



Consumers' attitude and adoption of location-based coupons: The case of the retail fast food sector



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ABSTRACT

This study builds on the theory of parallel distributed processing, Thaler's exchange theory, and the trust theory to extend our existing knowledge on the location-based coupons literature in the retail fast food sector. Based on several location-based coupons provided by fast food chains, a mock coupon was designed and an online survey was conducted on a sample of 228 Canadians. Attitude toward location-based advertising is found to be significantly determined by consumers' trust and perception of control. Attitude toward location-based coupons, however, is driven by monetary benefits as well as convenience and hedonic motives. Attitude toward location-based coupons is significantly predicted by attitude toward location-based advertising. Both of them have a significant impact on consumers' intention of using location-based coupons. The study provides strong evidence supporting Thaler's exchange theory according to which customers are motivated by monetary benefits as well as convenience and hedonic aspects.

1. Introduction

The widespread use of smart mobile devices and the recent advances in technologies have provided many possibilities of personalizing the promotional message sent to consumers within a variety of Global Positioning Systems (GPS) and have thereby dramatically fostered the development of location-based advertising (Okazaki and Taylor, 2008). The latter refers to the “marketer-controlled information customized for recipients’ geographic positions and received on mobile communication devices” (Bruner and Kumar, 2007, p. 3). As a result of the development of location-based advertising, location-based coupons emerged as a new element of the promotional mix strategy. Location-based coupons help retailers to send personalized promotional contents and marketing messages to nearby consumers (Unni and Harmon, 2007). This ‘new’ form of couponing is gaining great interest among firms because it allows a “better interactivity and connectivity” with customers (Karjaluoto et al., 2008, p. 242). It includes both price and special offers, such as location-based coupons, and non-price offers such as brand ads, polling, location-based reminders, and geotags (i.e., an electronic tag that assigns a geographical location (e.g., the vendor's address) to a posting on a social media website, a digital photograph, etc.) (Barwise and Strong, 2002; Bruner and Kumar, 2007). The current research focuses on the former aspect of coupons (i.e., price and special offers).

The main reasons for studying this concept are as follows. First, since location-based coupons are relatively a new form of couponing, they are understudied and the literature in this area is scant. To the best of the authors’ knowledge, most studies on mobile marketing focus on location-based services in general (Banerjee and Dholakia, 2012; Bruner and Kumar, 2007; Ketelaar et al., 2017) or on mobile coupons (Dickinger and Kleijnen, 2008; Hsu et al., 2006; Im and Ha, 2012, 2013; Jayasingh and Eze, 2009, 2010, 2012). The latter, which can be viewed as an earlier version of location-based coupons, are defined as “an electronic ticket solicited and/or delivered by mobile phone that can be exchanged for a financial discount or rebate when purchasing a product or service” (Mobile Marketing Association, 2007, p. 1). Despite their potential benefits for consumers, the introduction of mobile coupons has faced resistance from consumers (e.g., Ha and Im, 2014). In 2013, thus three years after their introduction, mobile coupons accounted only for two percent of all coupon redemptions (Mobile Marketing Association, 2013). The introduction of location-based coupons seems to suffer the same fate as mobile coupons (i.e., resistance from consumers). Therefore, investigating consumers’ attitude toward and intention of using location-based coupons warrants further attention in order for scholars and marketers to understand how to enhance their adoption by consumers. Another drawback of past studies is that some of them extensively rely on information technology (IT) adoption theories, such as the technology acceptance model (TAM, Davis, 1989), to

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examine mobile services adoption behavior (Jayasingh and Eze, 2009; Lopez-Nicolas et al., 2008; Nysveen et al., 2005). However, these theories alone fail to thoroughly explain consumers' behavior in the context of mobile services because they mainly focus on the technology perspective and disregard the consumer perspective (Kim et al., 2007; Kleijnen et al., 2007; Liu et al., 2015). Considering additional theories would better shed light on the main drivers of location-based coupon adoption and consumers' behavioral intentions, i.e., "why [location-based] coupons are used", rather than describing and inventorying users, i.e., "who uses [location-based] coupons" (Mittal, 1994, p. 533).

Based on the aforementioned research motives and concurring with Fortin (2000) among others, it is worth developing a consumer behavioral model to thoroughly investigate the adoption of location-based coupons and, ultimately, pave the way for future research. To achieve this, the present study draws from the theory of parallel distributed processing (McClelland et al., 1986), Thaler's (1985) exchange theory, and the trust theory (Mayer et al., 1995) to develop a comprehensive model on the determinants of location-based coupon adoption. More specifically and in addition to the role of utilitarian benefits, the study explores the role of hedonic motivations, trust, and control in affecting attitude toward location-based coupons. Furthermore, it explores the role of the hierarchical formation of attitudes by investigating the relationship between consumers' general attitude toward location-based advertising and their specific attitude toward location-based coupons. It is expected that the results of this study would help practitioners and marketing executives to improve the uptake of location-based coupons and boost consumers' acceptance and redeeming intention.

The remainder of the paper is organized as follows. The second section deals with the literature review and proposes the study's hypotheses. The third section explains the methodology adopted to undertake the empirical research. Results and discussions are presented in sections four and five, respectively. Finally, the paper presents the theoretical and managerial implications in section six and conclusion, limits, and future directions in section seven.

2. Literature review and hypotheses

2.1. Genesis of location-based coupons

Generally, the couponing strategy is used as an integral part of an advertising policy (Bruner and Kumar, 2007; Unni and Harmon, 2007). It is a way to reduce prices (the primary goal), augment revenues (sales, profits, and market shares), boost store traffic, reduce overstocked inventory, and increase new product/service awareness (Achadinha et al., 2014; Babakus et al., 1988; Dickinger and Kleijnen, 2008). Originally, firms solely used paper coupons. However, with the increasing role of technology, they have upgraded their marketing strategies by progressively considering online coupons (e.g., coupons provided on the firm's website), then mobile coupons (i.e., "an electronic ticket solicited and/or delivered by mobile phone that can be exchanged for a financial discount or rebate when purchasing a product or service" (Mobile Marketing Association, 2007, p. 1), and lately location-based coupons (e.g., coupons sent to mobile devices by using location-based services). Thus, and as illustrated in Fig. 1, location-based coupons are the 'natural' result of the improvement in location-based advertising, which in turn is the outcome of the development of mobile advertising and location-based services.

Without any doubt, mobile coupons generate several benefits for firms by allowing them, for instance, to reach the target audience in a much easier and cost efficient way (Achadinha et al., 2014; Fortin, 2000). Location-based coupons, however, are likely to yield more benefits and contribute to consumer empowerment since they offer day-to-day price reductions, lessen searching costs and cognitive load, take into consideration the consumer's location and tailor the offers to his/her preferences, and respect the consumer's privacy since they require his/her prior consent (Achadinha et al., 2014; Audrain-Pontevia et al.,

2013; DelVecchio, 2005; Fortin, 2000; Kang et al., 2006). Despite their potential benefits, the past few studies (see Table 1) have mainly focused on the adoption and redemption of mobile coupons (e.g., Dickinger and Kleijnen, 2008; Hsu et al., 2006; Im and Ha, 2012, 2013; Jayasingh and Eze, 2009, 2010, 2012), consumers' attitude toward location-based advertising (e.g., Bruner and Kumar, 2007) and, to a lesser extent, the profiling and segmentation of mobile coupon users (e.g., Banerjee and Yancey, 2010; Im and Ha, 2012). Therefore, investigating location-based coupons is deemed important to shed light on this particular aspect of mobile marketing and location-based advertising. To do so, it is of primordial importance to understand consumers' attitude toward location-based advertising (i.e., as a general attitude) and location-based coupons (i.e., as a specific attitude), the determinants of these attitudes, and their usage intention.

2.2. Attitudes toward location-based advertising, location-based coupons, and usage intention

Before explaining the impacts of attitude toward location-based advertising and attitude toward location-based coupons on intention of using location-based coupons, this section ought to first explain the interplay between both these attitudes. More specifically, it discusses how an individual general attitude toward location-based advertising affects his/her specific attitude toward location-based coupons. To achieve this, the theory of parallel distributed processing is considered. This theory argues in favor of the attitude transference process. It asserts that a (favorable) general attitude (e.g., attitude toward location-based advertising) is transmitted or diffused to (favorable) specific attitudes (e.g., attitude toward location-based coupons).

The theory of parallel distributed processing posits that processing any specific information is thought of as the mechanism whereby a specific set of processing elements (e.g., perceptions, memories, and feelings), known as units, coherently interrelated by weighted connections, is activated or excited (McClelland et al., 1986). This suggests that "the activation of one element of the embedded system triggers the activation of other elements such that the final state of the system is the result of stimulation of the whole network" (Prislin and Ouellette, 1996, p. 846).

When individuals face an ambiguous situation or novel topic, they strive to understand it through the inspection and exploration of the set of typical elements that make up that situation or topic (Prislin and Ouellette, 1996). By doing so, they may identify some elements in common with previous encountered (known) situations (Prislin and Ouellette, 1996). Information processing activates these common elements since they are highly relevant, structurally coherent, and thereby accessible to be recalled from memory (Prislin and Ouellette, 1996; Prislin et al., 1998). Prislin and Ouellette's (1996) experimental studies conclude that i) general attitudes are likely to exert a strong impact on specific attitude formation, and ii) both of them are significantly related to behavioral intentions.

Prislin and Ouellette (1996, p. 845) report that "Wood et al. (1995) found that general attitudes characterized by high evaluative-cognitive consistency or by high evaluative-affective consistency served as the basis for the formation of specific attitudes in situations in which the general attitude issue was directly mentioned and thus made relevant for specific issues". Prislin et al. (1998, p. 67) further emphasize that the mechanism of attitude deduction occurs when "existing attitudes are used as a premise for evaluation of new issues". In other words, people tend to form new attitudes as an inferred and logical consequence of general evaluations of broader issues which have some (many or few) elements in common with the new situation. Following this reasoning and in line with previous research (Marakas et al., 1998; Rumelhart et al., 1986; Tan and Chia, 2007), the current research assumes that attitudes operate on multiple levels on the basis of their rank order such that individuals hold an attitude toward a general domain (i.e., operationalized at a macro-level) and specific attitudes toward its

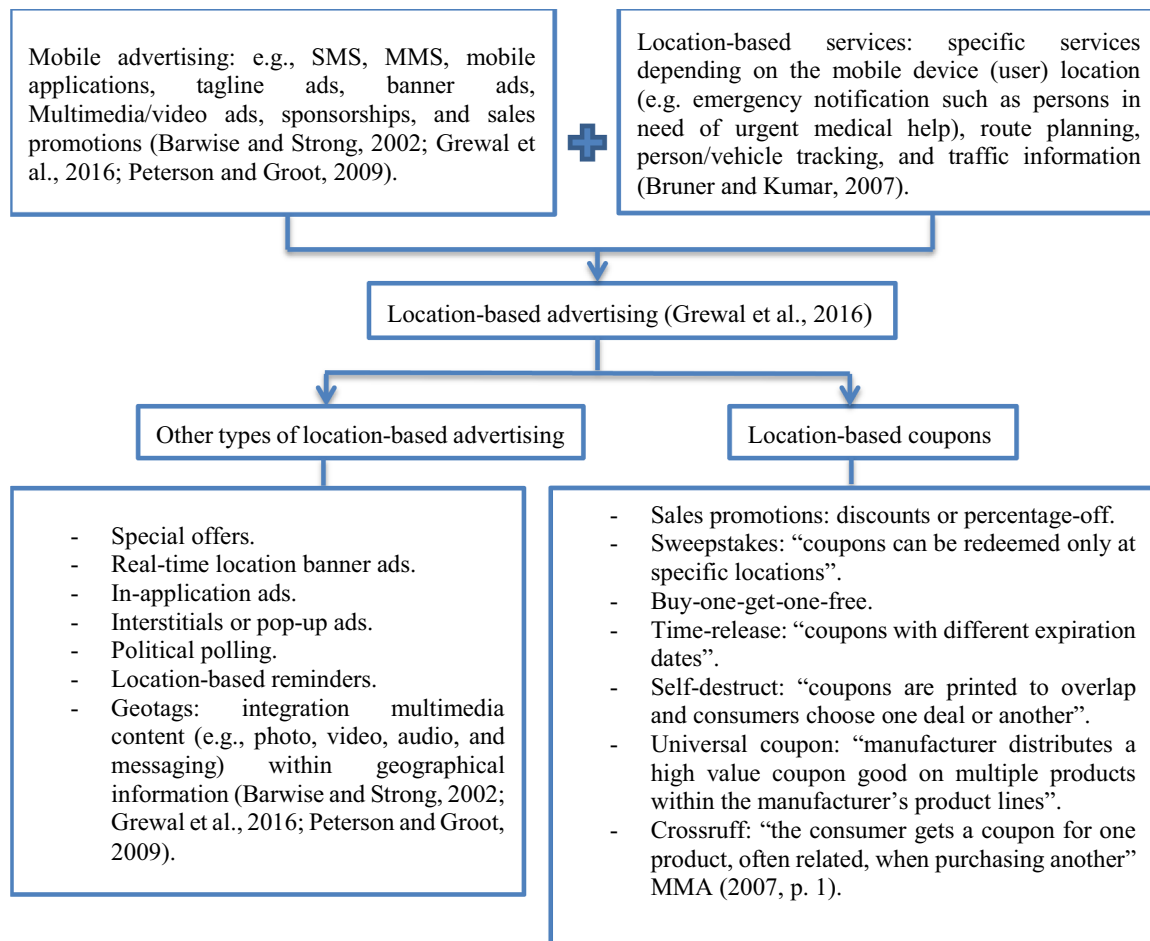


Fig. 1. Genesis of Location-based coupons.

subdomains (i.e., operationalized at a micro-level). Accordingly, there is a strong likelihood that an attitude toward location-based coupons as a micro level form of attitude will be deduced from an attitude toward location-based advertising as a macro level one.

The impact of a general attitude on a specific one is also reported in different areas such as attitude toward advertising, organic farming, and green behavior. For instance, Souiden et al. (2017) find that consumers' attitude toward online advertising (i.e., specific attitude) is mainly explained by their attitude toward advertising in general (i.e., general attitude). They add that the relationship between both attitudes is not evident since an individual can develop a positive attitude toward advertising in general, but not necessarily toward online advertising. Their findings are in line with those of McKenzie et al. (1986), Hampel et al. (2012), and Tan and Chia (2007). For example, McKenzie et al. (1986) report that a strong association exists between consumers' attitudes toward advertising in general and their attitudes toward advertising in a specific medium. Similarly and in another study on organic farming, Malek-Saeidi et al. (2012) argue that more specific beliefs and attitudes evolve from general beliefs and worldviews. They find that, among other factors, a general attitude toward the environment has a significant and direct impact on an attitude toward organic farming. In line with Malek-Saeidi et al.'s (2012) study, Stobbelaar et al. (2006) contend that general attitudes toward the environment influence people's attitudes toward sustainable agricultural activities.

It is well established that attitudes, whether general or specific, strongly shape behavioral intentions. The marketing literature leaves no doubt about these relationships. Theories such as the theory of reasoned action (TRA, Fishbein and Ajzen, 1975), the technology acceptance model (TAM, Davis, 1989), and the theory of parallel

distributed processing provide strong evidence supporting the effect of attitudes on intention. In the mobile marketing domain, the relationship between attitude and intention is further confirmed by Ha and Im's (2014) and Im and Ha's (2013) studies.

Based on the above discussion, we infer that:

- H1.** Attitude toward location-based advertising has a positive and significant impact on attitude toward location-based coupons.
- H2.** Attitude toward location-based advertising has a positive and significant impact on intention of using location-based coupons.
- H3.** Attitude toward location-based coupons has a positive and significant impact on intention of using location-based coupons.

Since both attitudes are expected to have a significant impact on consumers' intention of using location-based coupons, it is perhaps essential to identify some key determinants of these attitudes.

2.3. Determinants of attitude toward location-based coupons

Based on Thaler's (1985) exchange theory, the current section argues that money saving, convenience, and hedonic benefits determine consumers' attitude toward location-based coupons. Thaler's (1985) exchange theory arises as an adequate theoretical foundation for the current research as it assumes that consumers can undergo two cognitive processes, namely acquisition value and transaction value, to make their decisions when they face a price reduction. The acquisition value refers to the assessment process by which consumers estimate the net value (utility – purchase price) which results from the acquisition or usage of the product or service (Audrain-Pontevia et al., 2013). The

Table 1
A summary of selected studies on mobile marketing, m-couponing and location-based advertising.

Authors	Article type	Type of coupon	Sample size	Main results
Leva et al. (2018)	Empirical	Social coupons (deal-of-the-day, (DoD))	146 Groupoun users	DoD adoption is positively influenced by deal proneness and DoD enjoyment, but negatively influenced by value consciousness and DoD perceived risk.
Mollitor, Spann, Ghose, and Reichhart (2018)	Empirical (field experiment)	Mobile coupon	6329 users	Out-of-store push coupons are more effective in generating store visit and purchase and increasing visit duration.
Beeck and Toporowski (2017)	Empirical (factorial design)	Mobile coupon	Study 1: 528 Study 2: 146	Consumers respond positively to mobile coupon when they are near the shop. However, their response to mobile coupon is negatively influenced by perceived risk.
Nakhata and Kuo (2017)	Empirical (experimental design)	Social coupons (Groupon)	Experiment 1: 98, experiment 2: 279 recruited from MTurk panel	Compared to regular coupons, consumer choice of special-priced social coupon is influenced by the type of product (utilitarian vs hedonic).
Pandey and Maheshwari (2017)	Systematic review	Coupon	n/a	An overview about coupon literature is presented and some research avenues are proposed.
Andrews, Goehring, Hui, Pancras, and Thornswood (2016)	Conceptual	Mobile promotions	n/a	A framework is proposed introducing various stakeholders in the mobile promotion ecosystem.
Green and Kim (2016)	Empirical (cluster analysis)	n/a	751	Based on their smart shopping activities, three categories of smart shoppers are identified: spontaneous smart shoppers, apathetic smart shoppers, and involved smart shoppers.
Grewal, Bart, Spann, and Zubeseck (2016)	Conceptual	Mobile advertising	n/a	An overarching framework is proposed. It synthesizes findings in mobile advertising and identifies factors that should be considered when examining mobile advertising effectiveness.
Lin, Paragas, and Bautista (2016)	Empirical	Location-based mobile advertising (LBA)	605 Singapore's mobile consumers	Perceived LBA value is negatively influenced by privacy concern and perceived sacrifice. However, it is positively influenced by perceived utility, utilization of contextual information, and trust. Furthermore, perceived LBA value is positively associated with consumers' response to purchase advertised brands.
Im and Ha (2015)	Empirical	Mobile coupon	658	Intention to grant permission is positively influenced by economic benefits and enjoyment, but negatively influenced by perceived privacy risk.
Kang et al. (2015)	Empirical	Mobile location-based services (LBS) retail apps	853 U.S. consumer panel.	Perceived interactivity and compatibility influence consumers' affective engagement, which, in turn, determines their intention to download and use retail apps.
Voropanova (2015)	Conceptual	mobile marketing services	n/a	A conceptual model is proposed introducing dimensions of shopping productivity when using mobile devices in a retail environment.
Khajehzadeh, Oppewal, and Tojib (2014)	Empirical	Mobile coupon	247 + 309 members of a US-based online research panel	Intention to redeem m-coupon is influenced by the type of product, temporal needs congruency, shopping motivation and regulatory fit.
Achadinha et al. (2014)	Empirical	Mobile coupon	204	Intention to redeem m-coupon is mainly determined by positive attitude towards m-coupons, followed by perceived control and social influence.
Im and Ha (2013)	Empirical	Mobile coupon	611 US consumers	Intention to use mobile coupons is determined by intention to disclose personal information and attitude towards mobile coupon. Attitude towards mobile coupon is, in turn, determined by perceived ease of use, perceived usefulness, perceived risk, and subjective norms.
Im and Ha (2012)	Empirical (cluster analysis)	Mobile coupon	611 US consumers	Four consumer adopter groups of mobile coupons are identified. Except for ease of use, perceived usefulness, attitudes and behavioral intentions are found to be significantly different across these groups.
Banerjee and Yancey (2010)	Empirical (secondary data analysis)	Mobile coupon	n/a	Consumer response to mobile coupon is influenced by the congruence of coupon designs with the nature of the product. Furthermore, their positive response to mobile coupon is determined by the types of discount for utilitarian products, and by the timing of receiving the message for hedonic products.
Jayasingh and Eze (2010)	Empirical	Mobile coupon	781	Intention to use mobile coupons is significantly influenced by attitude, compatibility, social influence and personal innovativeness.
Shankar, Venkatesh, Hofacker, and Naik (2010)	Conceptual	Mobile marketing	n/a	A general conceptual framework is proposed introducing three main entities in mobile marketing: the consumer, the mobile and the retailer.
Jayasingh and Eze (2009)	Empirical	Mobile coupon	781	Intention to redeem m-coupon is significantly determined by perceived usefulness, perceived ease of use, perceived credibility, compatibility, and social influence.
Dickinger and Kleijnen (2008)	Empirical	Mobile coupon	370 mobile phone users	Attitude toward m-coupon is positively influenced by economic benefit and negatively influenced by redemption effort.
				Intention to redeem mobile coupons is positively determined by attitude, perceived control, social norms, and past use of coupons.

(continued on next page)

Table 1 (continued)

Authors	Article type	Type of coupon	Sample size	Main results
Bruner and Kumar (2007)	Empirical (scale development)	Location-based Advertising	n/a	A scale of attitude toward location-based advertising (ALBA) is developed.
Hsu et al. (2006)	Empirical	Mobile coupon	256	Behavioral intention in using m-coupons is influenced by attitude and perceived control. Attitude is influenced by compatibility, perceived ease of use, and perceived usefulness.
Fortin (2000)	Conceptual	Electronic coupon	n/a	Based on the theory of planned behavior, a model of electronic coupon use is proposed.

acquisition value includes, among others, convenience (e.g., time and effort saving) and money saving when purchasing a product or a service. The transaction value, however, relates to the hedonic aspect of getting a product/service at a reduced cost. It implies the pleasure (not to be confused with the pleasure of the shopping trip or the acquisition of hedonic goods) felt when the internal reference price is higher than the purchase price (Audrain-Pontevia et al., 2013). More precisely, it refers to feelings of delight and gratification which result from “winning a bargain” (Garretson and Burton, 2003). The two types of transactions are in line with the conceptualization of consumers’ shopping experience by emphasizing two main dimensions or values: utilitarian and hedonic (Babin et al., 1994; Fisher and Arnold, 1990). The utilitarian value derives from money saving and convenience, while the hedonic value derives from exploration and entertainment (Rintamaki et al., 2006). Both of them are useful in explaining consumers’ shopping behavior. Sherry (1990, p. 180) summarizes this by describing consumers as oscillating “between homo economicus and homo ludens”.

2.3.1. Money saving

One key particularity of location-based coupons over paper-based coupons is that it enables consumers to browse and search for bargains with far lesser monetary costs (e.g., no need to buy newspapers to collect coupons) (Audrain-Pontevia et al., 2013). This is in line with Audrain-Pontevia et al.’s (2013, p. 446) opinion stipulating that the main objective of users of location-based coupons is “taking advantage of a good price deal”, that is, getting products/services at a price lower than the market price. Consumers value money saving because they are highly price-conscious (Babakus et al., 1988) and utility maximizers (Su et al., 2014; Venkatesan and Farris, 2012). Indeed, they tend to base their purchase decisions on their perceptions of the levels of price (high vs low) (Garretson and Burton, 2003). Thus, it is reasonable to expect that money saving is a key driver of developing a positive attitude toward location-based coupons, particularly since previous research provides considerable evidence to support the role of price-centric motivation in forming favorable appraisals of location-based coupons (Achadinha et al., 2014; Dickinger and Kleijnen, 2008). The following hypothesis is therefore proposed:

H4. Money saving has a positive and significant influence on attitude toward location-based coupons.

2.3.2. Convenience

For consumers, a product/service is seen as convenient when it enables them to achieve their task “at a convenient time, in a convenient place and in a convenient way” (Liu et al., 2015, p. 477). Marketers view convenience as an end in itself due to i) the increasing demands of consumers for comfortable and user-friendly products/services, ii) incessant technological evolutions, and iii) fierce climate of competition between firms (Berry et al., 2002). Convenience is another core advantage of location-based coupons because it allows consumers to lower their purchase decision costs and increase their perceptions of being smart shoppers (Chandon et al., 2000). Researchers assume that the human brain is by nature a “cognitive miser” that values time and effort (Banerjee et al., 2016, p. 100). In this vein, consumers are in most cases unwilling to “waste” their time as well as their cognitive and physical energy in a purchase task, they rather generally apply “rules of thumb or heuristics to simplify [it]” (Zaichkowsky, 1991, p. 54). Indeed, “consumers are often portrayed as being caught in a battle between optimizing choice outcomes and simplifying choice decisions in order to minimize the mental effort involved in shopping-related tasks” (DelVecchio, 2005, p. 375). Many researchers argue that location-based coupons are more efficient in terms of time and effort saving than any other form (paper-based or other e-coupons) because consumers receive notifications (SMS, MMS, e-mail alerts, and notifications of the location-based coupon application) on their mobile devices (Im and Ha, 2013; Park et al., 2018; Sharl et al., 2005). Thus, users are not

compelled anymore to search for, collect, organize, and redeem coupons found in the media (free standing inserts in newspapers and the Internet). All this process is now made much more convenient by both mobile devices and location-based services, enabling consumers to redeem location-based coupons ubiquitously (Liu et al., 2015) and with less effort (Dickinger and Kleijnen, 2008). In addition, while traditional coupons are redeemable for restricted durations (Kang et al., 2006), location-based coupons allow extensions of deadlines for coupon-redemption, enabling time flexibility, pressure reduction, and decision-freedom enlargement (i.e., the consumers can do other tasks). In the mobile marketing literature, convenience is often reported as a key factor (Wen and Mahatanankoon, 2004; Liu et al., 2015; Pura, 2005). Based on the above, the following hypothesis is proposed:

H5. Convenience has a positive and significant impact on attitude toward location-based coupons.

2.3.3. Hedonic motivation

Researchers assume that beyond the utilitarian motivations of location-based coupons, hedonic

motivation arises as a purpose in itself (Childers et al., 2001; Liu et al., 2015). Those who take advantage of location-based coupons perceive themselves as special and much smarter (Garretson and Burton, 2003; Shimp and Kavas, 1984). Minimizing costs (money, effort, and time) improves individuals' self-esteem and self-satisfaction, so that they can be justifiably proud of themselves (Atkins and Kim, 2012). Indeed, consumers are conditioned by egocentric benefits in that they feel a sense of success, achievement, and accomplishment when they redeem coupons (Dickinger and Kleijnen, 2008). In this vein, getting a good deal leads consumers to experience the joy of "victory" and "winning" since they feel implicitly as if they had "won in an implied game against" vendors as well as other consumers who did not use coupons (in general) (Schindler, 1998, p. 388) or location-based coupons (in particular). As they are always notified of sales promotions, they assign to themselves the responsibility to gain a good bargain (Garretson and Burton, 2003) and are conscious of the efficiency of using location-based coupons which may reinforce such a "small pleasure of life" (Mittal, 1994, p. 537) and feelings of pride in their choice (Burton et al., 1998). Location-based coupons are also viewed as self-signaling means that "can serve to establish and confirm a consumer's self-concept" ("people's perception of the type of person they are") (Chernev et al., 2011, pp. 67–68). This refers to the extent to which location-based coupons can convey symbolic meanings to customers on how they are thrifty, smart, price mavens, and value-conscious they are (Garretson and Burton, 2003; Lichtenstein et al., 1997). According to the exchange theory (Thaler, 1985), using coupons is considered as "work" per se (Audrain-Pontevia et al., 2013). In fact, searching for information about good deals and redeeming coupons to exploit money saving trigger perceptions of transaction fairness (Audrain-Pontevia et al., 2013). Consumers undergo a diagnosis of the utility of their choice after any purchase, including obtaining a bargain (Chernev et al., 2011). This leads them to be deeply convinced that they made the right purchase in every sense of the word. Put differently, it "signals the smart-shopping skills and values of the users and may superiorly enhance their social prestige and help them fulfill their personal values and moral obligations" (Chandon et al., 2000; p.77); thus, this desire of non-financial rewards will lead consumers to form favorable appraisals of location-based coupons. Since that the impact of hedonic motivations on attitude is well-established in the marketing literature (e.g., Chtourou and Souiden, 2010; Mittal, 1994), the following hypothesis is therefore proposed:

H6. Hedonic benefits have a positive and significant impact on attitude toward location-based coupons.

Because past studies report that money saving (i.e., cost/benefits) has a significant impact on hedonic benefits (e.g., Laroche et al., 2003;

Schindler, 1998), and in reference to hypothesis H4 (i.e., Money saving has a positive and significant influence on attitude toward location-based coupons), it is rational to expect that hedonic benefits would play a mediating role between money saving and attitude toward location-based coupons. Indeed, Shimp and Kavas (1984) and Mittal (1994) argue that there is a causal path between cost/benefit evaluation and affect. Laroche et al. (2003) confirm that, for any type of promotion, the cost/benefit construct has a significant impact on the consumers' affective component. They add that "the more people perceive that they are doing this cognitive exercise, the more they appreciate it and feel they are smart and get good deals" (p. 519). In line with this view, Schindler (1998) stipulates that consumers would experience a good feeling (e.g., the joy of victory and winning) after benefiting from a good deal. Hence, we suggest the following hypothesis:

H7. Hedonic benefits have a significant mediating role between money saving and attitude toward location-based coupons.

2.4. Determinants of attitude toward location-based advertising

In the literature on Internet and mobile marketing, trust and control emerge as two major factors that play a considerable role in the formation of consumers' attitude (e.g., Achadinha et al., 2014; Dickinger and Kleijnen, 2008; Hsu et al., 2006; Kang et al., 2006; Palvia, 2009; Shaw, 2014; Toufaily et al., 2011). This section discusses their potential role in determining consumers' attitude toward location-based advertising.

2.4.1. Trust

Trust plays a central role in the marketing literature (Mayer et al., 1995). Prior research reports a broad acceptance of the premise that trust is a key challenging factor in building consumer loyalty and "that any damage to trust represents the potential loss of a significant intangible asset for an organization" (Davies and Olmedo-Cifuentes, 2016, p. 1438). However, its particular significance is even more apparent in Internet and mobile contexts that are characterized by high levels of uncertainty and risk (Palvia, 2009; Toufaily et al., 2013). In the context of location-based advertising, individuals value privacy which refers to "user's fear of other people/organizations knowing what he or she is interested in ("Big Brother syndrome")" and security which refers to "consumer fears regarding the safety of the information exchanged over a wireless network" (Coursaris et al., 2003, p. 60). Individuals are highly concerned about whether firms have established safety policies and how they manipulate their personal data (Shaw, 2014). In this respect, how firms track the location of consumers, collect information about their habits, interests, and desires, and use this dataset might be considered as a threat to the integrity of consumers' personal data and consequently will escalate their "sensitivity of the Big Brother syndrome" (Coursaris et al., 2003, p. 60). Consumers fear that firms can misuse or mistakenly divulge their confidential data or that fraudulent parties can intercept, view, and exploit their personal information (Flavián and Guinalfú, 2006; Watson et al., 2013). In their meta-analysis on the role of trust in technology adoption, Wu et al. (2011) find that it has a significant effect on attitude. Also, previous empirical findings show strong support for the impact of trust on attitude (Toufaily et al., 2013; Suki and Suki, 2017). In addition, many consumers have less confidence in and can even develop hostility against location-based advertising claims (Chylinski and Chu, 2010). They think that location-based advertising offers are misleading and thus they develop skepticism and doubt about the marketers' 'real' motivations behind these deals (Persaud and Azhar, 2012). They strongly believe that they will be duped or manipulated when they accept it (Lunardo and Roux, 2015). Consequently, when they are distrustful and suspicious about a firm's location-based advertising, they will negatively deem its offers. Conversely, when they have enough confidence in a firm's location-based advertising, they will

respond much more positively to it (Persaud and Azhar, 2012). Thus, it is rational to expect that high levels of trust will generate favorable evaluations of location-based advertising. This leads to the following hypothesis:

H8. Trust has a positive and significant impact on attitude toward location-based advertising.

2.4.2. Control

Control refers to “the degree of control a person believes he or she has over performing a behavior” (Rivis et al., 2009, p. 2986). In the present study's context, perceived control refers to the extent to which the frequency, timing, and the nature of promotional messages are under/outside the consumer's control (Jayawardhena et al., 2009; Watson et al., 2013). Because mobile phones are perceived as the most personal and private media that accompany their owners anytime and anywhere, consumers' vulnerability is likely to be accentuated (Dickinger and Kleijnen, 2008). In fact, location-based advertising allows marketers “to track consumers' every movement, thereby increasing the level of intrusion and invasion”, specifically in instances in which individuals have not yet planned any purchases (Persaud and Azhar, 2012, p. 425). This situation raises their fears that they will lose their freedom of choice (Trump, 2016). As argued by Trump (2016, p. 302), individuals perceive location-based advertising “as unwelcome attempts to control choice”. Thus, individuals are likely to be skeptic about location-based advertising which may host unsolicited promotional messages perceived as invading their integrity (Jayawardhena et al., 2009), increasing therefore their irritation feelings and even provoking their radical avoidance response (Hühn et al., 2017). Indeed, the reception of a great number of unsolicited deals-related information is commonly associated with information overload (it is by nature inconceivable that consumers can manage and process a relentless flow of information), and thus is counterproductive and can generate stress (Dickinger and Kleijnen, 2008). In contrast, when users can control the reception of such messages (e.g., advertising about products and brands), they will feel more powerful and can, therefore, find them more useful (Jayawardhena et al., 2009; Nysveen, 2005). Previous meta-analyses (Armitage and Conner, 2001; McEachan et al., 2011) evidence the significant role of control in influencing attitude. As a matter of fact, when individuals believe that they have a satisfactory degree of control over location-based advertising, they tend to favorably evaluate it. However, when they think that location-based advertising is out of their control, they are likely to negatively evaluate it. This leads to the following hypothesis:

H9. Perceived control has a positive and significant impact on attitude toward location-based advertising.

All the above-discussed relationships and their corresponding hypotheses are illustrated in the following conceptual model (see Fig. 2):

3. Methodology

3.1. Data collection and sample characteristics

Based on several location-based coupons provided by fast food chains, a mock coupon (e.g., see Appendix A) is designed. This approach is often used in advertising and branding research in order to control the effect of certain factors such as the product brand name, product origin, etc. (e.g., Dahlén and Lange, 2004; Dahlén et al., 2008; Rosengren and Dahlén, 2012). The choice of the study's context (i.e., fast food industry), is motivated by the following reasons. First, fast food chains like McDonalds and Burger King are among, if not the world's, top-ranked chains in terms of the number of locations and revenues. Second, the agro-food industry has been the pioneering sector that has launched coupons (The Real Deal, 2017). Third, location-based coupons raise the interest of fast food services, often targeting

consumers who are on the road, particularly in off-peak hours (Banerjee and Yancey, 2010). The survey was distributed online to a convenience sample of Canadian consumers who were recruited through the web service of a survey company, namely Amazon Mechanical Turk (MTurk). It is worth mentioning that the use of such companies (specifically MTurk) is gaining interest among marketing scholars and highly-ranked scientific journals (Newton et al., 2016; Yi et al., 2017). Out of 230 questionnaires, 228 were deemed complete and usable. Table 2 displays the characteristics of the sample.

3.2. Measurements

The questionnaire was composed of nine sections. The first eight sections were dedicated to measuring the study's constructs. All items were adapted from previous studies (see Table 3) and measured on a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. The last section dealt with respondents' sociodemographic variables such as age and gender.

4. Results

The study tests the model using SmartPLS 3. Unlike other covariance-based SEM techniques using Amos or Lisrel, Smart PLS is less restrictive in terms of small sample sizes, normal distribution, and model complexity (Hair et al., 2014). In addition, it enjoys widespread popularity and success with academicians (Jha et al., 2017; Luxton et al., 2017). For SmartPLS, Hair et al., (2014, p. 20) posit that the sample size should be equal to “10 times the largest number of structural paths directed at a particular construct in the structural model”. In the present study, four is the largest number of structural paths directed at attitude toward location-based coupons. Thus, a sample equal to or greater than 40 observations is large enough to test the model with SmartPLS. Besides, for SmartPLS, a sample size between 30 and 100 respondents is recommended by Chin (2010). In addition, we have conducted a literature review focusing on the sample size of studies applying SmartPLS and found that samples range between 180 and 252 (Davari et al., 2016; Gahinet and Cliquet, 2018; Graciola et al., 2018; Iyer et al., 2018; Londoño et al., 2016). Since our sample is composed of 228 participants, it is therefore deemed appropriate for data analysis using SmartPLS.

4.1. Assessment of the constructs' reliability

For each construct, reliability is examined by considering the threshold of 0.7 (Carmines and Zeller, 1979). Four items (TR1, TR2, ALBA4, and ALBA6) are excluded due to their low loadings (0.609, 0.526, 0.659, and 0.565, respectively), as shown in Table 4. For all the remaining items, the composite reliability values are higher than the threshold of 0.7, suggesting that the internal consistency reliability for each construct is verified (Fornell and Larcker, 1981).

In addition, all AVE values exceed 0.50. Thus, the convergent validity is satisfied (Bagozzi and Yi, 2012). Furthermore, constructs present a high discriminant validity (see Table 5) since the Fornell-Larcker (Fornell and Larcker, 1981) and heterotrait-monotrait ratio of correlations (HTMT, Henseler et al., 2015) criteria are met. Regarding the latter criterion, the highest HTMT value is below 0.9. In addition and following the HTMT inference criterion, the upper confidence interval limit is well below 1, demonstrating that all HTMT values are significantly different from 1 (Hair et al., 2017). With respect to the former (Fornell-Larcker) criterion, the square roots of AVE values are well above the correlations between the constructs (Henseler et al., 2009). Finally, multicollinearity is not a critical issue in the current study since all inflation factor values (VIF) are lower than the conservative threshold of 5 (Hair et al., 2017).

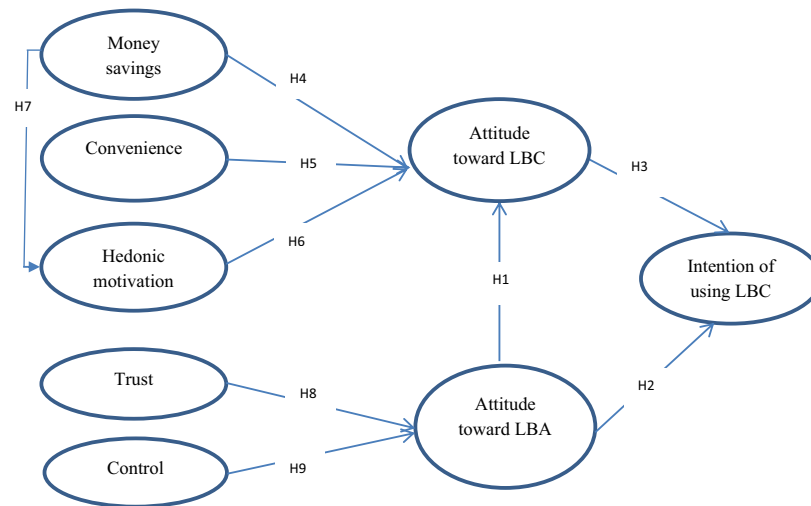


Fig. 2. Location-based coupon adoption model. Notes: LBA = location-based advertising and LBC = location-based coupons.

Table 2
Sample Characteristics.

Items	Freq.	% sample
Gender		
Male	137	60.1%
Female	91	39.9%
Age		
18–24	67	29.4%
25–30	51	22.4%
31–40	64	28.1%
41–50	30	13.2%
51–60	14	6.1%
60+	2	0.9%
Education		
High school	54	23.7%
University degree	136	59.6%
Post-university degree	38	16.7%
Occupation		
Public sector	60	26.3%
Private sector	80	35.1%
Self-employed	28	12.3%
Unemployed	17	7.5%
Others	43	18.9%
Annual income		
< CAD\$20,000	60	26.3%
\$20,000 and \$59,999	105	46.1%
> CAD\$60,000	63	27.6%
Experience mobile device		
< 1 year	3	1.3%
1–3 years	15	6.6%
> 3 years	210	92.1%
Daily use		
< 1 year	24	10.5%
1–3 h	79	34.6%
> 3 h	125	54.8%

4.2. Multicollinearity and common method variance

All VIF values are well below the threshold of 10 (Hair et al., 2014), indicating that multicollinearity is of no concern in this research. In addition, the common method variance (or common method biases) which is a “systematic error variance shared among variables measured with and introduced as a function of the same method and/or source”

(Richardson et al., 2009, p. 763) is verified. Harman's single-factor test is used to test whether the common method variance can threaten the study's results (Jarvis et al., 2003). In this study, the common method variance is also of no concern because no general factor accounted for the majority of the variance in the data (Jarvis et al., 2003).

4.3. Results of the structural model

Before testing the conceptual model's hypotheses, some preliminary analyses are deemed necessary to ensure that no alternative models (e.g., additional relationships, additional mediating and/or moderating variables, etc.) are overlooked.

4.3.1. Preliminary statistical analyses of the structural model

4.3.1.1. Effect size. The assessment of the effect size (f^2) “enables an assessment of the change in the R^2 value when an exogenous construct is omitted from the model” (Hair et al., 2017, p. 255). Scores of 0.02, 0.15, and 0.35, reflect small, medium, and large f^2 s (Cohen, 1988). Money saving has a large effect size ($f^2 = 0.475$) on hedonic motivation. Attitude toward location-based coupons has a very large effect size ($f^2 = 0.513$) on intention while attitude toward location-based advertising has a small to medium effect size ($f^2 = 0.139$). Attitude toward location-based advertising has the largest effect size ($f^2 = 0.171$) on attitude toward location-based coupons, followed by money saving ($f^2 = 0.150$), hedonic motivation ($f^2 = 0.06$), and convenience ($f^2 = 0.021$). Control has a medium to large effect size ($f^2 = 0.161$) on attitude toward location-based advertising, and trust has a small to medium effect size ($f^2 = 0.133$). These results show that any omission of any specific exogenous construct is ineluctably followed by a substantive drop in the R^2 s of the endogenous constructs (Hair et al., 2014). In other words, they show that the selection of those constructs is appropriate and the configuration of their relationships as they are hypothesized is relevant.

4.3.1.2. Mediation analysis. This research conducts a mediation analysis to estimate the expected mediating effects of attitude toward location-based coupons, attitude toward location-based advertising, and hedonic motivation. To achieve this, it uses the bootstrapping procedure instead of the Sobel (1982) test. The latter cannot be used in

Table 3
Measurement items.

Constructs	Items	Source
Money saving	Using location-based coupons (LBC) would MS1: help me to get what I want at a price I am willing to pay. MS2: grant me a lower price on my purchase than normal. MS3: help me to get a reasonable price on my purchase. MS4: enable me to get a good deal on my purchase.	Atkins and Kim (2012).
Convenience	Using location-based coupons would CV1: help me to make my purchases in a convenient way. CV2: not make my purchases a hassle. CV3: help me to make my purchases without any extra effort. CV4: help me to use my time wisely. CV5: help me not to waste time when making my purchases. CV6: enable me to make my purchase quickly	Atkins and Kim (2012).
Hedonic motivation	Using location-based coupons would HD1: be exciting. HD2: be enjoyable. HD3: be interesting.	Im and Ha (2015)
Trust	TR1: I would be happier to receive location-based advertising if I liked and trusted the company. TR2: I worry about trusting a company with my mobile phone in case they misuse my data or pass it onto a third party. TR3: I believe that marketers would use my data only for a purpose that I have approved. TR4: I believe that the consumer is protected by laws related to data privacy.	Watson et al. (2013) and Merisavo et al. (2007).
Perceived control	I would prefer to sign up for location-based advertising if I knew I could CO1: easily stop it. CO2: easily control the frequency of alerts. CO3: choose the types of message that I receive (text, picture, and video messages). CO4: easily control the number of messages that I receive.	Watson et al. (2013) and Jayawardhena et al. (2009).
Attitude toward location-based advertising	ALBA1: I would like being able to receive location-based advertising (LBA). ALBA2: In general, LBA would probably be irritating.* ALBA3: In general, LBA would probably be entertaining. ALBA4: LBA would be necessary. ALBA5: LBA would provide me useful information ALBA6: I think that LBA would be deceptive.* ALBA7: I feel that LBA is an exciting improvement in wireless communication. ALBA8: In general, I would be favorable toward LBA. ALBA9: I would probably not pay attention to LBA.*	Bruner and Kumar (2007).
Attitude toward location-based coupons	ALBC1: I would react favorably to LBC. ALBC2: I would like LBC. ALBC3: LBC are good. ALBC4: I feel positive toward LBC.	Bacile and Goldsmith (2011).
Intention of using location-based coupons	IU1: I intend to use LBC in the future. IU2: I would use LBC in the future. IU3: I am inclined to use LBC in the future.	Achadinha et al. (2014)

Notes: * reverse coded, MS = money saving, CV = convenience, HD = hedonic motivation, TR = trust, CO = control, ALBA = attitude toward location-based advertising, ALBC = attitude toward location-based coupons, IU = intention of using location-based coupons, LBA = location-based advertising, LBC = location-based coupons.

the context of PLS-SEM because it requires a normal distribution, in contrast to the more appropriate nonparametric PLS-SEM method (Hair et al., 2017; Preacher and Hayes, 2004, 2008).

First, all indirect effects are significant since none of the 95% confidence intervals include zero (see Table 6). Then, we assess the significance of the direct effects. With respect to the mediating effect of attitude toward location-based coupons, the direct effects of money saving and convenience on intention are weak (0.056 and 0.02, respectively) and statistically nonsignificant. Accordingly, attitude toward location-based coupons fully mediates the money saving-intention and convenience-intention relationships (taken into account by H4 and H5). The direct effects of attitude toward location-based advertising (0.174) and hedonic motivation (0.263) on intention are strong and statistically significant. Thus, attitude toward location-based coupons plays a complementary mediation role between attitude toward location-based advertising and intention of using location-based coupons (taken into account by H1, H2, and H3). It also plays a complementary

mediation role between hedonic motivation and intention. Hedonic motivation is found to have a complementary mediation between money saving and attitude toward location-based coupons (taken into account by H6 and H7). With respect to the mediating effect of attitude toward location-based advertising, the direct effects of trust and control on attitude toward location-based coupons are weak (0.017 and 0.053, respectively) and statistically nonsignificant. Accordingly, attitude toward location-based advertising fully mediates the effects of both trust and control on attitude toward location-based coupons (taken into account by H8 and H9). Altogether, these results give further credence to this study's conceptual model and hypotheses.

4.3.1.3. Finite mixture partial least squares. A Finite Mixture Partial Least Squares (FIMIX-PLS) segmentation analysis is conducted to uncover a possible unobserved heterogeneity in the data which “exists when two or more groups of respondents exhibit significant differences in their model relationships” and thus “can be a threat to the

Table 4
Descriptive statistics, composite reliability, average variance extracted, and loadings.

	MS	CV	HD	TR	CO	ALBA	ALBC	IU
Mean	3.829	3.284	3.300	2.717	4.254	3.043	3.622	3.474
SD	0.879	0.929	0.956	1.022	0.828	0.982	1.023	1.103
CR	0.952	0.933	0.920	0.855	0.958	0.942	0.974	0.953
AVE	0.832	0.700	0.792	0.746	0.851	0.699	0.904	0.872
MS1	0.875*							
MS2	0.900*							
MS3	0.938*							
MS4	0.934*							
CV1		0.828*						
CV2		0.755*						
CV3		0.862*						
CV4		0.835*						
CV5		0.881*						
CV6		0.854*						
HD1			0.881*					
HD2			0.885*					
HD3			0.904*					
TR3				0.855*				
TR4				0.873*				
CO1					0.898*			
CO2					0.937*			
CO3					0.933*			
CO4					0.922*			
ALBA1						0.894*		
ALBA2						0.753*		
ALBA3						0.786*		
ALBA5						0.833*		
ALBA7						0.856*		
ALBA8						0.933*		
ALBA9						0.780*		
ALBC1							0.959*	
ALBC2							0.959*	
ALBC3							0.927*	
ALBC4							0.958*	
IU1								0.940*
IU2								0.941*
IU3								0.920*

Notes: * significant at 0.001 level, MS = money saving, CV = convenience, HD = hedonic motivation, TR = trust, CO = control, ALBA = attitude toward location-based advertising, ALBC = attitude toward location-based coupons, IU = intention of using location-based coupons, CR = composite reliability, AVE = average variance extracted.

Table 5
Discriminant validity.

Fornell-Larcker criterion								
	MS	CV	HD	TR	CO	ALBA	ALBC	IU
MS	0.912							
CV	0.701	0.837						
HD	0.566	0.651	0.890					
TR	0.254	0.353	0.357	0.864				
CO	0.377	0.324	0.288	0.256	0.922			
ALBA	0.547	0.656	0.747	0.410	0.433	0.836		
ALBC	0.697	0.701	0.723	0.355	0.408	0.755	0.951	
IU	0.623	0.656	0.759	0.422	0.392	0.750	0.819	0.934
HTMT criterion								
MS								
CV	0.755 [0.665;0.824]							
HD	0.622 [0.524;0.715]	0.725 [0.619;0.799]						
TR	0.320 [0.153;0.468]	0.457 [0.269;0.605]	0.473 [0.274;0.621]					
CO	0.399 [0.263;0.528]	0.343 [0.192;0.465]	0.313 [0.128;0.449]	0.316 [0.176;0.488]				
ALBA	0.580 [0.494;0.663]	0.707 [0.611;0.775]	0.829 [0.751;0.897]	0.520 [0.313;0.666]	0.460 [0.342;0.562]			
ALBC	0.733 [0.658;0.788]	0.743 [0.641;0.814]	0.786 [0.680;0.855]	0.443 [0.259;0.589]	0.424 [0.287;0.559]	0.790 [0.698;0.858]		
IU	0.666 [0.587;0.736]	0.709 [0.608;0.775]	0.843 [0.761;0.892]	0.540 [0.354;0.668]	0.415 [0.267;0.547]	0.802 [0.719;0.863]	0.865 [0.817;0.905]	

Notes: MS = money saving, CV = convenience, HD = hedonic motivation, TR = trust, CO = control, ALBA = attitude toward location-based advertising, ALBC = attitude toward location-based coupons, IU = intention of using location-based coupons.

validity of PLS-SEM results” if it is not handled properly (Hair et al., 2014, p. 244). The first and critical step is to identify the number of segments that should be considered for this procedure (Matthews et al., 2016). Based on Hair et al. (2016) and the size of our sample (228), 3–5 segments could be potentially retained. Then, we checked for the partitions (number of cases in each segment) for each alternative. Based on the results displayed in Table 7, we can run two FIMIX-PLS analyses for 1) the whole data and 2) two segments, given that three or more groupings lead to segments with inadmissible sizes (Klarner et al., 2013). For example, in a three-segment solution, one segment includes only 11 out of 228 observations. This number of observations (11) is deemed very small and thus does not allow a segment-specific estimation (Hair et al., 2016; Klarner et al., 2013; Matthews et al., 2016).

The segment retention criteria for the FIMIX-PLS is based on the comparison between the values of AIC₃ (Modified Akaike information criterion (AIC) with Factor 3), BIC (Bayesian Information Criteria), CAIC (Consistent AIC), and EN (Entropy Normed) (Klarner et al., 2013). We should retain the higher value for the latter fit index (but it should be greater than 0.5) and the smaller values for the former three (Hair et al., 2018). Based on Table 8, the two-segment solution indicates that the AIC₃ score is satisfactory, yet the score of the entropy normed (EN) is below the recommended threshold of 0.5. Thus, the two-segment solution cannot be retained. Instead, and given that the scores of BIC and CAIC exhibit the lowest (i.e., satisfactory) values for the whole data solution, then this latter solution should be retained (Klarner et al., 2013). In combination, these FIMIX results show that homogeneity, rather than heterogeneity, is prevalent in this research (Hair et al., 2018). Thus, using moderating effects is not beneficial, which reflects the stability of the research conceptual model (Hair et al., 2018) regardless of consumers’ psychographics (e.g., traits, perceptions, and attitudes) and socio-demographics (e.g., age, gender, education, income, and occupation).

4.3.1.4. Predictive relevance. In addition, the current research tested the model’s predictive relevance using Stone-Geisser’s Q² (Geisser, 1974; Stone, 1974). “When a PLS path model exhibits predictive relevance, it accurately predicts data not used in the model estimation [out-of-sample predictive power]” (Hair et al., 2017, p. 202). The results show that all Q² values are well above zero (Q² for hedonic motivation = 0.239, Q² for attitude toward location-based

Table 6
Mediation analysis.

	IE	95% CI of IE	Sig	DE	95% CI of DE	Sig	S	M
Mediation of ALBC								
MS→IU	0.128	[0.074, 0.209]	Yes	0.056	[− 0.071, 0.156]	No	+	FM
MS→IU (HD)	0.054	[0.018, 0.093]	Yes	0.056	[− 0.048, 0.168]	No	+	FM
CV→IU	0.054	[0.009, 0.117]	Yes	0.020	[− 0.094, 0.141]	No	+	FM
HD→IU	0.096	[0.028, 0.164]	Yes	0.263	[0.147, 0.391]	Yes	+	CM
ALBA→IU	0.145	[0.080, 0.227]	Yes	0.174	[0.296, 0.565]	Yes	+	CM
Mediation of ALBA								
TR→ALBC		[0.048, 0.173]	Yes	0.017	[− 0.061, 0.110]	No	+	FM
CO→ALBC	0.104	[0.064, 0.180]	Yes	0.053	[− 0.048, 0.128]	No	+	FM
	0.114							
Mediation of HD								
MS→ALBC		[0.032, 0.201]	Yes	0.298	[0.191, 0.410]	Yes	+	CM
	0.119							

Notes: MS = money saving, CV = convenience, HD = hedonic motivation, TR = trust, CO = control, ALBA = attitude toward location-based advertising, ALBC = attitude toward location-based coupons, IU = intention of using location-based coupons, IE = direct effect, CI = confidence interval, Sig = significance ($p < 0.05$), DE = indirect effect, S = sign of $IE \times DE$, M = mediation, FM = full mediation, CM = complementary mediation, (HD) = through HD.

advertising = 0.183, Q^2 for attitude toward location-based coupons = 0.600, and Q^2 for intention = 0.585), demonstrating that the model has high predictive relevance.

4.3.1.5. Alternative models and control variables. Although the R^2 of the study's conceptual model is relatively high (close to 75%), we assess competitive models to see if they can reach a better R^2 adj (adjusted). The latter is deemed more suitable than R^2 to compare competitive models. Indeed, “problems often arise if we use the R^2 value to compare models that are specified differently (but with the same endogenous construct). For example, if we add nonsignificant constructs to a structural model that are slightly correlated with the endogenous latent variable, the R^2 will increase ... Thus, if we use the R^2 as the only basis for understanding the model's predictive accuracy, there is an inherent bias toward selecting models with many exogenous constructs, including ones that may be only slightly related to the endogenous constructs” (Hair et al., 2014, p. 175). We notice a nonsignificant increase of 3.5% in R^2 adj (a nonsignificant increase of 4% in R^2). In addition, all the added paths have effects sizes close to zero. Put differently, any omitted new path has an inconsequential impact on R^2 s adj R^2 s. Moreover, the Q^2 predictive relevance of the best alternative reports a nonsignificant improvement of about 0.027. This last result demonstrates that accuracy of prediction is not efficiently enhanced with alternative models. Subsequently, the present study's original model is further supported.

In addition, we control the effect of age, gender, education level, income, occupation, experience, and daily use. None of them provides a significant improvement in both R^2 adj and R^2 . Their inclusion in the conceptual model shows a nonsignificant gain (about 2%) in the Q^2 predictive relevance of the model. Furthermore, the effect size analysis demonstrates that the omission of these control variables is inconsequential. Hence, they are excluded from further analyses.

4.3.1.6. The importance-performance map analysis. We also conducted

Table 7
Relative segment sizes for different numbers of segments.

	Segment # 1	Segment # 2	Segment # 3	Segment # 4	Segment # 5
2 segments	51.1% (117)	48.9% (111)			
3 segments	56.8% (130)	38.2% (87)	5% (11)		
4 segments	49.1% (112)	33.3% (76)	12.4% (29)	5.1% (11)	
5 segments	41.5% (95)	35.9% (82)	10.1% (23)	9% (21)	3.4% (7)

Notes: # = number, value between parenthesis.

Table 8
Fit measures for the whole data and two-segment solution.

Fit measure	Solution 1: Whole data	Solution 2: 2 segments
AIC ₃	1330.661	1312.666
BIC	1357.384	1368.541
CAIC	1368.384	1391.541
EN		0.328

Table 9
IPMA analysis.

Predecessors of IU	Importance	Performance
ALBC	0.635	65.558
ALBA	0.575	51.811
Mean value	0.605	58.684
Predecessors of ALBC		
MS	0.348	70.741
CV	0.136	57.371
HD	0.214	52.270
ALBA	0.367	51.811
Mean value	0.266	58.048
Predecessors of ALBA		
TR	0.308	42.998
CO	0.417	81.332
Mean value	0.362	62.165

an importance-performance map analysis (IPMA). The IPMA analysis “extends PLS-SEM results such that it identifies” predecessor constructs that have a relatively high importance for predicting the target construct (i.e., those that have a strong total effect), but also have a relatively low performance (i.e., low average latent variable scores) so that improvements can be implemented” (Hair et al., 2018, p. 105).

With respect to the predecessors of intention, Table 9 shows that attitude toward location-based coupons and attitude toward location-

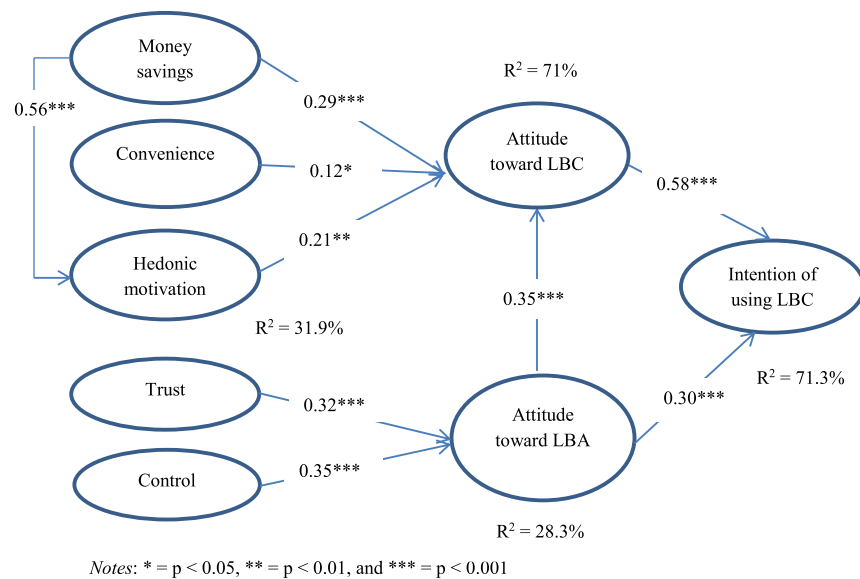


Fig. 3. Results of the Conceptual Model (standardized coefficients and R^2). Notes: LBA = location-based advertising and LBC = location-based coupons.

based advertising have a high relative importance (0.635 and 0.575, respectively), but almost a moderate performance (65.558 and 51.811, respectively). Thus, addressing both types of attitudes is strongly promising. With respect to the predecessors of attitude toward location-based coupons (to improve its performance), money saving, attitude toward location-based advertising, and hedonic motivation have a high relative importance (0.348, 0.367, and 0.214, respectively), but a low to moderate performance (70.741, 51.811, 52.270, respectively). Thus, marketers should prioritize these predecessors. Regarding attitude toward location-based advertising, control has both high relative importance (0.308) and performance (81.332). Thus, it does not necessarily present room for improvement. However, trust exhibits a relatively high importance (0.308) but a low performance (42.998). Thus, trust should be prioritized to improve its performance.

4.3.2. Final results of the structural model and hypotheses testing

The study's retained conceptual model explains 28.3% of the variance in attitude toward location-based advertising, 71% of the variance in attitude toward location-based coupons, and 71.3% of the variance in intention. All the study's hypotheses are accepted. Results show that attitude toward location-based advertising has the highest impact on attitude toward location-based coupons ($\beta = 0.35$, $t = 4.640$, $p < 0.001$), followed by monetary saving ($\beta = 0.29$, $t = 4.706$, $p < 0.001$), hedonic motivation ($\beta = 0.21$, $t = 2.851$, $p < 0.01$), and convenience ($\beta = 0.12$, $t = 2.042$, $p < 0.05$). Money saving is also found to have a significant impact on hedonic motivation ($\beta = 0.56$, $t = 12.674$, $p < 0.001$). As for consumers' attitude toward location-based advertising, it is found to be highly determined by control ($\beta = 0.35$, $t = 6.562$, $p < 0.001$) and trust ($\beta = 0.32$, $t = 4.835$, $p < 0.001$). Finally, intention is strongly impacted by attitude toward location-based coupons ($\beta = 0.58$, $t = 10.956$, $p < 0.001$) and attitude toward location-based advertising ($\beta = 0.30$, $t = 5.677$, $p < 0.001$). Fig. 3 reports the standardized coefficients and the R squared.

5. Discussion

The purpose of our research is to get a better understanding of consumers' motivations that drive location-based coupon redemption/usage intention. First, the study focuses on the relationship between attitude toward location-based advertising, attitude toward location-based coupons, and usage intention. Then, it investigates the

determinants of both attitudes. Results validate all the study's hypotheses. Here, we discuss the findings.

5.1. Attitude toward location-based advertising, attitude toward location-based coupons and intention of using

Based on parallel distributed processing, we hypothesize that consumers' general attitude toward location-based advertising will have a positive effect on their specific attitude toward location-based coupons. Results show that the latter is strongly affected by the former. Even more, among the determinants of attitude toward location-based coupons, location-based advertising is the strongest predictor. This result is in line with works on attitude deduction resulting from the process by which consumers recall their exemplary representations: general attitude (McKenzie et al., 1986; Malek-Saeidi et al., 2012; Stobbelaar et al., 2006). Our results extend the theory of parallel distributed processing by applying it in a contemporary context: location-based couponing.

5.2. Determinants of attitude toward location-based coupons

This study's results stipulate that consumers' attitude toward location-based coupons is significantly determined by money saving, convenience and hedonic benefits. This supports Thaler's exchange theory according to which consumers are motivated by monetary benefits as well as convenience and hedonic aspects. Additionally, the results support Liu et al.'s (2015) opinion contending that consumers not only engage in couponing activities for utilitarian benefits, but also for hedonic benefits.

The determinant role of money saving is in line with Achadinha et al.'s (2014) and Dickinger and Kleijnen's (2008) work and supports the premise that consumers' main motivation to redeem a coupon is the economic reward (Babakus et al., 1988). As for convenience, it emerges as another determinant of the attitude toward location-based coupons. Thus, consumers are attracted to location-based coupons because it is a convenient way for them to save time and effort while shopping. This is consistent with Wen and Mahatanankoon (2004), Liu et al. (2015), and Pura (2005) who demonstrate the important role played by convenience in mobile marketing and location-based services.

With respect to hedonic motivation, it is found to play a critical role in shaping attitudes toward location-based coupons. In line with Chandon et al. (2000), consumers keenly endeavor to match their self-esteem value and perceive themselves as smart shoppers and

responsible buyers. As described by Schindler (1998, p. 233), bargain hunting triggers their egocentric benefits and intensifies their sense of success and joy of “victory” against the vendor.

5.3. Determinants of attitude toward location-based advertising

With respect to the antecedents of attitude toward location-based advertising, the results show that consumers are highly concerned about trust and perception of control. First, it stands to reason that trust strongly affects consumers' evaluations and judgments regarding location-based services. Instinctively, consumers fear that firms can misuse their private information. This result further supports previous empirical findings showing a strong relationship between trust and attitude in online settings in general (Toufaily et al., 2013; Suki and Suki, 2017) and in location-based services in particular (Liu et al., 2015; Persaud and Azhar, 2012).

Finally, in line with past studies on the relationship between control and attitude (e.g., Achadinha et al., 2014; Dickinger and Kleijnen, 2008; Hsu et al., 2006; Kang et al., 2006), the present study finds that control appears as a second antecedent of attitude toward location-based advertising, suggesting that individuals generally assign high value to tasks that are highly controlled. Indeed, when things slip through their fingers, they perceive themselves as vulnerable and are likely to feel stress and frustration. The present study confirms the findings of Hühn et al. (2017) and argues that consumers prefer to control the flow of unsolicited messages in order to avoid information overload.

6. Theoretical and managerial implications

6.1. Theoretical implications

The bulk of past studies in relation to mobile marketing have mostly investigated location-based services in general (e.g., Banerjee and Dholakia, 2012; Ketelaar et al., 2017) or mobile coupons (e.g., Dickinger and Kleijnen, 2008; Im and Ha, 2013; Jayasingh and Eze, 2012). This study bridges gaps and extends the existing knowledge on the location-based coupons literature in many ways. First, this study contributes to enrich the existing limited literature about location-based coupons. It represents the first attempt to empirically investigate consumers' motivations to use this type of coupon, paving, therefore, the way for further in-depth investigations in this domain. Second, the present study is visionary in some respects. Indeed, since mobile coupons have faced, at their introduction, some resistance from consumers (Ha and Im, 2014), and because location-based coupons can be perceived as an extension of mobile coupons, this study sought to help scholars and marketers understand the main drivers of consumers' adoption of this particular type of coupon. Two types of attitudes (i.e., attitude toward location-based advertising and attitude toward location-based coupons) are found to be the main drivers, both of them are in turn determined by trust and control for the former, and money saving, convenience, and hedonic benefits for the latter. Third, this study is distinctive because it draws from different theories such as the theory of parallel distributed processing (McClelland et al., 1986), Thaler's (1985) exchange theory, and the trust theory (Mayer et al., 1995). Rather than relying solely on theories dealing with technology adoption, it is believed that involving these three theories would better explain consumers' attitudes and behavioral intentions. Fourth, the study provides additional evidence about the hierarchical formation of attitudes underlined by the parallel distribution process. Attitude transference from location-based advertising to location-based coupons represents one of the most interesting findings of this study. It thus evidences that attitude deduction results from the process by which consumers recall their exemplary representations (attitude toward location-based advertising) in order to create a more specific type of attitude (attitude toward location-based coupons). Fifth, it provides strong evidence supporting Thaler's exchange theory according to

which consumers are motivated by monetary benefits as well as convenience and hedonic aspects. More specifically, saving money is the primary driver of adopting location-based coupons. This is consistent with the economic utility theory because consumers are highly sensitive to economic benefits. However, the study also shows that individuals are not exclusively driven by monetary saving. In fact, convenience (i.e., saving time and effort) emerges as the second important antecedent of attitude toward location-based coupons, followed by hedonic motivation. The latter is also found to play a significant mediating role in the relationship between money saving and attitude toward location-based coupons. With respect to location-based advertising, like several studies on online and mobile marketing, trust (e.g., Chylinski and Chu, 2010; Suki and Suki, 2017; Toufaily et al., 2013) and perception of control (e.g., Kang et al., 2006; Trump, 2016) are undoubtedly key determinants of consumers' attitude.

6.2. Managerial implications

The research findings would help marketers be more effective in spurring the uptake of location-based coupons. Retailers who are savvy with location-based coupons will certainly have a competitive edge as this new type of couponing, once adopted by consumers, would stimulate their sales or at least increase consumers' brand awareness and store traffic. Retailers who are not yet familiar with location-based advertising (in general) and location-based coupons (in particular) should invest in this trendy marketing approach. Developing their own Apps and mobile marketing efforts is not an option; rather, it is crucial to the future of their businesses.

This study could show that a new attitude forms, following a hierarchical fashion. In this respect, a previous attitude toward a parent domain tends to affect a subsequent attitude toward its ramifications. We find that attitude toward location-based advertising as an umbrella domain has the strongest impact on attitude toward location-based coupons as one stretcher domain. This result implies that those who positively assess location-based advertising are more inclined to form positive evaluations of location-based coupons. As a first step, marketers can take full advantage of those who are presently using location-based advertising applications. To do so, they can include hyperlinks or tooltips in these services. As a second step, they can generate positive evaluations of location-based advertising in general by developing swift trust and perceptions of control. Marketers should reassure consumers that they provide trustworthy location-based advertising services, have the expertise to understand their needs, put their consumers' best interest first, and ensure the security of their confidential data. These actions aim to reduce consumers' suspicions about location-based advertising claims and boost their trust. Marketers could also integrate trust seals and security and privacy certification, increasing therefore consumers' valuing of the company's efforts in terms of privacy policy and the management of their sensitive data. In addition, because consumers are concerned about the intrusiveness and invasiveness of marketing messages and alerts, they should be informed that they are in control of the flow of deals-related information. Firms should set out an opt-in approach when designing their location-based coupon application. In this way, consumers will be able to manage and reduce the number of unsolicited messages, and filter them in accordance with their needs and situations. The objective of this policy is to lessen consumers' apprehension regarding their integrity and increase their perceptions of control.

Furthermore, the study explores the combined effects of monetary and non-monetary incentives in determining attitude toward location-based coupons. It comes as no surprise that monetary saving are associated with the elicitation of favorable appraisals regarding location-based coupons. Consequently, the current research evidences prior findings according to which individuals, in most cases, search for opportunities to save money. Indeed, the particularity of location-based coupons over paper-based coupons is that they allow consumers to

browse and search for deals with far lesser monetary costs since consumers just need to download the application rather than buying newspapers (or other media) to collect coupons.

Obviously, price-centric motivation emerges as a key driver of location-based coupons which is in line with previous research (Achadinha et al., 2014; Dickinger and Kleijnen, 2008). Marketers can include the amount of price cuts in a distinctive way in comparison with the body of the text (e.g., large, colored, bold or italic ways). Alongside money saving, convenience and hedonic aspects arise as two additional predictors of attitude toward location-based coupons.

Convenience limits the likelihood that consumers misuse their time or effort to make purchase decisions, as is often the case of the fast food segment. Consistent with the idea considering the consumer as a cognitive miser, location-based coupons help reduce the volume of time and effort allocated to purchase decisions. Thus, marketers should stress the fact that location-based coupons are a convenient way of getting a good deal. To do that, marketers could put in place promotional spots showing the gains in time and effort when using location-based coupons.

In addition, the present study finds evidence to suggest that hedonic motivation comes into play in order to create a favorable judgment of location-based coupons. Getting a good deal stimulates egocentric feeling sensations according to which consumers will feel a sense of pride and achievement, and even of pleasure at being lucky as they take advantage of bargain hunting. In addition, it also transmits symbolic meanings which make consumers perceive themselves as smart shoppers and market mavens. Marketers can enhance convenience and emotional benefits by including, in the location-based coupon application, messages such as “You must make the choice: either you control your time or your time controls you”, “Life is full of good things, never waste your time”, “Using location-based coupons is an act of great intellect”, “You are smart, you are lucky, you are a location-based coupon user”.

7. Conclusion, research limitations and future avenues

This study builds on some theories to extend our knowledge on the location-based coupons literature. Several key determinants of attitude toward location-based advertising and location-based coupons were investigated. The former is determined by trust and control, while the latter is determined by money saving, convenience, and hedonic motives. Hedonic motives are also found to play a significant role in mediating the impact of money saving on attitude toward location-based coupons. As for consumers' intention of using location-based coupons, it is found to be significantly predicted by both types of attitudes.

Like any research, this study has limitations. First and most importantly, we draw the attention of scholars to the interplay that may exist between general attitude and specific attitude. Prislin and Ouellette (1996) posit that the degree of embeddedness of a general attitude affects its activation speed in novel or ambiguous situations. Accordingly, they argue that the process of attitude deduction is mainly facilitated or accelerated (impeded or decelerated) by a deeply (slightly)-embedded general attitude. A highly-embedded general attitude is more intense, stable, predictive of behavior, and thus more accessible than a slightly embedded one (Kim et al., 2009). In other words, embeddedness is likely to moderate the effect of attitude toward location-based advertising on attitude toward location-based coupons, such that it is strong when the attitude toward location-based advertising is strongly embedded and on the contrary, weak when it is moderately or weakly embedded. We subsequently suggest that future

studies should investigate the moderating role of embeddedness on the inter-attitudinal (attitude toward location-based advertising on attitude toward location-based coupons) and the attitude-intention relationships (attitude toward location-based advertising on intention).

Second, the current research adopts a cross-sectional analysis. Adopting a longitudinal design will provide additional insight as to explore the attitude-attitude interplay over time. Indeed, attitude toward location-based advertising is a product of accumulated experiences with location-based coupons, among other specific location-based apps. Thus, investigating the plasticity of attitude toward location-based advertising may represent an interesting research avenue. By plasticity, we mean the capacity of attitudes and inter-attitude relationships (here, the impact of attitude toward location-based advertising on the attitude toward location-based coupons) to change throughout consumers' experience. For example, the effect is expected to be stronger in the pre-adoption stage and weaker or even nil in the post-adoption stage.

Third, following inductive reasoning, the inter-attitude relationships may come into play from the micro level to the macro level, such that attitude toward location-based coupons is likely to affect (positively or negatively) attitude toward location-based advertising. In other words, an interaction (a two-way effect) between attitude toward location-based advertising (macro level) and attitude toward location-based coupons (micro level) is likely to occur, specifically when consumers use location-based coupons. That is, in addition to the effect of attitude toward location-based advertising on attitude toward location-based coupons (evidenced in this research), future studies may investigate the reverse effect. For example, a negative experience with location-based coupons may jeopardize consumers' attitude toward location-based coupons, as a proximal response, and in turn, their attitude toward location-based advertising, as a distal response.

Fourth, as the study focuses only on the fast food sector, the results should be interpreted with some caution. Future research could test the study's model in a different context of convenience (e.g., grocery items), shopping (e.g., clothing), specialty (e.g., luxury items), and unsought goods (e.g., dental services).

Fifth, the mediation analysis, due to the complementary mediation of attitude toward location-based coupons, reveals the need of additional concepts that would mediate the effect of hedonic motivation on intention. We suggest that attitude toward deals in general (Laroche et al., 2003) and smart-shopper self-perception may arise as supplementary mediators between hedonic motivation and attitude toward location-based coupons. The latter concept (i.e., smart-shopper self-perception) “represents more ego-related benefits such as a sense of accomplishment, a boost in self-esteem, and pride in shopping savoir faire” (Garretson et al., 2002, p. 94). Hedonic motivation may also affect (adjust) attitude toward deals in general.

Finally, the data is collected from a convenience sample of individuals living in Canada. Thus, the generalizability of our results is impeded. Finally, yet importantly, future studies could test the model in a different cultural and economic context. For instance, the study can be replicated in cultures where time and money saving are not perceived as important motives (e.g., some of the rich Middle East countries).

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Appendix A



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