

**HEC MONTRÉAL**

**CONSUMER RESPONSE TOWARDS MULTIBRANDED  
PLAFORMS:  
The Case of Lexus vs. Camry**

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## **SUMMARY**

The multibranded platform approach is a phenomenon that affects a company's corporate, brand and technology management (Karlsson and Sköld, 2007). The multibranded strategy is known as the marketing efforts that a firm supports in order to market several similar products within unrelated brands. This study's objective is to evaluate consumer responses towards multibranded platforms, through the specific case study of Lexus vs. Camry. It is of specific interest, the perceived commonality of products derived from common platforms. Our research goal was attained as we discovered that some of these variables do indeed influence consumer behavior.

We tested the Research Model we designed after analyzing the Conceptual Development, and we administered a survey to 225 individuals in Montreal, Québec and Calgary, Alberta. We then used SPSS 19.0 to process the data.

The results show that respondent's attitudes and purchase intentions towards the luxury brand were not affected negatively after the Announcement of Commonalities with Camry. Consumers that own luxury automobiles seek unique products that will reflect their self and social image (Tian and al., 2001). For them, price and differentiation play a role in making them feel unique.

On the other hand, our results also suggest that there are rational customers who prefer products with a cost benefit, and do not necessarily care for unique products. For them,

the *Announcement of Commonalities* within a high-end brand did turn out to bring positive effects.

Lastly, we can highlight that automobile manufacturing companies' brand managers do effectively create strategies to clearly differentiate brands among segmenting markets, targeting individuals according to the age, income, and product preferences.

## SOMMAIRE

Le phénomène des plateformes multimarques est une approche qui a plusieurs impacts sur le management corporatif, le management des marques et le management des technologies (Sköld et Karlsson, 2007). La stratégie multimarque est connue comme les efforts de marketing qu'une firme soutient sur le marché avec plusieurs produits similaires et différents marques. L'objectif principal de cette étude est de mesurer la réponse des consommateurs face aux plateformes multimarques, par l'étude de cas spécifique de Lexus versus Camry. Un intérêt particulier est le point commun perçu des produits dérivés de plates-formes communes. Cet objectif est atteint car nous avons découvert qu'une partie de ces variables influence le comportement des consommateurs et que d'autres n'ont pas influencé.

Afin de tester le modèle de recherche construit après la recension des écrits, nous avons mené un sondage auto-administré auprès de 225 répondants à Montréal, Québec et à Calgary, Alberta. Le logiciel SPSS 19.0 a été utilisé pour traiter les données.

Les résultats montrent que les attitudes et les intentions d'achat vers la marque de luxe n'ont changé de façon négative après la communication des éléments communs exposés dans la marque plus bas. Ilya des consommateurs qui cherchent leurs voitures de luxe des produits uniques qui reflètent leur image de soi et sociale (Tian et al. 2001). Pour eux, le prix et la différenciation jouent un rôle dans la sensation de se sentir unique.

D'autre part, nos résultats suggèrent également qu'il existe des clients qui préfèrent les

produits rationnels, comme l'avantage de coût, et ne sont pas nécessairement des soins pour des produits uniques. Pour eux, la divulgation des éléments communs, se révèlent en effets positives.

Enfin, nous pouvons souligner que les gestionnaires de marque des entreprises de fabrication d'automobiles élaborèrent des stratégies pour bien différencier les marques entre les marchés de segmentation, en ciblant des individus en fonction de l'âge, le revenu et les préférences de produits.

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## INTRODUCTION

In order to survive in a cutting-edge competitive market, dynamic companies must develop new product development processes and innovative marketing strategies to gain greater market share and leave little room for competitor's products being able to successfully position their brands. International competition increases on a daily basis due to globalization and the Internet, which enable companies to offer various products to different consumer groups at a wide range of prices. It also presents them with the opportunity to use novel product development processes (Ulrich, 1995). Marketers can either apply mass customization strategies or find alternative ones, such as the multibranded platform strategy, to manage their product families engineering, manufacturing, customer segmentation, brand positioning and distribution (Sawhney, 1998; Liu et al., 2010). Platforms are new designs built on existing chassis. Francis (2000) describes platforms as analogous to tables because they have 4 support columns. These are components, processes, knowledge and know-how, and interpersonal relationships (teams and supplier networks). This common foundation works to lower costs, achieve economies of scale and populate product families in order to satisfy numerous customers with various products (Meyer, 1997; Meyer et al., 1997; Sawhney, 1998; Robertson et al., 1998; Ulrich, 1995). Product families that are managed with platforms are characterized by a technical common base, or commonality. Sawhney (1998) uses the following qualities to define product platforms: they share the same technology and components, they are targeted to a similar set of customers, they are distributed through a common marketing channel and they share a common corporate brand name. Karlsson and Sköld (2007:133), declare that the strategic aim of

multibranded platform development is to create financial synergies by combining assets across several brands. In fact, manufacturing companies such as Hewlett Packard's Deskjet Printers (Meyer and Lehnerd, 1997; Feitzinger and Lee, 1997), Sony Walkman (Sanderson and Uzumeri, 1995), Volkswagen and Boeing (Liu et al., 2009), Minolta's Intelligent Lens, Honda's Accord (Sawhney, 1998) have used multibranded platform approaches for reasons such as lowering their production costs and reducing their assembly processes.

The target segments developed by marketers correspond to the several consumer types. For example, one consumer segment prefers luxury brands which offer them differentiated attributes such as; unique features, exclusivity and prestige (Knight and Young Kim, 2007). Also, there is another more rational consumer segment that opts for products which balance cost and benefit but still remain with favorable attitudes towards known quality brands. Needless to say, segmentation and positioning information are in brand managers' best interest, concerning their decision making process.

Although the common foundation does bring positive benefits to manufacturing companies, a perceived commonality might proceed particularly from the use of multibranded platforms by companies (Muffatto and Roveda, 2000). In the scientific literature there are strategic marketing focused studies that show that there is a significant positive impact in Operations Management and Production after implementing the multibranded platform approach (Farrell and Simpson, 2010), but to date there are not

studies that provide insight to consumer behavior response towards related issues regarding the multibranded platform approach.

This study's objective is to find out if the perceived commonality of products is relevant for consumers generated by multibranded platforms. Author's created a scenario in the questionnaire with two cars in the Toyota Group; Camry (plain model) and Lexus (luxury model). While these two brands share a percentage of common components, their marketing efforts differ by; make and model, market segments and product offering. Toyota and Lexus products are sold through different dealer networks, offer different warranty and after sales service terms (Sawhney, 1998). Companies, such as Toyota that apply the multibranded platform approach, develop a common architecture for several product brands (Sköld and Karlsson, 2007).

This paper is devoted to assess the impact of multibranded platforms on consumer sentiments (attitudes and purchase intentions). The findings will be shared with the Automotive Manufacturing companies in order to share with them the findings of this research; it might be of benefit on their Marketing and Sales strategy planning. Authors will also provide a demographic profile of the respondents to describe segments.

Chapter One provides a detailed explanation of the development and advantages of the platform concept, new product development processes and branding strategies. Our research model is presented with the proposed hypotheses.

Chapter Two presents our research methodology and details its different aspects. We begin with an explanation as to why we chose the automobile industry to develop our survey. Next, we describe the type of research, study design, scales, pre-test, data collection method and sampling method, and then discuss the reliability and validity of the measurement instruments.

Chapter Three is divided into an explanation of sample characteristics, manipulation check and the testing of the hypotheses.

And, in Chapter Four, the variable roles, managerial implications, limitations and future research will be dealt with.

**Key words:** multibranded platforms, perceived commonality, product family, product architecture, co-branding, innovation and product management.

# Chapter One. Conceptual Development

## ***1.1 The Platform Concept***

### **1.1.1 What Are Multibranded Platforms?**

A platform is the common basis of individual products that belong to the same product family (Mc Grath, 1995; Robertson and Ulrich, 1998). Nowadays, industries are developing platforms between several brands known as multibranded product platforms (Karlsson and Sköld, 2007). The development of this strategy is beneficial to companies in terms of cost reductions, product extension, technology trends, improved design quality and faster product launches in the market (Meyer, 1997). Managers often apply this strategy to better manage product varieties (Krishnan and Gupta, 2001).

Sawhney (1998) introduced the concept of moving from portfolio thinking to platform thinking, and defines platform thinking as a strategy where companies share the knowledge and resources such as offerings, target markets and processes to achieve growth and variety. Platforms help customers understand company brands, as it helps educating customers and prospects on what attributes differentiates their company from the competitors. This approach help firms define their brands with unique attributes, lower costs to ideal points and at the same time they are able to offer a range of products at reasonable prices.



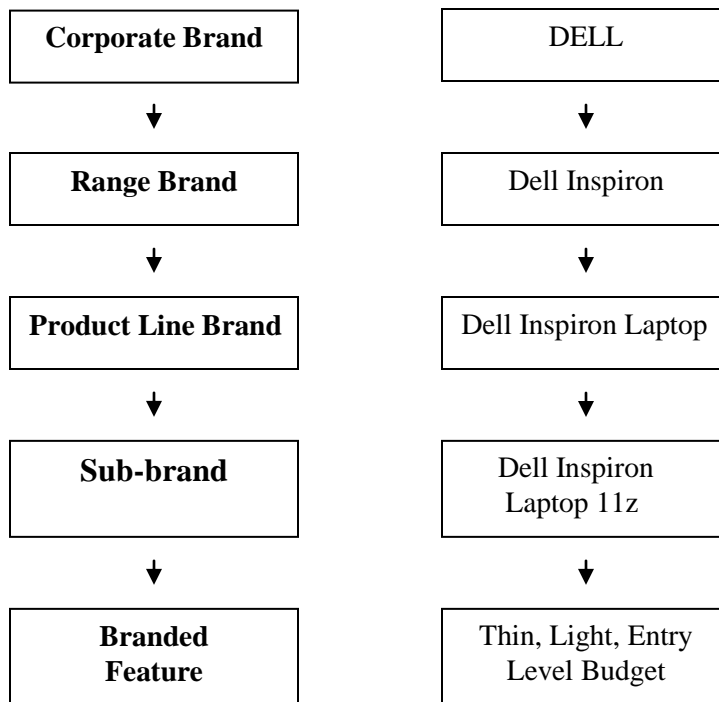
The platform-based development requires intensive and dedicated work from company's multidisciplinary groups such as planners, designers, engineers, operations, production, branding, distribution and promotion. Engineers prepare budgets on production costs and on the other side the Marketing Team work toward effective brand positioning, market share strategies (Halman et al, 2003) and effectively communicating their value proposition through several tactics such as websites, twitter, blogs and marketing collaterals, etc.

There are several platforms dimensions such as:

- a) Customer Platform, which refers to the customer segment for a specific market (Sawhney, 1998 and Halman et al, 2003);
- b) Brand Platform, consists of the corporate brand or driver brand such as Nestle, DELL, Useful, Cadbury or sub-brands such as Nestle KitKat, DELL Inspiron, Useful Multiseat and Cadbury Dairy Milk. The sub-brands use the company's brand across multiple related products, adding value by describing and clarifying the offering and facilitating a horizontal or vertical line extension from the core brand (Sawhney, 1998 and Halman et al, 2003);
- c) Process Platform, pertains to the manufacturing and supply chain processes (Fisher 1997; Sawhney, 1998 and Halman et al, 2003);
- d) Global Platform, concerns the common roll out plan across different markets and the customization level involved in order to adapt to a specific region's needs, such as pricing, product positioning message and distribution channels (Sawhney, 1998 and Halman et al, 2003);

e) Lastly, Product Platforms refers to the product family evolution (Sawhney, 1998 and Halman et al, 2003). **Figure 1** shows an example of a DELL product family and its brand architecture to structure and name the brand within its portfolio. DELL's corporate name is used on all products and services.

**Figure 1: DELL's Product Family and its Brand Architecture**



Source: Adapted from Sawhney (1998)

Platforms are characterized as a collection of assets that are shared by a set of products (Roberson and Ulrich, 1998:20). They state that the shared assets include: Knowledge, Components, Processes and Human Resources. See Table 1:

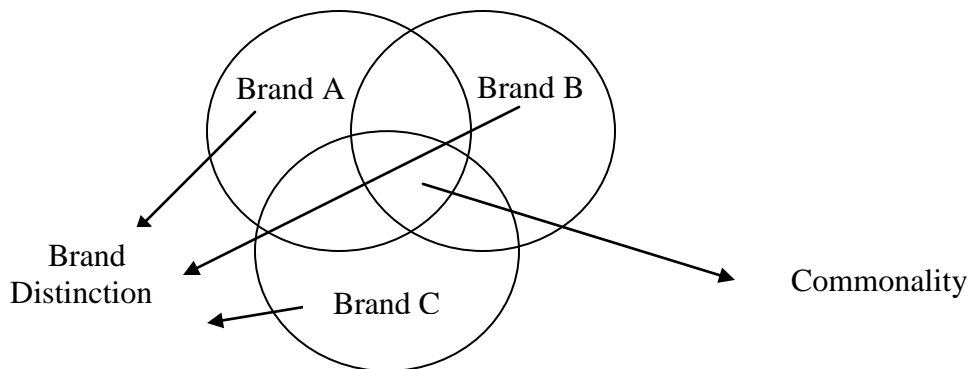
**Table 1: Platform Assets**

<b>PLATFORM ASSETS</b>	<b>DESCRIPTION</b>
<i>Knowledge</i>	Design know-how, technology applications and limitations, production techniques, mathematical models, and testing methods
<i>Components</i>	Part designs of a product, fixtures and tools needed to make them, circuit designs, and programs burned into programmable chips or stored on disks
<i>Processes</i>	Equipment used to make components or to assemble components into products and design of the associated production process and supply chain
<i>Human Resources</i>	Teams, relationships among team members, relationships between the team and the larger organization, and relationships with a network of suppliers

In the other hand, Muffatto and Roveda (2000) suggest that product platforms affect: a) Production and Logistic Processes such as; costs, investments and operations complexity; b) Development Processes such as; development lead time, standardization, quality and reliability of design; c) Project Organizational Structure such as; teamwork, design task partitioning, relationship with suppliers and d) Knowledge, the ‘know how’ transfer among projects, and the influence on and by technology.

The branded distinctions among platforms can be a feature, service or ingredient (Aaker, 2003). Figure 2 shows an image of the shared assets of a set of brands, and their differential core among the different brands.

**Figure 2: Conceptualization of the Multibranded Platform Development**



Source: (Sköld and Karlsson, 2007: 562)

The multibranded platform strategy has been used by General Motors. Their brands include: Chevrolet, Buick, Oldsmobile, Pontiac, Cadillac, Saturn, GMC and Hummer (Chernev, 2008). Multibranded platform strategies have also been used by Toyota and Lexus, Volkswagen and Audi, Skoda and Seat (Karlsson and Sköld, 2007).

In summary, multibranded platforms are the art of developing strategies within an organization in order to market two or more similar products under different brands. This

strategy involves synergy from the different teams, such as Operations, Production, Finance, Marketing and Sales within an organization.

## ***1.2 New Product Development***

Platforms accelerate the new product development process (NPD) and shorten product launch timing (Muffatto and Roveda, 2000; Halman et al, 2003). Product platforms turn the improvement of an earlier design into the creation of a new one. This platform approach is not a one-time effort; companies should update their technological processes in order to be prepared to launch future product generations focused on different consumer segments (Halman et al, 2003).

Muffatto and Roveda (2000) have underlined the advantages in the New Product Development Process:

- a) Increases speed in product development (Wheelwright and Clark, 1992);
- b) Saves product development and production costs (Muffatto and Roveda, 2000);
- c) Increases product reliability in successive generations of the product (Sanderson and Uzumeri, 1995);
- d) Increases variety and reduced managerial complexity sharing a common technology (Sanderson and Uzumeri, 1995);
- e) Increases business strategy flexibility (Muffatto and Roveda, 1999).

Platform strategy for New Product Development is not always feasible; it should match with the product's architecture (Muffatto and Roveda, 2000). Therefore, product

platforms do reduce the new product development process and as a common foundation will be shared across several products of the same family.

### **1.2.1 Product Architecture and Product Families**

Often, platforms are confused with other terms known in this industry such as product families and product architecture. All of them have different meanings but belong to the same strategy and are consistent with platform thinking. Product families are a group of products that share common assets (Meyer and Utterback, 1993; Sawhney, 1998). Product architecture is the group of components and interfaces of a product (Halman et al, 2003). Both physical and nonphysical product elements should be balanced in order to maintain brand uniqueness (Karlsson and Sköld, 2007). Products are based on an architecture that consists of one or more core subsystems (Francis, 2000). For example, automobile architectures are comprised of underbody and suspensions. The underbody includes; the front floor and under floor, engine compartment, structure of the vehicle, and transmission (Muffatto, 1999).

The concept of Product Family Architecture (PFA), is characterized by Du et al., (2001). It is a structure that generates a family of products. This includes a common base, differentiator enablers, and configuration mechanisms, which define the rules for product variant derivation or each individual product. Table 2 shows that by assembling and combining equal and different components, a product family is built.

**Table 2: Multiple Views of Architecture Product Family (APF) Construct**

<b>APF Construct</b>	<b>Sales</b>	<b>Engineering</b>
Common Base/Generic Product Structure	Common features	Product technology Product structure Common modules
Differentiator Enabler	Optional features values	Distinctive modules Distinctive structural relationships Scalable design parameters
Configuration Mechanism	Feasible sets	Variety generation across different products

Adapted from Source: Du and al. (2001:18)

### **1.2.2 Product Modularity**

Muffatto and Roveda (2000) specify that product architecture is composed of two configurations: modularity and integrity. Product Modularity is the process of designing, developing and producing modules that when combined in different ways, produce different products (Ernst and Kamrad, 2000). Modularisation can be considered helpful in platform set-up, as it helps a product stand out among others and meet different customer requirements (Muffatto, 1999). Muffatto (1997) detailed the advantages and disadvantages of modularity in the auto industry.

The modularisation concept offers several advantages such as reduced production costs, multiple modules for multiple applications, increases in the possibility of producing product variations, reduction of pre-assembly operations, reduction of setting up production processes, greater productivity and increased quality from automation (Baldwin and Clark, 1997; Wilhelm, 1997; Ulrich and Tung, 1991; Fisher et al., 1999; Feitzinger and Lee, 1997).

However, one of the main disadvantages of modularity are focused on the need to design multiple standard modules, as this may lead to a lack of differentiation in the final product (Desai et al., 2001; Robertson and Ulrich, 1998), especially when these modules are visible to customers (Robertson and Ulrich, 1998; Ulrich and Tung, 1991).

### ***1.3 Advantages of Applying the Platform Concept***

According to Muffatto (1999), the main reasons for platform development are: cost reduction and improved lead-time reduction. In addition, Halman et al (2003) also considers other benefits of building platform product families such as design flexibility and improving effectiveness in products value proposition.

#### **1.3.1 Cost Reduction**

Maximizing common components among product lines, minimizes production costs (Thevenot and Simpson, 2006; Farrell and Simpson, 2010). Firms that produce large volumes of shared parts attain economies of scale (Robertson and Ulrich, 1998). In fact, Black & Decker was successful in implementing a platform strategy of motor redesign among more than 120 different power tools being able to rebuild its product line around motor platforms to meet different applications, reducing production costs by 50% (Meyer and Lehnerd, 1997; Meyer and DeTore, 2001).

The redesign of one-at-a-time product line strategy does not help manufacturing companies achieve economies of scale (Farrell and Simpson, 2010). Evidently, a platform



approach significantly reduces the cost of the procurement of components and materials (Meyer, 1997). Moreover, we can finally state that the use of multibranded platforms approach does lower down production costs. As for the common foundation among products, common elements are used being able to achieve economies of scale.

### **1.3.2 Lead Time Reduction**

Brylawski (1999) highlights the following advantages of lead time reduction: increasing product variety, producing standards according to individual needs, decreasing the number of components, and concentrating on superior innovation and quality. Automobile makers now produce a wider range of products with lower production costs. By offering a variety of products, companies increase productivity and stock quality, become more efficient in management and distribution and ultimately make technological advancements. Wilhelm (1997) presents an automobile industry case study of a company that implemented a platform strategy and saw positive results reducing lead times, as well as with their relationships with suppliers.

## ***1.4 The Power of Brands***

Brands are the company's most valuable asset. In the auto industry, Toyota, Nissan and Mazda are widely recognized brands as they are one of the largest automobile manufacturers in the world. Brands are composed of unique value propositions that

clearly state the product or service benefits to customers, in order to differentiate themselves among competitors (Dawar, 2004).

Brand Managers are responsible of creating the brand's competitive advantage and maximizing the long term value of them (Wood, 2000). They also create Brands Attributes through the marketing mix (product, price, place, promotion). And, the Brand Equity measures are used to evaluate how managers build brands.

The Marketing Science Institute (Leuthesser 1988) defines brand equity as:

*The set of associations and behaviors on the part of the brand's consumers, channel members, and parent corporation that permits the brand to earn greater volume or greater margins than it would without the brand name and that gives the brand a strong, sustainable, and differentiated advantage over competitors.*

### **1.4.1 Co-branding Strategies**

In order to increase brand's equity, Brand Managers implement co-branding strategies. Cooperative branding, also known as co-branding is a strategy used to transfer the positive impressions of one brand to a second brand (Chang, 2009). It involves two or more independent brands from different product categories. As an example, Toyota introduced a new brand, "Lexus" to fulfill the high-end value segment of the market, rather than extending the Toyota Brand (Chernev, 2008). Toyota is a multinational automaker headquartered in Toyota, Japan. It has manufacturing plants in more than 20

countries around the world. Lexus is the luxury and refined brand of Toyota. It was introduced in 1989 in America, but now it is sold worldwide. The Lexus brand is recognized for its high quality, luxury and comfort. The Lexus line has been expanded to Sedans, Sport Coupe, Sport Utility and Hybrids. The Toyota Camry is the best-selling car in the Americas and part of the mid-sized car options in North America. It has style and comfort and it is reliable, durable and well-priced.

Automobiles are one of the new expanded luxury product categories (Fionda and Moore, 2009). The word luxury is derived from the Latin words “luxus and “luxuria” (Roux and Floch, 1996; as cited in Stegemann, 2006). Luxury brands (also known as high-end brands), are characterized by their symbolic attributes and their distinct values being conspicuous, unique, social, emotional, and quality (Vigneron and Johnson 1999). They offer status, prestige and exclusivity to consumers (Hadjicharalambous, 2010; Park et al., 1986). Low-end brands are those that offer functionality and durability (Park et al., 1991). High-end value brands or prestige brands share recognition, positive evaluation and improve the brand equity of low-end brands generating positive effects (Hadjicharalambous, 2010; Washburn et al., 2000, 2004). The co-branded products benefit from high-end brands (Dickinson and Health, 2008).

### 1.4.2 Commonality and Attitudes towards Products

According to Robertson and Ulrich (1998), the process of platform planning focus on three concepts such as the product plan, the differentiation plan and the commonality plan. See Table 3.

Table 3: **The Process of Platform Planning**

<b>Concepts</b>	<b>Explanation</b>
Product Plan	Product strategy and timing of introduction into the market
Differentiation Plan	The ways in which multiple versions of a product will be different for customers
Commonality Plan	The shared components among products

The concept of Commonality is defined by (Liu et al., 2010; Simpson et al., 2001a) as the common modules that products share, such as requirements, design features and physical attributes. According to (Muffatto and Roveda, 2000:617) the higher the percentage of common parts between two different models, the lower their production costs will be, but at the same time, the products will show lower distinctiveness. The major challenges of product platforms are to equilibrate commonality and product distinction (Robertson and Ulrich, 1998). Unbalanced commonality may degrade brand reputation (Kim and Chhajed, 2002). Attitudes are defined as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” Fishbein and Ajzen (1975). Toyota’s most popular brands include Camry and Lexus. The authors of this paper have selected two car models, the Lexus ES 350 and Camry Sedan as two

Toyota products. These two cars are manufactured through the multibranded platform strategy, sold through different car dealers and marketed to a similar set of customers.

The use of Lexus and Camry refers to the process of specifying the extension of what the concept is. Based on the above arguments, we propose the next hypothesis as the influence between commonality and consumer response has not yet been confirmed:

**H1a:** Attitudes towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).

**H1b:** Attitudes towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).

### **1.4.3 Positive Attitudes lead to Purchase Intentions**

Authors supported the Theory, which Fishbein (1963), developed in order to explain consumers attitudes towards objects. The theory states that attitudes provide explanation and are modified based on assessments about an individual's beliefs and attitudes toward objects. This will help them decide whether to possess a product or not. The purchase decision process is developed in a time sequence. First individuals decode messages, and then they learn and memorize brand perceptions through advertisements. Then their attitudes and purchase intentions are affected (Ernst, 1983). Hence, it is hypothesized:

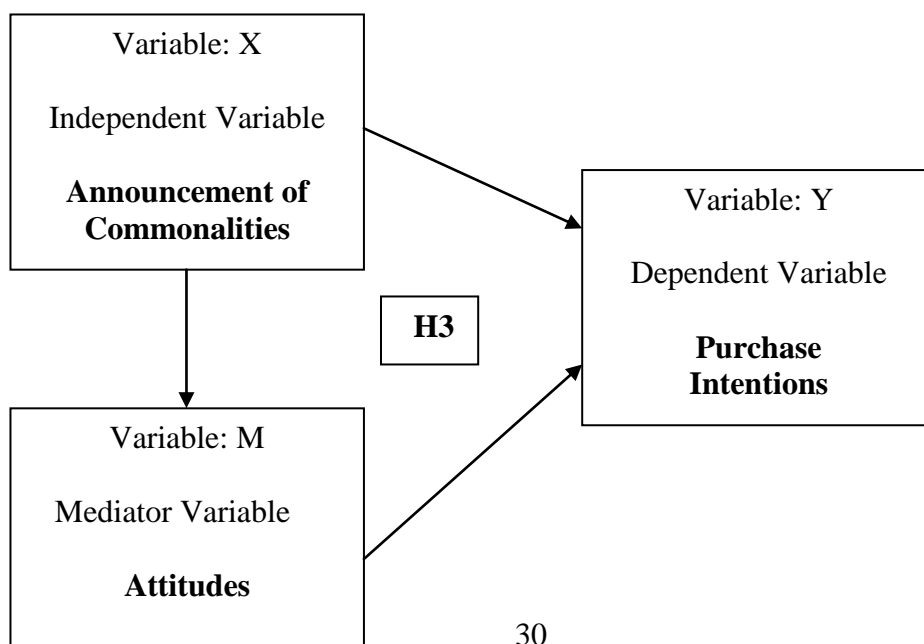
**H2a:** Purchase intentions towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).

**H2b:** Purchase intentions towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).

Shrout and Bolger (2002:422), suggests that mediation model occur when an indirect effect is comprised of the relationship of two variables (independent variable X and dependent variable Y) which are mediated by a third variable (mediator, represented as M in the table below). Therefore, last but not least, we propose our last hypothesis, a mediation effect:

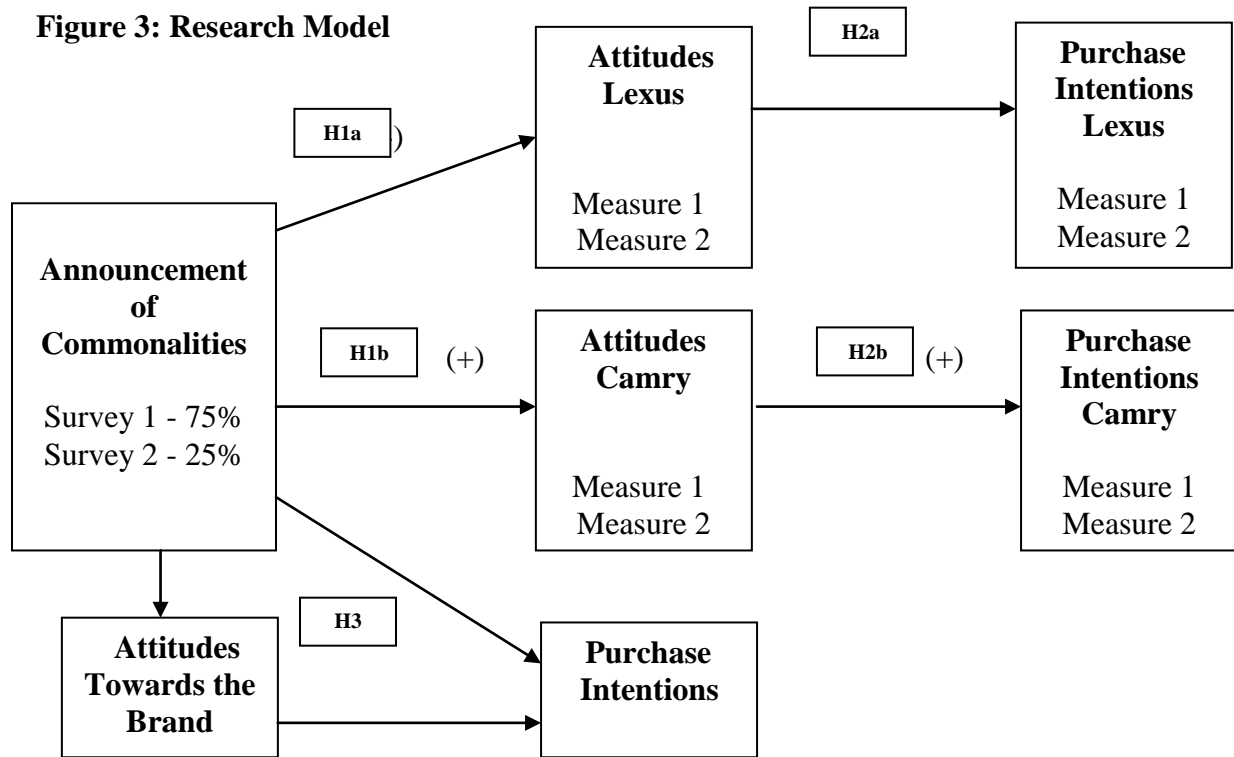
**H3:** The relationship between commonalities and purchase intentions is mediated by attitudes towards the brand.

**Table 4: The Mediation Effect Proposed Model**



## 1.5 Research Model

It follows therefore, the following conceptual framework. See Figure 3.



## 1.6 A Reminder of our Hypotheses

As the hypotheses have already been justified, we will just summarize them below:

**H1a:** Attitudes towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).

**H1b:** Attitudes towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).

**H2a:** Purchase intentions towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).

**H2b:** Purchase intentions towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).

**H3:** The relationship between commonalities and purchase intentions is mediated by attitudes towards the brand.



## **Chapter Two. Research Methodology**

This chapter will clarify the different aspects of the methodologies used in our study in order to test our established hypotheses. Let us begin with Research Settings, which include Context, Study Design, Measures and Data Collection. From there we will discuss the validation of measuring instruments.

### ***2.1 Context***

This research has been carried out within the framework of the automobile industry, a strong supporter of the platform concept. This industry has used platforms to its great advantage (Francis, 2000:39). Evidently, platforms have become a key component to success in the automotive industry (Muffatto, 1999). Nobeoka and Cusumano (1997) suggest that automobile companies that applied the platform strategy to their projects achieved higher sales than their competitors who did not use this strategy.

Our study has a causal research approach, research that aims to demonstrate how one variable determines the values of other variables that are associated in some way (Aaker and al., 2007:81). Two self-administered surveys were developed. Our method of data collection was determined by the number of measurable variables we selected. The main advantages of this method were the facility to recruit participants, the low costs and the quick manner in which we were able to obtain answers (d'Astous, 2005:92).

## **2.2 Study Design**

This study employs 2x2 mixed factor design. The between subjects factor is the percentage of common components (25% and 75%) and the within subjects factor is the brand (Lexus as the high-end brand and Camry as the low-end brand). The within subject factor was not counter-balanced in the surveys. Both surveys were presented with the same sequence, in the first place the attitudes and purchase intentions of Camry and then the Lexus.

## **2.3 Measures**

### **2.3.1 Scales**

We based our survey on five existing scales from previous studies and reports to measure the research model's variables. Although for our Research Model, Analysis and Results, we decided to exclude three of them and focus on only two scales as those were the ones that could help us achieve the main objective of this study. We did not create new scales as adequate scales from previous studies were at our disposal. Table 5, Appendix 1 and 2.

**Table 5: Description of Scales**

<b>Scales</b>	<b>Source</b>
Attitudes	Shamdasani, Stanaland, and Tan (2001)
Purchase Intentions	Dodds, Monroe, and Grewal (1991) Adapted by Sweeney, Soutar, and Johnson (1999)

In order to maintain comparability with the preceding scales, the items of all the concepts were measured using a 7-point Likert Scale, with (1) as strongly disagree and (7) as strongly agree.

The Attitude Scale's items were developed by Shamdasani, Stanaland, and Tan (2001). The Cronbach's Alpha (.899) indicates the items provide good indicators of attitudes. We measured attitudes towards Camry and Lexus twice. First, we measured respondents' Attitudes towards the two car brands (Measure 1). Then, we had respondents read through the scenario in which Camry and Lexus shared a percentage of common components (*Announcement of Commonalities*), and then we measured their Attitudes and Purchase Intentions again (Measure 2). One survey indicated that both cars shared 25% of common components, while the other one revealed that they shared 75% of common components. We developed these two different questionnaires in order to have two levels of the variable and verify if there were different results through both scenarios. Finally, we used both variables **Attitudes (Measure 1 and 2)** in order to test our hypothesis. See Table 6.

**Table 6: The Scale of Attitudes towards a Brand**

<b>Attitude 1</b>	Camry is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is a good product.
<b>Attitude 2</b>	I dislike Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Camry.
<b>Attitude 3</b>	I feel negative toward Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Camry.
<b>Attitude 4</b>	Camry is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is nice.
<b>Attitude 5</b>	Camry is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is pleasant.
<b>Attitude 6</b>	Camry is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is attractive.
<b>Attitude 7</b>	* I approve the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove the product.

Source: Shamdasani, Stanaland and Tan (2001)

\* Reversed score.

To measure the Purchase Intentions, we used a scale developed by Dodds, Monroe, and Grewal (1991), which was later adapted by Sweeney, Soutar, and Johnson (1999). The scale has 3 items; an alpha of .880 was reported for the scale of Sweeney, Soutar, and Johnson (1999). We measured Purchase Intentions towards Camry and Lexus two times, for the same reason we did with the Attitudes Scale, we tested both the *Purchase Intentions* (Measure 1 and 2). See Table 7.

**Table 7: The Scale of Purchase Intentions towards a Brand**

<b>Purchase Intentions 1</b>	I would consider buying Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Purchase Intentions 2</b>	I will purchase Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Purchase Intentions 3</b>	There is a strong likelihood that I will buy Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

Source: Brand Dodds, Monroe, and Grewal (1991), adapted by Sweeney, Soutar, and Johnson (1999)

### 2.3.2 Psychometric Properties

Before going on with the results analysis, we will determine the quality of our measurement instruments using the traditional key concepts in classical test theory reliability and validity. Initially, Cronbach's Alpha ( $\alpha$ ) was used to assess the scale reliability of each construct of our model. It helped us verify the reliability, internal coherence, and consistent measure of the Attitudes and Purchase Intentions. As we have mentioned before, according to Nunnally (1978), reliability coefficients of .700 or more are considered the minimum accepted level for a coefficient. See Table 8, it summarizes our Scales Reliability Assessment. Given that the Cronbach's Alpha ranges between .824 and .880, we can safely conclude that the scales are reliable.

**Table 8: Scales Reliability Assessment**

<b>Variable</b>	<b>Cronbach's Alpha</b>
Attitudes	.824
Purchase Intentions	.880

First, for the Attitudes Scale, we determined one factor with Eigenvalues greater than one, which accounts for 66.25% of the total variance. This factor is called "Attitudes" and the KMO index equals to .899, which is above .700, the minimum level suggested by Hair et al. (1998), and Bartlett's Sphericity Test is significant ( $p < .001$ ). We excluded the item, "Attitudes 7" as it had a loading in the Communalities Table of .087. After eliminating it, the new KMO index increased to .902 and the total variance for the single factor increased to 76.14%. See Table 11, it presents the final Factorial Analysis results

of the Attitudes Scale.

**Table 9: Factorial Analysis of the Attitude Scale**

<b>Item</b>	<b>Factor 1</b> Attitudes Loadings
Attitudes 1	.809
Attitudes 2	.878
Attitudes 3	.892
Attitudes 4	.903
Attitudes 5	.912
Attitudes 6	.837
<b>Eigenvalues</b>	4.569
<b>% of Variance</b>	76.14%
<b>Cronbach's <math>\alpha</math></b>	.824

Secondly, we verified the validity of the Purchase Intentions Scale also with the Exploratory Factorial Analysis and found one factor with Eigenvalues greater than one. This factor accounts for 80.89% of the total variance and is called “Purchase Intentions”. The KMO index is .700 and Bartlett Sphericity Test is significant ( $p < .001$ ) and all loadings exceeded the minimum levels. We can conclude, therefore, that the Factorial Analysis is applicable in this case. See below Table 12.

**Table 10: Factorial Analysis of the Purchase Intentions Scale**

<b>Item</b>	<b>Factor 1</b> Purchase Intentions Loadings
Purchase Intentions 1	.869
Purchase Intentions 2	.880
Purchase Intentions 3	.947
<b>Eigenvalues</b>	2.427
<b>% of Variance</b>	81.50%
<b>Cronbach's <math>\alpha</math></b>	.880

### 2.3.3 Pre-test

The pre-test was done after receiving the approval from CER (*Comité d'Éthique de la Recherche*) of HEC Montreal on September 4, 2008 with five respondents in Calgary, Alberta between September 5, 2008 and September 8, 2008. The pre-test survey was developed to ensure the smooth flow between questions with a convenience sample. There were no modifications recommended by respondents, so the questionnaires are without changes.

We created two surveys on the different *Attitudes* and *Purchase Intentions* towards the components that *two car brands* have in common (Camry Sedan and Lexus ES 350). Twenty-five percent (25%) of the *Announcement of Commonalities* was shared in the first survey, and 75% in the second. Both surveys contained collected samples from Montreal and Calgary, Canada. The qualified respondents were males and females, ages 18 and older, living in Montreal, Quebec or Calgary, Alberta. Samples were collected in these two cities because of the easiness of the authors to collect the most respondents as possible. The pre-test confirmed that there was an appropriate flow between the questions, so authors focused on the data collection (See Appendix 1 and 2).

## **2.4 Data Collection**

### **2.4.1 Population and Sample**

The total population was restricted to men and women over 18 in Montreal, Quebec and Calgary, Alberta, Canada. Two hundred and twenty-five respondents were given self-administered surveys.

### **2.4.2 Sampling Method**

The study sample was collected in Montreal and Calgary using a non-probability sample procedure (snowball sample) with friends, relatives and colleagues. The information was collected by means of a self-administered survey. Two hundred and twenty five surveys were collected, 69 in Montreal and 156 in Calgary. Some of the surveys in Calgary were given out at Bow Valley College and Maple Leaf Academy.

An electronic list was used to contact people by email, as well as paper-based surveys. Eighty-three surveys were collected by email and 142 surveys were completed on paper for a total of 225 surveys.

The two surveys were developed in English. In Survey 1, the Camry Sedan and Lexus ES 350 shared 25% of the common components and in Survey 2; they shared 75% of the same components. The purpose of developing two surveys was to find out if there was a



difference in consumer behaviour among the lower and higher percentages of common components in the two cars.

### **2.4.3 Survey**

The survey's introduction was presented to respondents at the beginning of the survey, so that they realized that they were part of a research survey and that they could refuse to participate at any time. It was mentioned that the information gathered was anonymous, confidential, and strictly for the use of this study's final results.

Respondents took approximately 10 minutes to fill out this five-part survey. The first part aimed to unveil Attitudes, Purchase Intentions and Perceived Commonality towards two car brands (Camry Sedan and Lexus ES 350). – Question 1a – 2e.

For the second part of the survey, we created scenarios for the same two car brands, Camry Sedan and Lexus ES 350. A description for each car was presented, indicating the model, series, type of engine, price, generation, manufacturer and the *Announcement of Commonalities* (Survey 1 (25%) and Survey 2 (75%)). As previously, we used the same scales of *Attitudes*, *Purchase Intentions* and *Perceived Commonality*, to see if there was a difference between these three variables after mentioning in the scenario that both cars shared a percentage (either 25% or 75%) of common components. See Appendix 1 and 2.

The survey's third part was meant to: a) determine a descriptive fact about respondents (how many cars had they bought over the past seven years).

The final part of the survey was geared towards the respondents' descriptive statistics, such as city, province, age, gender, marital status, highest education level and gross income per year. This section was taken from Statistics Canada, and was used to classify the respondents of this study into different segments. – Question 5-1 - 5-6.

## Chapter Three. Data Analysis and Results

In this chapter, the results will be analyzed and interpreted with SPSS 19.0. The research model's hypotheses will be tested and we will also present the moderator effects.

In order to classify the respondents into different segments, we have provided their demographic profiles. We will conclude the chapter with a summary of the results obtained in this study.

### **3.1 Sample Characteristics**

For the final research 225 surveys were administered; 158 surveys were collected in 2008 and then 67 more surveys were collected in 2010, in order to increase the sample size to obtain more reliable research findings. The sample was collected in two different cities in Canada, 69.3% of respondents were from Calgary, Alberta and 30.7% from Montreal, Quebec. The design of the survey was balanced, almost the same number of both surveys was given out; 113 surveys with 25% as the *Announcement of Commonalities*, and 112 surveys with 75% as the *Announcement of Commonalities*.

Most of the respondents had bought a car at least once in the last seven years. Only 17.7% of them had never bought a car. Half of our respondents had previously bought one or two cars in the past seven years. Table 16: presents the number of cars bought over the past seven years by the 225 respondents.

**Table 11: Number of Cars Bought in the last 7 years**

<b>Variable</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Number of Cars Bought in the last 7 years</b>	0	40	17.7%
	1	68	26.2%
	2	73	32.4%
	3	28	12.4%
	4 or +	25	11.11%

We had a higher percentage of male respondents (62.6%) than female (37.3%). Most of the respondents had between 25 and 34 years (40.4%) and 35 to 44 years (40.8%). There were no respondents older than 65. More details on Table 12.

**Table 12: Respondents Gender**

<b>AGE</b>	<b>18-24</b>	<b>25-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65+</b>
<b>Frequency</b>	18	91	92	19	5	0
<b>Percentage</b>	8%	40.4%	40.8%	8.4%	2.2%	0%

Concerning the respondents Highest Education Level, our sample was comprised of a high percentage of university graduates, Professional Studies (73.3%), while 20.8% of respondents had a college education (Technical Studies), 5.3% of respondents had only a high school diploma and 0.4% had no degree at all. See Table 13.

**Table13: Respondents Highest Education Level**

<b>EDUCATION LEVEL</b>	<b>No Degree</b>	<b>High School</b>	<b>College</b>	<b>University</b>
<b>Frequency</b>	1	12	47	165
<b>Percentage</b>	0.4%	5.3%	20.8%	73.3%

Legally married individuals made up 67.1%, while 20.4% of the respondents were single (never legally married), 5.7% lived in Common Law, 4.8% was divorced, and 1.3% were respectively separated but still legally married and/or widowed. See Table 14.

**Table 14: Respondents Legal Status**

<b>LEGAL STATUS</b>	<b>Single</b>	<b>Married</b>	<b>Separated</b>	<b>Divorced</b>	<b>Widowed</b>	<b>Common Law</b>
<b>Frequency</b>	46	151	3	11	1	13
<b>Percentage</b>	20.4%	67.1%	1.3%	4.8%	0.4%	5.7%

Among the respondents, 34.6% of them earned between \$20,000 and \$39,999; 23.5% had an income of less than \$20,000; 19.1% had an income between \$40,000 and \$59,999; 14.6% had an income between \$60,000 and \$79,999; 4.8% had an income between \$80,000 and \$99,999; and 4.0% had an income of \$100, 000 or more. Even though there

was a high percentage of respondents with a university degree, most of them had an income averaging between \$20,000\$ and \$39,999. See Table 15.

**Table 15: Respondents Annual Gross Income**

<b>GROSS INCOME ANNUALLY</b>	<b>Frequency</b>	<b>Percentage</b>
Less than \$20 000	53	23.5%
Between \$20 000 and \$39 999	78	34.6%
Between \$40 000 and \$59 999	43	19.1%
Between \$60 000 and \$79 999	33	14.6%
Between \$80 000 and \$99 999	11	4.8%
\$100 000 and more	9	4.0%

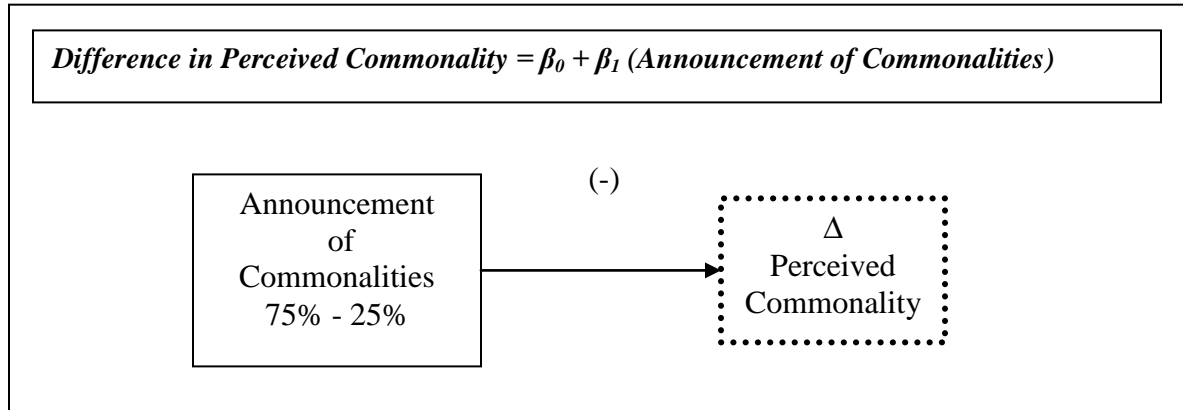
### **3.2 Manipulation Check**

We assessed a manipulation check through a single item in order to measure if the *Announcement of Commonalities* negatively influenced the Delta ( $\Delta$ ) **Perceived Commonality** of products. Through this measure we were able to confirm that respondents had processed what we told them of the *Announcement of Commonalities*.

We define the  $\Delta$  Perceived Commonality of products as the result of the Perceived Commonality (Measure 2 – after the *Announcement of Commonalities*) minus the

Perceived Commonality (Measure 1 – before the *Announcement of Commonalities*), as the single item was tested twice in the questionnaire. Responses were ranged in a 7-point Likert Scale. See Figure 4.

**Figure 4: Manipulation Check Model**



We tested it through a Linear Regression. The results provide support for our manipulation check. It gave us evidence that the Independent Variable (*Announcement of Commonalities*) does influence negatively  $\Delta$  *Perceived Commonality* of products; we obtained a p-value ( $p < .001$ ). So, there is evidence that an increase in *Announcement of Commonalities*, leads to an increase in  $\Delta$  *Perceived Commonality* of products. **See Table 16.**

**Table 16: Manipulation Check Regression**

Model	Sum of Squares	df	Mean Squares	F	Sig
Regression	38.282	1	38.282	11.237	<b>.001</b>

Independent Variable: *Announcement of Commonalities*  
 Dependent Variable:  $\Delta$  *Perceived Commonality*

## 3.2 Main Effects

### 3.2.1 Hypothesis H1a and H1b

**Hypothesis 1a** states that Attitudes towards a high-end brand (Lexus) are negatively affected by the *Announcement of Commonalities* with a low-end brand (Camry).

**Hypothesis 1b** states that Attitudes towards a low-end brand (Camry) are positively affected by the *Announcement of Commonalities* with a high-end brand (Lexus).

In order to test hypothesis 1a and 1b, a repeated measure ANOVA was performed where the within subject factor were the Car Models (Attitudes Camry and Attitudes Lexus) and the between subject factor was the *Announcement of Commonalities*.

Mauchly's Test of Sphericity Test Table shows the results of one of the assumptions of ANOVA with repeated measures. We can see in the **Table 17** that the significance level is below .05 (it is < .0005).

**Table 17: Mauchly's Test of Sphericity Table**

Within Subjects Effect	Mauchly's W	Approx. Chi Square	Df	Sig.
Car Model	.515	147.103	5	<b>.000</b>

Measures: Attitudes



**Table 18: Pairwise Comparison Table**

(I) CarModel	(J) CarModel	Mean Difference (I) – (J)	Std.Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Att Lexus Measure 1	Att Lexus Measure 2	.050	.060	1.000	-.109	.210
Att Lexus Measure 1	Att Camry Measure 1	.591	.082	<b>.000</b>	.373	.810
Att Lexus Measure 1	Att Camry Measure 2	.400	.094	<b>.000</b>	.150	.650
Att Lexus Measure 2	Att Camry Measure 2	.541	.096	<b>.000</b>	.286	.796
Att Camry Measure 1	Att Camry Measure 2	.349	.086	<b>.000</b>	.121	.578

Measures: Attitudes

The results presented in the Pairwise Comparisons Table (see Table 18), show us the results of the Bonferroni post-hoc test, which allows us to see that there was no significant difference between Attitudes Lexus (Measure 1 - before the Announcement of Commonalities) and Attitudes Lexus (Measure 2 – after the Announcement of Commonalities),  $P = 1.000$ . Conversely, there were significant differences between all other variables including; Attitudes Lexus (Measure 1) and Attitudes Camry (Measure 1),

$P = .000$ , Attitudes Lexus (Measure 1) and Attitudes Camry (Measure 2),  $P = .000$ , Attitudes Lexus (Measure 2) and Attitudes Camry (Measure 2),  $P = .000$ , as well as Attitudes Camry (Measure 1) and Attitudes Camry (Measure 2). We can, therefore, conclude that H1a is not supported and H1b is supported. Attitudes are represented as (ATT).

### 3.2.3 Hypothesis H2a and H2b

**Hypothesis 2a** states that Purchase intentions towards a high-end brand (Lexus) are negatively affected by the *Announcement of Commonalities* with a low-end brand (Camry).

**Hypothesis 2b** states that Purchase intentions towards a low-end brand (Camry) are negatively affected by the *Announcement of Commonalities* with a high-end brand (Lexus).

We have tested hypothesis 2a and 2b, using a repeated measure ANOVA, where the within subject factors were the Purchase Intentions (towards Lexus and Camry) and the between subjects factors were the Car Models (Attitudes Camry and Attitudes Lexus).

As a result, Mauchly's Test of Sphericity Test Table shows us the result of one of the assumptions of ANOVA with repeated measures. We can see in the Table 19 that the significance level is below .05 (it is  $< .0005$ ).

**Table 19: Mauchly's Test of Sphericity Table**

Within Subjects Effect	Mauchly's W	Approx. Chi Square	Df	Sig.
Purchase Intentions	.058	47.560	5	<b>.000</b>

Measures: Attitudes

The results presented in the Pairwise Comparisons Table (see Table 20), show us the results of the Bonferroni post-hoc test, which allows us to see the specific means that differed. We can see that there was a significant difference between Purchase Intentions towards Lexus (Measure 1) and Purchase Intentions towards Lexus (Measure 2),  $P = .000$  and there was also a significant difference between Purchase Intentions towards Camry (Measure 1) and Purchase Intentions towards Camry (Measure 2),  $P = .006$ . We can, therefore, conclude that H2a and H2b are supported. See results on Table 20, purchase intentions are represented as PI.

**Table 20: Pairwise Comparison Table**

(I) CarModel	(J) CarModel	Mean Difference (I) - (J)	Std.Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
PI Lexus Measure 1	PI Lexus Measure 2	.292	.045	<b>.000</b>	.157	.427
PI Lexus Measure 1	PI Camry Measure 1	.301	.114	.100	-.037	.639
PI Lexus Measure 1	PI Camry Measure 2	.047	.160	1.000	-.428	.521
PI Lexus Measure 2	PI Camry Measure 1	.009	.106	1.000	-.304	.323
PI Camry Measure 1	PI Camry Measure 2	-.254	.065	<b>.006</b>	-.446	-.063

Measures: Purchase Intentions

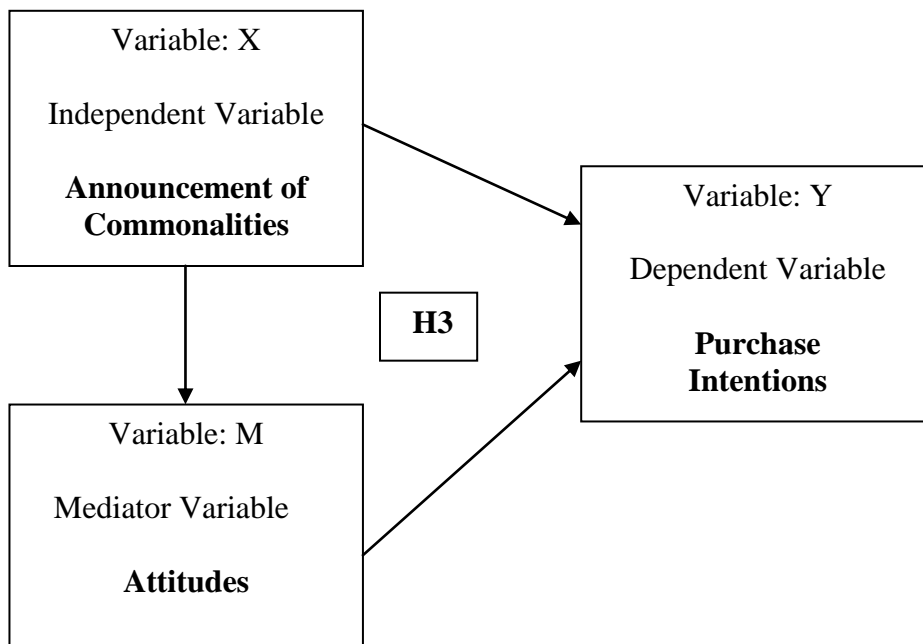
### **3.3 Mediation Effect**

#### **3.3.1 Hypothesis H3**

**Hypothesis 3** states that the relationship between commonalities and purchase intentions is mediated by attitudes towards the brand.

Authors tested Hypothesis 3 using an Univariate ANOVA and the Bootstrapping Method (Efron and Tibshirani, 1993), where the dependent variable was (M\*Y; ATII\*PI) and the fixed factor was the *Announcement of Commonalities* (ACC). Below in Figure 5, we explain the mediation effect that was tested. These study variables: X stands for the independent variable, M as the mediator variable and Y as the dependent variable. The mediator effect is represented as  $X \rightarrow M \rightarrow Y$ , in our study: Announcement of Commonalities  $\rightarrow$  Attitudes  $\rightarrow$  Purchase Intentions.

**Figure 5: The Tested Mediation Effect of Attitudes**



The Bootstrap Specifications Table shows the settings used during the sampling method. A thousand bootstrap samples were used during resampling. In both, the Parameters

Estimate Table (non-bootstrapped) and the Bootstrap Method for Parameters Estimate Tables shows the significance value of .000 and .001 for the Intercept (ATTI\*PI) which is less than .05. This suggests that Attitudes towards Brands is a Mediator of Announcement of Commonalities and Purchase Intentions. The non-bootstrapped table standard error and confidence intervals are bigger and wider than the bootstrapped table. We can, therefore, conclude that H3 is supported.

**Table 21: Bootstrap Specifications**

<b>Sampling Method</b>	Simple
<b>Number of Samples</b>	1000
<b>Confidence Interval Level</b>	95%
<b>Confidence Interval Type</b>	Percentile

**Table 22: Test of Between-Subjects Effects**

<b>Source</b>	<b>Type III Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Intercept	4.280E13	1	4.280E13	73.773	<b>.000</b>

Dependent Variable: ATTI\_PI

**Table 23: Parameters Estimate**

Effect	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a x b (ATTI*PI)	425429.955	72293.577	5.885	<b>.000</b>	282963.970	567895.940

Dependent Variable: ATTI\*PI

**Table 24: Bootstrap Method for Parameters Estimate**

Effect	B	Bootstrap				
		Bias	Std. Error	Sig. (2- tailed)	95% Confidence Interval	
Lower	Upper					
a x b (ATTI*PI)	425429.955	793.076	67139.376	<b>.001</b>	306527.349	568200.674

Dependent Variable: ATTI\*PI, Results based on 1000 bootstrap samples.

**Table 25: Summary of Results of Tested Hypotheses**

<b>Hypotheses</b>	<b>Result</b>
<b>H1a:</b> Attitudes towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).	Not Supported
<b>H1b:</b> Attitudes towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).	Supported
<b>H2a:</b> Purchase intentions towards a high-end brand (Lexus) are negatively affected by the announcement of commonalities with a low-end brand (Camry).	Supported
<b>H2b:</b> Purchase intentions towards a low-end brand (Camry) are positively affected by the announcement of commonalities with a high-end brand (Lexus).	Supported
<b>H3:</b> The relationship between commonalities and purchase intentions is mediated by attitudes towards the brand.	Supported



## **Chapter Four. Discussion**

The results of our research indicate the role of the *Announcement of Commonalities* in consumer response to the multibranded platform approach. In this Chapter we will compare our results to the findings of previous authors.

### **4.1 Discussion**

#### **4.1.1 Role of the Announcement of Commonalities**

Manufacturing companies use the platform concept to reduce the process of product development and production costs (Meyer and DeTore, 2001; Liu et al, 2010). It is also used to reduce cost in the procurement of components (Meyer, 1997) and improve relationships with suppliers (Wilhelm, 1997). Our results confirm that one's purchase decision is not directly affected by the *Announcement of Commonalities* (multibranded platforms), but through the Attitudes towards the brand.

Our study also confirms that that the higher the percentage of shared components, the higher the perceived commonality towards it (Muffatto and Roveda, 2000; Robertson and Ulrich, 1998). Contrary to our expectations, commonalities are perceived but they do not have any negative influence on high-end brands (Lexus). This result shows us that the Lexus brand is very well positioned on consumer's mind. The luxury brand has already a

value built in the market; Lexus does communicate special differential attributes such as unique features, exclusivity and prestige.

The main motivations for purchasing luxury brands are the need for sociability and self-expression (Vigneron and Johnson 1999). Lexus is a luxury brand developed to a specific target segment, namely consumers who convey a certain self and social image and enjoy feeling unique (Tian and al. 2001), mostly people that have high income. Not everyone can purchase a luxury car, so individuals that can afford them try to seek a unique product that gives them a certain status in society. What really matters to them is the luxury differentiation high-end brands (such as Lexus) have in terms of price, value and accessories as they want to feel unique and set apart from others (Snyder and Fromkin, 1977).

It was also confirmed what it is demonstrated on the existing co-branding literature today, high-end brands do share their positive brand equity with low-end brands (Hadjicharalambous, 2010; Washburn et al., 2000, 2004; Dickinson and Health, 2008). We confirmed that Lexus transferred positive influence to the attitudes towards the low-end brand (Camry), as well as those positive attitudes lead to positive purchase intentions.

Camry is a more ordinary brand targeted to another specific consumer segment likely with lower income: a more rational group who do not feel the need to create a certain social image. In our study, this type of consumer reaffirmed their loyalty to the brand as

they discovered through the scenario that we introduced that the low-end brand (Camry) shared a percentage of common components with Lexus. This illustrates positive aspects for from the high-end brand to the low-end brand.

So in conclusion, authors did find out those manufacturing companies, in particular automobile manufacturers can continue to benefit from the multibranded platform production. Launching several products for the diversified market, keeping production costs at a minimal level as they can and allocate budget for their Marketing purposes in order to position products with different strategies and value propositions does work successfully.

## ***4.2 Managerial Implications***

Individuals' responses towards multibranded platforms have not received much attention from manufacturers, especially does at the automobile industry. This study's findings reveal the opportunity for organizations to engage in these initiatives.

We can highlight two interesting points. Firstly, brand managers should be aware that the dynamics employed to launch and differentiate their portfolio of products to the different customer segments does have high value. As each individual evaluate products according to their personal needs, values and interests (Zaichkowsky, 1985a).

Secondly, the *multibranded platform* approach is advantageous from the Planning, Design and Operations Management point of view, as manufacturers are able to reduce production costs, lower lead times and decrease assembly time. The results of this study imply that Automobile Manufacturers have effectively balanced the commonality and differentiation needs within a product family, creating commercial strategies to protect their luxury brands value proposition and sales margins. There are several examples of corporate organizations to engage in similar initiatives, such as communicating consumers that low-end products are composed of some luxury components. This proposed strategy will add some value to the low-end brand. Sales revenues can easily duplicate. There are several examples of automobile corporate organizations that have in their portfolios both high-end brands and low-end brands that could consider the multibranded platform as a strategy such as Honda and Acura, Nissan and Infiniti, Volkswagen and Audi, Ford and Jaguar (Please note that in 2010 Ford sold Jaguar to Tata).

### **4.3 Limitations**

This research has several notable limitations. To begin, let us point out the limitations of the quality of responses. This study's sample is composed of a mixture of students and non-students. The use of students in marketing literature has been widely criticized (Peterson, 2001). Future studies on this subject should be done with representative samples, as responses are mostly based on perceptions and not on experiences. It would

have been interesting to administer the surveys to respondents who had previously purchased luxury automobiles or those whose income make them a candidate to do it so, as might have varied.

Another limitation was within the factor (Attitudes Lexus and Attitudes Camry) we did not counter balance the surveys. Half of the respondents should have been presented with a Camry-Lexus sequence and half with the Lexus-Camry one.

In addition, Camry was only compared to Lexus and not to the other brands in the market place. Camry belongs to the lowest top-end car category and not to a low-end one. Those who are able to purchase Camry are doing very good economically. Moreover, the fact that consumers select any Toyota brand may be due to the social image it has over other brands such as Nissan or Honda. This study focuses only in the case of Lexus and Camry, although authors do acknowledge more brands in the market place. Future research should aim testing with other automobile brands and different contexts in order to evaluate the generalization of its findings.

#### ***4.4 Future Research***

For instance, the same type of analysis could be done with consumers who have previously purchased luxury models or even on Lexus owners in particular. Another possible study could carry out the same research but use other known or unknown brands in their scenario to evaluate differences among specific Attitudes and Purchase

Intentions. Finally it might be interesting to do the same study with another product category to verify if results vary among them.

## **APPENDIX 1: Survey 1 (25%)**

### **SURVEY**

The following pages contain an anonymous questionnaire, which we invite you to complete.

This questionnaire was developed as part of a master's thesis at HEC Montréal with the goal to find the impact of consumers toward products.

Please answer the questions included in this questionnaire without hesitation, because generally, your first impressions best reflect your true opinions. There is no time limit for completing the questionnaire, although we have estimated that it should take about 10 minutes.

The information gathered is anonymous and shall remain strictly confidential. It will be used only to advance knowledge and for the dissemination of the overall results at academic or professional forums.

You are completely free to refuse to participate in this project and you may decide to stop answering the questions at any time. Completing this questionnaire will be considered as your consent to participate in our research project.

If you have any questions about this research, please contact the senior researcher, Mrs. Tatiana Navarro, at the telephone number or email address indicated below.

The research ethics committee of HEC Montréal has determined that the collection of data linked to the present study meets the ethics standards for research involving human subjects. If you have any questions related to ethics, please contact the committee secretary at (514) 340-6258 or at [cer@hec.ca](mailto:cer@hec.ca)

Thank you very much for your participation!

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## PART I

1a) What do you think of the Camry Sedan?

Camry is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is a good product.
I dislike Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Camry.
I feel negative toward Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Camry.
Camry is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is nice.
Camry is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is pleasant.
Camry is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

1b) Would you purchase the Camry Sedan?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

1c) What do you think of the Lexus ES?

Lexus is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is a good product.
I dislike Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Lexus.
I feel negative toward Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Lexus.
Lexus is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is nice.
Lexus is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is pleasant.
Lexus is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.



1d) Would you purchase the Lexus ES?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

1e) The Camry Sedan is \_\_\_\_\_ to the Lexus ES 350.

Much more different than similar	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Much more similar than different
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## PART II: SCENARIO

<b>Camry Sedan</b>
<b>Series: Family of mid-size sedan.</b>
<b>Built: Platform with a V6 engine</b>
<b>Price: from \$18,570</b>



Figure 1: <http://www.toyota.com/camry/photo-gallery.html>

Camry Sedan belongs to the mid size family sedan segment manufactured by Toyota. Series have been improved since 1980. Today, on its 7<sup>th</sup> generation, it shares 25% of same components with the Lexus ES 350.

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<b>Lexus ES 350</b>
<b>Series: Family of mid-size luxury sedan.</b>
<b>Built: Platform with a V6 engine</b>
<b>Price: from \$42,900</b>



Figure 2: <http://www.lexus.ca>

Lexus ES 350 belongs to the family of mid-size luxury sedan manufactured by Toyota. Series have been improved since 1989. Today, on its 5<sup>th</sup> generation, it shares 25% of same components with the Camry Sedan.

2a) What do you think of the Camry Sedan?

Camry is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is a good product.
I dislike Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Camry.
I feel negative toward Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Camry.
Camry is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is nice.
Camry is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is pleasant.
Camry is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

2b) Would you purchase the Camry Sedan?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

2c) What do you think of the Lexus ES?

Lexus is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is a good product.
I dislike Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Lexus.
I feel negative toward Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Lexus.
Lexus is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is nice.
Lexus is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is pleasant.
Lexus is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

2d) Would you purchase the Lexus ES?

	Strongly Disagree						Strongly Agree
I would consider buying Lexus.	1	2	3	4	5	6	7
I will purchase Lexus.	1	2	3	4	5	6	7
There is a strong likelihood that I will buy Lexus.	1	2	3	4	5	6	7

2e) The Camry Sedan is \_\_\_\_\_ to the Lexus ES 350.

Much more different than similar	1	2	3	4	5	6	7	Much more similar than different
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### PART III

3a) How many cars have you bought in the last 7 years?

- a. 0
- b. 1
- c. 2
- d. Other: \_\_\_\_\_

3b) Circle the answers that best reflect your opinions.

	Strongly Disagree						Strongly Agree
a) It is worth the extra cost to drive an attractive and attention-getting car.	1	2	3	4	5	6	7
b) I prefer to drive a car with a strong personality of its own.	1	2	3	4	5	6	7
c) I have sometimes imagined being a race driver.	1	2	3	4	5	6	7
d) Cars offer me relaxation and fun when life's pressures build up.	1	2	3	4	5	6	7
e) Sometimes I get too wrapped in my car.	1	2	3	4	5	6	7
f) Cars are nothing more than appliances.	1	2	3	4	5	6	7
g) I generally feel a sentimental attachment to the cars I own.	1	2	3	4	5	6	7
h) Driving my car is one way I often use to relieve daily	1	2	3	4	5	6	7

pressure.							
	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
i) I do not pay much attention to car advertisements in magazines or on TV.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
j) I get bored when other people talk to me about their cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
k) I have little or no interest in car races.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
l) Driving along an open stretch of road seems to “recharge” me in body, mind and spirit.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
m) It is natural that young people become interested in cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
n) When I’m with a friend, we often end up talking about cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
o) I don’t like to think of my car as being ordinary.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
p) Driving my car is one of the most satisfying and enjoyable things I do.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
q) I enjoy discussing cars with my friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

#### **PART IV**

4a) Circle the answers that best reflect your opinions.

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
a) I am very attracted to cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
b) I tend to be a car leader rather than a car follower.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
c) I am more likely to buy a car if it is scarce.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
d) I would prefer to have car custom-made than have them ready-made.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
e) I enjoy having cars that others do not.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
f) I rarely pass up the opportunity to order custom features on the cars I buy.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
g) I like to try new cars before others do.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
h) I enjoy buying cars that are	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

different and unusual.							
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4b) Circle the answers that best reflect your opinions.

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
a) I automatically know which brands of car to buy.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
b) I am loyal to one brand of car.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
c) At the place purchase, I can visually detect my preferred car brand without much effort.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
d) I can immediately identify my preferred car brand even if it's located with other brands.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
e) When I purchase my preferred car brand, I do not pay attention to the other brands.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
f) I enjoy learning about cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
g) I will search for the latest information on cars before I purchase one.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
h) I keep current on the most recent developments of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
i) I consider myself knowledgeable on cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
j) My knowledge of cars helps me understand very technical information about this product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
k) I use my knowledge of cars to verify that adverting claims are in fact true.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
l) I can recall almost all existing brands of cars from memory.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
m) I can recognize almost all brand names of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
n) I call recall product-specific attributes of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
o) I can recall brand-specific attributes of the various brands of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

**PART V**

1. City \_\_\_\_\_ Province: \_\_\_\_\_

2. Age range:

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65 years and over

3. Gender:

- Male     Female

4. Legal Marital Status:

- Never legally married (single)
- Legally married (and not separated)
- Separated but still legally married
- Divorced
- Widowed
- Common-law

5. Highest Education Level:

- No degree
- Completed High School Diploma
- College, Cegep, or other non-university certificate or diploma
- University degree, certificate or diploma

6. Gross income per year:

- Less than 20 000\$
- Between 20 000 \$ and 39 999 \$
- Between 40 000 \$ and 59 999 \$
- Between 60 000 \$ and 79 999 \$
- Between 80 000 \$ and 99 999 \$
- 100 000 \$ and more

Commentaries (*Optional*):

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**THANKS for your collaboration!**

## **APPENDIX 2: Survey 2 (75%)**

### **SURVEY**

The following pages contain an anonymous questionnaire, which we invite you to complete.

This questionnaire was developed as part of a master's thesis at HEC Montréal with the goal to find the impact of consumers toward products.

Please answer the questions included in this questionnaire without hesitation, because generally, your first impressions best reflect your true opinions. There is no time limit for completing the questionnaire, although we have estimated that it should take about 10 minutes.

The information gathered is anonymous and shall remain strictly confidential. It will be used only to advance knowledge and for the dissemination of the overall results at academic or professional forums.

You are completely free to refuse to participate in this project and you may decide to stop answering the questions at any time. Completing this questionnaire will be considered as your consent to participate in our research project.

If you have any questions about this research, please contact the senior researcher, Mrs. Tatiana Navarro, at the telephone number or email address indicated below.

The research ethics committee of HEC Montréal has determined that the collection of data linked to the present study meets the ethics standards for research involving human subjects. If you have any questions related to ethics, please contact the committee secretary at (514) 340-6258 or at [cer@hec.ca](mailto:cer@hec.ca)

Thank you very much for your participation!

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## PART I

1a) What do you think of the Camry Sedan?

Camry is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is a good product.
I dislike Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Camry.
I feel negative toward Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Camry.
Camry is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is nice.
Camry is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is pleasant.
Camry is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

1b) Would you purchase the Camry Sedan?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

1c) What do you think of the Lexus ES?

Lexus is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is a good product.
I dislike Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Lexus.
I feel negative toward Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Lexus.
Lexus is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is nice.
Lexus is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is pleasant.
Lexus is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

1d) Would you purchase the Lexus ES?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

1e) The Camry Sedan is \_\_\_\_\_ to the Lexus ES 350.

Much more different than similar	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Much more similar than different
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## PART II: SCENARIO

<b>Camry Sedan</b>
<b>Series: Family of mid-size sedan.</b>
<b>Built: Platform with a V6 engine</b>
<b>Price: from \$18,570</b>



Figure 1: <http://www.toyota.com/camry/photo-gallery.html>

Camry Sedan belongs to the mid size family sedan segment manufactured by Toyota. Series have been improved since 1980. Today, on its 7<sup>th</sup> generation, it shares 75% of same components with the Lexus ES 350.

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<b>Lexus ES 350</b>
<b>Series: Family of mid-size luxury sedan.</b>
<b>Built: Platform with a V6 engine</b>
<b>Price: from \$42,900</b>



Figure 2: <http://www.lexus.ca>

Lexus ES 350 belongs to the family of mid-size luxury sedan manufactured by Toyota. Series have been improved since 1989. Today, on its 5<sup>th</sup> generation, it shares 75% of same components with the Camry Sedan.

2a) What do you think of the Camry Sedan?

Camry is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is a good product.
I dislike Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Camry.
I feel negative toward Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Camry.
Camry is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is nice.
Camry is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is pleasant.
Camry is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Camry is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

2b) Would you purchase the Camry Sedan?

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
I would consider buying Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
I will purchase Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
There is a strong likelihood that I will buy Camry.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

2c) What do you think of the Lexus ES?

Lexus is a bad product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is a good product.
I dislike Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I like Lexus.
I feel negative toward Lexus.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I feel positive toward Lexus.
Lexus is awful.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is nice.
Lexus is unpleasant.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is pleasant.
Lexus is unattractive.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	Lexus is attractive.
I approve of the product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	I disapprove of the product.

2d) Would you purchase the Lexus ES?

	Strongly Disagree						Strongly Agree
I would consider buying Lexus.	1	2	3	4	5	6	7
I will purchase Lexus.	1	2	3	4	5	6	7
There is a strong likelihood that I will buy Lexus.	1	2	3	4	5	6	7

2e) The Camry Sedan is \_\_\_\_\_ to the Lexus ES 350.

Much more different than similar	1	2	3	4	5	6	7	Much more similar than different
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### PART III

3a) How many cars have you bought in the last 7 years?

- a. 0
- b. 1
- c. 2
- d. Other: \_\_\_\_\_

3b) Circle the answers that best reflect your opinions.

	Strongly Disagree						Strongly Agree
a) It is worth the extra cost to drive an attractive and attention-getting car.	1	2	3	4	5	6	7
b) I prefer to drive a car with a strong personality of its own.	1	2	3	4	5	6	7
c) I have sometimes imagined being a race driver.	1	2	3	4	5	6	7
d) Cars offer me relaxation and fun when life's pressures build up.	1	2	3	4	5	6	7
e) Sometimes I get too wrapped in my car.	1	2	3	4	5	6	7
f) Cars are nothing more than appliances.	1	2	3	4	5	6	7
g) I generally feel a sentimental attachment to the cars I own.	1	2	3	4	5	6	7
h) Driving my car is one way I often use to relieve daily	1	2	3	4	5	6	7

pressure.							
	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
i) I do not pay much attention to car advertisements in magazines or on TV.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
j) I get bored when other people talk to me about their cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
k) I have little or no interest in car races.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
l) Driving along an open stretch of road seems to “recharge” me in body, mind and spirit.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
m) It is natural that young people become interested in cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
n) When I’m with a friend, we often end up talking about cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
o) I don’t like to think of my car as being ordinary.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
p) Driving my car is one of the most satisfying and enjoyable things I do.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
q) I enjoy discussing cars with my friends.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

#### **PART IV**

4a) Circle the answers that best reflect your opinions.

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
a) I am very attracted to cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
b) I tend to be a car leader rather than a car follower.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
c) I am more likely to buy a car if it is scarce.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
d) I would prefer to have car custom-made than have them ready-made.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
e) I enjoy having cars that others do not.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
f) I rarely pass up the opportunity to order custom features on the cars I buy.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
g) I like to try new cars before others do.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
h) I enjoy buying cars that are	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

different and unusual.							
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4b) Circle the answers that best reflect your opinions.

	<b>Strongly Disagree</b>						<b>Strongly Agree</b>
a) I automatically know which brands of car to buy.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
b) I am loyal to one brand of car.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
c) At the place purchase, I can visually detect my preferred car brand without much effort.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
d) I can immediately identify my preferred car brand even if it's located with other brands.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
e) When I purchase my preferred car brand, I do not pay attention to the other brands.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
f) I enjoy learning about cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
g) I will search for the latest information on cars before I purchase one.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
h) I keep current on the most recent developments of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
i) I consider myself knowledgeable on cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
j) My knowledge of cars helps me understand very technical information about this product.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
k) I use my knowledge of cars to verify that adverting claims are in fact true.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
l) I can recall almost all existing brands of cars from memory.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
m) I can recognize almost all brand names of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
n) I call recall product-specific attributes of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
o) I can recall brand-specific attributes of the various brands of cars.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

**PART V**

7. City \_\_\_\_\_ Province: \_\_\_\_\_

8. Age range:
- 18-24 years
  - 25-34 years
  - 35-44 years
  - 45-54 years
  - 55-64 years
  - 65 years and over

9. Gender:
- Male     Female

10. Legal Marital Status:
- Never legally married (single)
  - Legally married (and not separated)
  - Separated but still legally married
  - Divorced
  - Widowed
  - Common-law

11. Highest Education Level:
- No degree
  - Completed High School Diploma
  - College, Cegep, or other non-university certificate or diploma
  - University degree, certificate or diploma

12. Gross income per year:
- Less than 20 000\$
  - Between 20 000 \$ and 39 999 \$
  - Between 40 000 \$ and 59 999 \$
  - Between 60 000 \$ and 79 999 \$
  - Between 80 000 \$ and 99 999 \$
  - 100 000 \$ and more

Commentaries (*Optional*):

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**THANKS** for your collaboration!



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