit for this sample as well (Baumgartner and Homburg 1996; Hair *et al.* 2010; Hu and Bentler 1999; Kenny *et al.* 2015). The Cronbach's alpha for the scale is 0.840, which indicates good reliability.

Study 3: Establishing the criterion validity

The next step is to establish the criterion validity or concurrent validity of the scale. Criterion validity is the extent to which a measure is empirically associated with relevant criterion variables (Cronbach and Meehl 1955; Nunnally and Bernstein 1994). To evaluate criterion validity for this scale, we searched the literature to find the constructs associated with indulgence vs. restraint. According to Minkov (2007; 2011) and Hofstede *et al.* (2010), life control, happiness, and subjective health are among the constructs that are highly associated with indulgence vs. restraint. Therefore, in a new study, we compensated respondents (n=355) through Amazon Mechanical Turk to respond to a questionnaire measuring life control, happiness, and subjective health in addition to the 6-item scale that we developed for indulgence vs. restraint. Three hundred twenty-six of the filled questionnaires were valid and useful. Using Pearson's correlation coefficient, the indulgence scale correlated significantly with life control, happiness, and subjective health with coefficients of 0.363, 0.298, 0.154, respectively (*p*<0.01). This establishes criterion validity for the scale. The results of the CFA show an excellent fit for the 6-item individual-level indulgence scale: $\chi^2(9)$=15,82, *p*=0.71; χ^2/df=1.76; CFI=0.991; RMSEA=0.048; SRMR=0.022 (Baumgartner and Homburg 1996; Hair *et al.* 2010; Hu and Bentler 1999). The Cronbach's alpha for the scale is 0.864, which indicates good reliability.

Convergent validity

The next step is to test the convergent validity of the individual-level indulgence scale. Campbell and Fiske (1959) argued that convergent validity implied that measures of the same construct correlate more highly with each other than with measures of different constructs. To evaluate the convergent validity of the individual-level indulgence scale, we used three criteria: average variance extracted (AVE), composite reliabilities (CR), and item-loadings. According to Fornell and Larcker (1981), the average variance extracted should be greater than 0.5 to demonstrate satisfactory convergent validity, AVE greater than 0.5 means that the explained variance for the construct is greater than the variance due to the error (Lucas *et al.* 1996). Fornell and Larcker (1981) also showed that composite reliability (CR) should be greater than 0.7 to support convergent validity. Finally, the item-loading greater than 0.5 is indicative of the convergent validity of the scale (Churchill 1979; Hildebrandt 1987; Peterson 2000)**.**

We used all the three datasets of this essay and the dataset collected for the second essay of this thesis to test the convergent validity of the individual-level indulgence scale. A summary of the AVE, CR, and item loadings of the scale for the four datasets is available in Table 1.2. We also combined all four datasets to test the convergent validity of the scale in a larger dataset. This dataset is indicated as sample 5 (Table 1.2).

The composite reliability (CR) exceeds the threshold of 0.7 for all the five datasets (Table 1.2). The item-loadings of all the six items of the scale for all the five samples, except for sample 1, are greater than the suggested cut-off of 0.5. Finally, except for sample 1, the average variance extracted (AVE) exceeds or is slightly below the suggested cut-off of 0.5. Especially for dataset 5, which is the largest one, all the AVE, CR, and item-loadings exceed the cut-off values. Overall these findings are supportive of the convergent validity of the individual-level indulgence construct.

Table 1.2: AVEs, CRs, and item loadings of the individual-level indulgence in the five datasets

	size	AVE	CR	Item number (item loading)
Dataset1	271	0.396	0.786	1(0.412),2(0.426),3(0.791), 4(0.833),5(0.578),6(0.610)
Dataset 2	489	0.485	0.849	1(0.568),2(0.664),3(0.686), 4(0.788),5(0.719),6(0.735)
Dataset 3	326	0.521	0.867	1(0.667),2(0.772),3(0.701), 4(0.757),5(0.714),6(0.713)
Dataset 4 (collected for the second essay)	398	0.509	0.861	1(0.612),2(0.742),3(0.686), 4(0.760),5(0.788),6(0.677)
Dataset5 (combined dataset)	1484	0.538	0.875	1(0.647),2(0.728),3(0.718), 4(0.788),5(0.768),6(0.745)

Discriminant validity

In addition to convergent validity, the next critical step in testing the construct validity is to show that the construct demonstrates discriminant validity. Discriminant validity is the extent to which the measure is novel and not simply a reflection of some other variables (Churchill 1979). We tested the discriminant validity of the individual-level indulgence scale against two constructs: self-control and hyperopia. Hyperopia means involving excessive farsightedness and future-biased preferences (Keinan and Kivetz 2008; Kivetz and Keinan 2006). While our scale is correlated with these two constructs, we expected to see satisfactory evidence of discriminant validity.

In conjunction with the nomological study in the second essay of this thesis, we asked respondents to answer the items of self-control and hyperopia constructs measured by scales developed by Tangney *et al.* (2004) and Haws and Poynor (2008), respectively. Results show correlations between our scale and self-control, and between our scale and hyperopia are 0.377 (p<0.001) and 0.08 (p<0.1), respectively. Therefore, we took the additional step of testing the discriminant validity of our scale against these two constructs. We used two methods to examine the evidence of discriminant validity between individual-level indulgence and self-control and between individual-level indulgence and hyperopia.

First, according to Fornell and Larcker (1981), discriminant validity is achieved when the average variance extracted (AVE) for each construct is greater than the squared correlations between the constructs. Discriminant validity of our scale was supported, as its AVE was 0.509, greater than the squared correlations between our scale and self-control and between our scale and hyperopia, which were 0.142 and 0.006, respectively.

Second, we tested for the discriminant validity of our scale using a series of chi-square difference tests, as suggested by Jöreskog (1971) and Anderson and Gerbing (1988). This method involves sequentially setting the correlations between each pair of constructs equal to 1 and comparing the chi-square of this constrained model to the chi-square value of the baseline model. The differences between the chi-square values for the models are distributed as chi-squares, with degrees of freedom equal to the difference in degrees of freedom for the two models. To achieve discriminant validity, the chi-square statistic for the baseline model must be significantly lower than the chi-square value for the models with fixed correlation levels.

As denoted in Table 1.3, for each case, the chi-square for the unconstrained model was found to be significantly lower (*p*<.001) than that of the constrained model. The individual-level indulgence does not correlate perfectly with self-control and hyperopia, furnishing further evidence of additional discrimination. Therefore, the individual-level indulgence construct demonstrates strong evidence of discriminant validity against self-control and hyperopia.

Table 1.3: Chi-square difference tests of discriminant validity of the individual-level indulgence scale

	Chi-square	df	ΔChi-square	Δdf	*p*-value
Hyperopia/indulgence **Freely correlated**	151.429	53	605.532	1	*P<0.0001*
Hyperopia/indulgence **Correlation constrained to1**	756.961	54			
Self-control/indulgence **Freely correlated**	420.863	151	697.988	1	*P<0.0001*
Self-control/indulgence **Correlation constrained to1**	1118.851	152			

Discussion and conclusion

In this essay, through three survey studies, we conceptualized and developed a valid and reliable measurement scale for the sixth dimension of Hofstede's framework, indulgence vs. restraint, at the individual level.

In study 1, through a survey of 271 undergraduate students, we purified the initial pool of 40 items derived from the three main resource books for indulgence vs. restraint in the literature. Using reliability assessment, item-to-total correlation, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA), items were purified to the final 6-item scale (Table 1.1). At this stage, the scale fitted very well with the data and had good reliability. In study 2, through a survey of 489 undergraduate students, the scale again showed good reliability and fitted well with the data. In study 3, through a survey of 326 respondents, our scale showed a significant correlation with constructs associated with indulgence vs. restraint, establishing the criterion validity of the scale. Moreover, the results of studies 1 to 3 demonstrate the individual-level indulgence scale's discriminant validity against hyperopia and self-control and establish its convergent validity.

In all the three studies, the individual-level indulgence scale showed good reliability, and the confirmatory factor analysis proved its good fit with the four datasets. Finally, it is worth to mention that the scale developed in this Essay 1 aimed to measure individual-level indulgence. High individual-level indulgence means low individual-level restraint and vice versa.

Theoretical implications

The scale developed in this essay helps researchers measure indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, at the individual level, and to study the impact of this individual-level cultural dimension on different areas of human behavior such as marketing, management, and psychology. Measuring culture at the individual level is more accurate and valid than using national-level scores; it helps avoid ecological fallacy, and it is also in line with the individual-level psychological approach. Many studies have reported and emphasized the possible

direct effects of individual-level cultural variables across different areas of research in human behavior. However, due to the lack of a scale for measuring indulgence vs. restraint at the individual level, most of the cross-cultural research has ruled out this dimension and has limited their studies to only the first five dimensions of Hofstede's cultural framework. Besides, although the notion of indulgence and indulgent behavior is not new to the marketing literature, the literature has yet to clarify and include the distinct and important role of individual-level indulgence vs. restraint, as a cultural trait, on different aspects of indulgent behavior. Therefore, this essay fills these gaps and contributes by providing researchers with a valid and reliable scale to measure individual-level indulgence vs. restraint.

Managerial implications

From a managerial viewpoint, the scale introduced in this essay would allow firms and businesses to have a better understanding of the structure of their marketplace. Combined with other individual-level cultural dimensions, individual-level indulgence vs. restraint, which is of high importance in consumer behavior, helps business practitioners understand a wider range of cultural variations in the market. Marketers can benefit from using the individual-level scale developed in this essay, together with the other individual-level cultural scales, instead of using Hofstede's national-level scores, to get a more accurate estimate of the cultural heterogeneity, which exists more or less in each market, to better monitor and manage the composition of their customer base.

Specifically, using our scale to measure individual-level indulgence vs. restraint, as another (the sixth) individual-level cultural trait, helps marketing managers segment their markets more effectively. This becomes even more important for the firms operating in multi-cultural countries such as Canada, India, the USA, or those operating internationally. Accordingly, the insights gained from the conceptualization and measurement of the individual-level indulgence vs. restraint helps marketers benefit in other focal areas of application such as targeting and positioning. A better estimate of indulgence vs. restraint distribution provides companies with a more specific segmentation process towards specific products and services. Measuring the individual-level indulgence vs. restraint of the customers also helps managers better position their products in their specific markets. As mentioned, indulgence vs. restraint is an important predictor of consumer behavior to improve positioning strategies and assess customers' perceptions. A better understanding of cultural heterogeneity provides the means to enhance communication strategies
. It also adds value to reward programs tailoring offerings to specific customers as opposed to aggregate information.

Limitations and future research

The indulgence vs. restraint individual scale development provides an important tool to study the culture's role in human behavior. It also introduces other potential studies in the area of cross-cultural research.

There are limitations to this study, the sample is mostly North American, and respondents' diversity and heterogeneity was limited. It is strongly suggested to validate the scale by testing it in samples from different countries and with respondents having cultural orientations.

Future research should examine the individual-level scale within comprehensive models in marketing, psychology, public policy to prove its predictive and nomological validity. The

interactive effect of individual-level indulgence with the other cultural dimensions could be a fruitful avenue helping researchers understand a wider range of individuals' cultural variations.

The interplay between the national culture of the country of origin and the individual-level indulgence vs. restraint also provides a worthwhile avenue for future research. Finally, by conducting comparative longitudinal studies, researchers could also investigate how the distribution of this cultural dimension changes in subpopulations over time.

Essay 2: Impact of individual-level indulgence on hedonic and utilitarian attitudes, and purchase intentions

Introduction

In the second essay of this thesis, to establish nomological validity of the individual-level indulgence scale developed in the first essay, we develop and test the nomological network, which generally examines the impact of individual-level indulgence on the utilitarian and hedonic attitudes and the subsequent outcome variables such as repurchase intention and WOM.

One important aspect of construct validity is to establish the nomological validity of the construct. "Nomological validity refers to the degree to which predictions in a formal theoretical network containing a construct of interest are confirmed" (Bagozzi 1981). In other words, nomological validity is the extent to which the construct of interest behaves as it should with other constructs that are hypothesized to be related to that concept (Campbell 1960). The theoretical framework network, which comprises the construct of interest, the related constructs, and the interrelationships among them, is called the nomological network. Therefore, to assess the nomological validity of the construct of interest, the nomological network has to be developed and tested (Cronbach and Meehl 1955).

In this essay, to demonstrate the nomological validity of the individual-level indulgence construct, following a thorough literature review, we developed a nomological network and tested it in the context of restaurant revisit and car or cellphone repurchase. Here, the nomological network is a conceptual model that shows that the impact of individual-level indulgence on WOM and repurchase intention is mediated through hedonic and utilitarian attitudes, which the impact of individual-level indulgence on them (hedonic and utilitarian attitudes) is mediated through post-purchase satisfaction emotions. Aside from establishing nomological validity of our scale, the results of this essay have an important implication of individual-level indulgence in consumer behavior, with a significant contribution to the field of the role of culture in consumer behavior and the field of utilitarian and hedonic values and attitudes, and consumer decision making.

Indulgence and hedonic and utilitarian attitudes

As mentioned, the sixth dimension of Hofstede's framework, indulgence represents a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun, while restraint represents a society that suppresses or control gratification of needs and regulates it using strict social norms (Hofstede *et al*. 2010). More (less) indulgent societies are associated with higher (less) importance of leisure, more (less) declarations of happiness, higher (lower) importance of freedom of speech and leisure, more (less) likelihood to remember positive emotions, higher (lower) percentages of obese people, and more (less) lenient sexual norms (Hofstede 2011). In short, indulgence emphasizes the value of pleasure and having fun, while restraint imposes the control of desire for enjoyment and leisure. In other words, the importance of pleasure-seeking versus control of desire for fun is the key distinction in the definition of indulgence vs. restraint.

Similarly, in philosophy, utilitarianism is an ethical theory claiming that the proper action

is the one that promotes utility and leads to happiness (Sidgwick 1981). According to Jeremy Bentham, the founder of utilitarianism, utility, which is the consequence of good action, is the sum of all pleasures that result from an action, minus the suffering resulting from the action (Brink 1992; Sinnott-Armstrong 2003).

Similar to indulgence, which is mainly concentrated on seeking pleasure and joy, given utilitarianism, the focus is on happiness and pleasure. Mill (1969) believed that happiness and pleasure are the only inherent goods and desirable things that a human being should do for his/her own sake (Driver 2009; Mill 1969; Scarre 1996). Therefore, given that the core of both concepts, indulgence and classical utilitarianism, is seeking happiness and joy, we expect that they would be closely related.

This view of utilitarianism presented by the early thinkers, such as Bentham and Mill, endorses "classical" or "hedonistic" forms of utilitarianism (Babin *et al*. 1994), and it is referred to as hedonistic utilitarianism (Brink 1992; Harsanyi 1977; Henson 1971). Thus, classical utilitarianism should be closer to what is known as hedonism rather than to utilitarianism in the consumer behavior literature.

However, even though the classic view of utilitarianism is closer to hedonism than to utilitarianism in the consumer behavior literature, it does not mean that it is totally unrelated to utilitarianism in consumer behavior. Mill (1910) established that some things have utility by being instruments to provide satisfaction and pleasure (Babin et *al*. 1994; Crisp 2006; Mill 1910). Therefore, classical utilitarianism, while being more consistent with hedonism than with utilitarianism, represents both hedonic and utilitarian dimensions of consumer behavior (Babin *et al*. 1994). Similarly, we expect that indulgence, which has a lot in common with classical utilitarianism, would be correlated with both utilitarianism and hedonism in consumer behavior, and since hedonism in consumer behavior is more representative of classical utilitarianism, the correlation between indulgence and hedonism in consumer behavior should be stronger than the correlation between indulgence and utilitarianism in consumer behavior.

Similarly, consumer values are classified as hedonic or utilitarian (Babin *et al.* 1994; Bridges and Florsheim 2008). Hedonic and utilitarian values result from the consumption of hedonic and utilitarian benefits, respectively (Chitturi *et al.* 2008; Holbrook 1999). Babin *et al.* (1994) described utilitarian values as task-oriented, non-emotional and rational, associated with the conscious following of a planned outcome compared with hedonic values, more subjective, multisensory, personal, associated with more fun and playfulness, and related to the hedonic benefits.

Not surprisingly, similar to the relationship between classical utilitarianism and hedonism and utilitarianism in consumer behavior, we expect that both hedonic and utilitarian values in consumer behavior are representative of classical utilitarianism, and therefore are closely related to indulgence. We expect that while both hedonic and utilitarian values would be related to classical utilitarianism and indulgence, this relationship would be stronger for hedonic values than for utilitarian values. As research establishes that pleasure and arousal correlate significantly and positively with both hedonic and utilitarian values, the magnitude of this correlation between pleasure and utilitarian values is substantially less than that between pleasure and hedonic values (Babin *et al*. 1994).

Value is an important antecedent of attitudes (Maio and Olson 1995). It affects behavior both directly and indirectly through attitudes (Carman 1978; Homer and Kahle 1988). In other words, attitude mediates the relationship between products' value, both hedonic and utilitarian, and behavior such as purchase intentions (Baker *et al*. 2002). In the consumer behavior literature, attitudes are defined as learned enduring consumers' general summative evaluations explaining feelings and general conceptions of a product, which generally could be favorable, unfavorable, or neutral (Ajzen 2001; Bolton and Drew 1991; Ekinci *et al*. 2008; Gresham *et al*. 1984; Kraus 1995). Attitudes guide action tendencies, behavioral tendencies, and decision making (Eagly and Chaiken 1993; Oliver 1980; 1981; Roest and Pieters 1997). According to the theory of planned behavior, attitudes are the most reliable antecedents of behavioral intentions, such as repurchase intentions and WOM (Ajzen 1991; Fulton *et al*. 1996; Homer and Kahle 1988**)**.

Similar to values, consumer behavior research has indicated that attitudes in consumer behavior are inherently bidimensional and consist of two factors: utilitarian and hedonic (Batra and Ahtola 1991). Hedonic attitudes mostly load on items such as pleasant-unpleasant and nice-awful, while utilitarian attitudes mainly load on items such as useful-useless, beneficial-harmful (Batra and Ahtola 1991; Voss *et al.* 2003). The hedonic component is associated with fun and sensory attributes and the resulted gratification, while the utilitarian component is associated with functional attributes such as benefits and performances (Dick and Basu 1994).

Attitudes are a product of a variety of factors (Homer and Kahle1988). Some of the main antecedents of attitudes are individuals' underlying value structures and beliefs (Eagly and Chaiken 1993; Fishbein and Ajzen 1975; Olsen 2002), such as cultural values and characteristics (Henry 1976; Homer and Kahle 1988). Katz (1960) shows that the value-expressive function of attitudes expresses one's central values and self-concept.

Cultural values affect the individual's value structures and beliefs. More specifically, since indulgence and classical utilitarianism, which is in line with hedonism and utilitarianism in consumer behavior, are closely related, we propose that individual-level indulgence influences consumer's evaluations of hedonic and utilitarian values of products, given that these values are correlated with pleasure. Moreover, since this correlation is higher for hedonic values than for utilitarian values, we expect that the influence of individual-level indulgence on hedonic values would be stronger than that on utilitarian values.

Consequently, we expect that individual-level indulgence would have the same positive effect on consumer's hedonic and utilitarian attitudes. In conclusion, people with higher individual-level indulgence scores, who are more pleasure-seeking, should have higher hedonic and utilitarian attitudes resulting from consumption than people with lower individual-level indulgence scores. We expect that the effect of individual-level indulgence on attitudes would be higher for hedonic attitudes than for utilitarian attitudes. Furthermore, given that utilitarian and hedonic perceived values and attitudes are among the main antecedents of repurchase intentions and word-of-mouth (Ajzen and Fishbein 1977; De Matos and Rossi 2008; Ha *et al*. 2010; Oliver and Bearden 1985; Suh and Youjae 2006), we assume that hedonic and utilitarian attitudes mediate the relationships between individual-level indulgence and repurchase intentions and word-of-mouth, and these mediation relationships would be stronger for hedonic attitudes than for utilitarian attitudes.

Therefore, we propose the following hypotheses:

H1: Hedonic attitudes mediate the relationship between individual-level indulgence and repurchase intentions.

H2: Utilitarian attitudes mediate the relationship between individual-level indulgence and repurchase intentions.

H3: The mediating effect between individual-level indulgence and repurchase intentions is stronger for hedonic attitudes than utilitarian attitudes.

H4: Hedonic attitudes mediate the relationship between individual-level indulgence and WOM intentions.

H5: Utilitarian attitudes mediate the relationship between individual-level indulgence and WOM intentions.

H6: The mediating effect between individual-level indulgence and repurchase intentions is stronger for hedonic attitudes than utilitarian attitudes.

Indulgence and post-purchase emotions

Several studies suggest that direct experiences from product trials or consumption influence consumers' attitudes toward the product through emotional judgments and satisfaction resulting from the consumption experiences (Fazio and Zanna 1978; 1981; Kempf 1999; Smith and Swinyard 1983). Satisfaction is different from consumer attitudes, and it is an essential determinant of attitudes in the post-consumption stage (Bolton and Drew 1991; Ekinci *et al*. 2008; Oliver 1980). In other words, satisfaction is "the overall level of customer pleasure and contentment resulting from experience" (Hellier *et al*. 2003) and the basis for attitudinal adjustments toward engaging in a repeated behavior (Oliver 1997; Oliver and Bearden 1985). Thus, consumer attitudes mediate the relationships between satisfaction or emotional judgments and behavioral intentions (Eagly and Chaiken 1993). Also, satisfaction and emotional judgments mediate the relationships between their antecedents and post-purchase attitudes.

Researchers showed that cultural characteristics are among the important antecedents of consumer post-purchase behavior (Laroche *et al.* 2004; Mattila 1999). For example, cultural characteristics impact service and product evaluations (Crotts and Erdmann 2000; Zhang 1996), willingness to repeat purchase and loyalty (Jin *et al*. 2008), complaint behaviors (Liu and McClure 2001), and satisfaction (Lee and Kacen 2008).

Similarly, emotions in general, and post-purchase emotions in particular, are a function of cultural characteristics, as emotions are known as social and cultural products (Mattila 1999). In general, emotional features are stronger in individualistic societies (Mazaheri *et al.* 2011) and more subdued in high power distance and collectivistic cultures (De Mooij and Hofstede 2011). Regarding emotional expression, individualists are known for overall emotional expressivity and in particular happiness and surprise situations, while collectivists tend to display only positive emotions and control negative emotions (De Mooij and Hofstede 2011, Matsumoto *et al*. 2008). Specifically, cultural characteristics are determinants of consumption-related emotions (Bu *et al*. 2013, Davis *et al.* 2008).

In the same manner, research shows that indulgence characteristics influence emotions and the expression of emotions. There are higher percentages of very happy people in indulgent societies than in restrained societies (Hofstede *et al*. 2010). Compared to highly restrained

societies, people in highly indulgent societies not only experience more positive emotions (Jie and Jing 2015), but also remember more their positive emotions (Putnam and Gartstein 2017), and therefore more often rate and declare themselves very happy (Hofstede 2011). This is not surprising since the core of indulgence is happiness, while the core of restraint is control of gratification (Hofstede *et al.* 2010). We expect that the same effects can be obtained for the post-consumption emotions, meaning that individual-level indulgence impacts positive post-purchase emotions such as delight and confidence. In other words, positive post-purchase emotions mediate the relationship between individual-level indulgence and hedonic and utilitarian attitudes. Hence, the hypotheses are formulated as:

H7: Delight mediates the relationship between individual-level indulgence and hedonic attitudes at the post-purchase stage.

H8: Confidence mediates the relationship between individual-level indulgence and hedonic attitudes at the post-purchase stage.

H9: Delight mediates the relationship between individual-level indulgence and utilitarian attitudes at the post-purchase stage.

H10: Confidence mediates the relationship between individual-level indulgence and utilitarian attitudes at the post-purchase stage.

Nomological validity Study

Data collection and sample

This study employed the survey method for data collection. Data were collected through Mturk from 458 respondents, of which 398 were valid and useful. First, we asked them to think about the restaurant they had recently visited and answer the items corresponding to positive post-purchase emotions (delighted and confident), hedonic and utilitarian attitudes, repurchase intentions, and word-of-mouth intention. Then, we asked them to think about their car, and if they own no car think about their cellphone and answer the items corresponding to positive post-purchase emotions (delighted and confident), hedonic and utilitarian attitudes, repurchase intentions, and word-of-mouth intention. Finally, we measured their individual-level indulgence.

Measurement instruments

Hedonic and utilitarian attitudes were measured by the 10-items scale developed by Voss *et al.* (2003). Positive post-purchase emotions (delighted and confident) were measured each by one item, asking how delighted/confident they were with their experiences (Chitturi *et al.* 2008). Repurchase intentions were measured by the 3-items scale from Kim (2016). Revisit intentions were measured by the 3-items scale from Su *et al.* (2016). Recommendations (WOM intentions) were measured by the 4-items scale from Maxham (2001). Finally, individual-level indulgence was measured by the 6-item scale developed in the first essay of this thesis. See the items in the Appendix.

All the scales exhibited solid internal consistency and reliability in the original works (Chitturi *et al.* 2008; Kim 2016; Maxham 2001; Su *et al.* 2016; Voss *et al.* 2003) and our study. Cronbach's α value for individual-level indulgence was 0.856. Its value for the scales for the restaurant dataset was: hedonic attitude (α= 0.939), utilitarian attitude (α=0.85), WOM (α= 0.968), and repurchase intention (α= 0.843), and for the scales for the car/cellphone dataset were: hedonic attitude (α=0.96), utilitarian attitude (α=0.889), WOM (α=0.943), and repurchase intention (α= 0.87). All scales demonstrated good internal reliability (all Cronbach's α values > 0.8).

Procedure

The hypotheses were tested using four separate parallel mediation models for each of the two restaurants and car/cellphone datasets separately (four models for each dataset, eight models in total) (Please refer to Figures 2.1 and 2.2). The mediation relationships were tested via PROCESS macro for SPSS (Hayes 2012), which calculated 5000 bias-corrected bootstrap samples with 95% confidence intervals to examine the indirect effects, and thereby evaluate the mediation relationships (Hayes 2009; 2012; Preacher and Hayes 2008). The *p*-values for each pathway in the mediation models and confidence intervals for indirect effects significance are reported. Any *p*-values less than 0.05 are set to be significant, and confidence intervals that do not contain zero represent significant mediation relationships.

Figure 2.1: Mediation models for the restaurant dataset

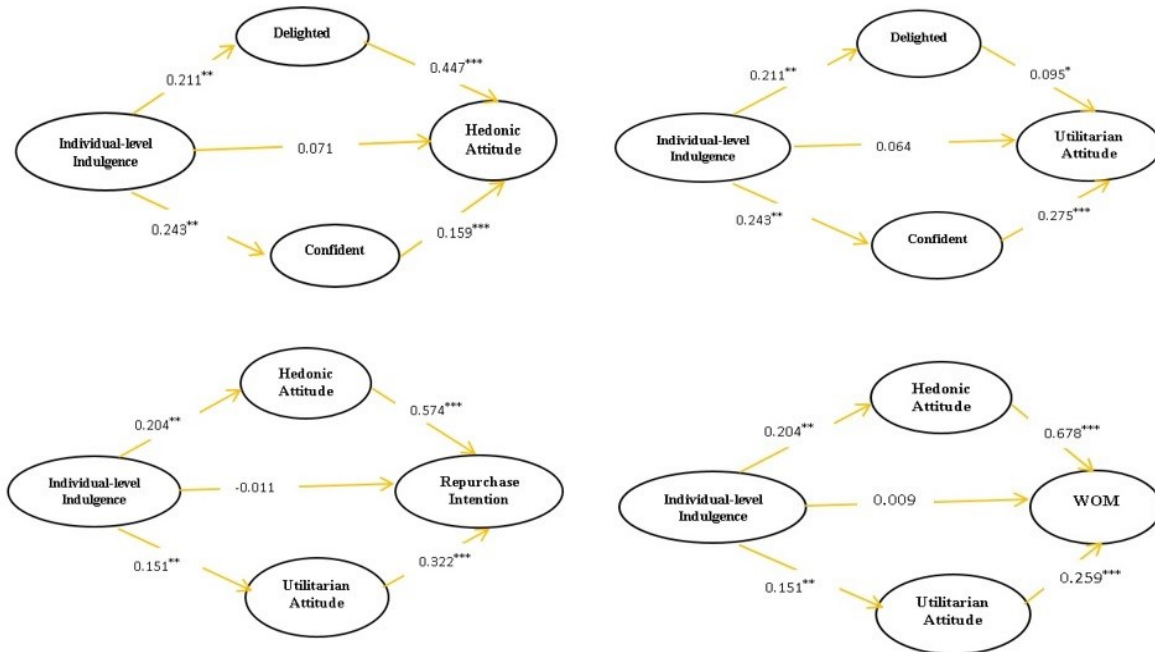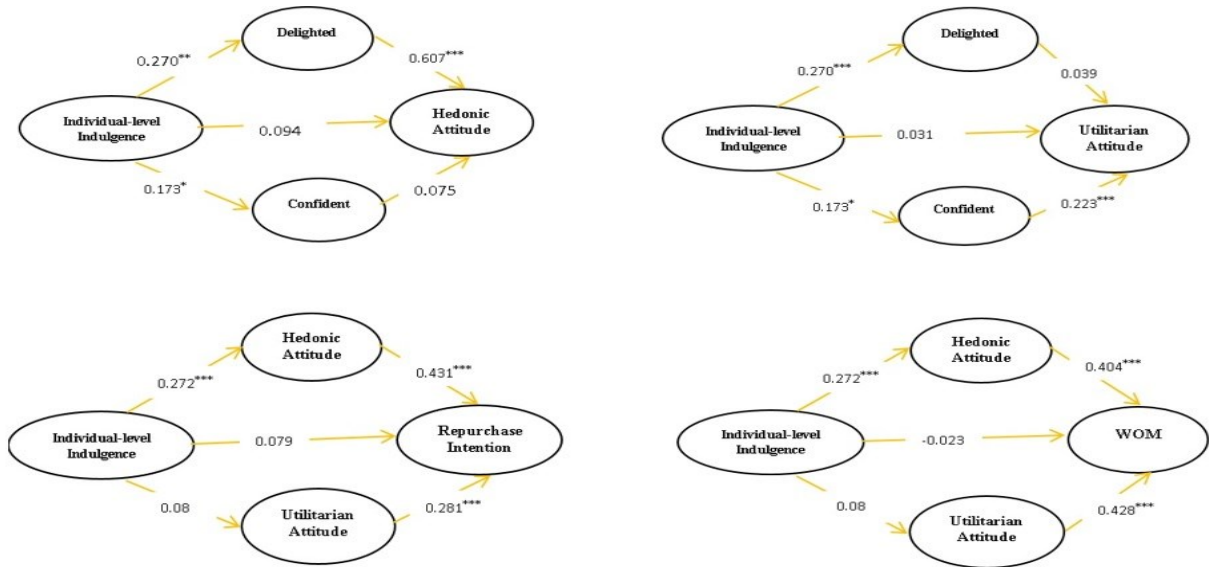Figure 2.2: Mediation models for the car/cellphone dataset

Structural equation modeling (SEM) via AMOS 22.0 was used to test the combined conceptual model for each of the two restaurants and car/cellphone datasets separately. The combined conceptual model, which includes all the mediation relationships, is shown in Figure 2.3.

Figure 2.3: The combined conceptual model for the nomological validity study
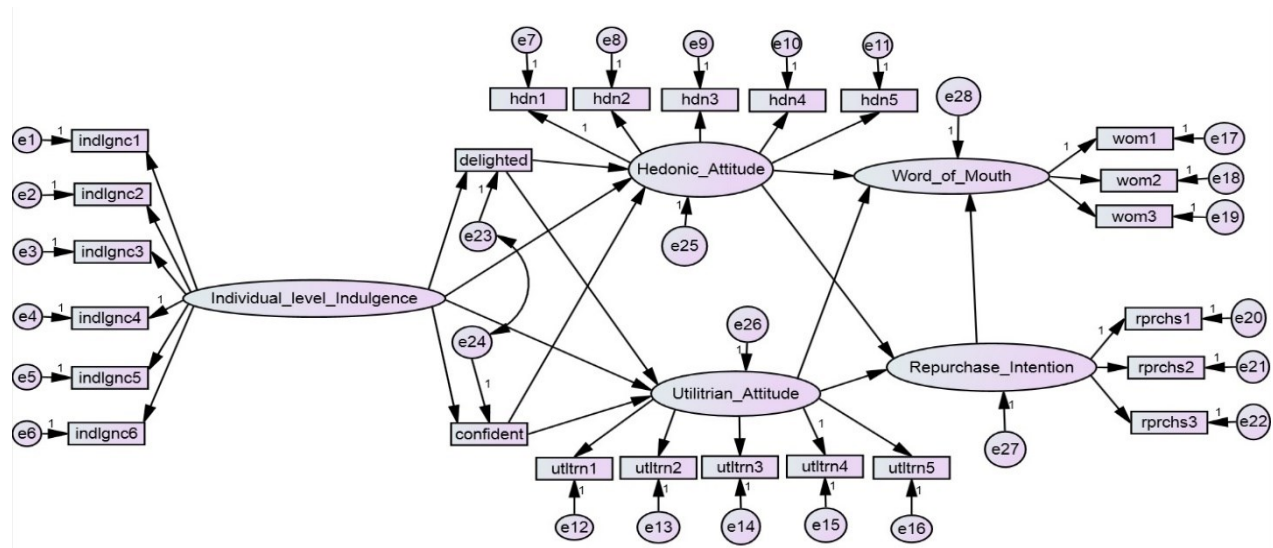
In this model, another path (Repurchase➔WOM) was added, which is already supported in extant literature (Oh 1999). We used Maximum Likelihood to estimate the model parameters and the goodness-of-fit indices.

Analyses and results

The values for each pathway in the mediation models are denoted in Figures 2.1 and 2.2, and confidence intervals (CI) for indirect effects significance are included in Tables 2.1 and 2.2, respectively. Results in Figure 2.1 and Table 2.1 are related to the restaurant dataset, and those in Figure 2.2 and Table 2.2 are related to the car/cellphone dataset.

For the restaurant dataset (Table 2.1), all eight indirect effects (indulgence➔ delighted➔ hedonic_attitudes; indulgence➔confidence➔hedonic_attitudes; indulgence➔delighted➔ utilitarian_attitudes; indulgence➔confidence➔utilitarian_attitudes; indulgence➔ hedonic_attitudes➔repurchase_intentions; indulgence➔utilitarian_attitudes➔ repurchase_intentions; indulgence➔hedonic_attitudes➔WOM.; indulgence➔ utilitarian_attitudes➔ WOM) are significant, thus supporting H1, H2, H4, H5, H7, H8, H9, and H10. Furthermore, since all the direct effects of individual-level indulgence on hedonic attitudes, utilitarian attitudes, repurchase intentions, and WOM are not significant, all the four mediation relationships are full mediations. In other words, delighted and confidence fully mediate the relationship between individual-level indulgence and hedonic attitudes and fully mediate the relationship between individual-level indulgence and utilitarian attitudes. Moreover, hedonic and utilitarian attitudes fully mediate the relationship between individual-level indulgence and repurchase intentions and fully mediate the relationship between individual-level indulgence and WOM. These results are summarized in Table 2.1. Finally, since the magnitude of the indirect effects of indulgence➔ hedonic_attitudes➔ repurchase_intentions is greater than indulgence➔ utilitarian_attitudes➔ repurchase_intentions (0.0832>0.0346), and the magnitude of the indirect effects of indulgence➔ hedonic_attitude➔ WOM is greater than indulgence➔ utilitarian_attitudes➔ WOM (0.0992>0.0281), H3 and H6 are supported. Therefore, all hypotheses (from 1 to 10) are supported for the restaurant dataset.

Table 2.1: Results of the mediation effects for the restaurant dataset

	Completely Standardized Indirect Effect	Boot LLCI	Boot ULCI	Indirect Effect	Direct Effect (From Fig.1)	Mediation Status	Hypothesis Status	
Indulgence→ Hedonic Attitudes→ Repurchase Intentions	0.0832	0.0290	0.1470	Significant	0.011(ns)	Full Mediation	H1(Supported)	H3 (Supported)
Indulgence→ Utilitarian Attitudes→ Repurchase Intentions	0.0346	0.0072	0.0757	Significant	0.011(ns)	Full Mediation	H2(Supported)	
Indulgence→ Hedonic Attitudes → WOM	0.0992	0.0334	0.1682	Significant	0.009(ns)	Full Mediation	H4(Supported)	H6 (Supported)
Indulgence→ Utilitarian Attitudes → WOM	0.0281	0.0062	0.0624	Significant	0.009(ns)	Full Mediation	H5(Supported)	
Indulgence→Delighted → Hedonic Attitudes	0.0745	0.0172	0.1389	Significant	0.071(ns)	Full Mediation	H7(Supported)	
Indulgence→Confidence → Hedonic Attitude	0.0306	0.0078	0.0704	Significant	0.071(ns)	Full Mediation	H8(Supported)	
Indulgence→Delighted → Utilitarian Attitudes	0.0189	0.0009	0.0554	Significant	0.064(ns)	Full Mediation	H9(Supported)	
Indulgence→Confidence → Utilitarian Attitudes	0.0630	0.0222	0.1169	Significant	0.064(ns)	Full Mediation	H10(Supported)	

For the car/cellphone dataset, as shown in Table 2.2, the indirect effects of indulgence→ delighted→ hedonic_attitudes, indulgence → confident → utilitarian_attitudes, indulgence → hedonic_attitudes→ repurchase_intentions, and indulgence→ hedonic_attitudes→ WOM are significant, thus supporting H1, H4, H7, and H10. Furthermore, since all the direct effects of indulgence on hedonic attitudes, utilitarian attitudes, repurchase intentions, and WOM are not significant, all the four mediation relationships are full mediations. In other words, delighted fully mediates the relationships between individual-level indulgence and hedonic attitudes, confidence fully mediates the relationships between individual-level indulgence and utilitarian attitudes, hedonic attitudes fully mediate the relationships between individual-level indulgence and repurchase intentions, and hedonic attitudes fully mediate the relationships between individual-level indulgence and WOM.

As shown in Table 2.2, the other indirect effects for the car/cellphone dataset (indulgence → confident → hedonic_atitude; indulgence → delighted → utilitarian_attitude; indulgence → utilitarian_attitude → repurchase_int.; indulgence → utilitarian_attitude → WOM) is not significant. However, as shown in Table 2.2, for two of them (indulgence → utilitarian_attitude → repurchase_intention; indulgence → utilitarian_attitude → WOM), the lower confidence intervals are very close to zero, -0.0002 and -0.0014 respectively. To further assess them, we tested these two indirect effects via another method using Amos software. Here, for each mediation effect, we fixed the alternative path to zero and measured the mediation effect of the observation. For example, for measuring the indirect effect of utilitarian attitude, we fixed the hedonic path to

zero and measured the mediation effect of utilitarian attitudes on the relationship between individual-level indulgence and repurchase intentions and between individual-level indulgence and WOM. As shown in Table 2.2, in the columns labeled AMOS, *p*-values for these two mediation effects (indulgence ➔ utilitarian_attitude ➔ repurchase_intention; indulgence ➔ utilitarian_attitude ➔ WOM) are both 0.056. Therefore, we can say by increasing the sample size or by having a homogenous sample only consisting of only one of the car or cellphone cases, these two indirect effects may turn out to be significant.

However, the other indirect effects for the car cellphone dataset (indulgence➔ confidence ➔ hedonic_attitudes; indulgence ➔ delighted➔ utilitarian_attitudes; indulgence ➔ utilitarian attitudes ➔ repurchase_intentions; indulgence ➔ utilitarian_attitudes ➔ WOM) are not significant, which means that H2, H5, H8, and H9 are not supported for the car/cellphone dataset.

Finally, given that the indirect effects of indulgence ➔ hedonic_attitudes ➔ repurchase_intentions and indulgence ➔ hedonic attitudes ➔ WOM are significant and the indirect effects of indulgence ➔ utilitarian_attitudes ➔ repurchase intentions and indulgence ➔ utilitarian_attitudes ➔ WOM are not significant, H3 and H6 are supported for the car/cellphone dataset.

Table 2.2: Results of the mediation effects for the car/cellphone dataset

		PROCESS MACRO EXCELL		AMOS						Hypothesis Status	
	Completely Standardized Indirect Effect	Boot LLCI	Boot ULCI	Boot LLCI	Boot LLCI	P-value for indirect effect	Indirect Effect	Direct Effect (From Fig.2)	Mediation Status		
Indulgence➔ Hedonic Attitude➔ Repurchase Intention	0.0891	0.0418	0.1432	0.05	0.134	0.001	Significant	0.079 (ns)	Full Mediation	H1 (Supported)	H3 (Supported)
Indulgence➔ Utilitarian Attitude➔ Repurchase Intention	0.0171	-0.0002	0.0459	0.002	0.040	0.056	Not significant	0.079 (ns)	No Mediation	H2 (Not Supported)	
Indulgence➔ Hedonic Attitude ➔ WOM	0.0895	0.0405	0.1407	0.049	0.137	.001	Significant	-0.023 (ns)	Full Mediation	H4 (Supported)	H6 (Supported)
Indulgence➔ Utilitarian Attitude ➔ WOM	0.0278	-0.0014	0.0636	0.005	0.060	0.056	Not significant	-0.023 (ns)	No Mediation	H5 (Not Supported)	
Indulgence➔ Delighted➔ Hedonic Attitude	0.1173	0.0344	0.0509	0.065	0.182	0.001	Significant	0.094 (ns)	Full Mediation	H7 (Supported)	
Indulgence➔Confident➔ Hedonic Attitude	0.0094	-0.0030	0.0355	-0.002	0.034	0.156	Not significant	0.094 (ns)	No Mediation	H8 (Not Supported)	
Indulgence➔ Delighted➔ Utilitarian Attitude	0.0120	-0.0074	0.0425	-0.006	0.035	0.256	Not significant	0.031 (ns)	No Mediation	H9 (Not Supported)	
Indulgence➔Confident➔ Utilitarian Attitude	0.0444	0.0098	0.0895	0.017	0.084	0.011	Significant	0.031 (ns)	Full Mediation	H10 (Supported)	

The fit for the conceptual model (Figure 2.3) is acceptable for both restaurant and car cellphone datasets (Baumgartner and Homburg 1996; Hair *et al*. 2010; Hu and Bentler 1999). Fit indices for the restaurant dataset are: χ^2/df=3.25, CFI=0.928, NFI=0.899, TLI=0.917, IFI=0.928, RMSEA=0.075, and SRMR= 0.063. For the restaurant dataset, fit indices are: χ^2/df =2.18, CFI=0.961, NFI=0.931, TLI=0.956, IFI=0.962, RMSEA=0.054, and SRMR=0.053.

The results of the CFA for the 6-item individual-level indulgence scale on the dataset of this study with 398 respondents show a good fit: $\chi^2(9)$=25.56, *p*<0.01; χ^2/df=2.84; CFI=0.981; RMSEA=0.066; SRMR=0.028 (Baumgartner and Homburg 1996; Hair *et al*. 2010; Hu and Bentler 1999).

Discussion and conclusion

In this essay, to establish nomological validity of the individual-level indulgence, following a thorough literature review, we developed a nomological network (figure 2.3) focusing on the impact of individual-level indulgence on WOM and repurchase intentions, mediated through hedonic and utilitarian attitudes, which the impact of individual-level indulgence on them (hedonic and utilitarian attitudes) is mediated through post-purchase satisfaction emotions (delight and confidence).

The results of the nomological model show an important implication of this cultural dimension at the post-purchase stage in consumer behavior. More specifically, it shows how hedonic and utilitarian attitudes fully mediates the impact of individual-level indulgence on repurchase intentions and WOM intention in the context of restaurant revisit and car or cellphone repurchase. Furthermore, it demonstrates how the effect of individual-level indulgence on hedonic and utilitarian attitudes is fully mediated by positive post-purchase emotions (confidence and delight).

Hedonic and utilitarian values and attitudes are of great importance in consumer behavior research, as they are the main motivation for purchase and consumption (Arnold and Reynolds 2003; Parasuraman *et al*. 1985; To *et al*. 2007). Values in consumer behavior, which inherently consist of the two factors of utilitarian and hedonic values (Batra and Ahtola 1991), determine the relativistic preferences of consumers (Holbrook 1999). Values affect behavior both directly and indirectly through attitudes (Carman 1978; Homer and Kahle 1988). Similarly, hedonic and utilitarian attitudes guide action and behavior tendencies and decision making in consumer behavior (Eagly and Chaiken 1993; Oliver 1980; 1981; Roest and Pieters 1997), and are the most reliable antecedent of behavioral intention, such as WOM intentions and repurchase intentions (Ajzen 1991; Fulton *et al*.1996; Homer and Kahle 1988).

Despite the importance of hedonic and utilitarian attitudes and values, studying the antecedents of hedonic and utilitarian values and attitudes has received limited attention in the literature. Even those few attempts to study their antecedents have focused mostly on product or store attributes (Olsen and Skallerud 2011), or emotions arising from customers' interactions with those attributes (López and Ruiz 2011; Stoel *et al*. 2004). However, no research has yet examined the role of personality, particularly the role of cultural traits of the decision-maker or customer as antecedents of hedonic and utilitarian attitudes and values. In other words, the difference of the

mechanism of effects of hedonic and utilitarian attitudes and values on consumer choice subject to different cultures or individuals with different cultural traits has remained totally unexplored. In fact, the concept of value is relativistic and dependent on both situational and personal factors (Kleijnen *et al.* 2007), of which personality traits are an underdeveloped area of hedonic and utilitarian attitudes and values in consumer behavior. Finally, Voss *et al.* (2003) emphasized the need to incorporate the hedonic and utilitarian dimensions of attitudes and values in more complicated models. Thus, to address these gaps, in this essay, following an in-depth literature review, we developed and tested the nomological network shown in Figure 2.3, as the first research to study the impact of culture on the mechanism of the effect of hedonic and utilitarian attitudes on consumer repurchase intentions and WOM.

The results of the data analysis show that hedonic and utilitarian attitudes fully mediate the relationship between individual-level indulgence and repurchase intentions, and fully mediate the relationship between individual-level indulgence and WOM. Moreover, since the magnitude of this effect is greater for the hedonic route than for the utilitarian one, the mediating effect is stronger for hedonic attitudes than for utilitarian attitudes. Furthermore, it demonstrates how the impact of individual-level indulgence on hedonic and utilitarian attitudes is fully mediated by positive post-purchase emotions (confidence and delight). Finally, the individual-level indulgence scale showed good reliability, and the confirmatory factor analysis proved its good fit with the dataset.

Theoretical implications

The nomological validity study of the individual-level indulgence construct in this essay provides a conceptual framework with multiple benefits that illustrates the impact of individual-level indulgence on WOM and repurchase intentions, which is mediated through hedonic and utilitarian attitudes. The model shows the mechanism underlying the effect of individual-level indulgence on hedonic and utilitarian attitudes, and subsequently on WOM and repurchase intentions.

The results of data analysis confirm that hedonic and utilitarian attitudes fully mediate the relationship between individual-level indulgence and repurchase intentions, and fully mediate the relationship between individual-level indulgence and WOM. Moreover, since the magnitude of this effect is greater for the hedonic route than for the utilitarian one, the mediating effect is stronger for hedonic attitudes than that for utilitarian attitudes. This means that individuals with higher indulgence have higher repurchase intentions and WOM, due to having higher utilitarian and hedonic attitudes, of which the impact of hedonic attitude is more important than the impact of utilitarian attitude.

These results fundamentally contribute to research on the role of culture in consumer behavior and to research on hedonic and utilitarian values and attitudes and their outcome behaviors such as WOM and repurchase intentions. Prior literature on hedonic and utilitarian attitudes and values tends to focus mostly on the applications and impacts of the values and attitudes on the outcome variables, while their personal antecedents have remained uncovered. Our findings extend existing literature and provide a more comprehensive insight into the mechanism of the effects of hedonic and utilitarian values and attitudes on the subsequent outcomes by taking

into account the role of individual-level indulgence vs. restraint. In other words, individual-level indulgence vs. restraint is the determinant of the hedonic and utilitarian attitudes and their resulting outcomes such as WOM and repurchase intention.

Finally, as shown in Figure 2.3, the model also sheds new light on the relationship between individual-level indulgence, post-purchase emotions, and hedonic and utilitarian attitudes. In this regard, for the restaurant dataset, delight and confidence fully mediate the relationship between individual-level indulgence and hedonic attitudes and fully mediate the relationship between individual-level indulgence and utilitarian attitudes. For the car cellphone dataset, delightfully mediates the relationship between individual-level indulgence and hedonic attitudes, and confidence fully mediates the relationship between individual-level indulgence and utilitarian attitudes.

Managerial implications

The findings of this essay help managers understand the effect of individual-level indulgence vs. restraint on the hedonic and utilitarian values and attitudes of consumers and the subsequent outcome behaviors. The nomological model clarifies the mystery around the influence of culture on the mechanism of the effect of hedonic and utilitarian attitudes on the outcome behaviors such as WOM and repurchase intentions. Previously, it was, wrongly or inaccurately, believed that the differences in the magnitude of hedonic and utilitarian attitudes and values of consumers from different countries or cultures were related to the *level of country development* (Babin *et al*. 1994). However, the nomological model developed and tested in this essay, shows that it is indulgence vs. restraint that motivates individuals' hedonic and utilitarian attitudes and subsequently their outcome behavior such as repurchase intentions and WOM. In other words, more indulgent societies or individuals have higher hedonic and utilitarian attitudes and consequently higher outcome behaviors such as WOM and repurchase intentions, rather than more restraint societies and individuals, and this difference is greater for hedonic attitudes than for utilitarian attitudes.

This insight is essential both in international and in culturally heterogeneous markets for understanding the structure of the customers' hedonic and utilitarian motivations, which vary due to the differences in their individual-level indulgence. More specifically, this knowledge of the composition of hedonic and utilitarian motivation and attitudes of customers can also be used by marketers to allocate their resources and marketing efforts more effectively by targeting appropriate segments in their different markets and to appropriately position their products. Moreover, this insight about the relative importance of hedonic and utilitarian attitudes of individuals comes useful when companies want to offer existing products to new markets, or when they want to offer new products to existing markets since a good match between the combination of hedonic and utilitarian benefits of their products and the individuals' indulgence in the target market is essential. This match is also crucial for repositioning the existing products in existing markets. Failing to understand and act based on such a match can lead to poor targeting and positioning in markets and increase the risk of new product development failure and market extension failure.

Similarly, such a match between the relative importance of hedonic and utilitarian motivation for the individuals in the target market and the composition of the hedonic and

utilitarian benefits of the offered products is essential in other areas of marketing efforts such as reward and loyalty programs and marketing communications. For example, in reward programs, it is important to design a reward with the right combination of hedonic and utilitarian attributes for each segment according to the relative importance of hedonic and utilitarian motivations and attitudes of the individuals in that segment, which is a function of their level of indulgence. In the same manner, communication managers should be aware of the indulgence profile of their target market to differentiate their message by focusing on hedonic or utilitarian benefits of their products, according to the relative importance of hedonic and utilitarian attitudes for the individuals in the target market. Again here, failure to account for the above-mentioned match can significantly reduce the effectiveness of marketers' reward and loyalty programs and communication efforts.

Finally, the impact of individual-level indulgence on hedonic and utilitarian attitudes, explained in our model, might help explain other aspects of consumer behavior related to hedonic attitudes and values such as impulse purchases, luxury consumption, and vice and virtue consumption.

Limitations and future research

Although the conceptual model in this paper provides key insights into the role of culture in human behavior research with several theoretical and managerial implications, it is important to pinpoint the limitations as well as areas for future research. In this essay, for testing the nomological model, to simplify our study design, we limited the context to restaurant revisits and car and cellphone repurchases. Future research could extend the generalizability of the model by testing the impact of individual-level indulgence on the mechanism of the effect of hedonic and utilitarian attitudes on consumer behavior across different product categories at both pre-purchase and post-purchase stages. Also, to test the model, we surveyed only people from Canada, and the only diversity in our samples comes from the diversity of Canadian society. Future research can help improve the generalizability of the model by testing it with samples from a wider variety of country settings.

Also, future research may improve the evidence of validity and extend the application of the impact of individual-level indulgence on hedonic and utilitarian attitudes and values, introduced in our model, by testing this impact on different areas of consumption related to hedonic attitudes and values such as luxury consumption, vice and virtue consumption, and counterfeit purchase consumption. Moreover, future research could provide more useful insights by examining the other dimensions of cultures and other factors such as gender, age, income, and socioeconomic status to see the interactive effects of these factors along with individual-level indulgence. Finally, the model is mostly market-driven; however, the impact of individual-level indulgence on hedonic and utilitarian attitudes and values merits attention in non-market contexts such as education, community wellbeing, and policymaking.

Essay 3: Assessing the impact of individual-level indulgence vs. restraint on the preference between vice and virtue products

Introduction

In the first essay of this thesis, we developed a valid and reliable scale for measuring indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, at the individual level. In the second essay, we established the nomological validity of the individual-level indulgence scale in the network, supporting the impact of individual-level indulgence on hedonic and utilitarian attitudes and subsequently on purchase intention and WOM. In this essay, we aim at establishing another important implication of indulgence in consumer behavior, namely the effect of indulgence on the preference between vice and virtue products.

Since 2010, when Minkov (2007; 2011) and Hofstede *et al*. (2010) introduced Indulgence vs. restraint as the sixth dimension of Hofstede's cultural framework, its impacts on various areas of consumer behavior have remained largely unexplored. As discussed in the first essay, this is mainly due to the lack of an appropriate scale to measure indulgence vs. restraint at the individual level. Using national-level scores to measure cultural characteristics at the individual level is an example of ecological fallacy and leads to invalid results and conclusions (Brewer and Venaik 2014). As a result, indulgence vs. restraint has been largely excluded from research in marketing, and the focus of scholars has been on studying the other five cultural dimensions of Hofstede's framework.

Typically, high-indulgent (low-restraint) cultures put a premium on free gratification of human desires related to enjoying life and having fun, while low-indulgent (high-restraint) cultures place a higher value on controlling and regulating the gratification of these desires (Hofstede 2011). For example, people in high-indulgent (low-restraint) societies such as European, North American, and South American countries are associated with higher importance of leisure, more likelihood of remembering positive emotions, more declarations of happiness, and also higher percentages of obese people, whereas people from low-indulgent (high-restraint) societies such as Eastern European and Asian countries are associated with a higher perception of helplessness, less importance of leisure, less likelihood of remembering positive emotions, and also fewer obese people (Hofstede 2011).

Concerning the definition of vice and virtue in the marketing literature, indulgence vs. restraint seems to be an important related cultural factor to the field of vice and virtue consumption. Vice vs. virtue, which was first introduced by Wertenbroch (1998), distinguishes between the products that while associated with immediate and short-run gratification and pleasures, their consumption is reasonably anticipated with obvious harm and negative payoffs in the long run (vices), and the products that connote only positive payoffs in the long run and consuming them in moderation would result in no harm (virtues) (Mishra and Mishra 2011; Wertenbroch 1998). Due to the harm associated with vice products, choosing and consuming them induce guilt, whereas no guilt is associated with choosing and consuming virtue products. (Mishra and Mishra 2011; Okada 2005). Unhealthy but often tasty foods such as French fries are examples of vices, while less tasty but healthy foods such as salads are examples of virtues. Vices and virtues are also referred to as wants and shoulds, respectively, in the marketing literature (Bazerman *et al.*1998).

Like hedonic vs. utilitarian, vices are more affectively and experientially appealing than virtues (Mishra and Mishra 2011; Okada 2005). However, vice vs. virtue categorization is fundamentally different from the hedonic vs. utilitarian categorization, in the sense that the payoff offered by hedonic and utilitarian goods are both positive, but of different types, and their consumption in moderation is harmless and evokes no guilt. On the other hand, vice vs. virtue categorization is clearly defined in terms of the temporal trade-offs between benefits and harms (Okada 2005), which means that in contrast to harmless virtue products, vice products are always associated with long-term harm and therefore induce guilt (Dhar and Wertenbroch 2000; Okada 2005).

Despite the importance of Wertenbroch's vice vs. virtue categorization in consumer behavior literature and in self-control literature in social psychology (Vosgerau *et al.* 2016), there has been no research on the effect of cultural characteristics on the preference between vice and virtue products. Since the essence of indulgence vs. restraint is the attitude toward enjoying life and having fun (allowing vs. regulation and control), this cultural dimension seems to be a significant predictor of attitude towards vice and virtue products.

Therefore, the objective of this research is to assess the impact of indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, on the preference between vice and virtue products. For simplicity, we limit our study to the context of food consumption. Future research can improve the generalizability of the results of this study by investigating this effect in other domains of consumption. We first provide a literature review on vice and virtue and justification, and then through a survey study and by using the individual-level indulgence measuring scale developed and validated in the first and the second essay, we examine the effect of indulgence vs. restraint on the preference between vice and virtue goods in the context of snack consumption.

Vice vs. virtue and justification

The previous literature has strongly validated the effect of justifiability on consumers' choice and preference (Kivetz and Zheng 2006; Mukhopadhyay and Johar 2009; Okada 2005; Shafir 1993; Simonson 1989; Slovic 1975). This means that to choose and consume a product, people need to be able to justify it, and justifiable choices are easier to choose (Mukhopadhyay and Johar 2009; Okada 2005; Shafir *et al.* 1993), and a higher need makes a choice harder (Okada 2005). This is mainly because choosing and consuming unjustifiable products evoke a sense of guilt (Mukhopadhyay and Johar 2009; Strahilevitz and Myers 1998). In fact, guilt and justifiability are interrelated concepts, and higher guilt associated with a choice leads to a higher need for justification for choosing it (Okada 2005). Likewise, when the sense of guilt associated with choosing and consuming a product decreases, the likelihood of choosing that product increases (Mukhopadhyay and Johar 2009; Strahilevitz and Myers 1998). Hence, to choose a product, people need to put effort into constructing reasons to help them to justify choosing and consuming it (Shafir *et al.* 1993; Kivetz and Simonson 2002a).

Since compared to relatively discretionary products, ordinary and necessary products are associated with lower or no guilt, it is easier to justify them (Okada 2005, Kevitz and Simonson 2002). Similarly, choosing and consuming vices requires higher justification rather than choosing and consuming virtues, which need almost no justification efforts (Mishra and Mishra 2011; Mukhopadhyay and Johar 2009; Okada 2005), as vices are the products that connote negative

payoffs and obvious long-term harm, and therefore are often associated with guilt, compared to virtues which are the products that lead only to long-term benefits and no harm and therefore induce no guilt (Bazerman *et al.* 1998; Mishra and Mishra 2011; Wertenbroch 1998).

Hence, when it comes to choosing between vice and virtue products, people's normal and default choice is a virtue (Vosgerau *et al.* 2016), unless only through justification they can overcome the guilt associated with vice and choose it over virtue. Therefore, justifying efforts to overcome the guilt associated with vice is the key in choosing between vice and virtue.

Research shows that people use different justification mechanisms to mitigate the guilt associated with a guilty choice to promote the likelihood of choosing that choice, such as doing an altruistic act like bundling it with a charitable option (Khan and Dhar 2006; Kivetz and Simonson 2002a; Mukhopadhyay and Johar 2009; Strahilevitz and Myers 1998), search the context for external justification cues like prior restraint (e.g., past consumption of virtues) (licensing) (Khan and Dhar 2006; Mukhopadhyay and Johar 2009), and perception of completion or progress of a long stream of efforts or a goal (Kivetz and Simonson 2002*a*; Wilcox *et al.* 2009).

Individual-level indulgence and vice vs. virtue

Despite the extensive literature on the importance and the mechanisms of justification to reduce the guilt for choosing vice products, the role of cultural characteristics on the individual's ability and tendency to mitigate the guilt, and consequently on choosing vice over virtue has remained unexplored. However, it seems that culture can directly influence the attitude toward the guilt associated with vice, and therefore influence the preference between vice and virtue; for example, regarding American culture, Okada (2005) speculates that tendency for justification for fun may be a reflection of American culture.

Specifically, indulgence vs. restraint*,* the sixth dimension of Hofstede's cultural framework, is strongly related to the attitude towards pleasure and fun, as according to Hofstede (2011), indulgence stands for a society that allows relatively free gratification of human desires related to enjoying life and having fun. Therefore, it should be easier for high-indulgence (low-restraint) people to justify the guilt to get the immediate gratification of vices. In other words, higher indulgent characteristics are associated with lower self-control ability towards fun and pleasure and consequently associated with an easier justification of the guilt associated with vice consumption.

Besides, according to Hofstede (2011), restraint stands for a society that controls the gratification of needs related to fun and pleasure and regulates it using strict social norms. Therefore, concerning gratification and pleasure, high-restraint (low-indulgent) people have more self-control strength and tend to suppress their desire for fun and pleasure. In other words, restraint acts as an antecedent for self-control strength. Research shows that self-control is the main tool to avoid myopic temptations such as choosing and consuming vice products (Kivetz and Simonson 2002b; Kivetz and Zheng 2006; Wertenbroch 1998), and in fact, it is lapses of self-control that would result in choosing vice (Kivetz and Keinan 2006; Mukhopadhyay and Johar 2009).

Therefore, due to high self-control strength, it is more difficult for high-restraint (low-indulgence) people to overcome the guilt and justify choosing and consuming vice products.

In conclusion, therefore, we propose that compared to low-indulgence (high-restraint) individuals, it is easier for high-indulgence (lower-restraint) individuals to justify the guilt associated with vice and purchasing and consuming them. In other words, individual-level indulgence increases the likelihood of justifying guilt and choosing vice.

Research shows that when multiple items are presented together, each item is evaluated concerning others (Okada 2005). Likewise, when vice and virtue are presented together, due to the contrast effect, the direct comparison between vice and virtue highlights the guilt associated with vice and therefore makes justification more critical (Okada 2005, Shafir 1993). Therefore, presenting vice and virtue together can better show the effect of individual-level indulgence on justification, and choosing vice over virtue, which we are seeking. We therefore hypothesize that:

H1: Individual-level indulgence (restraint) increases (decreases) the likelihood of choosing vice over virtue; this means that high-indulgence (low-restraint) individuals are more likely to choose vice over virtue.

Research methodology

Data collection and sample

Our study set out to examine the effect of individual-level indulgence on preference between vice and virtue snack choices. We used the survey method to test the hypotheses in the context of snack consumption. Two hundred Canadian residents completed the study on Mechanical Turk in exchange for a small monetary compensation. However, 23 responses were excluded due to lack of attention and engagement. Thus, a total of 177 useable responses were included in the analysis. The demographic characteristics of the respondents are summarized in Table 3.1.

Table 3.1: Demographic characteristic of the participants

Total= 177						
age	**16-22**	**23-30**	**31-40**	**41-50**	**51-60**	**61-70**
	29	57	56	20	9	6
gender	**Male**			**Female**		
	103			74		
education	**Less than high school**	**High school graduate**	**Some college, no degree**	**Associate's degree**	**Bachelor's degree**	**Master's degree**	**Ph.D.**
	0		11	43	123	0	0
marital status	**Single, never married**		**Married or domestic partnership**		**Separated/ Divorced**		**Widowed**
	84		87		5		1

Procedure

First, participants were shown pictures of three pairs of vice vs. virtue snacks (one pair at a time), and for each pair, they were asked to choose one of them. As shown in Figure 3.1, the pairs are carrots vs. potato chips, French fries vs. salad, and chocolate cake vs. fruit salad. The choices are adopted from Liu *et al.* (2015) and Haws *et al.* (2016). Then, participants answered items measuring individual-level indulgence, and finally, they answered items measuring demographic information.

Figure 3.1: Vice vs. virtue snack choices
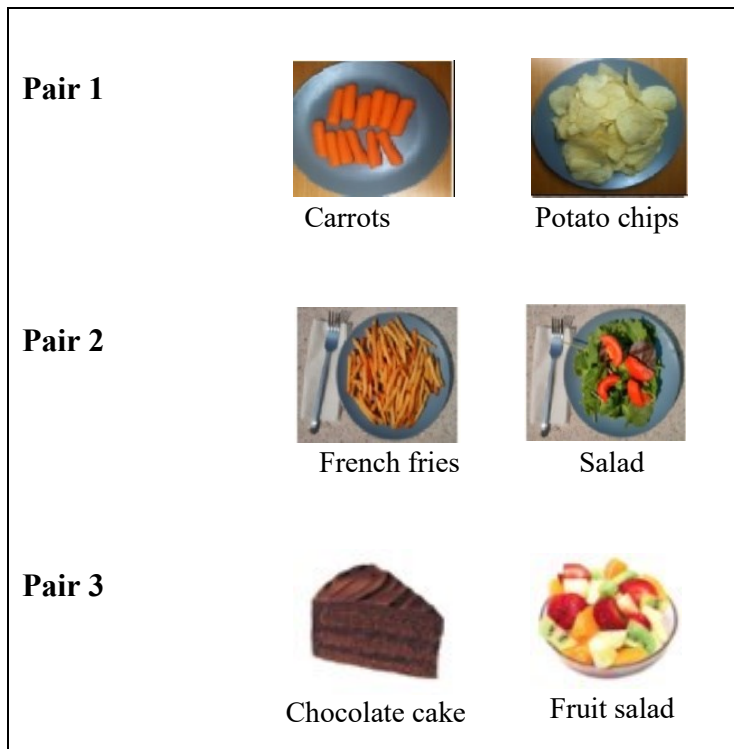
Measures

Individual-level indulgence was measured using the scale developed and validated in the first two essays of this thesis. We used seven-point scale items anchored by 1 (strongly disagree) and 7 (strongly agree) to record Individual-level indulgence. A higher score indicates higher individual-level indulgence (lower individual-level restraint), and a lower score indicates lower individual-level indulgence (higher individual-level restraint). Its Cronbach's α (0.822) suggests good reliability.

Data analysis and results

We performed binary logistic regression analyses in SPSS to assess if high-indulgent (low-restraint) people are more likely to choose vice over virtue. In other words, this analysis assesses the impact of individual-level indulgence on the preference between vice and virtue in the context of snack consumption. Here, individual-level indulgence is the independent variable, and the choice between vice and virtue snack is the binary dependent variable. The results of the analysis for each pair of snacks are as follows:

First pair: carrots vs. potato chips

The dependent variable (snack choice) was coded as 0=carrots and 1=potato chips. Individual-level indulgence was treated as a continuous predictor variable ranging from 1 to 7 (the amount was set equal to the mean of the multi-item Likert scale for measuring individual-level indulgence).

A test of the full model (with individual-level indulgence as the predictor variable) compared with the null model was statistically significant ($\chi2(1)$=4.249, p<0.05). The Hosmer and Lemeshow test is not significant ($\chi2(8)$=3.942, p=0.862), which indicates the goodness of fit of the model. As indicated in Table 3.2, individual-level indulgence has a significant impact on preference between carrots (virtue) and potato chips (vice) (B=0.335, Wald=4.132, df=1, $p < .05$). The odd ratio is equal to 1.398, which means that for one unit increase in individual-level indulgence, the odds of choosing potato chips (vice) over carrots (virtue) increases by 39.8%. In other words, high-indulgence (low-restraint) individuals are more likely to choose potato chips (vice) over carrots (virtue). Therefore, our hypothesis is supported.

Second pair: French fries vs. Salad

The dependent variable (snack choice) was coded as 0=Salad and 1=French fries. Individual-level indulgence was treated as a continuous predictor variable ranging from 1 to 7 (the amount was set equal to the mean of the multi-item Likert scale for measuring individual-level indulgence).

A test of the full model (with individual-level indulgence as the predictor variable) compared with the null model was statistically significant ($\chi2(1)$=5.25, p<0.05). The Hosmer and Lemeshow test is not significant ($\chi2(8)$= 9.450, p=0. 306), which indicates the goodness of fit of the model. As indicated in Table 3.3, individual-level indulgence has a significant impact on preference between French fries (vice) and salad (virtue) (B =0.365, Wald=5.056, df=1, $p < 0.05$). The odd ratio is equal to 1.441, which means that for one unit increase in individual-level indulgence, the odds of choosing French fries (vice) over salad (virtue) increases by 44.1%. In other words, high-indulgence (low-restraint) individuals are more likely to choose French fries (vice) over salad (virtue). Therefore, our hypothesis is supported.

Third pair: chocolate cake vs. fruit salad

The dependent variable (snack choice) was coded as 0=fruit salad and 1=chocolate cake. Individual-level indulgence was treated as a continuous predictor variable ranging from 1 to 7 (the amount was set equal to the mean of the multi-item Likert scale for measuring individual-level indulgence).

A test of the full model (with individual-level indulgence as the predictor variable) compared with the null model was statistically significant ($\chi2(1)=4.044$, $p<0.05$). The Hosmer and Lemeshow test is not significant ($\chi2(8)=6.067$, $p=0.640$), which indicates the goodness of fit of the model. As indicated in Table 3.4, individual-level indulgence has a significant impact on preference between chocolate cake (virtue) and fruit salad (vice) ($B=0.314$, Wald=3.900, df=1, $p<0.05$). The odd ratio is equal to 1.368, which means that for one unit increase in individual-level indulgence, the odds of choosing fruit salad (virtue) over the chocolate cake (vice) decreases by 36.8%. In other words, high-indulgence (low-restraint) individuals are more likely to choose chocolate cake (vice) over fruit salad (virtue). Therefore, our hypothesis is supported.

Table 3.2: Results of binary logistic regression for carrots vs. potato chips

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	**Indulgence**	.335	.165	4.132	1	.042	1.398	1.012	1.931
	Constant	-.874	.780	1.256	1	.262	.417		
a. Variable(s) entered on step 1: Indulgence									

Table 3.3: Results of binary logistic regression for salad vs. French fries

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	**Indulgence**	.365	.162	5.056	1	.025	1.441	1.048	1.981
	Constant	-1.191	.771	2.387	1	.122	.304		
a. Variable(s) entered on step 1: Indulgence									

Table 3.4: Results of binary logistic regression for fruit salad vs. chocolate cake

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	**Indulgence**	.314	.159	3.900	1	.048	1.368	1.002	1.868
	Constant	-1.727	.773	4.999	1	.025	.178		
a. Variable(s) entered on step 1: Indulgence									

Discussion and conclusion

The main objective of this essay was to know how culture influences consumers' preference between vice and virtue. Previous literature has emphasized the importance of vice and virtue in consumer behavior and the role of justification and self-control in shaping the preference between vice and virtue. However, the cultural differences influencing these factors, and subsequently the choice between vice and virtue have remained largely unexamined in the literature. Thus, in this essay, we took the first step in examining the influence of culture on consumer behavior in the area

of vice and virtue products by showing that indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, is a strong predictor of individuals' preference between vice and virtue products. In other words, high-indulgence (low-restraint) people are more likely to choose vice over virtue, compared to low-indulgence (high-restraint) people. We studied this effect by using a survey study in the context of food consumption. Data were gathered from Canadian MTurkers. The binary logistic regression method allowed us to test the impact of the continuous predictor variable (individual-level indulgence) on the binary outcome variable (snack choice)**.** To avoid ecological fallacy, to measure indulgence vs. restraint at the individual level, we used the scale that we had developed and validated in the first and second essays of this thesis. The results for all three pairs of snacks provide strong support for the association between indulgence vs. restraint and the preference between vice and virtue. This means that, compared to low-indulgence people, high-indulgence people are more likely to choose vice over virtue. Also, generally in high-indulgence (low-restraint) cultures, people are more likely to choose vice over virtue. However, when attributing this result to a whole country, it should not be forgotten that, because of the cultural heterogeneity of countries, ascribing cultural characteristics of a country to every individual in that country is an example of ecological fallacy and should always be done with care.

Theoretical and managerial implications

The findings of this essay have several theoretical and managerial implications. Despite the emphasis on the importance of vice vs. virtue and on the mechanisms and factors affecting consumer preference between vice and virtue in previous literature in consumer behavior, the role of cultural differences in vice vs. virtue preference and consumption has remained largely unexamined, and findings of the research that has mostly based in western countries have been generalized across cultures. Therefore, in this essay, we took the first step to incorporate cultural characteristics into the vice and virtue consumption research by examining the role of the sixth dimension of Hofstede's cultural framework, indulgence vs. restraint, on vice and virtue consumption behavior in the context of food consumption. This essay contributes to the literature by providing empirical support for the relationship between indulgence vs. restraint and preference between vice and virtue products. This means that, compared to low-indulgence (high-restraint) individuals, high-indulgence (low-restraint) individuals are more likely to choose vice over virtue. Also, generally in high-indulgence (low-restraint) cultures, people are more likely to choose vice over virtue.

From a practical point of view, this research offers several managerial implications. First, firms with culturally diverse markets can benefit from this knowledge to enhance their understanding of this important aspect of consumer behavior. The knowledge of the relationship between indulgence and preference between vice and virtue can help them to target the right segment of consumers for their product, offer the right type of product to the targeted segment of the market, and better position their products compared to the competitors, based on the vice-virtue continuum. This knowledge also offers companies valuable opportunities to better adapt their advertising and promotion efforts according to the indulgence vs. restraint profile of their market. Specifically, in loyalty programs, knowing that people with different indulgence levels prefer different types of rewards on the vice-virtue continuum (e.g., luxury or necessity reward), can help marketers offer a better matching reward to each customer and enhances customer value. Finally, our finding is also particularly important for policymakers to better know about the vice vs. virtue

preference of the people of their society, according to their individual-level indulgence profile, and make the right actions. For example, in high indulgent cultures, policymakers may need to more often warn about the harms associated with vice foods and other types of vice products.

Limitations and future research

Despite the contributions of this study, some research limitations need acknowledgment. First, this study employed a Canadian only sample. Although Canada has significant cultural diversity, future research can improve the generalizability of the results of this study by using samples from a broader set of countries. Second, the context of this study was limited to food consumption. We encourage future studies to examine the impact of indulgence vs. restraint on vice vs. virtue preference in other areas of consumption to increase the generalizability of the results. Third, we tested this effect by asking respondents' preferences in a hypothetical situation. Future research can enhance the validity of these results by testing the impact of indulgence vs. restraint on preference between vice and virtue products, and subsequently on outcome constructs such as willingness to pay, satisfaction, repurchase intention, and WOM, in a real purchase situation. It will also be fruitful to investigate more exactly the mechanism of effect and the mediators between indulgence vs. restraint and vice vs. virtue preference. Finally, our study focused only on the impact of indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, on vice and virtue consumption behavior. Another suggestion for future research is to investigate the influence of other cultural dimensions (e.g., masculinity and uncertainty avoidance) and their interactions on vice and virtue consumption behavior.

General discussion and contributions

Culture is a broad concept that embraces a set of values, meanings, knowledge, perceptions, beliefs, morals, customs, and habits, collectively held and internalized by members of society, and distinguishes the members of one group or society from those of another (Dake 1991; Hofstede 1984; Shavitt and Barnes 2019; Soares *et al.* 2007). Cultural characteristics are among key factors shaping people's perceptions, dispositions, attention, interpretation, persistent preference, and responses, and cause underlying and systematic differences in human behavior.

Needless to say, culture is also one of the main factors influencing almost every aspect of consumer behavior and market structure (McCort and Malhotra 1993; McCracken 1986; Shaw and Clarke 1998; Soares *et al.* 2007; Steenkamp 2001). Specifically, marketing has been an increasingly global phenomenon, and understanding the cultural context is necessary to make wise decisions (Shavitt and Barnes 2019), and not taking into account the role of culture has led to many business failures (Ricks 1993). This advancement in international marketing necessitates that the theories developed and validated mostly in western countries to be adjusted according to cultural differences (Iyengar and Lepper 1999; Steenkamp 2001). Consequently, over the last 25 years, research on the role of culture in consumer behavior has been growing exponentially (Shavitt and Barnes 2019; Soares *et al.* 2007).

However, the main obstacle that hampers research on the role of culture in human behavior has always been the too elusive, complex, and pervasive nature of the concept of culture, raising definitional, conceptual, and operational problems in capturing it (Manrai and Manrai 1996; McCort and Malhotra1993; Nasif *et al.* 1991; Soares *et al.* 2007)

To overcome this challenge, there have been several attempts to conceptualize and identify appropriate dimensions to operationalize and assess the concept of culture and allowing its inclusion in empirical research (Dorfman and Howell 1988; Hofstede 1980; 2001; Hofstede *et al.* 2010; House *et al.* 2004; Smith *et al.* 1996; Schwartz 1994; 1997). Hofstede's cultural framework is by far the most comprehensive, robust, influential, and widely cited national cultural framework in psychology, sociology, marketing, and management studies. Its six dimensions, namely individualism/collectivism, uncertainty avoidance, power distance, masculinity/femininity, long-term orientation, and indulgence/restraint provide a solid conceptual basis for formulating hypotheses regarding the influence of culture on dependent variables and for comparative cross-cultural studies (Hofstede 1980; 2001; Hofstede *et al.* 2010).

However, the national scores of Hofstede's framework for each dimension are only appropriate for examining culture at the ecological (national/macro) level, and using them for measuring culture at the individual level has thus been criticized for arising measurement error and yielding invalid results. In fact, due to several reasons such as immigration, social media, international trade and finance, tourism, and technological flows, cultural heterogeneity exists among individuals of the same national culture (Cleveland and Laroche 2007; Hollebeek 2018; Kizgin *et al.* 2018), and ascribing the national-level cultural scores to every individual in that nation is a kind of ecological fallacy (Brewer and Venaik 2014). Therefore, it is strongly required to assess Hofstede's dimensions at the individual level**.**

In response to this need, there have been several attempts to measure Hofstede's dimensions at the individual level (Dorfman and Howell 1988; Erdem *et al.* 2006; Sharma 2010; Yoo *et al.*

2011). CVSCALE (Donthu and Yoo 1998; Yoo *et al.* 2001; Yoo *et al.* 2011), which is a 26-item instrument for measuring the first five dimensions of Hofstede's framework (all the dimensions except indulgence/restraint) at the individual level, has been the most widely used scale in human behavior research and has adequate psychometric properties (Hollebeek 2018; Soares *et al.* 2007). However, since indulgence vs. restraint is the most recently added dimension to Hofstede's cultural framework (Hofstede *et al.* 2010; Minkov 2007; 2011), CVSCALE does not include this dimension. Similarly, to date, there has been no attempt in the rest of the literature to conceptualize and measure indulgence vs. restraint at the individual level. Therefore, there is a strong need for a conceptualization of individual-level indulgence vs. restraint and developing a psychometrically sound scale to measure it to capture the variance of this cultural dimension inside societies and define this cultural characteristic of individuals.

One of the main contributions of this thesis to behavioral research is to fill this gap by conceptualizing and developing the first valid and reliable scale to measure the sixth dimension of Hofstede's cultural framework, indulgence vs. restraint, at the individual level. The scale developed in essay one measures individual-level indulgence. High individual-level indulgence means low individual-level restraint and vice versa. Researchers can benefit from this scale to assess the distinct and important impact of indulgence vs. restraint on dependent variables across different areas of behavioral research such as marketing, management, and psychology, without committing an ecological fallacy. Moreover, the individual-level indulgence scale developed in essay one, combined with other individual-level cultural dimensions, helps marketers to improve their market research efforts by understanding a wider range of cultural variations in the market. By having a more accurate estimate of the cultural heterogeneity, which exists more or less in each market, marketing managers can better monitor and manage the composition of their customer base. They also can improve the effectiveness of their segmenting, targeting, positioning, and communication efforts by taking into account the fit between the indulgence vs. restraint level of individuals in the market and the company's products. Understanding the cultural heterogeneity of the market is even more crucial for international firms or those operating in multicultural countries such as Canada, India, and the US.

The results of essays two and three of this thesis establish important implications of indulgence vs. restraint as an important predictor of consumer behavior. The results of the theoretical model in essay two, which also serves as proof for nomological validity of the individual-level indulgence vs. restraint scale developed in essay one, contribute to the marketing literature by demonstrating a crucial implication of this cultural dimension in consumer behavior in the context of restaurant revisit and car and cellphone repurchase. The model in essay two shows the mechanism underlying the effect of individual-level indulgence on hedonic and utilitarian attitudes, and subsequently on WOM and repurchase intentions.

As the main motivations for purchase and consumption, hedonic and utilitarian values and attitudes are highly important in consumer behavior research (Arnold and Reynolds 2003; Parasuraman *et al.* 1985; To *et al.* 2007). However, research on the antecedents of hedonic and utilitarian attitudes and values in consumer behavior is largely underdeveloped. Thus, the results of testing the nomological network in essay two contribute to the literature by showing that hedonic and utilitarian attitudes fully mediate the relationship between individual-level indulgence and repurchase and revisit intention, and fully mediate the relationship between individual-level indulgence and WOM. Moreover, since the magnitude of this effect is larger for the hedonic route

than for the utilitarian one, the mediating effect is stronger for hedonic attitudes than for utilitarian attitudes. This means that individuals with higher indulgence have higher repurchase intentions and WOM intention, due to having higher utilitarian and hedonic attitudes, of which the impact of hedonic attitude is greater than the impact of utilitarian attitude. Our findings add to the existing body of knowledge by clarifying the mystery around the influence of culture on the mechanism of the effect of hedonic and utilitarian attitudes on the outcome behaviors such as WOM and repurchase intentions. Previously, it was, wrongly or inaccurately, perceived that *level of country development* is responsible for the differences in the magnitude of hedonic and utilitarian attitudes and values of consumers from different countries (Babin *et al*. 1994). Furthermore, the results demonstrate how the impact of individual-level indulgence on hedonic and utilitarian attitudes is mediated by positive post-purchase emotions (confidence and delight).

The insight gained from essay two is also essential for marketing managers in both international and culturally heterogeneous markets. In short, knowledge of the composition of hedonic and utilitarian motivation and attitudes of customers, which vary due to the differences in their individual-level indulgence, can be used by marketers to allocate their resources and marketing efforts more effectively. Considering the match between the composition of hedonic and utilitarian benefits of their products and the individuals' indulgence in the target market can help marketers improve their segmenting, targeting, and positioning efforts. This match is also essential in other marketing efforts such as reward and loyalty programs and marketing communications. In the same manner, communication managers can effectively differentiate their message according to the relative importance of hedonic and utilitarian attitudes for the individuals in the target market. Finally, the results again prove the psychometric soundness of the individual-level indulgence scale.

In essay three, we turned our attention to another important implication of indulgence vs. restraint in human behavior. Here, using the individual-level indulgence construct developed in essay one, we empirically tested the impact of individual-level indulgence on the preference between vice and virtue in the context of food consumption. While previous literature has emphasized the importance of vice and virtue in consumer behavior and the role of justification and self-control in shaping the preference between vice and virtue, the cultural differences influencing these factors and subsequently the choice between vice and virtue have remained largely unexamined in the literature. Thus, in essay three, we took the first step in examining the influence of culture on consumer behavior in the area of vice and virtue products, by showing the relationship between indulgence vs. restraint and the preference between vice and virtue.

The findings of essay three contribute to the literature by providing empirical support for the role of indulgence vs. restraint, the sixth dimension of Hofstede's cultural framework, as a strong predictor of individuals' preference between vice and virtue products. In other words, high-indulgence (low-restraint) people are more likely to choose vice over virtue, compared to low-indulgence (high-restraint) people. Here again, the findings of this essay regarding the relationship between indulgence and preference between vice and virtue help marketing managers of the firms with culturally diverse markets to enhance their segmentation, targeting, and positioning efforts based on the vice-virtue continuum. Finally, the results again prove the psychometric soundness of the individual-level indulgence scale.

This knowledge also offers marketers valuable opportunities to better adapt their advertising and promotions according to the indulgence vs. restraint profile of their market. For example, regarding loyalty programs, marketers can offer a better matching reward to customers according to their preference between vice and virtue (e.g., luxury or necessity reward). Finally, the findings of essay three can help policymakers in high-indulgence societies to know about the desire of people for vice consumption and to implement appropriate policies such as to warn more often about the harms associated with vice foods and other types of vice products.

In this thesis, by conceptualizing and developing the individual-level scale for measuring indulgence vs. restraint and establishing its two important implications in consumer behavior, we took the first steps to examine the largely undeveloped area of research on the role of this cultural dimension in human behavior in general and in consumer behavior in particular. We believe that the findings of this thesis open the door for future research and produce a steady stream of cross-cultural research. It is noteworthy to mention that to develop the scale in essay one, we used only samples from Canada and the US, and future research can help improve the generalizability of the scale by validating it with samples from other countries. Finally, future research could extend the generalizability of the model and findings of essay two and the findings of essay three by testing them in different product categories.

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Appendix

Initial 40-item pool for the development of individual-level indulgence vs. restraint scale

		Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	What happens to me is of my own doing							
2	I feel that I am my own master							
3	I have the liberty to live my life as I please							
4	Having leisure is very important in my life							
5	I seek every chance I can to have fun							
6	I try to live my life as fully as possible							
7	Having entertainment is very important in my life							
8	Having friends is very important in my life							
9	It is important to have a job that leaves sufficient free time							
10	Leisure is more important than work in life							
11	Feeling and desires related to leisure should be gratified freely							
12	Feeling and desires related to merrymaking with friends should be gratified freely							
13	Leisure is a personal value in my life							
14	People should not follow strict sexual norms							
15	Gratification of needs should not be regulated by means of strict social norms							
16	There should not be any limits on individuals' enjoyment							
17	There should not be any limits on individuals' enjoyment							

18	Desires, especially with respect to sensual pleasure, should not be suppressed							
19	Gratification of desires should not be delayed							
20	Freedom of speech is a primary concern for me							
21	I should not control my desires and wishes							
22	Overspending on cars and luxury is a part of life							
23	When I wish for something, I let myself be free to have/buy it							
24	Feeling and desires related to spending and consumption should be gratified freely							
25	I like relatively free spending of my disposable income							
26	Thrift is not a desirable trait in children							
27	Sexual indulgence for its own sake is a human necessity, and without it, neither man nor woman reaches his/her or her full growth							
28	One should enjoy complete sexual freedom without restriction							
29	There is no problem with romantically attracting someone who is already in a relationship							
30	Feelings and desires related to casual sex should be gratified freely							
31	Feeling and desires related to sexual networking should be gratified freely							
32	Deviance should be tolerated							
33	Overall I can consider myself as a happy person							
34	Experiencing positive feelings is very exciting							
35	Positive feelings should not be restricted							
36	It is more likely for me to remember positive emotions than negative emotions							

37	I frequently experience positive emotions							
38	I describe my health condition as "excellent"							
39	I am optimistic about the future							
40	Using cannabis is not very bad							

Summary of the scales used in essay two

Brief Self-control scale	1. I am good at resisting temptation 2. I have a hard time breaking bad habits (R) 3. I am lazy (R) 4. I say inappropriate things (R) 5. I do certain things that are bad for me, if they are fun (R) 6. I refuse things that are bad for me 7. I wish I had more self-discipline (R) 8. people would say that I have iron self-discipline 9. pleasure and fun sometimes keep me from getting work done (R) 10. I have trouble concentrating (R) 11. I am able to work effectively toward long-term goals 12. sometimes I can't stop myself from doing something, even if I know it is wrong (R) 13. I often act without thinking through all the alternatives (R)
Hedonic attitudes	1. Dull/Exciting 2. Not Delightful/Delightful 3. Not Fun/Fun 4. Not Thrilling/Thrilling 5. Boring/Interesting
Utilitarian attitudes	1. Necessary/Unnecessary 2. Effective/Ineffective 3. Helpful/Unhelpful 4. Functional/Non Functional 5. Practical/Impractical

Positive post-consumption emotions	1. Confident 2. Delighted
Repurchase intention	1. I will consider it preferentially when repurchasing 2. I will repurchase it 3. I will repurchase a new model sold by the company of which product purchased
Revisit intention	1. I intend to revisit this restaurant next time that I want to eat out 2. This restaurant would always be my first choice 3. I would like to come back to this restaurant in the future
WOM intention	1. How likely are you to spread positive word-of-mouth about this product(restaurant)? 2. I would recommend this product(restaurant) to my friends. 3. Given my experience with this product(restaurant), I would not recommend it to my friends. (R) 4. If my friends were looking for a product (restaurant), I would tell them to try this product(restaurant).

Demographic Questionnaire

Direction: Please carefully answer the following questions regarding your demographic information:

- **Gender:** Female ◯   Male ◯

- **Age:** 16-22 ◯   23-30 ◯   31-40 ◯   41-50 ◯   More than 50 ◯

- **Educational level:** Undergraduate ◯   Graduate ◯   Postgraduate ◯

     If any the pleas specify: _____

- **Marital Status:** Single ◯   Married ◯   Separated/ Divorced ◯   Widowed ◯

     Other**: _____

- **Level of English proficiency:** Very Low ◯   Low ◯   Moderate ◯   High ◯   Very High ◯

- **Country of origin:** _____

- **Mother Tongue Language:** _____