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German Millennials' Decision-Making Styles and Their Intention to Participate in Online Group Buying

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ABSTRACT

This study focuses on the relationship between consumer decision-making style (CDMS) of German millennials and their intention to participate (ITP) in online group buying (OGB). We make substantive contributions to the literature of consumer behavior and electronic commerce in particular. The study conducts structural equation modeling to analyze data obtained from a sample of 591 German millennials, an economically powerful young generation constituting the main beneficiaries of OGB websites. Data analysis yields significant relations among millennials between a perfectionistic, brand-conscious, price-conscious, impulsive, and novelty-seeking CDMS and their ITP in OGB. Whereas the price-conscious CDMS dominates the picture, there are also gender-based differences, with female millennials who occupy impulsive or novelty-seeking CDMSs having a higher ITP in OGB. In contrast, male millennials with a brand-conscious CDMS have a higher ITP, and male perfectionists avoid OGB sites. Our results offer managerial value to OGB websites to cater to specific CDMSs of millennial buyers.

KEYWORDS

Consumer decision-making styles; daily deal websites; millennials; online group buying

Introduction

The idea of the online group buying (OGB) mechanism builds upon a group discount deal, which takes place when a defined number of potential buyers agree to purchase a product or service and meet predetermined conditions that were set by the seller (Anand and Aron 2003; Liu and Sutanto 2012). Hence, OGB companies encourage consumers to forge coalitions of sufficient size to enable the website's owner to exert some influence for price negotiation with the relevant suppliers and obtain deeper discounts (Liao et al. 2012; Hung, Cheng, and Hsieh 2015; Zhang et al. 2015). The OGB phenomenon took place in various modified formats for more than one-and-a-half decades. In this context, multiple firms have appeared. Nevertheless, most of them disappeared ever since because of their faulty business model with narrow assortments, long waiting times, and no clearly

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stated final price. Several years ago, Groupon reinvented the original OGB idea with a much simpler model and high discounts whenever a deal takes place (Coulter and Roggeveen 2012). An Internet search shows that today there are more than 15 OGB sites operating as Groupon clones and deal aggregators in Germany offering deep discounts on a variety of national, international, and local brands and services (e.g., DealTicket, Dealzeit, MeinDeal, 1DayFly, OneDealOneDay, Tagesdeal, and Travelzoo). These firms have been functioning successfully in the retail space, sharing it among others with traditional physical stores, online company retail stores, and large online intermediaries such as Amazon.de (Liu, Brock, Shi et al. 2013; Hung, Cheng, and Hsieh 2015; Zhang et al. 2015). In the retailing literature, OGB, especially in Asian markets, has gained wide recognition as a business model; Wang, Zhao, and Li (2013) report about 4,000 OGB websites in China (see also Liu, Brock, Shi et al. 2013; Wang and Chou 2014; Zhang et al. 2015; Wang 2016). According to some estimates, OGB grew at a rate of 15.9% between 2011 and 2016 (Ibisworld 2016), and this trend is expected to continue in the near future (Boon, Pitt, and Ofek 2015). In addition, online shopping worldwide is expected to increase by up to $2.4 trillion in 2018 from $1.7 trillion in 2015; particularly in Europe, online shopping sales are expected to grow from $446 billion to $578 billion (Statista 2017a,b). Given such a strong online shopping growth vector, OGB is also likely to grow globally (see also Ong 2015; Lee et al. 2016).

Nevertheless, most studies to date have remained focused on the technical analysis of OGB sites and processes (e.g., Kauffman, Lai, and Ho 2010; Kauffman, Lai, and Lin 2010; Jing and Xie 2011; Coulter and Roggeveen 2012; Liang et al. 2014; Eisenbeiss et al. 2015). Only few recent studies focus on behavior-related aspects of consumers (e.g., Liu, Brock, Shi et al. 2013; Hung, Cheng, and Hsieh 2015; Tseng and Lee 2016; Wang 2016; Suki and Suki 2017). Other studies have used the technology acceptance model of Davis (1989) in their research, addressing OGB and its acceptance from a technological perspective (e.g., Tsai, Cheng, and Chen 2011; Cheng et al. 2012; Lim and Ting 2014; Wang and Chou 2014). Albeit, with the advent of the new generation of OGB websites, the issue of a "new" technology is less relevant, as these websites now deploy user-friendly, state-of-the-art technologies. In addition, the technical aspects of the OGB process associated with dynamic pricing and uncertainty of price drops are absent from the daily deal model (Sheu, Chang, and Chu 2008; Chen et al. 2009; Kauffman, Lai, and Ho 2010; Hsu, Chang, and Chuang 2015). As a result, OGB websites have become electronic shopping platforms, like retail store websites, with the difference that shoppers gain deep discounts on daily deals without worrying about group formation. Hence, there is a need to analyze OGB as a form of consumer behavior using consumer behavior–related constructs that

describe in more detail why or which consumers use these websites—an area that has been scantily researched in recent literature (Suki and Suki 2017). Such consumer behavior–related constructs are, for example, consumer decision-making styles (CDMSs), which have been developed by Sproles and Kendall (1986), and are widely accepted in marketing research, even today in the online context (Song, Song, and Wang 2011; Rezaei 2015). Other authors have been using dimensions of risk and trust (e.g., Shiau and Luo 2012; Tseng and Lee 2016; Suki and Suki 2017); price fairness (e.g., Tai et al. 2012); motivational dimensions like profit, value, emotions, and achievement (e.g., Chen 2012; Lee et al. 2016); or attitude (e.g., Cheng and Huang 2013) to research a behavioral approach on OGB. In this study, we deploy CDMSs, since CDMSs reflect a relatively long-lasting characteristic of consumers' decision making (Sproles and Kendall 1986; see also Baoku, Cuixia, and Weimin 2010). According to Sproles and Kendall (1986), CDMSs are basic characteristics of consumers' decision making—such as quality seekers or brand-loyal consumers—that help to profile consumers based on their individual scores (i.e., the profile of consumer style).

Furthermore, the present OGB websites using the daily deal business model have become successful in attracting price-oriented buyers, and according to Dholakia and Kimes (2011), millennials—the largest target group—are their main beneficiaries. According to recent literature, people born during the period 1982 to 2000 are referred to as millennials, although some studies have also used the label Gen Y for them (e.g., Smola and Sutton 2002; De Hauw and De Vos 2010; Myers and Sadaghiani 2010; Kuron et al. 2015; Weber 2017). A number of studies analyzing online shopping among millennials have been published lately (e.g., Gurău 2012; Botha and Reyneke 2013; Muk 2013; Sujata 2013; Duffett 2015; Lissitsa and Kol 2016; Quintal et al. 2016; Silhouette-Dercourt and de Lassus 2016; Chuah et al. 2017). Nevertheless, little or no work has been undertaken on OGB among millennial consumers from a behavioral perspective such as this study. Even though the OGB sites sufficiently match various characteristics of millennials (e.g., price consciousness, variety seeking, lack of brand loyalty, and purchases that are highly influenced by friends on social media). Such characteristics make millennials at least to some extent different from the general consumer or, for example, older shoppers. Millennials are highly active in online shopping and are being touted as a very large current and potential consumer market with enormous buying power (Jackson, Stoel, and Brantley 2011; Euromonitor 2015). Therefore, a study of shopping of millennials on OGB sites will not only add substantively to the understanding of their CDMSs and shopping behavior in general; it will also, from a practical viewpoint, enable OGB sites to sharpen their marketing strategies for their largest target group (Dholakia and Kimes 2011).

To sum, the present study addresses three research gaps in the OGB literature. First, we analyze the relationships between different CDMSs—a well-established consumer behavior theory—and the consumers' intention to participate (ITP) in OGB. Second, we focus on German millennials: a large market segment with buying power and who are the main beneficiaries of OGB, but who have not been researched in this context. Third, the study additionally analyzes the gender-based differences in millennials' CDMSs and their ITP in OGB. Hence, we advance the discussion on the importance of using the CDMS approach in the online marketing and retailing context in general and in the OGB context in particular. Due to the stability of CDMSs over time, the fine-tuning of market-based strategies by OGB websites to enhance their appeal to shoppers as well as potential shoppers would also have the advantage of stability over time. Therefore, we think that the results of our study will further advance the already enriched literature on consumer behavior, online shopping, millennials, and OGB.

The remainder of the paper is organized as follows. First, in the theoretical background and hypothesis development section we discuss the literature on OGB from the German millennial perspective. Second, based on the theoretical framework of CDMSs and ITP in OGB, we generate testable hypotheses on millennials' ITP in OGB. The third section presents our research methodology with measurement scales, data gathering, and model evaluation. In the fourth section, we discuss results of hypothesis testing and gender differences in detail. The fifth section offers a conclusion with theoretical and managerial implications, limitations, and areas for future research.

Literature review

German millennials in the OGB context

The OGB in Germany is a new-old phenomenon that started concomitantly with that in the US. It is old in the sense that OGB first appeared in 1999 with the opening of Letsbuyit.com, a Swedish firm that had a trans-European reach to 14 countries, including Germany. Nevertheless, this firm, and others as well (e.g., CoShopper, Mercata, and Accompany), finally collapsed in the year 2001 (Economist 2001). All of these pioneers were highly ambitious entrepreneurial attempts to provide shoppers with some control over product pricing by grouping together (Hung, Cheng, and Hsieh 2015; Zhang et al. 2015). Yet, according to Kauffman and Wang (2002), they had a faulty business model. Several explanations—including the delay in group formation due to price uncertainty, consumer opportunism in group formation, difficulties in obtaining cooperation from suppliers,

and the bursting of the dot-com bubble—have been offered (Perry 2000; Tang 2008; Kauffman, Lai, and Ho 2010; Sharma and Balaram 2011).

Regardless of the short life of these pioneers, we see today that the OGB idea did not vanish. In its second life, it reemerged in 2008 in a different format, taking care of the problems encountered by the OGB pioneers, when Groupon commenced its operations in the US (Sharma and Klein 2016; Song et al. 2016). Internet research on the German market shows that almost all of the about 15 post-pioneer OGB companies replicated the Groupon format, and later on, as Groupon changed over to the "daily deal format," these companies also adopted it (Lee et al. 2016). The current OGB firms provide consumers a platform to form groups more easily and quickly than before (Hung, Cheng, and Hsieh 2015; Wang 2016). In this context, they use a variety of marketing tools, including electronic word-of-mouth (Pan and Chiou 2011; Luo et al. 2014; Park, Shin, and Ju 2014; Yang et al. 2015) to expedite group formation.

In essence, we think that—unlike their predecessors—the second-generation OGB companies seem to be here to stay as formidable online retail outlets in the current or a modified format catering to the shopping needs of deal seekers. It also needs to be noted that the assortment of OGB companies, such as Groupon.de and Gutscheine.de, include not only offerings from local brands but also products from highly popular major national and international brands, such as Apple iPhone, Puma pullovers, Brother laser printers, Dell desktops, Armani watches, and TomTom navigational devices (see e.g., www.groupon.de; www.gutscheine.de). Millennials would like to have such brands and products, but they are usually very costly. With large discounts ranging from 50% upward, they can have them now without being too extravagant in their spending. Moreover, the OGB companies have well-developed websites that are entertaining, provide multimedia features and, most important, offer novelties in products and services on a daily basis, which makes them attractive for social media--savvy millennials (Demangeot and Broderick 2016). While the largest population of millennials is in India and China and the richest ones are in Switzerland, the best combinations of population and income are in the US, Japan, Germany, the UK, and France (Euromonitor 2015). Germany has approximately 14.68 million millennials, amounting to about 18% of the population (Pew Research 2015). According to Pew Research (2015), although the economic stagnation during the past decade significantly affected the younger population in most countries of Europe, the effect on German and UK millennials was minimal. Thus, like their counterparts in the UK, the US, and China, where the economies were in better shape, German millennials have significant buying power, and many of these millennials are affluent consumers (Stories4Brands 2015). German millennials are an attractive market for retailers, as they have greater purchasing power

than American millennials (perhaps due to small or no student loans) and they desire to be the first users of new developments that send signals to their peers (Silhouette-Dercourt and de Lassus 2016). That is why they are treated as a major target group by companies to purchase their latest offerings and act as ambassadors for their brands (De Pelsmacker, Geuens, and van den Berg 2010). According to Stories4Brands (2015), these millennials are found to act as trendsetters in several product categories, such as clothing, makeup, and jewelry. Luxury goods have enjoyed a strong upward tendency in the millennial customer segment as well (Faust and Surchi 2015). Although German millennials do shop at shopping malls, like millennials elsewhere, they prefer online shopping. The underlying reasons are lower prices, transactional transparency, a wider choice of products and, most important, the availability of product reviews; they are the number one online buyers in Europe (Wenzel, Haderlein, and Mijnals 2009).

Over time, a number of studies pertaining to millennials have been published in the US and Europe (e.g., Singh et al. 2006; Koenig-Lewis, Palmer, and Moll 2010; Gurău 2012; Botha and Reyneke 2013; Muk 2013; Smith et al. 2013; Sujata 2013; Duffett 2015; Lissitsa and Kol 2016; Quintal et al. 2016; Silhouette-Dercourt and de Lassus 2016; Chuah et al. 2017). Based on the description of these studies, on the one hand, there appears to be a strong interest among scholars in deciphering the antecedents of millennials' shopping habits because they are becoming an attractive market (Silhouette-Dercourt and de Lassus 2016). On the other hand, according to Ordun (2015), while the pessimistic point of view of millennials is that they are lazy, irresponsible, impatient, apathetic, selfish, disrespectful, and even lost, the optimistic view is that they are open-minded, social, innovative, energetic, ambitious, confident, motivated, and smart; most important, though, is that they love to shop. Depending on their goals, a number of works have classified millennials into various subcategories based on their lifestyles, media usage, or personality (Barton, Fromm, and Egan 2012; Kilian, Hennigs, and Langner 2012; Euromonitor 2015). Based on such classifications, in this paper we use the CDMS approach from Sproles and Kendall (1986) to research the relationship between CDMSs and the millennials' ITP in OGB. An investigation into their decision making underlying shopping would furnish academics with additional research in deciphering the antecedents of millennials' shopping habits and businesses with deeper insights to formulate effective market strategies to target products and services to them.

Use of the CDMS approach in consumer behavior

The consumer CDMS scale is a tool that comprehensively covers consumer decision making about products and shopping. According to Sproles and

Kendall (1986), a CDMS is a mental orientation that primarily characterizes a consumer's approach to decision making. In the original version, they identified eight basic dimensions consisting of 40 scale items that characterize consumers' decision approaches to purchases. The perfectionistic, high-quality-conscious CDMS entails systematic and careful shopping. Consumers with such a style search for the very best quality and are not satisfied with "good enough" products. Brand-conscious, "price-equals-quality" consumers buy more expensive, well-known, and best-selling advertised brands. The novelty-fashion-conscious style is said to exist in consumers who gain excitement and pleasure from seeking out new things. Recreational, hedonistic consumers shop for fun. While price-conscious, "value-for-money" consumers are comparison shoppers looking for low prices and the best value for their money, impulsive, careless consumers are unplanned shoppers who do not care about how much they spend or about the best buys. The consumers with a confused-by-overchoice CDMS are those who, after searching for information from many brands and stores, experience information overload and find it difficult to make decisions. The last dimension captures those who are habitual, brand-loyal consumers; such consumers have favorite brands and stores, and they have formed habits in choosing them. In their article, Sproles and Kendall (1986) distinguish among different CDMSs and the consumer style inventory, that is, an instrument that measures the scores of an individual consumer on those eight basic styles (see also Bauer, Sauer, and Becker 2006).

The CDMS scale of Sproles and Kendall (1986) has been used in more than 30 studies globally (see also Rezaei 2015), and it has been partly adapted to the German consumer behavior literature as well (e.g., Kroeber-Riel and Gröppel-Klein 2013). Such studies include, for example, analyses of gender differences in CDMSs (e.g., Tai 2005; Bakewell and Mitchell 2006; Yang and Wu 2007). There are studies on cross-cultural differences in consumer shopping (e.g., Durvasula, Lysonski, and Zotos 1996; Siu et al. 2001; Bauer, Sauer, and Becke 2006) and market segmentation (e.g., Walsh, Hennig-Thurau, Mitchell et al. 2001; Bakewell and Mitchell 2006; Song et al. 2011; Rezaei 2015). Some studies have also investigated consumers' purchase of groceries and apparel in offline and online contexts, domestic and imported brands, and even prescribed consumption (e.g., Wang, Siu, and Hui 2004; Lamour and de la Robertie 2016). All these studies used modified CDMS scales with different numbers of scale items ranging from 21 to 38 (see also Rezaei 2015). Hence, not all of the original eight CDMSs have been used in previous studies such as those mentioned above. Moreover, authors like Mehta and Dixit (2016) and Walsh, Mitchell, and Hennig-Thurau (2001) have added additional CDMSs (i.e., variety seeking) or modified CDMSs (e.g., Bauer, Sauer, and Becker 2006). The primary reason for studies using modified

CDMS scales is that they remain robust even after being modified for specific contexts (see also Lamour and de la Robertie 2016). Most important, the CDMS scale enables researchers to glean information on CDMSs, which are assumed to be relatively stable parameters of purchase-decision making (Sproles and Kendall 1986; see also Baoku, Cuixia, and Weimin 2010). This study also uses a suitably modified CDMS scale to study German millennial consumers' ITP in OGB. On the one hand, we use six of the original eight CDMSs (see also Rezaei 2015) that, from our viewpoint, fit best into the context of OGB and German millennials. A research on major OGB sites, such as Groupon.de, showed that they do not carry groceries or daily use household items. As a result, for the time being, we decided not to develop a hypothesis pertaining to the "habitual, brand-loyal" CDMS, as it better fits to groceries or some types of apparel that people buy from habit. Moreover, there are two studies—Mehta and Dixit (2016) and Walsh, Mitchell, and Hennig-Thurau (2011)—that describe the German consumer as also being partly "confused by overchoice." Nevertheless, we argue with Bauer, Sauer, and Becker (2006) that "confused by overchoice" is a state of information overload rather than an individual's CDMS. Hence, in this study, we also did not develop a hypothesis pertaining to the "confused-by-overchoice" CDMS. On the other hand, the original scale has been translated into the online shopping context in Germany. Once again, the CDMS scale appears to be highly suited to this purpose for several reasons. First, it has dimensions that can measure millennials' shopping characteristics, such as price consciousness, perfectionism, and brand loyalty (see also Leo, Bennett, and Härtel 2005; Jamal et al. 2006), which, finally, result in the individual profile of consumer style (Sproles and Kendall 1986). Second, in comparison with the other approaches to analyzing consumer shopping patterns, that is, consumer typologies based on lifestyles, media usage, and the like, the CDMS scale as a consumer's mental orientation is considered to be better in understanding consumer choices (Sproles and Kendall 1986; Bao, Zheng Zhou, and Su 2003; Bauer, Sauer, and Becker 2006; Rezaei 2015). Third, according to Wang, Siu, and Hui (2004) and Wickliffe (2004), the mental characteristics of a consumer's decision making is directly linked to his or her choice behavior. Fourth, the scale is a time-tested instrument of consumer purchase-decision making (Baoku, Cuixia, and Weimin 2010).

ITP in OGB

The concept of ITP is considered to tap directly into possible purchasing (Ajzen and Fishbein 1980). Moreover, Gefen, Karahanna, and Straub (2003) and Gupta, Su, and Walter (2004) argue that buying intentions are closely connected to the actual buying behavior for many products (see also Grewal et al. 1998; Luo et al. 2011). Other researchers (e.g., Hansen 2005;

Chen and Wang 2016) use buying intentions in the context of consumer decision making as well. Not surprisingly, scholars have examined consumers' ITP in OGB websites from several perspectives. Fairness of transactions or an acceptable final price and its knowledge before the termination of the auction as well as perceived lower financial risk and ease of use of the website are some of them (e.g., Lai and Zhuang 2006; Kauffman, Lai, and Ho 2010; Tsai, Cheng, and Chen 2011; Das 2016; Lee et al. 2016; Tseng and Lee 2016). Lai and Zhuang (2006) suggest that OGB websites can form large groups rapidly, thereby increasing ITP, if they offer potential consumers financial incentives to join early and make these incentives size-dependent. Other studies have investigated consumer participation in OGB as an individual as well as a member of a community. For example, convenience, thriftiness in spending habits, larger discounts, novelty of shopping, variety seeking, trust in the virtual community, and the sense of virtual community of consumers are positively related to their ITP in OGB (e.g., Erdoğmus and Çiçek 2011; Huang and Chien 2011; Pan and Chiou 2011; Tsai, Cheng, and Chen 2011; Tseng and Lee 2016).

According to Singh et al. (2006), German millennials have a more favorable attitude toward sites that are German or have significant German adaptation compared with those that are low on adaptation. They found that the favorability of the attitude of millennials was positively related to their purchase intentions. According to Wenzel, Haderlein, and Mijnals (2009), German millennials also prefer online shopping on sites that have lower prices, transactional transparency, a wider choice of products and, most important, the availability of product reviews. To sum, high-quality, trustworthy OGB sites that are adapted to the German culture and include product reviews; have clearly stated policies for deals, the return of merchandise, and refunds; and ensure security of transactions can alleviate consumers' concerns about the genuineness of deals and their transactions and the financial risks, thereby enhancing their ITP in buying from these sites.

Hypothesis development

Perfectionistic, high-quality-conscious CDMS: People scoring high on this style are likely to be more systematic and careful in shopping (Sproles and Kendall 1986). According to Gilman et al. (2005), such people have high standards and search for the best quality possible (also Wesley et al. 2006). In this regard, the perception of quality derives from the product and its evaluation (Das 2014). Some millennials not only have the desire to make the best decision concerning price and quality but also give consideration to making good investments for the future, thereby implying that they search for the best-quality products and are not satisfied with the "good enough"

ones (Ordun 2015). Hence, they use considerable knowledge about the latest trends, image, and reputation of retailers and products; browse multiple store sites; and of course seek others' input. Nevertheless, even though OGB sites sell some costly products with large discounts, they do not offer multiple products in the offered product categories, as their assortment is regularly much narrower than that of traditional stores because of their daily deal format (Hsu, Chang, and Chuang 2015; Lee et al. 2016). As a result, millennials scoring high on the perfectionistic high-quality-conscious CDMS are not likely to shop on OGB sites, since there is little or no scope for comparison shopping. This leads to our first hypothesis:

H1: The higher millennials score on the perfectionistic, high-quality-conscious CDMS, the lower their ITP in OGB.

Brand-conscious, "price-equals-quality" CDMS: This style is potent among those consumers who purchase expensive, well-known, best-selling advertised brands. According to Workman and Lee (2013), brand names can highly influence decision making. Park and Gretzel (2010) state that brand-conscious consumers take pleasure in the consumption of exclusive brands, and Zhang and Kim (2013) add that they favor luxury fashion products. For such consumers, the brand itself creates utility and assists in finding products with the required qualities (Smith and Brynjolfsson 2001). Following Dodds, Monroe, and Grewal (1991), brands also serve as information cues that help to reduce uncertainty for the consumer. In the millennials' context, Lodes and Buff (2009) found that, for high-priced products such as cell phones, MP3 players, and jackets/coats, male millennials exhibited stronger brand loyalty than women. Gurău (2012) also reported that, for high-value products, single professional and married millennials show a higher level of exclusive brand loyalty than college-going millennials. According to Ordun (2015), on the one hand, millennials select brands that help them to define who they are, what is important to them, and what expresses best their own personality. On the other hand, part of the millennial cohort seeks "value for money" and always looks for discounts and coupons (Forbes 2016). Therefore, we think that millennials who are seeking expensive brands at discounts, that is, being brand-conscious while saving some money, are likely to show a greater intention to buy them on OGB sites, as they offer the best combination of brand and price for many products. This leads to our second hypothesis.

H2: The higher millennials score on the brand-conscious CDMS, the higher their ITP in OGB.

Recreational, hedonistic CDMS: Consumers scoring high on this CDMS are those who shop for fun (Guiry, Mägi, and Lutz 2006). They are also those people who enjoy the shopping task as leisure-time activity (Bellenger

and Korgaonkar 1980). Such behavior makes them different from the "normal" shopper (Celsi, Rose, and Leigh 1993). Respective literature draws a connection of recreational shopping with hedonic consumption experiences (Holbrook et al. 1984), and Williams, Slama, and Rogers (1985) state that recreational shoppers are not discount shoppers, since they get pleasure that might lead to unplanned acquisitions and hedonic spending value (see also Wong et al. 2012). In addition, Mathwick, Malhotra, and Rigdon (2001) find that the recreational shopping enthusiast is a multichannel shopper, and Sharma and Klein (2016) claim that this CDMS may translate into browsing several websites for recreational purposes or visiting shopping malls. According to the Economic Times (2016), millennials are a "right now" generation, follow their passions, live to explore, have a short attention span, and unconventional thinking. They are more of an experiential generation than one engaged in acquisition. Some of them believe in renting and sharing (e.g., Uber and Airbnb) rather than owning high-priced products (e.g., homes and cars) and engage in activities that are experiential rather than requiring long-term commitment. Given that millennials tend to shop for good value for money, OGB firms with state-of-the-art websites should be attractive to them for shopping for fun, but these sites are not like the online shopping malls that would enable them to browse several sites for fun (see also Demangeot and Broderick 2016). Therefore, millennials who score high on the recreational CDMS are less likely to shop for recreational purposes on OGB sites. This leads to our third hypothesis:

H3: The higher millennials score on the recreational, hedonistic CDMS, the lower their ITP in OGB.

Price-conscious, "value-for-money" CDMS: Following Sproles and Kendall (1986), consumers scoring high on this style are likely to engage in comparison shopping for low prices and believe that they have to obtain the best value for their money (see also Park and Gretzel 2008). According to Lysonski and Durvasula (2013), they always look for sale prices, and Wesley et al. (2006) declare that price-conscious consumers are constantly concerned with getting lower prices; they are not willing to pay a price premium for distinctive features of products. Keeping in mind that purchasing expensive brand names enhances an individual's social position, whereas frequently looking for cheaper prices and purchasing at sales prices might be perceived as being cheap (Bao, Zheng Zhou, and Su 2003), millennials with a price-conscious CDMS can now afford expensive designer brands and likewise increase their social status. In this context, Wenzel, Haderlein, and Mijnals (2009) claim that some millennials are social shoppers and they are price conscious and prefer to shop on sites that have recommendation systems, price comparisons, and seller rating systems. The OGB websites offer high-price products and well-known brand names, but for a

much lower price at high discount rates. Hence, they offer great deals with a high transaction value, for which deal-prone millennials fall (Liu 2014). Lumi, a Finnish company that sells fashion accessories, to appeal to European millennials, kept its merchandise at a price almost half that of major brands such as Coach, Louis Vuitton, and Armani so that this group, with its increasing income, can afford such luxury products (www.lumiaccessories.com). Mercedes-Benz also has become successful in capturing the millennial market by creating cars with lower price points (Zoeller 2017). To sum, OGB companies sell high-priced products and services with large discounts; therefore, they would be attractive to millennial shoppers who score high on the price-conscious CDMS (see also Liu, Burns, and Hou 2013; Faust and Surchi 2015; Hung, Cheng, and Hsieh 2015; Silhouette-Dercourt and de Lassus 2016). This leads to our fourth hypothesis:

H4: The higher millennials score on the price-conscious CDMS, the higher their ITP in OGB.

Impulsive, careless CDMS: Impulsive consumers are unplanned shoppers, and they do not care about how much they spend (Sproles and Kendall 1986). Rook (1987) stated that impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately with diminished regard for consequences (Chen and Wang 2016). Impulse shoppers are most of the time careless about how much they spend (Lysonski and Durvasula 2013), and they are not likely to plan their shopping trips (Jamal et al. 2006). Verhagen and van Dolen (2011) detect that impulse buying is also positively correlated with web surfing. Having money, a favorite store, credit cards, and shopping malls are also claimed to be directly associated with impulsive buying (Youn and Faber 2000). Impulsive spenders also act as opinion leaders, are high spenders, and are keen to be the first to buy new products from fashionable brands; impressing others is key to this consumer (Muratore 2016). Finally, in online purchasing website quality is found to have a significant positive relationship with the urge to buy impulsively (Wells, Parboteeah, and Valacich 2011; Chen and Wang 2016; Wang 2016), although, according to Liu, Li, and Hu (2013), not enough knowledge is available on impulsive buying in online environments. The OGB websites fulfill these conditions, such as having attractive websites, carrying fashionable brands, and keeping their visitors informed about new deals, thereby attracting the impulsive buyer. Hence, millennials scoring high on the impulsive CDMS are more likely to buy on OGB sites. This leads to our fifth hypothesis:

H5: The higher millennials score on the impulsive, careless CDMS, the higher their ITP in OGB.

Novelty-fashion-conscious CDMS: Consumers scoring high on this CDMS are likely to gain excitement and pleasure from seeking out new things (Wesley et al. 2006; Zhou et al. 2010). Moreover, novelty-fashion-conscious consumers enjoy being in style (Lysonski and Durvasula 2013), and they place value on pleasure by looking for new products (Park and Gretzel 2008). One of the main characteristics of OGB sites is the novelty of deals and product portfolios with deep discounts. Hence, the novelty-fashion-conscious CDMS correlates with the OGB sites' assortments. Millennials are novelty seekers: They seek new products, ideas, and services to satisfy these desires (Parment 2013). After all, this is a generation of experiencers. According to Parment (2013), compared with baby boomers, millennials are more attracted to innovative products, and they opt for early adoption. Zhang and Kim (2013) state that buying prestigious goods and fashion products is considered as an indicator of personal wealth and well-being. Gurău (2012) argues that millennials constantly follow trends on social media to seek such novelties, although they may not be a homogeneous group overall. Therefore, OGB sites would be attractive to millennials scoring high on the novelty-fashion-conscious CDMS. This leads to our sixth hypothesis:

H6: The higher millennials score on the novelty-fashion-conscious CDMS, the higher their ITP in OGB.

Research methodology

Measurement scales

With this research, we test the relationships between six of the eight CDMSs introduced by Sproles and Kendall (1986) and the ITP in OGB of millennials (adapted from Gupta, Su, and Walter 2004). Figure 1 depicts the proposed research model and the respective relations based on the discussion in our hypothesis development section.

We conducted the survey using a paper-based questionnaire. The survey instruments pertaining to the two theoretical constructs in this study (i.e., CDMSs and the ITP in OGB), although developed and used in previous studies, were adjusted to make them relevant to the German online shopping context and to the OGB context in particular. As described earlier, the two CDMSs "habitual, brand loyal" and "confused by overchoice" of the original scale were not included in our model (see also Bauer, Sauer, and Becker 2006; Rezaei 2015). The remaining items of the original scale from Sproles and Kendall (1986) were translated back and forth into the German language (Mullen 1995; Walsh, Hennig-Thurau et al. 2001). A few additional items were generated, and some items were

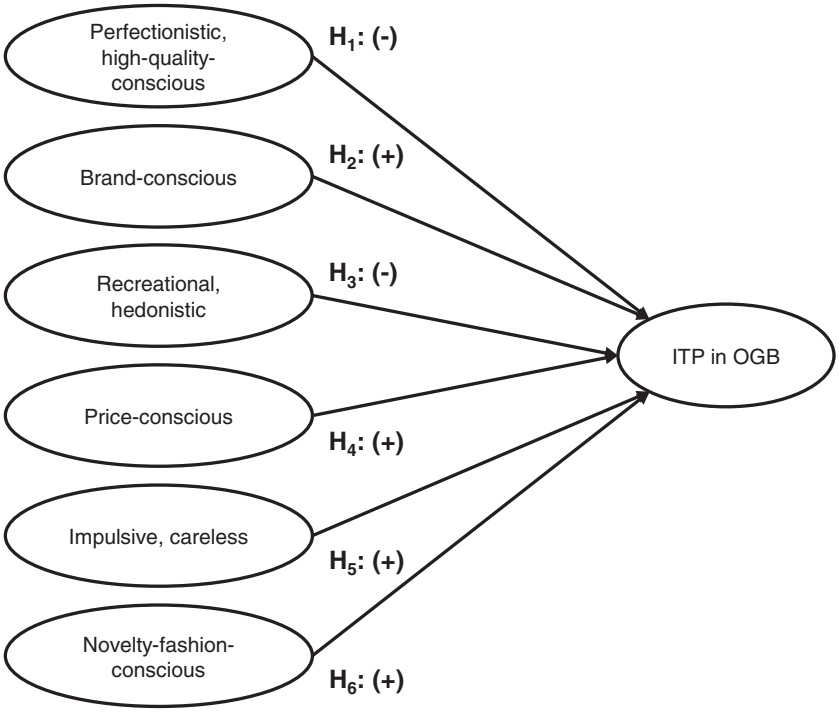

Figure 1. Proposed research model.

partly modified or reversed to make the instrument even more relevant to the German OGB context (Bauer, Sauer, and Becker 2006). The ITP construct was measured using Kauffman, Lai, and Ho's (2010) scale, which the authors developed after modifying Gupta, Su, and Walter (2004) scale for online shopping. The items were adapted to the OGB context accordingly (see the appendix for item overview). After the completion of the translation and modification process, the scales were checked for face validity by three knowledgeable judges, two of whom have a German background—one of the authors and a German doctoral student—and the final version of the questionnaire was pretested to account for discrepancies in the understanding of any item. In accordance with the questions raised about item wording, the questionnaire was modified to enhance understanding and validity. In addition, two examples of Groupon deals were implemented to ensure that respondents who had not taken part in OGB so far could clearly imagine how the OGB process works. Nevertheless, during the pretesting and the actual survey, there was hardly anyone who had not heard about sites like Groupon and their business model. This research used a 5-point Likert scale format from 1 (*strongly disagree*) to 5 (*strongly agree*) as in the original study (Sproles and Kendall 1986).

Data gathering

To test the above-stated hypotheses, it was decided to gather data from college or university students because they are a definite part of the millennial generation and are likely to engage in online and offline shopping (Bakewell and Mitchell 2003; Dholakia and Kimes 2011; Jackson, Stoel, and Brantley 2011); hence, they would be highly relevant for the study. To obtain a large data set and to increase the study's reliability and validity, one of the authors and three carefully advised graduate assistants gathered the data with an interviewer-administered questionnaire using snowball sampling to increase the response rate. In this context, no incentives were given to potential respondents. Given the primary goal of this study, snowball sampling was considered to be appropriate for several reasons. First, this sampling method provides a sample through referrals made among people who share or know of others who possess homogeneous characteristics of research interest (Biernacki and Waldorf 1981); the OGB among millennials entails similar social interactions. Second, snowball sampling allowed the researchers to extend the domain of sampling from a limited size to the university student population, which would be likely to furnish a better representation of the millennial population for testing the model (Mort and Drennan 2005). Third, the snowball sampling method has been widely used in sociological research and specifically in the marketing discipline (e.g., Frenzen and Davis 1990; Mort and Drennan 2005; He and Li 2011; Baltar and Brunet 2012). Fourth, in their recent work, Chen, Chen, and Xiao (2013) found that the usage of snowball sampling in social interaction analysis is even better than random sampling, as it captures the network topology.

After a careful review of the returned questionnaires, 591 were found to be fully completed and applicable for data entry and subsequent analysis, as they are within the millennial cohort. Approximately one-fifth (159 respondents, 21.2%) had to be removed from the initial sample because they did not indicate their age, were older than 30 years, or did not appropriately complete the questionnaire, leaving us with a response rate of 78.8%. The sample comprised 223 males (37.7%) and 368 females (62.3%). The average respondent's age was 22.81 ($SD = 3.07$). Hence, the respondents' age characteristics are by and large within the range that is generally considered as millennials (Weber 2017). Moreover, it was found that 17.4% of the sample had already participated in OGB, while 94.8% would further recommend OGB, offering a good picture about satisfaction with OGB, repurchase intentions, and recommendation behavior at the time when the data were gathered. In the limitations section we discuss possible shortcomings of the sample composition.

Reliability and validity of the scales

We used SPSS Amos 23 to check the reliability of the scales and subsequently conduct the hypothesis testing with structural equation modeling, using maximum likelihood as an efficient method of parameter estimation. Structural equation modeling is an established powerful multivariate approach for simultaneously testing and estimating such types of models with causal relations and multi-item measurements as used in this study. Hence, structural equation modeling can be utilized instead of running separate confirmatory factor analyses, calculating factor score weights afterward and applying additional regression analyses to calculate the path coefficients for the relationships between the different CDMSs and the ITP in OGB. Nevertheless, a two-step approach was applied, as recommended by Anderson and Gerbing (1988), for separate estimation and respecification of the measurement model with confirmatory factor analyses prior to the simultaneous estimation of the measurement and structural models. In the cleaning process of the CDMSs with 31 original items (see the appendix), we strictly deleted items with less than 0.6 factor loading to improve measurement model estimation and overall fit values (Guadagnoli and Velicer 1988). Subsequently, 19 items remained for six consumer CDMS dimensions and three items for the ITP scale. Table 1 exhibits the remaining scale items within each CDMS dimension and the ITP in OGB, the means, the standard deviations, and the factor loadings. The averages per dimension are depicted in bold letters next to the name of the CDMS dimension. In addition, Cronbach's alpha (CA) as well as the composite reliabilities (CRs) of the items belonging to each CDMS and ITP in OGB constructs were calculated and are displayed as measurement properties of the utilized constructs. Finally, the path coefficients (β) and significance levels (p) for the discussion of the results are presented on the right-hand side. Significant values are shown in bold.

The six CDMS dimensions show highly satisfying CRs of 0.805 for perfectionistic, high-quality-conscious (CA = 0.795); 0.817 for brand-conscious (CA = 0.811); 0.938 for recreational, hedonistic (CA = 0.945); 0.830 for price-conscious (CA = 0.828); 0.843 for impulsive, careless (CA = 0.836); and 0.768 for novelty-fashion-conscious (CA = 0.750). The CR for the ITP scale emerged as 0.943 (CA = 0.942). All the concept-to-domain coefficients (factor loadings) displayed in table 1 are statistically significant, thereby demonstrating high convergent validity for the constructs.

Following Fornell and Larcker (1981), the discriminant validity for the exogenous variables was estimated by comparing the average variance extracted by each CDMS construct with the squared correlation between them. Table 2 displays that the average variance extracted by each factor was far greater than its squared correlation (see also Suki and Suki 2017),

Table 1. Measurement properties of dependent and independent constructs.

Factor name	*Mean*	*SD*	Factor loading	CA	CR	*β*	*p*
Perfectionistic, high-quality-conscious	**3.70**	**0.98**					
V3_In general, I usually try to buy the best overall quality.	4.07	0.92	0.685				
V4_I make special efforts to choose the very best quality products.	3.41	1.06	0.733	0.795	0.805	**−0.168**	**.002**
V5_My standards and expectations for products I buy are very high.	3.81	0.93	0.686				
V6_Only the best products really satisfy me. (Adapted)	3.51	1.01	0.744				
Brand-conscious	**2.67**	**1.07**					
V7_The well-known brands are best for me. (Adapted)	2.91	1.03	0.830	0.811	0.817	**0.150**	**.005**
V8_The more expensive brands are usually my choices.	2.59	1.08	0.845				
V9_The higher the price of a product, the better its quality.	2.50	1.09	0.634				
Recreational, hedonistic	**3.50**	**1.25**					
V12_Shopping is a pleasant activity for me. (Reversed)	3.69	1.18	0.868				
V13_I enjoy shopping just for the fun of it.	3.60	1.22	0.910	0.945	0.938	0.023	.614
V14_Shopping in different stores is fun. (Adapted)	3.60	1.23	0.945				
V15_I take my time while shopping. (Additional)	3.35	1.27	0.770				
V16_I like extensive shopping trips. (Reversed)	3.24	1.37	0.835				
Price-conscious	**3.68**	**1.05**					
V20_I look carefully to find the best value for the money.	3.71	1.05	0.798	0.828	0.830	**0.367**	**.000**
V21_To find the best offer I compare prices of different brands and products. (Additional)	3.64	1.05	0.885				
Impulsive, careless	**3.08**	**1.08**					
V22_I seldom plan my shopping trips. (Reversed)	3.04	1.08	0.754	0.836	0.843	**0.120**	**.006**
V23_I am impulsive when purchasing.	3.08	1.11	0.939				
V24_Often, I make spontaneous purchases. (Adapted)	3.12	1.05	0.697				
Novelty-fashion-conscious	**3.27**	**1.09**					
V30_I like to experience different products and brands. (Adapted)	3.40	1.04	0.901	0.750	0.768	**0.201**	**.000**
V31_To get variety, I choose different brands. (Adapted)	3.13	1.13	0.668				
Intention to participate in OGB	**2.83**	**1.08**					
V32_I am willing to participate in a group buying purchase.	3.05	1.29	0.899	0.942	0.943		
V33_I will probably participate in a group buying purchase.	2.97	1.25	0.961				
V34_I am interested in participating in a group buying purchase.	2.79	1.27	0.897				

Note. CA: Cronbach's alpha; CR: composite reliability; OGB: online group buying.

Table 2. Construct correlations and average variance extracted (AVE).

Factor	AVE	Perfectionistic, high-quality-conscious	Brand-conscious	Recreational, hedonistic	Price-conscious	Impulsive, careless	Novelty-fashion-conscious
Perfectionistic, high-quality-conscious	0.508	1					
Brand-conscious	0.602	0.407	1				
Recreational, hedonistic	0.753	0.165	0.109	1			
Price-conscious	0.710	0.229	−0.190	0.004	1		
Impulsive, careless	0.645	−0.053	0.030	0.124	−0.209	1	
Novelty-fashion-conscious	0.629	0.157	−0.042	0.344	0.207	0.053	1

and it achieved the necessary level of 0.5 (Hair et al. 2009). It is also thought that common method bias is not an issue in this model, although the predictor variables were not separated from the dependent construct in the survey. In this context, techniques discussed by Podsakoff et al. (2003) were applied. First, the respondents were carefully advised in the questionnaire and through the interviewers that there are no right or wrong answers and they should answer the questions as honestly as possible to reduce their evaluation apprehension and the possibility of socially desirable answers. Second, we performed a common latent factor analysis by running our model with and without a common latent factor, likewise, comparing the factor loadings of each path (Podsakoff et al. 2003). Common method bias is not a concern in this research since all observed differences are close to zero.

Model fit

The overall fit of the structural and the applied measurement model is very satisfactory. In addition to tables 1 and 2, the fit values and the results of the hypothesis testing (β weights) are presented in figure 2.

The χ^2 statistics of goodness of fit for the structural model yielded a value of $\chi^2 = 449.135$ with $df = 185$ and a p value of .000. According to Byrne (2001), ideally the model should have a high p value, but it is also quite common to see very low p values when structural modeling is applied to large data sets such as this one. As a result, several other goodness-of-fit indices for the structural model, for example, chi-square divided by degrees of freedom (χ^2/df), goodness of fit index (GFI) and adjusted goodness of fit index (AGFI), and comparative fit index (CFI) and Tucker-Lewis index (TLI) for the measurement model, were also deployed (Anderson and Gerbing 1988; Bagozzi and Yi 1988). The relative chi-square value of 2.428 (χ^2/df) for this model is very satisfactory. Following Carmines and McIver (1981), the value of χ^2/df for a good model should be less than 3.0. For the remaining indices, the value above 0.9 is evidence of a very good model fit (Doll, Xia, and Torkzadeh 1994; Hair et al. 2009). For this model, the

values of GFI = 0.934, AGFI = 0.910, CFI = 0.967, and TLI = 0.959 are all indicative of excellent model fit. Likewise, the RMSEA is considered to be one of the most informative indicators of goodness of fit, as it estimates the amount of error of approximation per degree of freedom and takes into account the sample size as well. The root mean square error of approximation (RMSEA) value of 0.049 is just below the required stricter value of 0.05, which is another example of the very close fit of our model (Browne and Cudeck 1992), and the corresponding p value of close fit (PCLOSE) = 0.582 is insignificant, hence also displaying a very good model fit (Hair et al. 2009). The structural equation modeling results indicate that the hypothesized model depicts very well the relationship between the six different CDMSs of German millennials and their ITP in OGB.

Discussion

Results of the hypothesis testing

As is apparent from figure 2, five of the six CDMSs of German millennials have significant relationships and one dimension has an insignificant

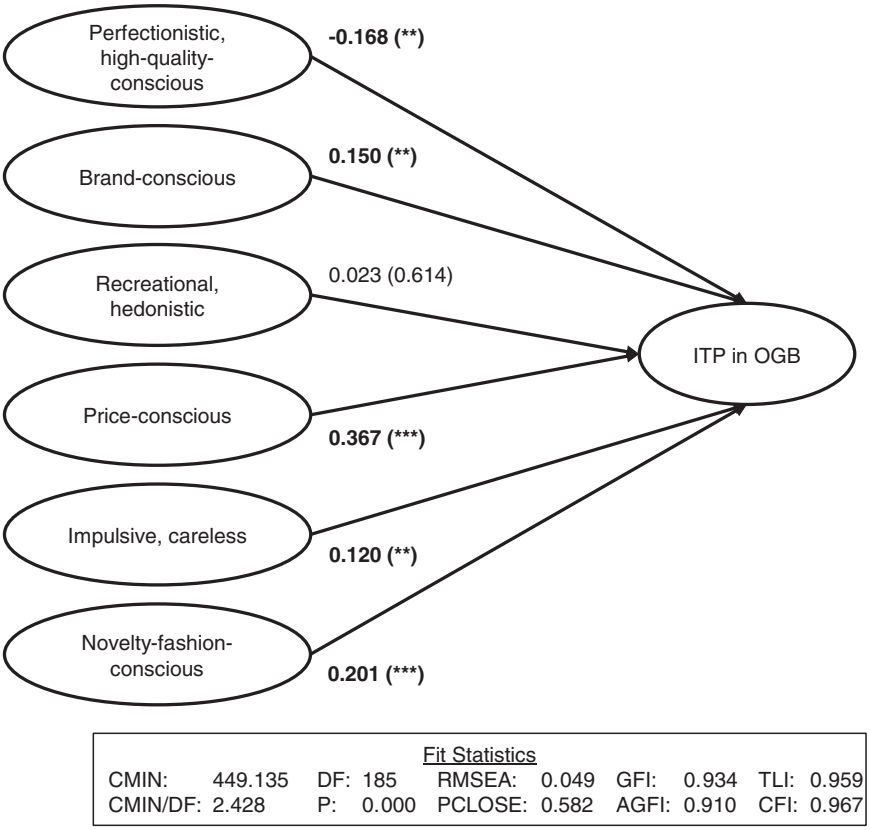

Figure 2. Structural equation modeling results.

relationship with the ITP in OGB. Hypothesis H_1, stating that the higher millennials score on the perfectionistic, high-quality-conscious CDMS, the lower their ITP in OGB, is supported ($\beta = -0.168$, $p = .002$). As expected, the results suggest that OGB sites are not for the sort of German millennial consumers scoring high on the perfectionistic high-quality-conscious CDMS because they do not provide a wide assortment of products for these millennials to compare and make the selection that in their view is the best. They are also not likely to address those consumers' need for detailed information and intense product feature comparison in the buying process.

Hypothesis H_2, stating that the higher millennials score on the brand-conscious CDMS, the higher their ITP in OGB, is also supported ($\beta = 0.150$, $p = .005$). Those websites, with their new business model, now carry well-known national or international brands, like Nike and Calvin Klein, as well as local services (e.g., restaurants, hairdressers, or wellness hotels). Therefore, this finding confirms the authors' argument that German millennials scoring high on this CDMS would like to buy well-advertised national and international brands, but at cheaper rates. This is also very much in line with the published literature on German shopping (Fernie and Arnold 2002; Zoeller 2017).

Contrary to the authors' expectations, hypothesis H_3, stating that the higher millennials score on the recreational, hedonistic CDMS, the lower their ITP in OGB, is not confirmed ($\beta = 0.023$, $p = .614$). Although the OGB websites are entertaining, as they showcase a certain number of products and services on one site and consumers gain a wide variety of offerings, they are still limited to narrow assortments of national and international brand names and local services. Consumers scoring high on the recreational CDMS, who visit websites for recreational purposes, do not limit themselves only to one-stop or one-brand shopping; they want to browse and relax.

Hypothesis H_4, stating that the higher millennials score on the price-conscious CDMS, the higher their ITP in OGB, is very much supported ($\beta = 0.367$, $p = .000$). Given the large value of $\beta = 0.367$, it is clear that German millennials scoring high on this CDMS have high intentions to shop on OGB sites due to the deep discounts. The price and likewise the value-for-money dimension act as major drivers of individual consumers' participation in OGB. These results find corroboration in German studies (Wenzel, Haderlein, and Mijnals 2009; Euromonitor 2015). The results are also very much in line with Wang and Chou (2014), who found a significant relationship between the "economic orientation" of Taiwanese current group-buying consumers and their "intention to repurchase" from an OGB website. Furthermore, this result finds corroboration from the communication strategies of Groupon, Daily Deal, Living Social, and other OGB websites that emphasize prices and discounts as their main sales argument.

Hypothesis H_5, stating that the higher millennials score on the impulsive, careless CDMS, the higher their ITP in OGB, is supported ($\beta = 0.120$, $p = .006$). The result is in line with Park, Yu, and Zhou (2010) finding that consumer impulsiveness is strongly positively related to the desire for experiences with the objective of stimulating the senses (see also Venkatraman and Price 1990). According to Walsh, Hennig-Thurau et al. (2001), such consumers are susceptible to in-store buying incentives, such as free additional products with purchases and attractive displays of eye-catching merchandise. Also, Chen and Wang (2016) state that especially hedonic products increase impulse buying intention. The OGB sites use many of these products and techniques and therefore are likely to be attractive to consumers with an impulsive CDMS.

The last hypothesis, H_6, stating that the higher millennials score on the novelty-fashion-conscious CDMS, the higher their ITP in OGB, finds strong support as well ($\beta = 0.201$, $p = .000$). As described before, parts of the millennial cohort are novelty seekers who wish to fulfill their experiential desires (Gurău 2012). This generation has been found to be more attracted to innovative products than baby boomers (Parment 2013). The OGB sites provide novel and fashionable products every day, with new deals on products and services, and inform customers on a daily basis to keep them motivated to shop for the deals. Hence, millennials scoring high on the novelty-fashion-conscious CDMS are highly attracted by OGB websites. Table 3 displays the overall results of the hypothesis testing.

Differences between male and female millennials

In addition to the general model of hypothesized relationships between the different CDMSs of millennials and their ITP in OGB, the same model was tested separately as a multigroup analysis for two groups—males and females—to account for the gender differences in the sample. The overall fit of the structural and the applied measurement model, when the two groups are run with the same model, is evidently less than in the single-model situation but still very satisfactory. The χ^2 statistics of goodness of fit for the model yielded a value of $\chi^2 = 688.260$ with $df = 370$ and a significance level of $p = .000$. The relative chi-square has a value of $\chi^2/df = 1.860$ and therefore is well below 3.0, likewise showing a good model fit. However, CFI = 0.959 and TLI = 0.949 display a very good measurement model, GFI = 0.904 shows very satisfactory overall model fit, and AGFI = 0.869 is slightly below the threshold of 0.9. Nevertheless, the RMSEA value of 0.038 is less than the required value of 0.05, and the corresponding PCLOSE = 1.000 reaches the threshold value of 1 for a close model fit. Table 4 reports the findings for the path coefficients (β) and

Table 3. Overall results of hypotheses testing.

Hypotheses	Result
H1: The *higher* millennials score on the *perfectionistic* CDMS, the *lower* their *ITP* in OGB.	Confirmed
H2: The *higher* millennials score on the *brand-conscious* CDMS, the *higher* their *ITP* in OGB.	Confirmed
H3: The *higher* millennials score on the *recreational, hedonistic* CDMS, the *lower* their *ITP* in OGB.	Not confirmed
H4: The *higher* millennials score on the *price-conscious* CDMS, the *higher* their *ITP* in OGB.	Confirmed
H5: The *higher* millennials score on the *impulsive, careless* CDMS, the *higher* their *ITP* in OGB.	Confirmed
H6: The *higher* millennials score on the *novelty-fashion-conscious* CDMS, the *higher* their *ITP* in OGB.	Confirmed

Note. CDMS: consumer decision-making style; ITP: intention to purchase; OGB: online group buying.

Table 4. Different path coefficients for males and females.

	Male ($n = 223$)			Female ($n = 368$)		
Factor name	*Mean* (*SD*)	β	*p*	*Mean* (*SD*)	β	*p*
Perfectionistic, high-quality-conscious	3.71 (1.06)	−0.216	.009	3.70 (0.92)	−0.135	.091
Brand-conscious	2.73 (1.13)	0.175	.033	2.63 (1.03)	0.137	.059
Recreational, hedonistic	3.51 (1.44)	−0.054	.451	3.87 (1.12)	0.042	.489
Price-conscious	3.63 (1.18)	0.476	.000	3.70 (0.97)	0.290	.000
Impulsive, careless	3.02 (1.13)	0.098	.176	3.12 (1.05)	0.129	.018
Novelty-fashion-conscious	3.07 (1.13)	0.102	.226	3.39 (1.05)	0.250	.000

significance levels (p) as well as the means and standard deviations for both the group of males with 37.7% of the respondents ($n = 223$) and the group of females with 62.3% of the respondents ($n = 368$). The results display the relationship of the different CDMSs of the male and female millennials and their respective ITP in OGB. Significant values are printed in bold letters.

We need to point out here that the interpretations of group differences should be taken with caution because the groups are different in size and both groups are smaller than the sample size in the main model. Once again, strong confirmation is found that German millennials scoring high on the price-conscious CDMS have the strongest ITP in OGB for both genders. Whereas males exhibit a value of $\beta = 0.476$, females exhibit a lower value with $\beta = 0.290$. Male millennials scoring high on this CDMS seem to be more price-sensitive and therefore more attracted by OGB websites and their pricing models with large discounts. Nevertheless, for both groups the values are highly significant ($p = .000$). Hence, millennials with an "economic orientation" see the main driver of their participation in OGB in the pricing of OGB websites.

The results also reveal gender differences in the relationship between other individual CDMSs and the millennials ITP in OGB. While female millennials scoring high on both, the novelty-fashion CDMS ($\beta = 0.250$, $p = .000$) and the impulsive, careless CDMS ($\beta = 0.129$, $p = .018$), the male

millennials scoring high on the brand-conscious CDMS ($\beta = 0.175$, $p = .033$) are attracted by OGB sites. Further, male millennials scoring high on the perfectionistic, high-quality-conscious CDMS ($\beta = -0.216$, $p = .009$) are not at all attracted by OGB sites. Since we found a significant effect for female respondents scoring high on the impulsive, careless CDMS and their ITP in OGB, we can conjecture that the OGB websites are catering more to such females, as they offer a variety of products and services (see also Muratore 2016). Moreover, these websites encourage immediate purchasing of high-priced branded products and local services with large discounts, which benefits the impulsive buying behavior. For the male millennials scoring high on the perfectionistic, high-quality-conscious CDMS, we found a high and significant negative effect on their ITP in OGB; perhaps the OGB websites do not address the need for detailed information and intense product feature comparison in the buying process that is important for millennials with this CDMS. Nevertheless, the OGB websites' offerings of high-priced branded products with large discounts benefit brand-conscious buying behavior.

Conclusions

Theoretical and managerial implications

This study was designed to investigate the relationships between different CDMSs of German millennials and their ITP in OGB. The study makes a case for the application of well-tested relevant consumer behavioral theories and concepts to analyze consumer OGB for two reasons. First, it can help in developing effective marketing strategies by gleaning information about the decision making of online group buyers. Second, the current generation of OGB websites no longer suffers from the problems that their predecessors faced and has become like other online retail stores but with the difference that shoppers obtain large discounts on daily deals without worrying about group formation. Hence, the study makes a substantive contribution by establishing a beachhead for future research to analyze the consumer decision making of millennials—perhaps the most attractive future segment for consumer products (see also Dholakia and Kimes 2011).

Another theoretical implication stems from the results of the study. The study reports significant relationships between millennials' perfectionistic/high-quality-conscious, brand-conscious, price-conscious, impulsive/careless, and novelty-fashion-conscious CDMSs and their effect on their ITP in OGB. In this context, the study also highlighted gender differences concerning varying CDMSs and ITP in OGB. Hence, our study connects the literature on millennials' lifestyles, online shopping, and consumer decision

making and adds value to the growing literature on OGB and deal-of-the-day websites.

Moreover, our results lay the foundation for the development of marketing strategies suitable for different CDMSs in OGB shopping, that is, offering insights for OGB sites. For example, OGB websites should emphasize large discounts on prices since the price-conscious CDMS has the most significant effect on ITP in OGB. They also should carry more national and international designer brands and expand their social media activities in their communication strategies for this online affine target group. By doing so, they would not only increase their product and service variety but also entice fence-sitting millennials to engage in OGB, those who perhaps are not participating due to the unavailability of deals on specific goods or site characteristics that do not match their CDMSs and the millennials' communication behavior in general. The research also found that OGB sites are more attractive to female millennials scoring high on the impulsive, careless and novelty-fashion CDMSs—a subgroup that is on the one hand keen on experiencing new and different things and, on the other hand, quickly attracted and willing to buy when the offering suits them. By extension, more impulsive female millennials would show a greater ITP in OGB if the OGB websites were designed for them. This means morphing OGB websites to appeal to different male and female millennial segments (Hauser et al. 2009). Marketers should pay specific attention to this recommendation, as millennials are not necessarily brand-loyal: They opt for the websites that connect best with them. This finding also indicates that it is important for OGB websites to exude trustworthiness and reliability in their offerings.

Eventually, OGB websites should ensure that they offer a great online experience for potential consumers. In this context, CDMS-based market segmentation can play an important role in the marketing programs of OGB websites. Researchers and websites should test different marketing approaches, for example, regarding assortment, pricing, website design, communication, and order processing. An interesting anchor point could be the possibility of contacting a salesperson during the online shopping process on the OGB website, which can help in lowering the perceived risk for consumers who have a greater need for trustworthiness (Lee and Dubinsky 2017).

Limitations and future research

The findings of this research should be viewed against the backdrop of its limitations. The study used a snowball sampling technique to gather data within the millennial cohort; although it is a valid data-gathering technique used in marketing and other social sciences, its results should be considered

in light of the researched target group and the limitation of a single but huge area in the German university landscape. We do not consider our study as being representative of all age groups or the millennial cohort in general. Hence, the comparison of age groups or different social milieus should be part of follow-up studies, for which this research about the millennial cohort and its differentiation into male and female millennials can be seen as a starting point. In this context, one can also criticize that our study uses intentional behavior—that is, stated preferences and not actual behavior—for researching the relationship between different CDMSs and OGB. Nevertheless, we think that according to Sproles and Kendall (1986), CDMSs are a consumer's decision-making inventory, and we do not intend to forecast OGB sales but rather an individual's tendency in relation to a specific kind of online shopping. Future studies should research the connection among CDMS, ITP in OGB, and actual buying behavior in more detail with personalized data. Another shortcoming might be that our results are constrained by the fact that only 17.4% of respondents had personal experience in OGB. When the study was designed, the authors gave priority to sample size, simultaneously taking care of intensive pretesting and additional pictures within the interviewer-administered questionnaire that displayed two examples of OGB deals from the Groupon.de website. Future studies should increase the number of respondents who already took part in OGB to counter this limitation. Finally, another caveat is that the survey covered millennials in Germany only. Therefore, strictly speaking, the results are not generalizable to millennials' OGB behavior in other regions of the world (e.g., Asia, Russia, Africa, or the Americas). CDMSs and consumers' ITP in OGB might be different in other countries. Hence, an area of future research could also be the cross-cultural validation of the results of this study.

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Appendix. Original number of consumer decision-making styles in this study.

Factor name
Perfectionistic, high-quality-conscious
V1_Getting very good quality is very important to me.
V2_When it comes to purchasing products, I try to get the very best or perfect choice.
V3_In general, I usually try to buy the best overall quality.
V4_I make special efforts to choose the very best quality products.
V5_My standards and expectations for products I buy are very high.
V6_Only the best products really satisfy me. (Adapted)
Brand-conscious
V7_The well-known brands are best for me. (Adapted)
V8_The more expensive brands are usually my choices.
V9_The higher the price of a product, the better its quality.
V10_I prefer buying the best-selling brands.
V11_The most advertised brands are usually very good choices.
Recreational, hedonistic
V12_Shopping is a pleasant activity for me. (Reversed)
V13_I enjoy shopping just for the fun of it.
V14_Shopping in different stores is fun. (Adapted)
V15_I take my time while shopping. (Additional)
V16_I like extensive shopping trips. (Reversed)
Price-conscious
V17_I most intensive watch out for the prices while shopping. (Additional)
V18_I buy as much as possible at sales prices.
V19_The lower price products are usually my choice.
V20_I look carefully to find the best value for the money.
V21_To find the best offer I compare prices of different brands and products. (Additional)
Impulsive, careless
V22_I seldom plan my shopping trips. (Reversed)
V23_I am impulsive when purchasing.
V24_Often, I make spontaneous purchases. (Adapted)
V25_I seldom take my time to look for the best buys. (Adapted)
V26_Often, I do not take care how much I spend. (Adapted)
Novelty-fashion-conscious
V27_I am open-minded to new products and brands. (Adapted)
V28_I follow current trends and fashion. (Additional)
V29_I like buying new products and brands. (Additional)
V30_I like to experience different products and brands. (Adapted)
V31_To get variety, I choose different brands. (Adapted)