

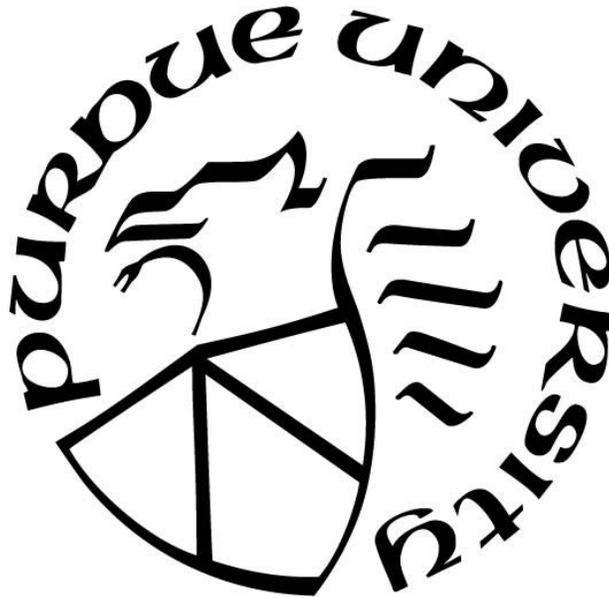
**CHOICE OVERLOAD AND PURCHASE INTENTION AMONG
MILLENNIAL RURAL AND URBAN CONSUMERS**

by
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Dedicated to my parents, whose persistent “reminders” motivated me to complete my graduate studies, my brother, whose complete lack of interest in my studies helped me to maintain my sanity at home, and my spouse, who always supported me through the tough times during the program.

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ABSTRACT

Many researchers have studied the interaction between choice overload and purchase intention resulting in mixed and sometimes contradictory results. This study extended the current knowledge and examined how rurality (rural vs. urban/suburban) among millennial consumers influences choice overload and purchase intention when presented with extensive or limited options. Using both quantitative survey data and qualitative interviews, the author studied consumer experiences to understand choice overload and purchase intention better. Overall, some of the results suggest a statistical difference between rural and urban/suburban participants in their feelings of choice overload. However, many of the results were small and unlikely to be of practical significance. Additionally, the interviews were analyzed and multiple themes emerged, including possible factors that may support prior meta-analytic conclusions about the nuance of choice overload.

CHAPTER 1. INTRODUCTION

The United States contains large swaths of rural areas (Hawk, 2013; United States Census Bureau, 2013). Rural areas afford many advantages to those who live there: clean air, clear skies, and tight-knit communities. These advantages come with some severe disadvantages, including decreased access to information, goods, and services (Kaufman, Macdonald, & Lutz, 1997). It is this lack of access to information that is of potential interest to businesses who wish to sell their goods and researchers in the field of consumer science who study choice overload.

Choice overload refers to the cognitive difficulty of making a decision when offered an overwhelming amount of information related to a decision goal. Choice overload is a contentious construct among scholars in the field of consumer behavior (McShane & Bockenholt, 2018; Chernev et al., 2015; Scheibehenne et al., 2010). Lack of conclusive evidence and uncertainty about the role of moderating and dependent variables in influencing choice overload and purchase behavior leaves the door open for new paths of research. One such unexamined channel in choice overload is the role of millennial rural and urban/suburban consumers, who will be significant purchasers for years to come. Additionally, new paths of shopping have emerged with the advent of the internet. Online purchasing is common, but results may vary compared to in-person shopping (Koufaris, 2002).

This dissertation examined the role of option variety and choice overload on purchase behavior of millennial rural and non-rural consumers. This study investigated the extent to which product options differently influenced purchase likelihood between rural and non-rural millennials as well as potential moderating factors motivating these differences between the two groups. It was also designed to understand how option variety influenced online and in-person purchase behavior. Overall, this research was intended to argue that rural and urban consumers differ in their propensity to buy or not buy a product when presented with either “extensive” or “limited” options.

These questions were answered using a mixed-methods approach, utilizing both a quantitative survey and qualitative interview. The survey assessed the role of option variety in the likelihood of purchasing a product among millennial rural and urban consumers. Additionally, the questionnaire also studied the role of product price and purchase frequency in influencing purchase likelihood. Similar to the quantitative survey, the qualitative interview was designed to help

understand purchase propensity between the two groups when presented with a dual set of options. Furthermore, the strength of the interviews lies in its ability to delve deeper into the consumers' past, emotions, thought process, and various other factors to better understand significant influencers of purchase decision making and subsequent purchase behavior.

Businesses should value this information because understanding purchase behavior differences between the groups allots them an edge over their competition. Specifically, their profits may be influenced by the quantity of products they present to each group if the number of products influences purchase likelihood. The ability to predict how consumers will respond to product options will help a company make sustainable business decisions regarding optimal option offerings to provide diverse groups of customers to maximize profit potential. Furthermore, having the ability to anticipate the behavior of the shopper can help the company target buyers using the ideal variety of products to increase sales/profits. Additionally, cognitive dissonance associated feelings of choice overload could result in negative word of mouth/reviews, leading to a reduction in earnings for the company.

On the other hand, consumers and businesses can use this information to tailor countermeasures to decrease or prevent the incidence of overload. For example, if certain groups are found to be less likely to purchase when presented with more product options, they may opt to visit stores or online stores that offer limited variety to increase the likelihood of purchasing or curb unnecessary purchasing. Beyond businesses/companies, the knowledge gained from this study will benefit many entities seeking to influence the purchase behavior of rural or urban millennial consumers. Additionally, the outcomes of this study will add to the current knowledge about choice overload and option variety.

Problem Statement

Consumers' cognitive resources are limited, and when consumption surpasses this limit, decision quality could suffer (Fiske & Taylor, 1984; Park, Hill, & Bonds-Raacke, 2015). When consumers are presented with a large amount of information from which to make a purchase decision, their cognitive resources may be surpassed, leading to information overload. Numerous studies support the influence of information overload on online purchase decision-making behavior (Gao, Zhang, Wang, & Ba, 2012). However, few studies have examined the impact

consumer background, specifically rural or urban/suburban locations, have on online purchase decision-making.

Furthermore, more and more companies are engaging in online sales. However, current understanding of online consumer behavior continues to be in its infancy (Dennis, Merrilees, Jayawardhena, & Wright, 2009). Additionally, online purchase behavior does not necessarily result in the same outcomes as traditional shopping behaviors (Koufaris, 2002). With the advent of the internet and computer, information search has become more accessible. Consumer's use of technology, particularly in the search step of purchase decision-making, results in varying degrees of cognitive effort expenditures.

Rural and urban consumers have shown significant differences in their purchase history resulting from differences in product and assortment availability (Liu, Shively, & Binkley, 2013). Product options were previously limited for rural consumers, but technological improvements have resulted in greater access to and use of the Internet for both rural and urban consumers (Mangold & Smith, 2012; Perrin & Duggan, 2015). Furthermore, millennials have grown up making purchases online. Nonetheless, current knowledge about online purchase behavior remains in its formative years (Dennis, Merrilees, Jayawardhena, & Wright, 2009), and purchase behavior online may differ from traditional shopping behavior outcomes (Koufaris, 2002). Several findings substantiate the influence of information overload on purchase decision-making behavior online (Gao, Zhang, Wang, & Ba, 2012). Nevertheless, studies on the impact of rural and urban consumer's backgrounds on online purchase decision-making are lacking. With the increase in online shopping by both rural and urban consumers, this research intends to address this gap and add to the knowledge about how extensive or limited options will alter rural and urban millennial's purchase behavior. Millennials are an essential group for businesses to understand because of their current and future purchase potential for several decades to come.

This study seeks to address the deficiency in information about the differences in purchase behavior of rural and urban millennials when presented with extensive or limited purchase options. Millennial's future purchase potential makes this group exceptionally important for companies to understand better. Furthermore, advancing technology has allowed consumers of various backgrounds to have access to the internet and, consequently, online shopping (Mangold & Smith, 2012; Perrin & Duggan, 2015). As such, internet shopping and technology are critical in the millennial's life, thus worth exploring further.

Contribution to Field

This study contributes to existing knowledge concerning the influence of a diverse number of product options on purchase behavior. Previous researchers have described the power of a varying number of product varieties on the decision to purchase (Dhar, 1997; Hoch, Bradlow, & Wansink, 1999; Kahn, 1998). However, researchers have not examined how this decision to purchase differs between millennial rural and nonrural consumers. Additionally, this study will add to the existing evidence on the influence of several factors on purchase behavior when consumers are provided limited and extensive product options.

Beyond this study's contribution to existing scholarly knowledge, this information may also inform marketers and business executives in developing and implementing new strategies, particularly when considering rural and urban millennial consumers. Specifically, the data may inform companies about the ideal variety of products to offer each customer segment to increase purchase potential while minimizing purchase deferral, consequently maximizing profits. Based on the findings of the study, businesses can optimize the quality of the information presented to consumers to minimize the likelihood of feeling overloaded (Eppler & Mengis, 2004). Improving the quality of the information can aid consumer processing capacity, so they are better able to use the information quickly and efficiently. Furthermore, this study supplements existing evidence of the influence of price and other factors on purchase deferral among millennial urban and rural consumers presented with limited or extensive product options to aid companies in optimizing profits.

CHAPTER 2. LITERATURE REVIEW

Information Overload

A standardized definition of information overload is absent across disciplines (Roetzel, 2019). Generally speaking, information load refers to the number and types of stimuli the recipient must attend (Jacoby, 1977). Information overload indicates the limits on the ability of a person to process information given an individual's processing capacity (Roetzel, 2019; Eppler & Mengis, 2004). When too much information is presented to the person, surpassing their processing limits, they are considered "overloaded." Once overloaded, consumers experience anxiety and decision-making becomes less accurate and effective. Studies suggest that the overabundance of information is not only disruptive to personal life, including adverse effects on emotions and perceived physical health, but also work-life, mainly inefficiency through wasted productive time (Hemp, 2009; Roetzel, 2019). When the quantity of information exceeds processing capabilities, the consumer displays difficulty in their ability to identify relevant evidence, ignores important information, takes more time to make a decision, and decision accuracy suffers (Eppler & Mengis, 2004). With the evolution of technology, information, in the form of text messages, e-mails, social media, etc., are at our fingertips every second of our lives. Additionally, decision-makers have access to a wealth of information in very little time, leading to more information than they can evaluate (Roetzel, 2019). However, some consumers may not feel overwhelmed by the surplus of information and, instead, feel stimulated, which could be suggestive of information addiction (Hemp, 2009).

Research on information overload peaked in the 1980s and 1990s (Roetzel, 2019). Several early works suggest that providing consumers with too much information could result in negative consequences (Jacoby, 1974; Jacoby, 1977; Jacoby, Speller, & Kohn, 1974). Scammon's (1977) experimental study concluded that increasing the amount of information presented led to information overload because participants were forced to divide their processing time among the various pieces of information. Malhotra (1982) added further support to previous findings on information overload by concluding that consumers can be overloaded with information in experimental settings when presented with too much information. However, the same year, the author criticized Jacoby, Speller, & Kohn's findings on information overload (Malhotra, Jain, &

Lagakos, 1982). The author goes on to re-analyze the previous researchers' findings and concludes that consumers can process large amounts of information. In response, Jacoby (1984) criticized Malhotra's conclusions determining that while consumers can become overloaded, they may not become overloaded because consumers will be selective about the information, preventing themselves from reaching levels of overload. Keller & Staelin (1987) showed that decision effectiveness was negatively affected when the quantity of information increased. The significance of these findings in a marketplace is vital for marketers and businesses (Malhotra, 1984). Consumers attempt to limit the amount of information they must process when they encounter overwhelming amounts of information, however, their processing ability becomes overloaded when they must process the large quantity of data in a limited time. When presented with too much information, consumers may opt to use heuristics or may ignore certain information when making decisions, possibly resulting in suboptimal decisions.

Current research on consumer information overload has primarily focused on online settings. In an effort to increase buyers, many online retailers provide a large amount of product information online (Lee & Lee, 2004). This can include several different models, each with a large number of attributes for the products they offer. Studies confirm that the vast quantities of information presented to consumers result in consumers experiencing information overload (Lee & Lee, 2004; Chen, Shang, & Kao, 2009). The information overload experienced by the buyers, resulted in less satisfaction, less confidence, distrust, and confusion for the buyers (Lee & Lee, 2004; Moon, Costello, & Koo, 2016). Their negative experience with too much information may also result in higher negative word of mouth, which may severely impact a business's future profits. However, studies suggest that buyers with online shopping experience may process product information more efficiently and effectively, resulting in lower reported experiencing information overload (Moon, Costello, & Koo, 2016). Their findings suggest that consumers who grew up making purchases online may be less likely to be stressed when choosing from a large number of product options and possibly less negatively influenced by higher product options.

Choice Overload

This study focused on choice overload. Choice overload is one of the terms used to describe the experience that comes with decision-making in the presence of extensive options/choices (Iyengar & Lepper, 2000). The over choice concept has been traced back to Jean Buridan, a French

philosopher who theorized that when people are presented two equally attractive options, they will delay choosing (Scheibehenne, Greifeneder, & Todd, 2010). The assumption was confirmed in 1944, by Miller, in an experiment that reported that surrendering an attractive alternative for other options could lead to procrastination and conflict. In the 1950s, researchers noticed that when consumers were required to choose between two similar options, conflict increased (Festinger, 1957; Lewin, 1951). In fact, as alternatives become more and more alike, yet mutually exclusive, it leads to more conflict. As the number of options increases, so did the choice conflict, leading to confusion, anxiety, and inability to choose (Lipowski, 1970).

Recent studies lend further support to the idea that choosing from larger assortments of products leads to less satisfaction and unfavorable behavioral responses (Dhar, 1997; Iyengar & Lepper, 2000; Sloot, Fok, & Verhoef, 2006). Lower satisfaction and decreased purchase outcomes were found in a study when buyers were provided jams or chocolates for purchase (Iyengar & Lepper, 2000). Fewer shoppers purchased the jams or chocolate when the varieties of jams or chocolates were increased from 6 to 24 or 30. Not only were the consumers more likely to buy the jam or chocolate when there were fewer options to choose from, but the participants subsequently reported greater satisfaction with their selection as well. Shah and Wolford (2007) found a curvilinear relationship between the number of pen choices and buying behavior. Specifically, they found that participants were more likely to buy a pen when presented with a small variety of options (8-10) compared to a large variety (16-20). Reutskaja and Hogarth (2009) presented participants with a range of gift boxes to choose from. Comparable to the previous findings, participants reported lower levels of satisfaction when they were required to choose from a larger number of boxes (30) or a minimal number of options (5) and highest when presented with a medium number of options (10-15). Overall, wide variance exists in the literature concerning the likelihood of experiencing overload.

Buyers were also more likely not to buy or defer purchases when they were presented with a large assortment of products. Tversky and Shafir (1992) showed an increase in the tendency to postpone purchase decisions when an attractive alternative was added, creating additional conflict for the buyer. Dhar (1997) lends further support with his study reporting that the number of participants deferring the purchase decision increased when a second attractive option was added to the choice set. In the previously mentioned Iyengar and Lepper (2000) study, not only were participants less satisfied with their selection when presented with a large assortment of jams (24

or 30), but buyers were also less likely to purchase one of the jams when presented with a large variety. Furthermore, participation rates among employees in retirement plans, 401(k), fell as the number of fund options increased (Iyengar, Jiang, & Huberman, 2004). Overall, the findings suggest that consumers are more likely not to buy or defer the purchase of a product or service when presented with an extensive option.

Analysis of empirical data showed similar findings in terms of the negative consequences of large assortments. Broniarczyk, Hoyer, and McAlister (1998) showed that merchants could decrease the number of product options, specifically eliminating low-preference products, without adversely affecting store preference or assortment perceptions. Boatwright and Nunes (2001) found that reducing the number of stock-keeping units (SKU) for an online retailer, increased sales by an average of 11% in 42 categories. Two-thirds of the categories experienced an increase in sales, and almost half experienced an increase of 10% or more. Another study with a major Dutch retailer, found that an assortment reduction attracted new buyers to the category, partially offsetting sales losses (Sloot, Fok, & Verhoef, 2006). Finally, using household-level market data, researchers found that the number of SKU's per brand, sizes per brand, and proportion of SKU's, that are unique to the store, harmed store choice (Briesch, Chintagunta, & Fox, 2009). That said, not all studies have found evidence of choice overload.

In a qualitative study with 19 participants, Sthapit (2018) did not find evidence of choice overload. Study participants were presented with either 20 or 50 souvenir choices and then asked questions about their purchase regret. Study participants did not express evidence of choice overload or disappointment. Additionally, online settings have also not aligned with choice overload theory. Aparicio and Prelec (2018) examined the internet browsing behavior of individuals when presented with potential choice overload situations when using the internet. Contrary to what was expected, the authors found that more choices increased engagement. In other words, having more links on a page was related to a participant more likely to click a link than if there were only a few links.

Finally, in the first of its kind study, Reutskaja, Lindner, Nagel, Andersen, and Camerer (2018) examined participants' brains while presented with varying numbers of choices. Their purpose was to find if there was neurological evidence for choice overload. The authors found that choice overload was likely not a dichotomous situation where an individual could be overwhelmed with many choices. Instead, the authors described the neurological evidence for a "U-shape" of choice

overload. Participants' brains responded best under the middle choice condition (12 choices) and negatively to the too few (6) or too many (24) conditions.

In summary, evidence for choice overload varied from more choices leading to less participation (Iyengar, Jiang, & Huberman, 2004) to more choices leading to greater participation (Aparicio and Prelec, 2018). In other words, no one study provided conclusive evidence explaining choice overload. In response to this lack of scholarly consensus, scholars turned to meta-analytic techniques to aggregate findings across the field (Chernev, Böckenholt, & Goodman, 2015; McShane & Böckenholt, 2018; Scheibehenne, Greifeneder, & Todd; 2010).

Meta-Analytic Studies of Choice Overload

Varying results on choice overload have led researchers to provide overviews of the field in the form of meta-analyses. A meta-analysis is a quantitative overview of a subject that synthesizes the results from multiple studies (Borenstein, Hedges, Higgins, & Rothstein, 2011). An effect size is calculated for each study, and then those effect sizes are averaged with weighting by sample size to create an overall effect size that is intended to be more representative of the population.

In a comprehensive meta-analysis, Scheibehenne, Greifeneder, and Todd (2010) aggregated the results from 50 published and unpublished randomized experimental studies on choice overload. Furthermore, the authors found no moderating conditions that were significant influencers of choice overload. The authors found no effect size across the studies but noted that there existed a large amount of variance among study effect sizes. This variance was not randomly distributed, and the authors suggested that the underlying issue in understanding the phenomena of choice overload was likely due to how relative versus absolute evaluations, maximizing, and choice justification were operationalized.

Chernev, Böckenholt, and Goodman (2015) argued that the meta-analytic approach taken by Scheibehenne et al. (2010) was flawed. Chernev et al. (2015) claimed that the meta-analytic approach taken by Scheibehenne et al. (2010) masked the effect of choice overload. In designing their own meta-analysis, Chernev et al. (2015) followed the approach of Scheibehenne et al. (2010) with two exceptions. Chernev et al. (2015) tightened the inclusion criteria for study inclusion within their meta-analysis. In contrast to Scheibehenne et al. (2010), Chernev did not include conference proceedings or doctoral/masters' theses. The author argued that including only peer-

reviewed journal articles would lead to a higher increase in the quality of studies within the meta-analysis. Additionally, the Chernev et al. (2015) study included a broader sampling of the literature.

The second, and according to Chernev et al. (2015), more substantial difference was in the construction of the regression model used to calculate the mean effect size of choice overload and the influence of moderators. Of particular importance, Chernev et al. (2015) used a hierarchical model to control for dependence between effect sizes drawn from the same study. The authors speculate that this lack of control led to biased estimates in the Scheibehenne et al. (2010) study.

Using this different methodological approach, Chernev et al. (2015) found significant effects on choice overload. The authors found that across studies, when participants were faced with a large number of choices, in relation to moderating effects, the phenomena of choice overload was present. These four moderating factors were “choice set complexity, decision task difficulty, preference uncertainty, and decision goal” (Chernev et al., 2015, pg. 344). Choice set complexity refers to the lack or presence of an attractive alternative and the similarity between options. Decision task difficulty is described as attributes that increase the difficulty of choice, e.g., time constraints and consequences of choice. Preference uncertainty represents the presence of whether the consumer already has a predefined preference. Finally, the decision goal refers to the need to reduce cognitive effort (Chernev et al., 2015). In other words, the presence of choice overload is predicted by the stakes of choice. A shopper grabbing a soft drink in an aisle filled with choices during a leisurely Sunday is unlikely to face choice overload. In contrast, a consumer faced with having to buy a computer a week before their university classes begin is more likely to face choice overload under Chernev et al.’s model (2015).

McShane and Böckenholt (2018) further refined the approach of Scheibehenne et al. (2010) and Chernev et al. (2015) with their meta-analysis. The authors claimed that the meta-analytic techniques used by Scheibehenne et al. (2010) and Chernev et al. (2015) did not accurately capture the complexity of choice overload. In response, McShane and Böckenholt (2018) used a multilevel multivariate meta-analytic technique to incorporate all possible statistical information in studies. The authors used the same 21 papers that Scheibehenne et al. (2010) and Chernev et al. (2015) used in their meta-analysis. Their answer to the question of whether or not choice overload was a real phenomenon was “it depends.”

The authors found that choice overload varies depending on what the dependent measure is and what is the moderating factor. For example, choice overload was evident when the dependent variable was regret when moderated by having a decision goal but was not evident when moderated by decision task difficulty. Even in the presence of no moderator, choice overload varied by the dependent variable. When the dependent variable is option selection, there is a more significant effect of choice overload than when the dependent variable is satisfaction. McShane and Böckenholt (2018) were not the first to demonstrate the nuance in choice overload using meta-analytic techniques. Hwang and Lin (1999), in their meta-analysis examining bankruptcy prediction studies, found that information overload fell into two categories: the breadth of the information being given, and how often the information was repeated.

Though not written for the explicit purpose of a meta-analysis on choice overload, a case study used in a methodological brief provided further meta-analytic evidence for the existence of the choice overload phenomena. In a methodological brief illustrating the use of single-paper meta-analyses, McShane and Böckenholt (2017) used a study on choice overload as one of their three case examples. The authors use the data within the paper to rerun its analysis and find that the original authors had likely overestimated their effect. The authors found that low choice difficulty leads to consumer satisfaction, where few choices lead to less satisfaction. Further, when consumers faced few choices with low choice difficulty, they were further dissatisfied. McShane and Böckenholt (2017) found that the effect direction that the author reported was correct, but the size of the effect was likely over-estimated.

Finally, researchers outside of the field conducted systematic reviews of choice overload. Upon learning of the controversy surrounding meta-analyses of choice overload, Simonsohn, Nelson, and Simmons (2014) reexamined the body of literature using a p-curve analysis. Researchers employing a p-curve analysis examine the distribution of p-values in a body of published literature. If the curve of the plotted p-values is flat or left-skewed, then this strongly suggests publication bias. In comparison, a right-skewed p-curve suggests a true effect. In their analysis of choice overload, Simonsohn et al. (2014) found that the published literature for more choice having a negative outcome displayed a flat curve while the published literature suggesting that more choice had a positive outcome had a right-skewed curve. Simonsohn et al. (2014) interpreted this as providing evidence that there likely existed publication bias within the choice

overload literature. On the whole, there does not seem to be conclusive evidence for the existence of choice overload as a construct.

The meta-analytic studies provide a controversial picture of the existence of choice overload as a genuine phenomenon. Where Scheibehenne et al. (2010) found no meaningful effect in their meta-analytic results, Chernev et al. (2015) did. Chernev et al. (2015) was critical of the methodological approach of Scheibehenne et al. (2010). In turn, McShane and Böckenholt (2018) were critical of both prior meta-analyses. That said, rather than providing conclusive evidence one way or the other for the existence of choice overload, McShane and Böckenholt (2018) provided a complex picture of choice overload. In conclusion, the meta-analytic evidence for the existence of choice overload is mostly inconclusive.

Rurality

According to the Census Bureau, urban areas are dense territories that include residential, commercial, and other non-residential land uses (United States Census Bureau, 2013). The U.S. Census Bureau defines Urbanized Areas as 50,000+ people and Urban Clusters as at least 2,500 but less than 50,000 people (U.S. Department of Health and Human Services, 2013). While the Census does not clearly define “rural,” it includes all population, houses, and territories not included in the urban areas. However, since this definition does not follow any city or country boundaries, it can sometimes be difficult to accurately determine whether a particular area is considered urban or rural by their definition. One other important caveat to this is that researchers found significant variation within federal definitions of rurality (Puryear & Kettler, 2017). Rural communities closer to urban centers tend to have characteristics more similar to suburban communities than to rural communities further away from urban centers (Puryear & Kettler, 2017). Access to the goods and services afforded by urban centers likely leads to variance in characteristics in rural communities.

In 2010, 71.2% of the U.S. population resided in urban locations, with 28.8% in rural parts of the nation (United States Census Bureau, 2013). A 12.1% increase in urban population growth occurred from 2000 to 2010, with 9.7% growth in the U.S. Hence, while the majority of the U.S. population resides in urban communities, a significant portion (28.8%) reside in rural areas.

Additionally, though about 72% of the U.S. population resides in urban/suburban areas, this only accounts for 10% of the country in terms of land area, meaning rural areas account for

roughly 90% of the country (United States Census Bureau, 2013). While land is a scarce commodity at a premium cost in urban areas, rural areas are ripe with land waiting to be acquired and used by businesses (Hawk, 2013). The possible savings on land and materials in rural communities may make up for the low consumer population presence. Thus, it may be beneficial for businesses to start or expand their commerce to rural areas. However, before making this drastic transition, businesses must better understand the differences between rural and urban consumers.

Rural and urban/suburban populations differ in their access to goods and services (Kaufman, Macdonald, & Lutz, 1997). Low-income residents are less likely to live in suburban households where the consumers have greater access to a wider variety of food, including a greater range of brands, qualities, and package sizes. Furthermore, rural consumers have reduced access to both supermarkets and large grocery stores (Kaufman P. K., 1999). Supermarkets, in these neighborhoods, generally are smaller in size and carry a narrower range of product assortments. Even when these consumers have access to supermarkets, rural supermarkets have prices that are about 4% higher, further limiting access to goods due to affordability. While many factors may contribute to this phenomenon, Krebs-Smith & Kantor's (2001) also showed that urban residents have greater access to an ever-expanding variety of products such as food compared to their rural counterparts.

Liese et al. (2007)'s study examined the accessibility to different food stores and assortment availability in these stores. The findings suggest that rural communities have lower access to food stores. Furthermore, food store distribution was heavily weighted towards convenience stores (74%) versus larger supermarkets and grocery stores (16% and 10% respectively) in rural communities. On the other hand, Urban communities reported a higher proportion of grocery stores and supermarkets (36%-57%) compared to convenience stores (8%-41%). These findings are notable because supermarkets and grocery stores sell a more considerable assortment of products compared to convenience stores.

When analyzing grocery baskets of customers, scholars found that, on average, urban consumers had more diverse food baskets compared to their rural counterparts (Liu, Shively, & Binkley, 2013). Even when it comes to technology, there exists a wide gap in access to electricity, television, radio, cell phones etc. among households in urban and rural areas of Tanzania (Audience Scapes, 2013). The above findings suggest that rural and urban populations differ in the amount of variety and options available to each population when purchasing products. Overall,

rural consumers tend to have less access to products and services compared to their urban counterparts.

Previous studies report that rural consumers are accustomed to fewer assortments of product options, which could result in a proclivity not to buy or defer purchasing a product when presented with a large assortment of products. On the other hand, urban/suburban consumers are accustomed to a greater variety of product options, possibly inoculating them to the effects of choice overload on purchase behavior. Based on the above studies, this study will examine the differences between rural and urban consumers in the likelihood to purchase products when presented with a large or small assortment of options.

Millennial Purchase

Specifically, this study examines millennial's (rural and non-rural) purchase behavior. Millennials are an essential group for businesses to understand because of their current and future purchase potential for several decades to come. Furthermore, advances in technology have led to greater access to and use of the internet for both rural and urban consumers (Perrin & Duggan, 2015). From 2000 to 2015, internet use increased from 56%, 53%, and 42% to 85%, 85%, and 78% for suburban, urban, and rural residents, respectively. Millennials are a technology-savvy group who have grown up making purchases online, and technology is an everyday tool for them (Mangold & Smith, 2012). Since shopping, internet shopping, and technology are significant in the millennial's life, this study explored differences in purchase behavior among rural and urban millennials when presented with extensive or limited options.

Based on the above literature, the following research questions and hypotheses were tested:

- RQ1: To what extent do millennial rural and urban consumers differ in intention to purchase products when they encounter limited options or an extensive number of options.
 - H1: Rural consumers are more likely to purchase the product when they are presented with limited options.
 - H2: Urban consumers are more likely to purchase the product when they are presented with extensive options.
 - H3: Choice overload is negatively correlated with purchase intention.
 - H4: Choice overload's negative correlation with purchase intention is more pronounced with rural consumers.

- RQ2: What thought processes and/or emotions come into play when millennial rural/urban consumers encounter a large assortment of products?
- RQ3: What thought processes and/or emotions come into play when millennial rural/urban consumers encounter small assortments of product?
- RQ4: When millennial rural/urban consumers encounter extensive or limited product varieties, what influences their decision to purchase or defer the purchase of the product?

Online Purchase Behavior

Though an increasing number of businesses are participating in online sales, current understanding of online consumer behavior continues to be in its infancy (Dennis, Merrilees, Jayawardhena, & Wright, 2009). With the advent of the internet and computer, information search has become more accessible (Park, Hill, & Bonds-Raacke, 2015). Consumers' use of technology, particularly in the search step of purchase decision-making, results in varying degrees of cognitive effort expenditures. These cognitive resources are limited, and when consumption surpasses this limit, decision quality could suffer (Fiske & Taylor, 1984; Park, Hill, & Bonds-Raacke, 2015). Additionally, studies suggest that online purchase behavior does not necessarily result in the same outcomes as traditional shopping behaviors (Koufaris, 2002).

Internet use, even general internet use, is associated with higher amounts of product purchases on the internet (Citrin, Sprott, Silverman, & Stem Jr., 2000). Other studies lend further support claiming that the percentage of panelists purchasing products online increased as time spent on the internet increased (Lohse, Bellman, & Johnson, 2000). The length of time spent on the internet, including the number of months spent on the internet, number of hours per week spent online, hours per week spent working online, time spent searching for products on the internet, and believing that emails are crucial were all a significant predictor of online purchasing behavior for 79 percent of the sample (Bellman, Lohse, & Johnson, 1999).

The above findings suggest a need to differentiate between online and offline purchase behavior when trying to understand the consumer decision-making process.

- RQ5: What factors influence purchase decision-making in online situations, and how does it differ from brick-and-mortar purchases?
- RQ7: How do small and large product assortments influence purchase decisions online?
- RQ6: How do these factors differ among millennial rural and urban consumers?

CHAPTER 3. METHODOLOGY

Overview

The purpose of this study was to explore the factors that influence millennial consumer's decision to buy or not buy when presented with extensive or limited product varieties. This study used a mixed-methods approach, qualitative interviews, and quantitative survey instruments.

Quantitative Study

Participants

Participants were solicited via recruitment flyers and emails through the Midwestern University listserv. Recruitment flyers were posted throughout the Midwestern University campus by the researcher. Permission was obtained from the Office of the Registrar at the Midwestern University to use the campus-wide student list-serve. The researcher then drafted an email containing details about the study and a link to the survey and completed the Midwestern University Registrar's (DSE) Direct Student Email Request Form, which sends out emails to specific students on campus. The Office of the Registrar then sent the email to all domestic students attending the Midwestern University during the Spring 2017 semester ($n = 31,145$). The researcher collected responses between April 27, 2017 and May 9, 2017. Of the eligible students, 1940 participated in the survey. This constitutes a 6.22% response rate. Previous studies that examined purchase decision-making tended to have between 200 and 500 participants (Chernev, Böckenholt, & Goodman, 2015). However, the model used in this study is relatively simple/small, necessitating only between 125-200 participants.

Inclusion criterion

The Midwestern University students were selected as participants for the study owing to easy access and because they are part of the millennial population. Additionally, the researcher was only interested in examining U.S. consumer behavior and did not need to include samples from other countries. As such, the researcher only included domestic students in the survey and included an exclusion criterion for all international students. Furthermore, millennial students will

soon graduate and are expected to become consumers in the marketplace for decades to come, making them a valuable population for businesses to understand when implementing new strategies for products and services. Understanding these consumers' purchase decision-making process will give stakeholders an edge in the U.S. consumer market.

Of the total participants, not all respondents fully completed the survey. In order for a response to be included in the study, the participant must have stated whether they were from a rural or urban/suburban local. Additionally, to be included, respondents must have completed the portion of the questionnaire detailing purchase behavior. After considering these criteria, 233 responses were excluded from the final analysis.

Instrumentation

The researcher used several established survey questionnaires as a basis to assess different factors that may influence purchase decisions: Park et al.'s Product Familiarity scale (1994) and Hunter and Goebel's scale of Information Overload (2008). Questions from these measures were used to assess each items' influence as a moderating factor between rural and non-rural groups. The questions from the surveys were altered to fit the framework of the study better (see appendix A.). The questionnaire surveyed participants on product familiarity and choice overload.

Product Familiarity

A self-assessed product familiarity scale, based on Park et al.'s (1994) assessment, was administered to the participants to assess their level of familiarity with the products. The standardized alpha for the original measure is .91 with a total item correlation ranging from .82 to .83. The questions were slightly altered to include the name of the product the participant is to report on (see appendix A.).

Choice Overload

The choice overload scale is based on Hunter and Goebel's (2008) scale of information overload. The original scale reported reliability of .82. The questions were slightly altered to be relevant to this study (see appendix A.).

Procedure

The researcher invited participants to complete an online survey/questionnaire, via Qualtrics, that gathered data on their demographics (gender, age, rural or urban home town, etc.), purchase intention, and other factors that may play a role in their online purchase decision-making process. Additionally, the participants completed questionnaires about various background factors that examined mediating effects on the model. The variables examined in this study include: choice overload and product familiarity. After completing the demographic and background information (including zip code and self-reporting of the location to differentiate rural and urban participants), the researcher randomly assigned participants to purchase option groups (extensive options or limited options) with information about the products. They were then asked about their intention to purchase or defer the purchase of a product or products based on the information provided.

Product Variety

Several researchers have studied the influence of small versus large options varieties on purchase behavior (Iyengar & Lepper, 2000; Reutskaja & Hogarth, 2009; Shah & Wolford, 2007). Previous researchers have operationalized the terms limited options to signify less than 10 products, usually between 5-8 varieties. Wide varieties were typically greater than 16, usually around 25-30 product options. This was described as realistically large but not an unusually large number of options. Based on the methods of previous researchers, this study presented 5 or fewer options in the limited option group and between 25-30 options in the extensive option group.

Product Offerings

The researcher offered several products to the participants to examine the influence that the number of options has on purchase decisions. First, the researcher asked the participants to decide on purchase likelihood from a product they regularly purchase from the grocery store, which is relatively inexpensive. The researcher presented participants with different varieties of ice cream or potato chips. Only one brand of the product was used to prevent choice due to brand preference. In this study, Haagen-Daz was the ice cream brand, and Lay's was the potato chip brand. These brands were selected because of the large variety of flavor options available for

purchase. The “average” flavors, such as chocolate, vanilla, plain potato chips, etc. were removed to prevent the participant from choosing based on a pre-existing favorite.

The researcher asked participants about their purchase intention of a high-priced product that is irregularly purchased. In this study, laptops were the product. Images of various brands of windows laptops were presented to the consumer, with information detailing the product name, price, storage space, ram, video card, graphics card, display size, battery life, keyboard size, number of ports, dimensions, weight, and processor speed. The price of the laptops was limited to a range of \$300-900 because these represent low to mid-range laptop prices (Cavallo, 2017). Multiple brands were used because no one brand had sufficient varieties of laptops within this price range.

Finally, the researcher asked participants to select the likelihood of purchase from a product that was low priced and infrequently purchased. In this study, Sandisk jump drives were presented to the participants. They were presented with an image of the jump drive and informed that it was 120 GB size.

Correlation

Data were analyzed using R 3.3.1 software (Rstudio, 2016). An overall Spearman’s correlation was calculated between respondents purchase intention and their reported feelings of choice overload. A Spearman’s correlation is used because the measures that are being correlated are ordinal data. This makes a parametric correlation inappropriate (Faraway, 2016).

Mean Comparisons

Initially, a series of mean comparison tests were run to analyze the difference between treatment groups. Since the data is in the form of a Likert scale, the parametric studentized T test is inappropriate to use as a test statistic (Faraway, 2016). One of the assumptions of a T test is that the data is normally distributed (Faraway, 2016). Likert scale data is ordinal rather than continuous. Due to this, the assumption of normality is violated (Boone & Boone, 2012). Boone and Boone (2012) suggested the use of a non-parametric test. Given this, the Mann-Whitney *U* test was used in this analysis. In essence, a Mann-Whitney *U* test is a non-parametric version of the T test (Mann & Whitney, 1947).

The data uses multiple tests upon the same dataset. This can increase the likelihood of committing a Type I error. McDonald (2012) suggests the use of the Hommel correction when making a multiple comparison test. McDonald (2012) noted that a traditional p-value adjustment, such as the Bonferroni, can be overly conservative.

Repeated measures analysis

A multi-level model was used to assess differences in choice overload between rural and non-rural individuals. Individuals were tasked with assessing their purchase intention across four sets of items. This design constitutes a nested design where individuals are repeatedly measured. In these cases, a multi-level model is appropriate in order to control for the lack of independence of observational units (Raudenbush & Bryk, 2002).

Observational unit

The observational unit for this analysis was the item conditions for each participant. Each participant observed four conditions: ice-cream, potato chips, laptops, and flash drives. A set of three questions were provided to the individual to assess their feelings of purchase overload.

Dependent variable

The dependent variable in this analysis was the purchase overload composite score. There are four purchase overload composite scores associated with each participant. The four composites are associated with each of the items that participants were surveyed on: ice-cream, potato chips, laptops, and flash drives.

To calculate the composite score, the average of the three purchase overload Likert scale questions associated with a single item was taken. For example, the composite purchase overload score for an individual's response to the ice cream condition was taken by adding the Likert scale scores of the responses to the questions "The number of products available makes me feel overwhelmed?", "The volume of product information that I must choose from is frustrating?", and "The number of products available is stressful?".

Rurality

The primary independent variable of this study is rurality. Study participants indicated whether they were from a rural or non-rural locale. This variable was coded as a binary variable where 1 indicated that the participant self-reported being from a rural locale. Of those surveyed, 26.86% self-reported being from a rural locale.

Sex

Self-reported sex was one of two covariates included in the model. Participants were asked to self-report their sex. This variable was coded as a binary variable where 1 indicated that the participant self-reported being a male. 37.65% of the participants indicated that they were male.

White

White was the second of two covariates in the model. Initially, this variable was coded as a set of dummy variables that included other races/ethnicities besides White. Since 82.64% of the sample indicated that they were White, the remaining subgroups comprised only 17.36%. Given the lack of balance, Faraway (2016) suggested that it would be inappropriate to try to make conclusions about a relatively small group of students. For example, Black students were only 2.42% of the sample ($n = 43$). Given these relatively small group sizes, the non-White subgroups were combined into a single subgroup. Finally, this variable was coded as a binary variable where 1 indicated that the participant self-reported being White.

Many

This variable is an experimental condition used within the survey. This variable is a binary variable where 1 indicates that the associated composite score is from the experimental condition where the participant was asked to choose one item from the extensive choice set. In the other case, 0 indicates that the associated composite score is from the experimental condition where the participant was asked to choose one item from a limited number of choices.

Type

This variable is an experimental condition used within the survey. This is a categorical variable that denotes the item viewed by a participant from where the associated composite score was calculated. There is one category associated with each of the four conditions: ice cream, potato chips, laptops, and flash drives.

Buy

A final variable was included in the model that denotes whether a participant indicated that they would purchase an item. This variable was dummy coded as a binary variable where 1 indicated that the participant indicated that they would purchase an item from the group presented to them in the experimental condition.

Interaction terms

Three interaction terms were included in the model. The first was the interaction between Rurality and Many. The second was the interaction between Rurality and Type. The third interaction term was the interaction between Rurality and Buy. The interactions were chosen to provide clarity between the relationship of rurality and purchase overload.

Model

Two models were used in this analysis. The first was a model containing only the main effects. The second model added interaction effects. Both models were multi-level models. The main effect model used in the analysis is as follow:

Choice overload = Rurality + Many + Type + Buy + White + Sex

+ Random Participant Intercept.

This model states that the composite score for an individual's self-reported indicators of purchase overload is predicted by being from a rural local, the number of items they were presented, the type of items they were presented, whether the participant intended to purchase an item, whether

they are White, and their self-reported gender. Further, the intercept varies in the model by participant.

The second model contained all main effects but included the interactions between rurality, the experimental conditions, and a participants intention to make a purchase. The model also included a term for the random intercept. The model used in the second analysis is as follows:

$$\text{Choice overload} = \text{Rurality} + \text{Many} + \text{Type} + \text{Buy} + \text{White} + \text{Sex} + \text{Rurality} \times \text{Many} + \\ \text{Rurality} \times \text{Type} + \text{Rurality} \times \text{Buy} + \text{Random Participant Intercept}.$$

The analysis was conducted using the *lme4* package for *R* (Bates, Sarkar, Bates, & Matrix, 2007). The *lme4* package does not calculate *p*-values. The *p*-values shown in the analysis were calculated using the *lmerTest* package for *R* (Kuznetsova, Brockhoff, & Christensen, 2017). The *lmerTest* calculates model *p*-values by using a Satterwaite approximation to calculate error degrees of freedom. These degrees of freedom are then used to obtain a *p*-value in conjunction with the Wald *T* statistic provided by the *lme4* package. Finally, model assumptions were checked using *R*.

Qualitative Study

Participants

The study primarily interviewed undergraduate and graduate Midwestern University students whose hometown was in either rural or urban/suburban locations. Only domestic students were invited to participate because this study is primarily examining U.S. rural and urban consumers. This research compares the differences between rural and non-rural consumers in purchase decision-making. Since we are researching millennial purchase behavior, college students are adequate participants for the interviews. Additionally, college students are easy to access since the study was completed on a college campus in the Midwest. The solicitation continued until 12 participants completed the interviews. A sample of 12 participants were used because 12 participants provide sufficient information to achieve qualitative research goals (Patton, 2002). Although wide variability exists among scholars on the number of participants needed to achieve saturation, previous studies have concluded that saturation occurred within the first 12

interviews (Guest, Bunce, & Johnson, 2006). Additionally, the goal was to get close to equal numbers of both genders and geographic locations because this will help compare between the groups (Englander, 2012).

Procedure

The initial respondents were screened to confirm their backgrounds. This was accomplished by asking the participants to complete a short, initial survey. The interviewees were asked to provide zip codes for their hometown, whether they were primarily raised in a rural or urban/suburban location, whether they are domestic students, and if they are over the age of 18. Students who were under 18 and who were international students were disqualified from participating in the interviews because the study only researched the purchase behavior of U.S. millennial participants. Of the remaining participants, the students were sent an email indicating that they were selected based on their responses to the initial screening process. The e-mails provided them further information about the study and invited the students to schedule a time for the interviews. The interviews were conducted in a reserved, private room in one of the buildings on campus. The interviewee's participated in an in-depth, semi-structured interview asking about their purchasing behaviors, current and past. Before agreeing to participate in the study, the students were informed that the interview will be semi-structured and may take up to 2 hours. They were also informed that the interview would be audio recorded. Once the students have agreed to participate, a time and location were set up based on the participant's convenience.

On the day of the interview, the researchers elaborated on some basic information about the study and its purpose. The researcher also explained the confidentiality policy with the participant. The participant was, once again, reminded that the interview would be audio-recorded and later transcribed. Once the participant understood the agreement and purpose of the study, he/she was asked to sign the consent form, agreeing to participate in the study.

After the formalities were completed, the interview process began. Consistent with Moustakas's (1994) approach to phenomenological interviewing, the interview was completed via systematic steps. The phenomena of interest for this study are factors that play a role in the consumer's decision to buy or not buy products. Such factors could include emotions at the time of purchase, environmental influencers, upbringing, etc. The questions targeted the participants' lived experiences with purchase decisions while removing the researchers own experiences from

the equation. Although removed from the study, the researcher still played the role of a guide to direct participants in expressing their experience of the purchase decision-making process (Angen, 2000; Guba, 1996).

The interview/think-aloud protocols were structured to gather information about the participant and his/her past environment. This can include the environment they grew up in, including descriptions of the stores they frequented. Based on the participant's responses to the above questions, further questions were asked to delve deeper into the answers, focusing on questions that solicited descriptions of the experiences to better understand the shared experiences in decision-making between rural consumers and between urban consumers.

Based on information gathered, the interviewer delved deeper into the participants' shopping experience both in brick-and-mortar stores and online. They then asked probing questions about the influence that the number of options available for a product played in the consumer purchase decision.

All the recordings were then transcribed and analyzed for themes.

Analysis. After the interviews, either the researcher or an outside transcription service transcribed the recordings so the researcher can analyze the resulting text. In-line with the constructivism (interpretive) paradigm, through analysis of the data, the researcher's goal was to gain a better understanding of people's subjective understanding of the decision-making process and its link to the participants' decision behavior (Moustakeas, 1994). To accomplish this goal phenomenological approach was used to analyze the transcriptions. Similar to the interview process in phenomenology, it is crucial for the researcher to detach their own judgment and preconceived notions when analyzing the data (Holroyd, 2001). Essentially, they must, once again, separate themselves from the data to understand only the participant's experience of the phenomenon without the interference of researcher bias.

In the phenomenological approach, several stages exist in analyzing the data (Holroyd, 2001). The first step is to intuitively understand the data, which may involve repeatedly reading and rereading the transcriptions. Next, the researcher constructed a constituent profile by summarizing the raw data of each participant; this is the movement of objects as facts to essences (Holroyd, 2001; Creswell, 2007). This is accomplished by extracting natural meaning units (NMUs), which are discrete expressions of a participant's experiences of the decision-making process. These NMU's are condensed to identifiable sentences that communicate a distinct

expression of the experience, referred to as a central theme. Finally, reconstituting the central themes to remove irrelevant or repeating statements delivering a non-repetitive list of descriptive statements for each participant completes the constituent profile.

The constituent profiles were then used to form a thematic index for rural participants and one for urban participants, which highlights major themes that appear in the data. First, repeating and irrelevant statements were removed from the constituent profile statements, similar to what was done to create the constituent profile. Next, a search was completed to find referents within the profiles that were then isolated and listed separately. Referents were specific terms that emphasize the meaning of the experience in the purchase decision-making process. Finally, the thematic index contains the constituent's profiles, statements, themes, and referents that can be used to collectively examine the data and compare the rural and urban populations.

This enables the ability to compare profiles, statements, themes, and referents to create interpretive themes with attention on data that reveals the meaning of experience and the distinctive information that emerges for rural and urban consumers. These interpretive themes were used to find meanings ascribed to the phenomenon. In this case, it is the purchase decision-making process, which was then summarized to provide an in-depth representation of the participants' and each groups' experience of the decision-making event. Subsequently, it is possible to examine the experience of the phenomenon for each of the groups, rural and urban. Then, the researcher was able to pinpoint significant differences that were revealed. An additional step, coined by Moustaka (1994), involves including the researchers' own experiences as well as the contexts influencing said experiences.

CHAPTER 4. RESULTS

Quantitative Study

Respondents

In total, 1,940 respondents participated in the survey. Of those, 1,706 completed all portions of the survey and were included in the analysis. Of those, 458 indicated that they were from rural locales, and 1,248 indicated they were from non-rural locales.

Correlational and mean Comparison Results

The full results of the survey can be seen in Table 1. The overall correlation between purchase intent and choice overload across respondents was $-.14$. This provides evidence that there is a small negative correlation. Due to its small size, though, it is likely not practically significant.

Of the mean comparisons conducted, seven of the eight questions on the survey provided evidence that there was no difference between rural and non-rural respondents. Extensive choices for ice cream had a mean group difference of 0.11 ($U = .83, p = .41$). Limited choices for potato chips had a mean group difference of 0.05 ($U = .43, p = .66$) where many choices for potato chips had a mean group difference of 0.02 ($U = 0.19, p = .85$). For infrequent purchases that are high priced, group differences were not significant when faced with few choices ($U = 1.60, p = .11$) or many choices ($U = 0.66, p = .51$). Similarly, for infrequent purchases that are low priced, group differences were not significant when faced with few choices ($U = 0.59, p = .55$) or many choices ($U = 1.73, p = .07$).

Only one item in the survey showed a significant difference between groups. For an ice cream with few choices, the groups were statistically different ($U = 3.22, p < .01$). Given the fact that only one of the items showed a significant group difference, caution should be used in interpreting this result. Rather than there being a meaningful effect, it is possible that this result is due to chance. Calculating Cohen's d (Faraway, 2014) provides an effect size difference between the groups of $.26$. This effect size difference does not lead to an interpretation of practical significance between the groups. Thus, with the combined evidence of being the only item with statistical significance and a relatively small effect size, these results suggest that the group difference likely stems from statistical noise.

Table 1 Survey Results

Item	Group	Mean	SD	U	p
IC3	Rural	3.28	1.67	3.22	< .01
	Urban	2.88	1.53		
IC16	Rural	3.94	1.63	0.83	.41
	Urban	3.83	1.72		
PC3	Rural	2.51	1.49	0.43	.66
	Urban	2.56	1.53		
PC16	Rural	3.50	1.67	1.87	.85
	Urban	3.48	1.71		
LT3	Rural	0.48	0.50	1.60	.51
	Urban	0.41	0.49		
LT16	Rural	0.63	0.48	0.66	.51
	Urban	0.66	0.47		
JD3	Rural	4.23	2.04	0.59	.55
	Urban	4.32	2.02		
JD16	Rural	3.69	1.56	1.73	.07
	Urban	3.91	1.55		

Multi-level Model Results

The full results for the model can be seen in Table 2. There was no effect of Rurality on choice overload, as indicated in the main effects model. However, there were differences between rural and urban participants in choice overload for the ice cream condition ($b = -0.174, p = 0.031$). Similar rural effects were found for the potato chip and jump drive differences since those interactions were not statistically significant. However, the rural/urban difference for laptop was different from the difference in the ice cream condition where the effect is essentially zero, $b = 0.028$. Overall, these differences are unlikely to be practically significant. This lack of practical significance was also seen in the two interactions that were statistically significant. The interaction between Rural and Participants indicating they would make a purchase was statistically significant ($B = 0.036, SE = 0.016, p = .025$). In other words, participants from rural areas who indicated they would purchase after viewing an item also reported more feelings of choice overload. Though this might be seen as a theoretically interesting finding, again, the evidence presented does not make a compelling case for a practically significant effect. The final significant interaction with Rurality was the interaction with the computer condition ($B = 0.202, SE = 0.079, p = .011$). This means that

rural participants indicated that they had higher reported feelings of choice overload than their non-rural peers in comparison to ice cream (the baseline condition in the analysis). Rurality did not have a significant interaction with the other two conditions Potato Chips ($B = 0.040$, $SE = 0.063$, $p = .526$) or Jump Drives ($B = 0.070$, $SE = 0.064$, $p = .274$). Finally, the interaction between Rurality and the condition with many options did not have a significant interaction ($B = -0.034$, $SE = 0.049$, $p = .486$). Overall, there is weak evidence for the existence of a true effect in terms of differences in reported choice overload between rural and non-rural individuals.

Of the conditions used in the experiment, participants reported significantly higher rates of choice overload in the Computer condition ($B = 0.563$, $SE = 0.042$, $p < .001$) but less in the Thumb Drive condition ($B = -0.074$, $SE = 0.033$, $p = .025$) in comparison to the Ice Cream condition. The Potato Chip condition was not statistically different from the Ice Cream condition in how participants reported feelings of choice overload ($B = 0.007$, $SE = 0.033$, $p = .840$). Of the covariates examined in the model, Male was a significant predictor in the model ($B = -0.194$, $SE = 0.031$, $p < .001$). Males reported significantly lower feelings of choice overload in comparison to females. In contrast, participants who were White did not report statistically different feelings of choice overload than participants were non-White ($B = -0.021$, $SE = 0.043$, $p = .618$).

Table 2 Results from Hierarchical Linear Model

Fixed Effects	Estimate	SE	t	p
(Intercept)	1.99	0.05	38.533	<0.00
Rurality	-0.01	0.04	-0.4	0.69
Male	-0.19	0.03	-6.264	0.00
White	-0.02	0.04	-0.496	0.62
Potato Chip	0.02	0.03	0.685	0.49
Laptop	0.62	0.04	17.413	<0.00
Jump Drive	-0.05	0.03	-1.865	0.06
Indicating Purchase	0.01	0.01	1.819	0.07
Many Item Condition	0.53	0.02	24.597	<0.00

Table 3 Results from Hierarchical Linear Model Continued

Fixed Effects				
	Estimate	SE	t	p
Intercept	2.032	0.055	36.620	< .001
Rurality	- 0.174	0.081	- 2.162	.031
Male	- 0.194	0.031	- 6.286	< .001
White	- 0.021	0.043	- 0.499	.618
Potato Chips	0.007	0.033	0.202	.840
Laptop	0.563	0.042	13.416	< .001
Jump Drive	- 0.074	0.033	- 2.240	.025
Indicating Purchase	0.003	0.008	0.329	.742
Many Items Condition	0.543	0.025	21.372	< .001
Rurality*Purchase	0.036	0.016	2.240	.025
Rurality*Many	- 0.034	0.049	- 0.697	.486
Rurality*Potato chips	0.040	0.063	0.634	.526
Rurality*Laptop	0.202	0.079	2.543	.011
Rurality*Jump Drive	0.070	0.064	1.094	.274

Qualitative Study

The qualitative data collected from the students' interviews were analyzed and coded thematically (Moustakas, 1994). Many themes emerged that addressed the researcher's questions as well as new insights into the thought process of millennials purchase behavior. These additional insights can be used for future studies concerning influencers of purchase behavior and choice overload. As researchers, we strive to be cautious about interpreting the results; however, the following themes emerged from the interviews.

Theme 1: Extensive options need as an outcome of the product price

Some participants reported that the price of the product they wished to purchase influenced their need for extensive options. If the product they sought to purchase is what the interviewee considers to be high cost, then they prefer to choose from a larger number of options. Furthermore, participants stated a greater likelihood of performing more extensive research before completing the purchase and were willing to spend more time making the final decision. For example, one

24-year-old rural participant reflected, “I think if something is higher priced I would want more options but I would also spend a lot more time making a decision. So I think with something like a light bulb if it doesn’t like really matter because it is low cost and all I need like a specific watt that doesn’t really matter I would go and grab whatever is the cheapest one of the type of light bulb I want. But as far as a phone definitely more options and would be better and I would do a lot more research about it. I would spend a lot more time deciding.”

Additionally, participants stated that they would be meticulous about a product and its qualities when the product was higher cost. For instance, a freshman, suburban participant stated that “If it is high priced I would be more particular about it.” The interviewees also indicated that they would be less likely to purchase the product if it was expensive and the retailer offered few selections. For example, the same participant responded she was “less likely to buy if too few” and another suburban, graduate student responded that “but maybe for something like that where it's high priced, I don't know much about it, probably not stressful but a little more like I'm a little more cautious. I want to make the right decisions and not the right decision but one that makes sense for the situation.” Overall, the responses indicate that consumers prefer a greater variety of options when purchasing high-cost items. Additionally, participants also reported that they are willing to expend more effort to research and are more selective when purchasing expensive products compared to less expensive items.

Theme 2: Purchase intention based on the current necessity for product

Several participants reported that the need for a particular product influenced their decision to purchase the product versus deferring the purchase. If the item in question is one that is a necessity, the participants were more likely to purchase the product versus going elsewhere or purchasing the item at a later date. This was reported by a suburban graduate student who stated that “I needed them and I didn't have time to go somewhere else.” and a rural undergraduate who discussed her reasoning for purchasing a computer by stating “yeah, I needed one for school, so.”

However, if the product was not essential or was not required for an extended time period, then the participants reported that they were likely to defer the purchase until a later time or were willing to search a different venue. For instance, a suburban undergraduate participant reflected on her experience while purchasing a pair of jeans by stating, “sometimes I would just say oh go

home maybe I will like maybe buy another time and just forget about it because I don't really need it that much.”

Additionally, when the product was not essential, the participants were more likely to choose based on other factors, particularly price. The interviewees reported usually purchasing the cheaper of the options presented. For example, a rural undergraduate interviewee reflected that “if I were in a hurry I would be most likely to grab the cheapest one.” However, another participant reflected on their decision to purchase lunch meat, saying, “I bought one of them, yeah. Because I needed it and I was like, “well, I just have to pick one,” and so I just picked the biggest package that they had.” Finally, another suburban, undergraduate student revealed his experience buying a computer part stating, “well I needed it and I chose the better of the two that and the price were very different from one another.” In summary, the current necessity for a product dictated purchase behavior. When participants had an immediate need for the product, they reported more willingness to purchase a product immediately rather than shop around at other markets. On the other hand, when an item was not immediately needed, participants reported more willingness to choose items based on other variables, predominantly price.

Theme 3: Option availability in online versus physical stores

The participants explained how their purchase behavior differs in online situations compared to physical stores. A number of participants explained that they are more willing to purchase a product when they encounter limited options in a brick-and-mortar store, compared to online stores, because they would have to physically go to another store to find additional or different options. This was illustrated by a suburban graduate student vocalizing her thoughts when comparing online vs. in-person purchase behavior stating, “I think if I'm in a store, I think I'm likely to get something because I don't want it to be wasted time either. If I'm online I know that if sometimes just I've given up because online it's easy just to go back to it.” However, if they are shopping online, it is much more efficient to go to another website to search for more product options than to travel to another store. For instance, participants expressed that “online it is easier to compare all the different options” and in a physical store “you have would have to leave and go to another store whereas online you could just check other sites and that is a lot easier.” Furthermore, participants reported a greater desire for more options online because “online it is easier to compare all the different options.” As such, limited option availability was a more

significant deterrent to purchase intention online as opposed to in-store. Generally, the participants conveyed a greater willingness to shop multiple vendors online rather than physical stores due to ease and convenience.

Theme 4: Extensive options and level of expertise/interest

The majority of the interviewees experienced unfavorable feelings when they encountered an extensive assortment of options. In particular, the participants reported feeling overwhelmed. For example, one rural graduate student reported how he felt “there was at least 500 choices and it was overwhelming” and another suburban graduate student reported feeling “really confused because there is just so many different things that are the same, where it's just stressful” regarding the number of vitamin options to choose from.

However, after speaking with the participants, it became clear that the feelings experienced correlated with other factors. The main factors being the level of interest and level of expertise about the particular product.

The consumer's level of knowledge and interest appears to play a critical role in the need for extensive options. Participants preferred a higher number of options when purchasing a product they were more knowledgeable about and/or more interested in. One participant, with interest in computers, explained, “at least with technology, I prefer more options than not. Just because then you can compare and contrast all sorts of things.” and how “if there were too few options, that would have been more annoying than too many options. In that specific case.” For this particular participant, his explanation was grounded in the fact that computers/technology is something he is very knowledgeable about/interested in.

Additionally, these participants stated experiencing fewer negative emotions (overwhelmed) when presented with a higher number of options for products they were knowledgeable about compared to purchasers presented with little or no expertise in the product. This was expressed by an urban undergraduate discussing his feelings about purchasing sewing supplies by stating that “I would feel, honestly, overwhelmed on that one. Just because I don't know a lot about it, so I literally just basing everything by the box. And so I feel like I would have definitely a tougher time.”

Overall, the participants indicated feeling fewer negative emotions and a greater desire for extensive options when purchasing goods they had extensive knowledge or interest in versus consumers with little or no interest or knowledge about the product.

Theme 5: Internet as a research and/or purchase medium

Interviewees also reported using the internet as a research resource while purchasing the product in a physical store. The consumers were able to research and compare reviews, product options, product prices, etc., online before or during their visit to a storefront. An example is a suburban graduate student who explained that he “looked online first. But then I went to brick and mortar” and another rural graduate student who explained that for big purchases, she “might look online just to check things out. But then I would probably buy it in person, yeah.” Additionally, another participant expressed her research habits about an unfamiliar product explaining, “I was also trying to research about it online like look up reviews while I was shopping”. In contrast, another student explained his process when discussing purchasing a product he is very familiar with by stating, “Yeah, I would probably look online to see what the options-- what are they making? It's been a while, so what are they making now?... I could probably search the price online”. Overall, multiple participants expressed a desire to use the internet for research purposes, regardless of where they purchased the product.

However, participants also reported the ease of internet purchases, mainly when presented with extensive options, due to the online stores' ability to filter. Specifically, participants can filter products based on various criteria to narrow down options, making a large number of products easier to digest. For example, one interviewee explained how he used the internet as a research tool when purchasing a computer stating, “on the internet you can narrow down your specifications. Say I want a screen that is between 13 and 17 inches and only display and keep adding a criterion. So, more options are good in that case for me.” In summary, the participants expressed their use of the internet as a research tool and to help narrow down options whether they ultimately purchase the item online or in-person.

Theme 6: Internet versus physical store preference

Although many millennials prefer purchasing some products online, there are some who prefer purchasing products in the store. Specifically, the consumers want to purchase certain products in-store because it provides them the opportunity to interact with the good in question. Products included electronics, clothes, and enthusiast products. For example, a participant explained their process in purchasing a computer expressing, “I’ll do research using both formats. But when it comes to final purchasing, I will most likely go to the physical store itself.” He goes on to explain his reasoning, stating that in a physical store, a person can “touch and feel. Mess around with it.” Another respondent reported that she “don’t really like buying online because I can’t try them on” when discussing sweaters.

The need to interact with the product appears to be particularly crucial with high-cost products such as electronics. Consumers reported the necessity to manipulate the good to have a better understanding of how it feels and looks. For instance, one rural undergraduate stated, “I’d probably prefer to get them at a store, because with a bat, if I’m going to-- the good bats are 250, 300 bucks each, you’re shelling out an investment. You can use them for several years, but it’s a still a lot of money to drop at one time. So I prefer to be able to hold it and swing it and know how it’s going to feel.”. Yet another participant reported, “.....I would go to the store and feel them, basically. Touch the ones that I was interested in, and then with phones nowadays, I could probably search the price online, and if it’s not I’ll just determine which one based on the touching and how it looks and how does it look in person, how big it is.....” when discussing rock climbing equipment. Overall, the interviewee’s reported preference for in-person purchase for expensive, enthusiast, and specific other goods where interacting with the product was essential to making the final purchase decision.

Theme 7: Limited product options lead to experiencing negative emotions

When the participants encountered limited options, many reported experiencing negative emotions, including frustration and disappointment. One respondent said, “can we go negative, because I was very annoyed” when discussing the limited vegetable options available to her. However, another participant said, “so I was frustrated by the other two options weren’t what I wanted” due to the limited variety of stock available for purchase.

Additionally, participants reported fewer negative emotions and higher positive emotions when encountering products they are less familiar with or less knowledgeable about. In other words, when presented with a product, the participant was less knowledgeable about, almost all of the participants reported negative feelings if they encountered extensive product options. However, more than half of the participants reported neutral or positive feelings when presented with the limited product options. For example, one of the participants said, “as an engineer also, just how I am. How I am wired to get the specifics of that. Because I am like I want to walk in and grab the thing and leave. When there are more options and I don’t know exactly what they want. That is when I like ahh. Sheesh” when attempting to purchase ranch dressing for his mother.

In conclusion, experiencing negative emotions when presented with limited options is very nuanced. According to the responses, other factors play a role in how options variety influences feelings of choice overload and purchase.

Discussion

Scholars have debated the extent that choice overload influences purchase behavior (McShane & Bockenholt, 2018). The findings from this study provide evidence that the number of options available to consumers influences purchase decisions and satisfaction, but this effect is moderated by several factors. For example, when a product was considered expensive, consumers preferred a higher number of options. Additionally, consumers were also willing to devote more time to extensively research these high-cost products prior to making the final purchase decision.

In this chapter, for each research question, I discuss the results from the study in the context of my hypotheses. Further, I describe how the results of this study fit into the existing body of literature on purchase behavior and how it extends the current literature. I conclude with a summary of the findings and the overall theme of those findings.

Overall, the results demonstrate a statistical difference between rural and non-rural participants in their reported feelings of choice overload for some product conditions. When interaction effects are not in the model, the results do not support a difference between rural and non-rural consumers in their feelings of choice overload. Rurality by itself did not predict choice overload. Rurality, when faced with many choices or when presented with the laptop condition, helped predict the experience of choice overload. Overall, the findings suggest that rurality is a

better predictor of choice overload when moderated by other conditions, specifically, number of options and type of good, in this study. These findings align with the results of Chernev, Böckenholt, & Goodman (2015) and McShane & Bockenholt (2018) that experiencing choice overload is moderated by various other factors. However, the overall effect is small and suggests that findings represent a statistical difference but may not be practically significant. Additionally, the data support both statistical and practical significance, the existence of choice overload in two of the conditions measured. First, when consumers were presented with a wide variety of options, the participants reported more feelings of choice overload. This was consistent in both rurality groups; no differences were present between the rural and urban sample population. Second, when participants were presented the laptop option in the extensive option set, participants were more likely to report feelings of choice overload. Additionally, rural participants reported greater feelings of overload than their non-rural counterparts, only on the Laptop condition. However, since these results were not replicated in the other conditions, these findings should be approached with caution since it is difficult to determine if this is due to the high cost associated with the Laptop or due to rurality. This is consistent with prior research by Chernev et al., 2015 suggesting that decision task difficulty is a moderating factor in choice overload. Specifically, since laptops are considered high-cost items, participants were more likely to experience feelings of choice overload. Similarly, these results were consistent among both groups, rural and urban.

- RQ1: To what extent do millennial rural and urban consumers differ in intention to purchase products when they encounter limited options or an extensive number of options.
 - H1: Rural consumers are more likely to purchase the product when they are presented with limited options.
 - H2: Urban consumers are more likely to purchase the product when they are presented with extensive options.

The quantitative study examined the extent to which millennial rural and urban consumers differed in intention to purchase various types of products when presented with limited or extensive options.

I hypothesized that urban consumers would be more likely to purchase the product when they are presented with extensive options and that rural consumers are more likely to purchase the product when they are presented with limited options. Overall, the quantitative evidence from my

study does not support this hypothesis. Of the 8 items, only one was statistically different between groups. The low cost, frequently purchased item (ice cream) was statistically different between groups. However, the other low cost, frequently purchased item (potato chips) was not. This suggests that the observed group difference between rural and urban millennial purchasers was likely due to chance rather than an inherent and practical group difference. This result extends the work of McShane & Bockenhold (2018), by providing more context that one of the variables that likely do not influence purchase behavior is rurality. One important caveat to this finding is that this study only examined millennials. Differences in purchase behavior may exist among rural or non-rural locals among non-millennials. Scheibehenne et al. (2010), Chernev et al. (2015), and McShane and Böckenholt (2018) suggest that different moderating and dependent variables may influence the final result. As such, rurality might play a role in purchase intention but not in this specific study design. Furthermore, the 2010 decade gave rise to various arguments by researchers concerning the existence and influence of choice overload. However, the multiple meta-analysis provided inconclusive evidence concerning choice overload as a phenomenon.

- H3: Choice overload is negatively correlated with purchase intention.

The hypothesis stated that choice overload would negatively correlate with purchase intention. The results support the hypothesis because choice overload and purchase intention are weakly negatively correlated. Further, participants experienced more feelings of choice overload when exposed to the extensive option criteria in comparison to the limited option criteria. While the finding was statistically significant, it does not appear to be practically significant. These findings align with meta-analysis results of Chernev et al. (2015) and McShane and Böckenholt (2018) that choice overload is contingent on both moderating variables and the dependent variable. In this study, when participants were exposed to the extensive option criteria, participants were more likely to experience choice overload. These results are supported by Chernev et al. (2015) and McShane and Böckenholt (2018), who argued that choice overload is a very nuanced variable dependent on several factors. Overall, meta-analytic studies failed to provide conclusive support for the existence of choice overload. While Scheibehenne et al. (2010) failed to find a meaningful effect, Chernev et al. (2015) appeared to find an effect. Furthermore, Scheibehenne et al. (2010) and McShane and Böckenholt (2018) were both disparaging of prior meta-analysis on the subject.

- H4: Choice overload's negative correlation with purchase intention is more pronounced with rural consumers.

Similarly, it was hypothesized that choice overload's negative correlation with purchase intention would be more prominent in the rural population compared to the urban population. The research findings did not lend support to the hypothesis. When rural consumers were presented with extensive option criteria, data suggests they were less likely to report feelings of choice overload, but the results were not statistically significant. However, in the laptop condition, rural participants reported higher feelings of overwhelm than their non-rural counterparts. The results of the study appear to line up with previous meta-analysis results of Simonsohn et al. (2014), Chernev et al. (2015), and McShane and Böckenholt (2018) because the results do not provide conclusive results. The researchers discovered that choice overload varied significantly with both the dependent measure and moderating factors. As such, evidence of choice overload may change if the study examined different dependent variables or included other moderating variables. The findings of this study suggest that one such factor could be price, as laptops are higher priced than the other options in this study. Additionally, even examining previously published results suggested the existence of publication bias when more choices had positive outcomes (Simonsohn et al. 2014). Consequently, it is difficult to support the theory of choice overload conclusively.

- RQ2: What thought processes and/or emotions develop when millennial rural/urban consumers encounter a large assortment of products?

This study examined the thought processes and/or emotions develop when millennial rural/urban consumers encounter a large assortment of products. The interviews suggest that price influenced participants need for extensive options. This was particularly true for high-cost products where participants preferred a greater number of options when making their selection. Additionally, interviewees reported a higher likelihood of completing an extensive search on the product and spending more time deciding on the final choice.

Price being a primary influencer is not unexpected since the participants in this study were all college students, both graduate and undergraduate, and reported that they were limited in cash. Additionally, high-cost items tend to be items that are consumed over extended periods of time. These may be products the participants will use for several years, if not more, such as laptop

computers, television, car, couch, etc. Also, these are not products that can be easily replaced when limited in funds. As such, participants were more likely to demand a broader assortment of options and to scrutinize the availability of warranty and reviews on reliability.

Another factor that influenced purchase decision-making was the level of interest/expertise in the product. Specifically, when participants sought to purchase a product that they reported a high level of knowledge about, they were more likely to report neutral or positive emotions when they encountered a wider variety of product options. On the opposite end of the spectrum, when an extensive set of options for products were presented to the interviewees, that they were less knowledgeable about, they reported a higher likelihood of feeling negative emotions. In other words, the results suggest that participants prefer extensive product options for items they possess greater interest in/knowledge about. Previous research supports the belief that personality traits, including personal skills and level of experience, influence the feelings of overload (Eppler & Mengis, 2004). McShane & Bockenholt (2018) noted in their meta-analysis a similar phenomenon. Across studies, in their meta-analysis, participants that were presented with a combination of numerous options of unfamiliar products, they experienced choice overload. In contrast, when they were presented with many products of which they were familiar with, they did not experience choice overload. McShane & Bockenholt (2018) believed that the participants were able to rely upon prior knowledge to help them narrow down the choices quickly.

- RQ3: What thought processes and/or emotions come into play when millennial rural/urban consumers encounter small assortments of product?

Similar to extensive option criteria, the level of knowledge/interest about a good influenced their purchase decision process. However, when participants were shopping for commodities they were unfamiliar with, they were more likely to report pleasant reactions when presented with fewer product options and more likely to convey unpleasant impressions when presented with extensive product options. These findings align with and extend the findings by McShane & Bockenholt (2018), which examined moderating factors in choice overload.

- RQ4: When millennial rural/urban consumers encounter extensive or limited product varieties, what influences their decision to purchase or defer the purchase of the product?

When millennial rural/urban consumers discussed purchasing from an extensive/limited variety of goods, several factors influenced their willingness to buy the product. First, consumers reported a need for more options when seeking a high priced good/service. High priced items are a long-term investment asset dictating the need to have access to all possible choices to help make a more informed decision. Additionally, not only did consumers report completing a more extensive investigation of the good, but they were particular about the product and the product's qualities. Overall, both groups (rural and urban/suburban) reported similar findings. These results align with previous studies backing an increasingly similar purchasing experience between the millennial groups (Mangold & Smith, 2012; Perrin & Duggan, 2015; Dennis, Merrilees, Jayawardhena, & Wright, 2009). However, the findings do not support a difference between the groups when presented with extensive/limited options when purchasing high-cost goods.

- RQ5: What factors influence purchase decision-making in online situations, and how does it differ from brick-and-mortar purchases?

Millennials enjoy the ease and convenience of online purchasing. However, certain situations necessitate a preference for in-person purchases among some millennials. For example, respondents preferred in-person shopping because it gave them the opportunity to interact with the products. This was particularly true for certain products, including electronics, apparel, and enthusiast goods, since it gave the participants the ability to interact with the product, particularly touch. Additionally, participants stressed the importance of in-person interaction for goods that were high cost since these purchases were considered such a substantial investment. These results agree with the findings of Koufaris (2002) that online and traditional purchases can result in different outcomes and Gao, Zhang, Wang, & Ba (2012) that “experience products” such as apparel are challenging to assess due to its innate complex nature necessitating the need to interact with the product in person.

- RQ7: How do small and large product assortments influence purchase decisions online?

Interviewees described a greater willingness to purchase limited option goods in a physical store versus online because of the need to travel to another store to search for products. When purchasing goods online, the ease of researching another website for additional or variant options allowed participants to defer/not purchase products. As such, when one website did not offer an

appropriate number of options that met the participants' requirements, it was easy for the purchaser to move on to another website to find similar products. They were limited by the cost and time associated with physically traveling to another store. Moreover, participants also reported the ability to “filter” items when they felt overloaded with products in online stores, a feature not available in physical stores. If a customer were to visit a brick-and-mortar store and were presented with an overwhelming number of options, they would have little recourse to remedy the situation. However, when the same participant visited an online establishment and were presented with an overwhelming number of options, they have the ability to “filter” or remove products that do not meet specific criteria, giving them the ability to choose between fewer and more manageable, number of options. This ability to “filter” improved the participants' ability to manage the negative consequences associated with a large variety of options.

Studies support the filtering countermeasure to help alleviate feelings of overload experienced by individuals presented with overwhelming amounts of information (Eppler & Mengis, 2004; Roetzel, 2019). Additionally, these results support previous research findings by Koufaris (2002) that online shopping behavior does not result in the same outcomes as traditional shopping. However, these results are contrary to Gao, Zhang, Wang, & Ba (2012) that online purchase behavior, when presented with a large assortment of products, leads to negative experiences on the part of the consumer. Interviewee responses suggest that many consumers may experience more positive results when purchasing products online compared to brick-and-mortar.

- RQ6: How do these factors differ among millennial rural and urban consumers?

Overall, my results failed to show a significant difference in purchase behavior between rural and urban millennial consumers when presented with extensive or limited options. Furthermore, factors that influence purchase decisions were also quite similar between the two groups. This is understandable since both groups are in similar life situations. Specifically, participants are college students living on a limited income, making price or price v. quality a predominant factor influencing all/most purchase decisions, according to interview results. Additionally, with the expansion of technology, rural consumers have better access to the internet, increasing the influencing power of reviews in the purchase decision-making process comparable among the two groups (Mangold & Smith, 2012; Perrin & Duggan, 2015). Furthermore, equal access to the internet between the two groups could also lead to closing the gap that resulted from

lower product/store variety experienced by rural consumers, leading to more similar behavior pattern when presented with purchase options (Liu, Shively, & Binkley, 2013; Kaufman, Macdonald, & Lutz, 1997; Kaufman P. K., 1999; Krebs-Smith & Kantor's, 2001). Notably, rural consumers may not be more likely to experience cognitive overload when presented with extensive options because of more experience with similar purchase options as urban consumers as a result of an increase in access to various goods and services.

Overall, findings in the qualitative and quantitative portions of the study interconnect and support one another as well as prior findings from other researchers. Overall, the surveys did not provide conclusive support for differences in purchase behavior between rural and urban millennial consumers when presented with limited or extensive options. This could be due to the nuanced nature of choice overload and purchase behavior, as presented by previous researchers' meta-analyses (McShane & Bockenholt, 2018; Chernev et al., 2015; Scheibehenne et al., 2010). The interview results lend further support to the nuanced nature of choice overload and purchase behavior. For example, interview participants reported the level of interest/expertise and cost of product dictated need for extensive options and likelihood of choice overload. When examining costly items, interviewees also stated the desire for in-person product purchases when searching for high-cost items. They portrayed a desire to interact with the merchandise before making the final decision. The in-person purchase also influenced the consumers' likelihood to purchase products when less than an optimal number of options were presented due to the inefficiency associated with physically traveling to another store to search for the products.

Finally, "need"/decision goal was also reported to dictate the buyer's probability of purchasing a product when presented with a non-optimal number of product options. Overall, these variables could have significantly influenced the experience of choice overload and the likelihood of purchase in our survey study. Future surveys should structure the research to understand the interaction effects of these factors on the likelihood of experiencing choice overload and purchasing the item.

Implications

While the results of this study lend support to the existence of choice overload for high-risk items and extensive option criteria, the results failed to support a significant, practical difference between rural and urban consumer purchase behavior when presented with extensive or

limited options. However, the interview results suggest that other factors might play a role in purchase intention/behavior. Further studies should examine these factors, including interest, time, price, expertise, product type etc. and their influence on purchase behavior and choice overload. It would be wise of businesses to note these consumer factors when deciding how many varieties to offer to customers. Depending on these factors, fewer or larger varieties can bring about different results in terms of purchase behavior. Producers can also tie these factors to different product types as different factors were differentially important for different product classes.

Furthermore, the price was a critical variable for millennial purchases. Vendors should consider including additional, lower-cost options around areas that show a greater density of millennials, specifically college students. While price plays a crucial role in millennials' decision to purchase a product, price versus quality is also a significant contributor for many. Producers should research the implications to uncover the optimal price vs. quality criteria for specific consumables targeted toward millennial consumers.

Limitations and Future Directions

The results of this study offer several implications for companies and other stakeholders to sell various products to millennial consumers but are not free of limitations.

One such glaring limitation is that the study was conducted with participants from a single, mid-western university. As such, the results may have limited generalizability among the millennials in other parts of the United States or other countries. Additionally, since the study examined the purchase intentions of only millennial populations, it will be challenging to apply the results to other generations, both older and younger. Further, examining different class cohorts (freshmen, sophomore, junior, etc.) may result in different outcomes. First-year students, who are new to the university setting, may display a greater difference between rural and non-rural groups, since much of their experience derive from their home and upbringing. Seniors, who have spent more time away from home may have conformed more to their peers and current lifestyles, resulting in greater similarity between rural and non-rural participants. Additionally, future studies should expand the population subset to include participants from all over the United States and additional age groups.

The response rate was low for this study when taking into account the overall population size of students at the Mid-Western University. Future studies may benefit from ways to increase

the response rate among the population of the study. Methods of accomplishing this goal might be to increase the benefits gained from participating in the study, such as an increase in monetary gifts or a higher win rate among participants. Additionally, emailing surveys can be sent multiple times, instead of one, to increase participation by reminding students multiple times about the availability of the study. However, this could lead to frustration by the population as many students may see these surveys as “SPAM.”

Additionally, researchers who study choice overload may view the online nature of this study as a possible limitation. However, this study was artificial and different from both online and in-store settings. That said, the format of the study may generalize better to an online vs. a brick-and-mortar store setting.

A possible methodological limitation was on the definition of rurality used within this study. Study participants were asked to indicate whether or not they were from a rural local. Since this variable is self-reported, there is the possibility that not all participants conceptualized rurality in the same way. As such, the construct of rurality is likely not as well defined as if this study had used a more well-described definition. It is possible that using a non-self reported definition of rurality would have produced different results. For example, using the study participants zip code of their home address, a federal definition could have been utilized to more precisely define rurality. However, previous researchers found significant differences within the federal definitions of rurality (Puryear & Kettler, 2017). Rural areas that reside closer to urban areas display characteristics more similar to suburban communities than rural locations further away from urban areas (Puryear & Kettler, 2017). Overall, the concept of rural is very nuanced.

Another methodological limitation of the study was the analysis design of the qualitative portion of the study. Due to limited staff and funding, only one researcher interpreted the qualitative interview to uncover the various themes. Single-coder interpretation disallows for measuring of inter-coder reliability and agreement (Campbell, Quincy, Osserman, & Pedersen, 2013). Words may hold multiple meanings, and interpretation may be context-dependent. Limited guidance exists in the literature for establishing reliability in single-coder situations with semi-structured interviews.

Also, the influence of the level of expertise on the likelihood of experiencing choice overload appears to be incongruent between interview and survey findings. The survey results suggest that consumers who reported higher levels of expertise with the products (the laptop or the

jump drive) reported a higher likelihood of experiencing choice overload. On the other hand, the interview respondents reported they were less likely to experience feelings of overwhelm when presented extensive options for products they were more familiar with. While several causes can lead to these contradictory results, one such cause could be that the scale is not properly measuring the condition it is intended to measure. Additionally, levels of expertise could be an influential factor in experiencing choice overload but varies based on the product type. In other words, higher levels of expertise may not mitigate the likelihood of experiencing feelings of overwhelm equally for all product types. Further, the level of familiarity was only measured for the jump drive and laptop products among millennial consumers in the midwest. Expanding the product categories and the subject pool may yield different results in the experience of choice overload based on the level of familiarity with the product. Finally, the results from the interviews may not be generalizable.

Furthermore, the qualitative interviews provided great insight into other factors that play a crucial role in purchase intention when presented with extensive or limited options. Future research can use information gained from interviews to design and complete a quantitative study to validate the results of the interviews further. For example, previous studies suggest that time-constraints influence feelings of overload when making purchase decisions (Roetzel, 2019). Researchers can investigate how time-constraints, specifically the necessity to purchase products within a specific time-frame, influence purchase behavior among different groups when presented with extensive or limited options. Moreover, the investigation can also examine how the various factors may influence each other in the purchase process when presented with extensive or limited product varieties. For instance, how does time-constraint and expertise/interest influence each other when presented with various amounts of product options? Will expertise/interest help mitigate any stress associated with the time-constraint, leading to a higher likelihood of product purchase?

Future studies should also investigate how the results vary with expanded product types outside of those tested in this study. Expansion can include goods such as articles of clothing, fresh fruits/vegetables, cosmetics, etc. The results could be different for “experience” products Gao, Zhang, Wang, & Ba (2012) and other products. Additionally, product type results could also vary by age group due to each group's experience purchasing products online or brick-and-mortar.

Beyond expanding product categories, future research can also examine choice overload in additional settings (Roetzel, 2019). With the advances in technology, many consumers have

limitless access to the internet, including social media, e-mail, text messages, etc. Prospective studies can examine the influence of extensive and limited product information on consumers feelings of overload and intention to purchase on various internet-based platforms.

Finally, future researchers can focus on specific countermeasures to help alleviate the experience of overload among consumers (Eppler & Mengis, 2004; Roetzel, 2019). Explicitly, the studies can test different approaches businesses can employ to minimize consumers experience of overload. Researchers can also assess the solutions under several conditions examined within this study and outside of the study, including different age ranges, rurality, interest level, product type, price ranges etc.

CHAPTER 5. CONCLUSION

The results of the study support previous research/meta-analytic research on choice overload and purchase behavior (Chernev, Böckenholt, & Goodman, 2015; McShane & Bockenholt, 2018; Scheibehenne, Greifeneder, & Todd, 2010). The findings are suggestive of a difference between rural and urban/suburban consumers, but while the data are statistically significant, they are not practically significant. In turn, care must be taken in interpreting and using these findings.

Two conditions measured in this study resulted in both statistical and practical significance. First, participants presented with the extensive variety option reported higher impressions of choice overload regardless of rurality. Next, participants presented with the laptop option in the extensive criteria described higher likelihood of feeling choice overload. Notably, in the laptop condition, rural participants displayed greater feelings of overload than their urban/suburban matches. Nevertheless, the study failed to replicate these results in other conditions. As such, these conclusions should be approached with care because it is difficult to establish whether this is due to the high price of laptops or due to rurality.

Moreover, the findings of this study show that choice overload is negatively correlated when participants were presented with the extensive option set and positively correlated when presented with the limited option set. Once again, both are statistically significant, but neither was practically significant. Previous researchers have shown that choice overload is contingent on other moderating variables (Chernev, Böckenholt, & Goodman, 2015; McShane & Bockenholt, 2018). Therefore, care must be taken in interpreting and using these findings.

Specifically examining rural and non-rural consumers, the findings suggest that choice overload is negatively correlated with purchase intention and is more prominent in the rural population. However, these results were statistically, yet not practically, significant except in the laptop condition. In the laptop setting, rural participants displayed more feelings of overload than non-rural participants. Simonsohn et al. (2014), Chernev et al. (2015), and McShane and Böckenholt (2018) also reported inconclusive results and suggested that choice overload varied based on moderating factors and dependent measures. According to the findings of this study, the price could be one such moderating factor among consumers in measuring choice overload. Consequently, it is difficult to determine if the difference between rural and urban consumers'

feelings of overload is due to rurality or price. Further studies should be conducted to answer this question conclusively.

The interview results further support prior meta-analysis by Simonsohn et al. (2014), Chernev et al. (2015), and McShane and Böckenholt (2018), suggesting that choice overload fluctuated based on moderating factors and dependent measures. Among millennial rural and non-rural participants, the price was described as a noteworthy influencer in purchase decisions. Participants reported a greater need for extensive options and a higher likelihood of completing extensive research when purchasing high priced items. However, these findings may not generalize well to the overall population since most students live on substantially less income compared to other members of society.

Next, participants level of interest/expertise about a product dictated the likelihood of experiencing choice overload. Specifically, when encountering extensive selection of options about a product they showed high levels of knowledge/interest, participants were more likely to report neutral or positive emotions. On the other hand, when participants were presented with extensive options of products, they were less familiar with, they were more likely to describe feeling negative emotions. Consequently, the level of interest/expertise may be another variable dictating feelings of choice overload and should be further examined (Chernev, Böckenholt, & Goodman, 2015; McShane & Bockenholt, 2018).

Additionally, when examining online purchase behavior among millennial consumers, participants reported enjoying the ease and convenience of online shopping. However, specific conditions necessitated a predilection for in-person shopping. There was a need to interact with the product, which varied with participants, including when purchasing high-value items, enthusiast goods, electronics, apparel, etc. What products necessitate a need for interaction among specific groups is in need of further research.

Furthermore, interviewees stated a greater inclination to buy products when offered limited options in a physical store rather than online due to the inconvenience of driving to another store. Online shopping allows consumers to easily visit other stores/websites when presented with non-optimal purchase options. Participants also reported the ease of “filtering” items when presented with too many options in online settings leading to a lower likelihood of experiencing overload.

While the study fails to provide an overwhelming amount of conclusive evidence that is sorely lacking in the field of choice overload, the study provides much support to the findings of

previous studies as well as new, potential variables involved in the experience of choice overload (Chernev, Böckenholt, & Goodman, 2015; McShane & Bockenholt, 2018). Previous researchers have suggested the role of moderating and dependent factors in choice overload, but research is still lacking in conclusively determining what these variables may be. This study provides a host of new factors that appear to influence choice overload and purchase behavior.

Overall, the findings of this study provide researchers with a host of opportunities to further their goal of uncovering determinative factors influencing choice overload. Additionally, merchants can use the above information to target consumers to increase sales and revenue. By understanding the factors that influence purchase among various groups, companies can use the optimal method to maximize benefits.

APPENDIX

SURVEYS

Information/Choice Overload

Hunter and Goebel's scale of Information Overload (2008)

Factor

1. I sometimes feel frustrated during a sales presentation because of the volume of information that I must present.*
2. The amount of product information that I have to know in order to sell effectively makes me feel overloaded.
3. The volume of sales information that I must deal with is frustrating.
4. The amount of information regarding sales techniques that I must know causes me to make mistakes in sales presentations.*
5. I have presented the wrong product to the wrong customer because the amount of product information that I deal with is so large.
6. The amount of information regarding sales techniques that I must know has caused me to present the wrong product to the wrong customer.

Choice/Information Overload Measure:

- 1.) The number of products available makes me feel overwhelmed?
- 2.) The volume of product information that I must choose from is frustrating?
- 3.) The number of products available is stressful?
- 4.) There were too many product options to choose from?
- 5.) There were too few product options to choose from?

*Modified from Hunter, G. L.; Goebel, D. J. (2013). *Salespersons' Information Overload: Scale Development, Validation, and its Relationship to Salesperson Job Satisfaction and Performance*. Journal of Personal Selling & Sales Management 28(1), 21-35. DOI: 10.2753/PSS0885-3134280102.

Product Familiarity

Gursoy, D.(2001). DEVELOPMENT OF A TRAVELERS' INFORMATION SEARCH BEHAVIOR MODEL. Dissertation. Virginia Polytechnic Institute and State University.

Travelers' familiarity with the vacation destination

Will be measured on a five-point Likert type totally agree-totally disagree scale (1 = Totally disagree, 5 = Totally agree).

1. Compared to the average person, I am very familiar with the vacation destination I named above.
2. Compared to my friends, I am very familiar with vacation the destination I named above.
3. Compared to people who travel a lot, I am very familiar with the vacation destination I named above.
4. I always try to improve my knowledge about vacation the destination I named above.

Product Familiarity

Will be measured on a five-point Likert type totally agree-totally disagree scale (1 = Totally disagree, 5 = Totally agree).

	1	2	3	4	5
Compared to the average person, I am very familiar with the products that were previously presented.					
Compared to my friends, I am very familiar with the products that were previously presented.					
Compared to people who shop a lot, I am very familiar with the products that were previously presented.					

Based on *Gursoy, D. (2001). *DEVELOPMENT OF A TRAVELERS' INFORMATION SEARCH BEHAVIOR MODEL*.Dissertation. Virginia Polytechnic Institute and State University.

Survey Questions

Purchase Decision-Making Survey

3/19/2020

Qualtrics Survey Software

Consent

RESEARCH PARTICIPANT CONSENT FORM

Option availability and Online Purchase Intention between Rural and Urban Consumers

Sandra Liu PhD

Soumya Mohan MS, MBA

Department of Consumer Science

Purdue University

The purpose of this research is to understand the influence of option availability and other factors on consumer purchase intention in an online setting.

Participation in the study requires that you first complete a questionnaire asking basic demographic information including age, gender, etc. This is followed by another set of questionnaires about several factors including self-efficacy, need for cognition, variety seeking tendency, etc. Afterwards, you will be presented with several products and asked to complete questions about purchase intention.

The survey should take less than 10 minutes to complete and all information provided will be confidential. You are under no obligation to participate and you may withdraw at any time during the survey process, if you feel uncomfortable.

If you have questions, comments or concerns about this research project, you can contact one of the researchers:

Soumya Mohan, PhD Candidate

https://purdue.ca1.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview?ContextSurveyID=SV_3QcnKOOtg4QECEJ&ContextLibraryID=... 1/22

e-mail: mohan17@purdue.edu

Sandra Liu, PhD

e-mail: liuss@purdue.edu

If you have questions about your rights while taking part in the study or have concerns about the treatment of research participants, please call the Human Research Protection Program at (765) 494-5942, email (irb@purdue.edu) or write to:

Human Research Protection Program - Purdue University
Ernest C. Young Hall, Room 1032
155 S. Grant St.,
West Lafayette, IN 47907-2114

You can agree to participate in the study by clicking the "I agree" button below or choose to withdraw by clicking the "I Do Not Agree" button below:

Agree

Disagree

Location

Thank you for agreeing to participate in the study. You will now be asked a few basic demographic questions about where you were raised:

Please provide the zip code of city/town you were primarily raised?

Which location were you primarily raised in:

- Urban/Suburban
- Rural
- Other/Both

Demographic

What is your gender?

- Male

- Female
- Other

How old are you?

- <18
- 18
- 19
- 20
- 21
- 22
- 22+

How do you classify yourself?

- White
- Hispanic or Latino
- Black or African American
- Asian
- Native Hawaiian or Pacific Islander
- Native American or American Indian
- Other

Are you a

- Domestic Student
- International Student

Which of the following is your current classification at Purdue University?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- Other

What is your major?

Ice Cream

Now, imagine you are at the grocery store and enter the ice cream aisle. You are presented with the following options:



Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat Likely Extremely Likely

How likely are you to purchase one of the products, presented above, right now?

Now, imagine you are at the grocery store and enter the ice cream aisle. You are presented with the following options.







Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat Likely Extremely Likely

How likely are you to purchase one of the products, presented above, right now?

Ice Cream Questions

Do you like Ice Cream?

- Yes
- No

Please answer the following questions pertaining to the previous ice creams options presented:

Strongly Disagree Disagree Neutral Agree Strongly Agree

1.) The number of products available makes me feel overwhelmed?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.) The volume of product information that I must choose from is frustrating?	<input type="radio"/>				
3.) The number of products available is stressful?	<input type="radio"/>				
4.) There were too many product options to choose from?	<input type="radio"/>				
5.) There were too few product options to choose from?	<input type="radio"/>				

Block 15

Potato Chips

Now, imagine you go to the grocery store to purchase potato chips and are presented with the following options:







Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat Likely Extremely Likely

How likely are you to purchase one of the products presented above right now?

Now, imagine you go to the grocery store to purchase potato chips and are presented with the following options:



Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat Likely Extremely Likely

How likely are you to purchase one of the products presented above right now?

Potato Chips Questions

Do you like potato chips?

Yes
 No

Please answer the following questions pertaining to the previous potato chips options presented:

Strongly Disagree Disagree Neutral Agree Strongly Agree

1.) The number of products available makes me feel overwhelmed?

2.) The volume of product information that I must choose from is frustrating?

3.) The number of products available is stressful?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4.) There were too many product options to choose from?	<input type="radio"/>				
5.) There were too few product options to choose from?	<input type="radio"/>				

Why did you choose the selection you did?

On average, how often do you eat Potato Chips?

How often do you purchase Potato Chips?

Block 15

Laptops

Now, imagine you are on the market for a new WINDOWS laptop. You are presented with the following options. Will you choose to purchase one of the laptops presented below or choose to not buy/postpone buying?



ASUS: N550JQ
 Price: \$870
 Processor: Intel Core i7 4710HQ (2.50 GHz)
 Memory: 8GB Memory



HP: 15z Touch Laptop
 Price: \$319.99
 Processor: AMD A6-6310 Quad-Core APU
 Memory: 4GB DDR3L - 1 DIMM
 Harddrive: 750 GB 5400 rpm Hard Drive



Toshiba: Portege a30-c1340
 Price: \$884.99
 Processor: Intel Core i5-6200U
 Memory: 8GB DDR3L 1600MHz

Harddrive: 750 GB HDD
 Video Card: NVIDIA
 Geforce 845M
 Display: 15.6-inch FHD
 Battery Life: 56 WHrs, 6-
 cell Li-ion
 Keyboard: Illuminated
 Chiclet
 Ports: 2 USB 3.0
 2 USB 2.0
 1 HDMI™
 Dimensions: 15.08" x
 10.04" x 1.10"
 Weight: 5.95 lbs

Video Card: AMD Radeon
 R4 Graphics
 Display: 15.6-inch HD
 WLED-backlit Display
 Battery Life: Up to 7 hours
 and 15 minutes of battery
 life
 Keyboard: Standard
 Keyboard
 Ports: 1 USB 3.0
 2 USB 2.0
 1 HDMI™ 1
 1 RJ-45
 1

Harddrive: 500GB
 Video Card: IMobile Intel
 HD
 Display: 13.3-inch HD TFT
 LED Backlit
 Battery Life: Up to 9.7
 hours of battery life
 Keyboard: Full size, Spill
 resistant, Backlit
 Ports: 3 USB 3.0
 1 HDMI™
 RGB port
 Weight: 3.1 lbs

Headphone/Microphone
 Combo
 Dimensions: 15.13" x
 10.02" x .96"
 Weight: 4.73 lbs



Acer: R3-471T-76BM
 Convertible
 Price: \$549.99
 Processor: Intel Core i7-
 5500U Dual-core
 Memory: 8GB DDR3L
 SDRAM
 Harddrive: 1TB
 Video Card: Intel HD
 Graphics 5500
 Display: 14" HD WLED-
 backlit
 Battery Life: Up to 8 hours
 of battery life
 Keyboard: Standard
 Keyboard
 Ports: 1 USB 3.0
 2 USB 2.0
 1 HDMI™
 1 RJ-45
 Dimensions: 9.6" x 13.5" x
 0.9"
 Weight: 4.85 lbs



Toshiba: Tecra c40-c1430
 Price: \$649.99
 Processor: Intel Core i5-
 6200U
 Memory: 4GB DDR3L
 1600MHz
 Harddrive: 500GB HDD
 Video Card: Intel HD 520
 Display: 14-inch HD TFT
 LED Backlit
 Battery Life: Up to 7.97
 hours of battery life
 Keyboard: Full size, Spill
 resistant
 Ports: 3 USB 3.0
 LAN RJ-45 port
 1 HDMI™
 1 RGB port
 Weight: 3.97 lbs



Dell: Inspiron 15 3000
 Series Touch (AMD)
 Price: \$329
 Processor: AMD A6-6310
 Quad-Core APU with
 Radeon™ R4 Graphics
 Memory: 4GB Single
 Channel DDR3L 1600MHz
 (4GBx1)
 Harddrive: 500GB 5400
 rpm SATA Hard Drive
 Video Card: Integrated
 graphics with AMD APU
 Display: 15.6-inch HD
 (1366 x 768) Truelife LED-
 Backlit On-cell Touch
 Display
 Battery Life: Up to 8 hours
 of battery life
 Keyboard: Full size
 Keyboard
 Ports: 1 USB 3.0
 2 USB 2.0
 1 HDMI™ 1.4a
 Dimensions: 0.85" x 14.9" x
 10.24"
 Weight: 4.71 lbs



HP: ENVY 14t
 Price: \$599.99
 Processor: A6th Gen Intel(R) Core i5-6200U Processor Dual-Core
 Memory: 8GB DDR3L
 Harddrive: 1TB 5400 rpm
 Video Card: Intel HD Graphics 520
 Display: 14.0-inch HD BrightView WLED-backlit Display
 Battery Life: Up to 9hours and 30 minutes of battery life
 Keyboard: Backlit Keyboard
 Ports: 3 USB 3.0
 1 HDMI™
 1 RJ-45
 1
 Headphone/Microphone Combo
 Dimensions: 13.58" x 9.69" x .89"
 Weight: 4.4 lbs



Dell: Inspiron 15 5000 Series Laptop
 Price: \$549.99
 Processor: 6th Generation Intel® Core™ i5-6200U Processor
 Memory: 4GB Single Channel DDR3L 1600MHz
 Harddrive: 128GB Solid State Drive
 Video Card: Intel® HD Graphics 520
 Display: 15.6-inch HD (1366 x 768) Truelife LED-Backlit On-cell Touch Display
 Battery Life: Up to 7 hours of battery life
 Keyboard: Full size, spill-resistant keyboard
 Ports: HDMI™ 1.4a
 USB 3.0 (1)
 USB 2.0 (2)
 Kensington lock slot
 Media Card (SD, SDHC, SDXC)
 10/100 RJ-45
 Ethernet network
 Dimensions: 0.94" x 14.9" x 10.24"
 Weight: 5.11lbs



Acer: Aspire E5-573-35JQ
 Price: \$349.99
 Processor: Intel Core i3-5015U Dual-core
 Memory: 4GB DDR3L SDRAM
 Harddrive: 500GB
 Video Card: Intel HD Graphics 5500
 Display: 15.6" HD WLED-backlit
 Battery Life: Up to 5 hours of battery life
 Keyboard: Standard Keyboard
 Ports: 2 USB 3.0
 1 USB 2.0
 1 HDMI™
 1 RJ-45
 1
 Headphone/Microphone Combo
 Dimensions: 10.1" x 15" x 1.1"
 Weight: 5.29 lbs



Lenovo: Yoga 700 (14")
 Price: \$799.99
 Processor: 6th Generation Intel Core™ i7 Processor
 Memory: 8GB DDR3L
 Harddrive: 256GB SSD
 Video Card: Intel HD



Toshiba: Tecra a40-c1440
 Price: \$649.99
 Processor: Intel Core i5-6200U
 Memory: 8GB DDR3L 1600MHz



Dell: Inspiron 13 7000 Series 2-in-1
 Price: \$679.99
 Processor: 6th Generation Intel® Core™ i5-6200U Processor
 Memory: 8GB DDR3L 1600MHz
 Harddrive: 500GB 5400 rpm

Graphics 520/NVIDIA GeForce 940M 2 GB
 Display: 14" FHD (1920 x 1080), IPS
 Battery: 4 Cell 45 WHr Li-Polymer
 Ports: Full Size HDMI™ 1.4a
 (2) USB 3.0
 (1) USB 2.0 with D/C-in
 Micro HDMI - out
 4-in-1 Media Card (SD, SDHC, SDXC, MMC)
 (1) combo headphone / microphone jack
 Dimensions: 13.18" x 9.03" x 0.72"
 Weight: 3.5 lbs

Harddrive: 500GB
 Video Card: Intel HD 520
 Display: 14-inch HD TFT LED Backlit
 Battery: Lithium Ion (45Wh,4-Cell), Not user replaceable
 Keyboard: Full size, Spill resistant
 Ports: 3 USB 3.0
 1 HDMI™
 1 RGB port
 Weight: 3.97 lbs

SATA Hybrid Hard Drive with 8GB Cache
 Video Card: Intel® HD Graphics
 Display: 13.3-inch FHD (1920 x 1080) Truelife LED-Backlit Touch Display with Wide Viewing Angle (IPS)
 Battery Life: Up to 6 hours of battery life
 Keyboard: Full size, spill-resistant keyboard
 Ports: Full Size HDMI™ 1.4a
 (2) USB 3.0 (One USB 3.0 w/Power Share)
 (1) USB 2.0
 Security slot
 Media Card (SD, MMC)
 (1) Passive Stylus (Standard)
 (1) combo headphone / microphone jack
 Dimensions: 0.75" x 12.99" x 8.74"
 Weight: 3.66 lbs



Acer: Aspire Switch 11 SW5-171-33QB
 Price: \$349.99
 Processor: Intel Core i3-4012Y Dual-core
 Memory: 4GB LPDDR3
 Harddrive: 500GB
 Video Card: Intel HD Graphics 4200
 Display: 15.6" HD WLED-backlit
 Battery: 3-Cell 2955 mAh
 Keyboard: Not Included
 Ports: 1 USB 3.0
 1 USB 2.0
 Dimensions: 7.6" x 11.7" x 0.4"
 Weight: 1.87 lbs



Asus: ZenBook UX305CA
 Price: \$699
 Processor: Intel Core M 6Y30 (.90 GHz) Processor
 Memory: 8GB DDR3L 1866 RAM
 Harddrive: 256GB SSD
 Video Card: Intel HD Graphics 515
 Display: 13.3" Full HD
 Battery Life: Up to 10 hours of battery life
 Keyboard: Full size
 Ports: 3 USB 3.0
 1 Micro HDMI
 1 Headphone/Microphone Combo Jack
 Dimensions: 0.50" x 12.80" x 8.90"
 Weight: 2.60 lbs.



HP: Pavilion x360 - 13t Touch Laptop
 Price: \$529.99
 Processor: 6th Gen Intel(R) Core i5-6200U Processor Dual-Core
 Memory: 4GB DDR3L - 1DIMM
 Harddrive: 500GB 5400 rpm
 Video Card: Intel HD Graphics 520
 Display: 13.3-inch HD WLED-backlit IPS Display Touchscreen
 Battery Life: Up to 10 hours and 45 minutes of battery life
 Keyboard: Standard
 Keyboard
 Ports: 2 USB 3.0

- 1 USB 2.0
- 1 HDMI™
- 1 RJ-45
- 1

Headphone/Microphone
 Combo
 Dimensions: 12.89" x 8.8" x
 .89"
 Weight: 3.77 lbs



Lenovo: Discover Ideapad Y700
 Price: \$699.99
 Processor: 6th Generation Quad-Core™ i7 Processor
 Memory: 16GB DDR4
 Harddrive: 500GB
 Video Card: AMD R9 M375 4GB
 Display: 13.3-inch FHD (1920 x 1080) Truelife LED-Backlit Touch Display with Wide Viewing Angle (IPS)
 Battery: 4 Cell 60 WHr
 Keyboard: Red LED Backlit with 2 Level Brightness Control
 Ports: Full Size HDMI™ 1.4a (2) USB 3.0 (One USB 3.0 w/Power Share) (1) USB 2.0 + Always-on DC-in 4-in-1 Media Card (SD, SDHC, SDXC, MMC) (1) combo headphone / microphone jack
 Dimensions: 16.65" x 12.00" x 1.10"
 Weight: 4.8 lbs



Lenovo: Flex 3
 Price: \$569.99
 Processor: 6th Generation Intel Core™ i3 6100U Processor (2.30GHz)
 Memory: 4GB PC3L-12800 DDR3L
 Harddrive: 500GB 5400 RPM
 Video Card: Intel HD Graphics 520
 Display: 14.0" HD AntiGlare Multitouch
 Battery: 3 Cell 45 WHr
 Keyboard: Backlit Keyboard English
 Ports: Full Size HDMI™ 1.4a (2) USB 3.0 (One USB 3.0 w/Power Share) (2) USB 2.0 + Always-on HDMI-out RJ45 4-in-1 Media Card (SD, SDHC, SDXC, MMC) (1) combo headphone / microphone jack
 Dimensions: 13.39" x 9.06" x .85"
 Weight: 4.3 lbs

I choose to not buy at this time/delay my purchase.

Now, imagine you are on the market for a new WINDOWS laptop. You are presented with the following options. Will you choose to purchase one of the laptops presented

below or choose to not buy/postpone buying?



Dell: Inspiron 15 5000 Series Laptop

Price: \$549.99

Processor: 6th Generation Intel® Core™ i5-6200U Processor

Memory: 4GB Single Channel DDR3L 1600MHz

Harddrive: 128GB Solid State Drive

Video Card: Intel® HD Graphics 520

Display: 15.6-inch HD (1366 x 768) Truelife LED-Backlit On-cell Touch Display

Battery Life: Up to 7 hours of battery life

Keyboard: Full size, spill-resistant keyboard

Ports: HDMI™ 1.4a

USB 3.0 (1)

USB 2.0 (2)

Kensington lock slot

Media Card (SD, SDHC, SDXC)

10/100 RJ-45 Ethernet network

Dimensions: 0.94" x 14.9" x 10.24"

Weight: 5.11lbs



Dell: Inspiron 15 3000 Series Touch (AMD)

Price: \$329

Processor: AMD A6-6310 Quad-Core APU with Radeon™ R4 Graphics

Memory: 4GB Single Channel DDR3L 1600MHz (4GBx1)

Harddrive: 500GB 5400 rpm SATA Hard Drive

Video Card: Integrated graphics with AMD APU

Display: 15.6-inch HD (1366 x 768) Truelife LED-Backlit On-cell Touch Display

Battery Life: Up to 8 hours of battery life

Keyboard: Full size

Ports: 1 USB 3.0

2 USB 2.0

1 HDMI™ 1.4a

Dimensions: 0.85" x 14.9" x 10.24"

Weight: 4.71 lbs



Toshiba: Portege a30-c1340
 Price: \$884.99
 Processor: Intel Core i5-6200U
 Memory: 8GB DDR3L 1600MHz
 Harddrive: 500GB
 Video Card: IMobile Intel HD
 Display: 13.3-inch HD TFT LED Backlit
 Battery Life: Up to 9.7 hours of battery life
 Keyboard: Full size, Spill resistant, Backlit
 Ports: 3 USB 3.0
 1 HDMI™
 1 RGB port
 Weight: 3.1 lbs

I choose to not buy at this time/delay my purchase.

Laptop Questions

Please answer the following questions pertaining to the previous laptop options presented:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.) The number of products available makes me feel overwhelmed?	<input type="radio"/>				
2.) The volume of product information that I must choose from is frustrating?	<input type="radio"/>				
3.) The number of products available is stressful?	<input type="radio"/>				
4.) There were too many product options to choose from?	<input type="radio"/>				
5.) There were too few product options to choose from?	<input type="radio"/>				

Rate your level of knowledge/expertise.

Level of expertise for
WINDOWS LAPTOPS
compared to average
consumers.

Level of expertise for
WINDOWS LAPTOPS
compared to your peers.

Level of expertise for the
various Windows
BRANDS compared to
average consumers.

Level of expertise for the
various Windows
BRANDS compared to
your peers.

How often do you purchase laptops?

Flash Drive

Now, imagine you are on the market for a new 128 GB USB FLASH DRIVE. You are presented with the following options:







Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat likely Extremely Likely

How likely are you to purchase one of the products presented above right now?

Now, imagine you are on the market for a new 128 GB USB FLASH DRIVE. You are presented with the following options:



Extremely Unlikely Somewhat Unlikely Unlikely Likely Somewhat Likely Extremely Likely

How likely are you to purchase one of the products presented above right now?

Flash Drive Questions

Please answer the following questions pertaining to the previous usb flash drive options presented:

Strongly Disagree Disagree Neutral Agree Strongly Agree

1.) The number of products available makes me feel overwhelmed?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.) The volume of product information that I must choose from is frustrating?	<input type="radio"/>				
3.) The number of products available is stressful?	<input type="radio"/>				
4.) There were too many product options to choose from?	<input type="radio"/>				
5.) There were too few product options to choose from?	<input type="radio"/>				

Rate your level of knowledge/expertise.

Level of expertise for USB FLASH DRIVES cell phones compared to average consumers.

Level of expertise for USB FLASH DRIVES cell phones compared to your peers.

Level of expertise for the various USB FLASH DRIVE BRANDS compared to average consumers.

Level of expertise for the various USB FLASH DRIVE BRANDS compared to your peers.

How often do you purchase USB FLASH DRIVES?

Gift Card

Please provide your e-mail address below to be entered in the drawing to win a \$25 gift for participating in this survey:

Block 15

If you are interested in participating in an interview for a \$10 gift card, please enter your e-mail address below:

Powered by Qualtrics

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