AN EXAMINATION OF SOCIAL ONLINE SHOPPING ATTITUDES

OF UNDERGRADUATE STUDENTS ENROLLED IN THE DEPARTMENT OF

AGRICULTURAL LEADERSHIP, EDUCATION, AND COMMUNICATIONS AT

TEXAS A&M UNIVERSITY

A Dissertation

by

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Chair of Committee,	Theresa Pesl Murphrey
Co-Chair of Committee,	James R. Lindner
Committee Members,	Rebekka M. Dudensing
	Billy R. McKim
Head of Department,	John F. Elliot

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ABSTRACT

Current research aims at exploring attitudes of undergraduate agriculture students towards online social shopping (i.e., the use of social network features on shopping websites). The Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), and the Innovation Adoption and Diffusion theory served as the theoretical framework for this study. A sample of 432 students was selected from 1,130 currently enrolled undergraduate students in the Department of Agricultural Leadership, Education, and Communications (ALEC) at Texas A&M University. A 24-item survey questionnaire was designed and distributed via Qualtrics, and 226 complete responses were received. Results reveal that past online shopping experience, stage of adoption of the innovation, and social network intensity all significantly affect college students' attitudes towards online social shopping. However, demographic characteristics (i.e., age, gender, academic major, ethnicity, and connection to an agricultural organization) did not significantly affect attitudes towards social online shopping. Based on the results of this study, college students have purchased agricultural products online, and college students have indicated that social online shopping is synonymous with online shopping. Thus, agricultural companies should strive to reach college students on social shopping websites or risk missing opportunities to make a sale. Future research is recommended to target a larger population that includes diverse age groups and individuals who hold different occupations.

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CHAPTER I

INTRODUCTION

This chapter introduces the definition of social online shopping, as well as its advantages compared to the traditional shopping method, the main types of social shopping, the evolution of social online shopping, Facebook's history of integration with online shopping, and the justification of using college students as a research target. The theoretical framework, significance of the study, the statement of the problem, the purpose of the study, and definitions of terms are presented.

The social aspect of shopping (e.g., interacting with a friend or sales assistant) has been shown to be a major contributor towards positive emotions (Jones, 1999; McGrath & Otnes, 1995) and it increases the time spent and unplanned spending in a physical store (Babin, Darden, & Griffin, 1994; Jones, 1999). Early studies found that although traditional online shopping was considered to have advantages of convenience, wider product selection, competitive prices and greater access to information, traditional online shopping had low/medium level of entertainment and social interaction comparing to offline shopping (Chen, Gillenson, Sherrell, 2002; Gefen & Straub, 2003). Socially rich shopping experiences were valued and needed by online shoppers (Gefen & Straub, 2003; Jarvenpaa & Todd, 1997; Kim, 2002). The concept of *social shopping* was then born to meet the needs for a more socially rich online shopping experience.

Social shopping was defined as an online shopping method that mimics the social interaction one gets from offline shopping, by integrating with social network features (i.e., sharing, commenting, following), review systems, and curated product

recommendations. Most social shopping merchandise involves products and services provided to consumers (e.g., clothing, food); thus, social shopping relates to the tertiary sector (i.e., services) of the Agricultural Economics sector.

There are five categories of social shopping: group-shopping sites, shopping communities, recommendation engines, social shopping marketplaces, and shared shopping mechanisms. In general, online social shopping is traditional online shopping websites with added social features, which enable shoppers to obtain the lowest price, share reviews, ask questions about a product, or purchase together to obtain a group discount. Each of these features mimic the offline shopping experience with friends or getting help from other people.

Social shopping may not sound familiar but it has existed for many years. On Dec. 1st, 2005, a website called *ThisNext* (http://www.thisnext.com) was founded to resolve the product-discovery problem: people were not sure about what they were looking for, or they could not find a product they liked from a mainstream retailer (e.g., Macy's or Wal-Mart) (Tedeschi, September, 2006). The website provided a social shopping service that allowed registered users to create their own pages to collect information about items to form a visual shopping list, with not only text descriptions and web links, but also pictures of these products. This shopping list was viewable and searchable by other users of *ThisNext*. This was the debut of social shopping in history. As the population of social network users (i.e., Facebook, Twitter, etc.) expanded in numbers, retail companies started to display advertisements, conduct promotions, and develop fan groups on social networks (SNWs), which brought in huge economic profits.

Statistics reveal that Facebook's worldwide advertising revenue was $USD 4.28 billion in 2012, and the projected revenue will reach 14.27 billion U.S. dollars in 2015 (Statista, 2013). SNWs features such as wall-post, share, comment, mention, recommend, like, fan-page, group, etc. have been added to the online shopping experience, allowing people to virtually shop online with friends and family. Moreover, buyers can obtain group discounts if buying products or gift certificates online with other people within a short period. An example would be *Groupon* (http://www.groupon.com). Usually, this type of discount expired when the inventory has sold out, or the deadline arrived, whichever came first. Other forms of social shopping include online shoppers' communities/forums to discuss product reviews, deals, or recommendations (e.g., *Amazon Reviews, Slickdeals, MakeupAlley*).

Due to limited time and resources, the current research will focus on one type of social shopping: social shopping marketplaces. Examples of social shopping marketplaces include *Wanelo* (http://www.wanelo.com) and *Fancy* (http://www.fancy.com). Discussions were centered around the social network features (i.e., *Facebook*, to be specific) embedded in those social online shopping websites (i.e., follow/like a user or a brand's page, share, comment, mention someone, recommend, and group function).

The integration of Facebook with online shopping was not initially successful. According to PEW Research Center's Internet and American Life Project conducted during April 26- May 22, 2011 ($n = 2,227$ adults ages 18 and older), the major motivation for using social media was to stay in touch with friends and family (67%). A

study by Sociable Labs showed that half of the shoppers were logged into Facebook while shopping online; however, the study did not find any significant correlation between sharing on Facebook and shopping on e-commerce sites (Eler, 2011). Being friends with a person on Facebook did not mean agreeing with that person's tastes, that is to say, people were not interested in sharing what they buy with their Facebook friends. Since 2008, Facebook has attempted social integrations with Delta ticket window, Bing search engine, Facebook Deals, and a Time Warner Facebook app, but none of these projects survived (Rogers, 2011). The social graphs (i.e., who they are) did not seem to overlap much with people's interest graphs (i.e., what they like).

Facebook did not give up its effort on social integration. Besides showing advertisement that curated to users' interests in Facebook feeds, people can also shop within Facebook. Payvment, a Facebook platform aiming at creating a virtual mall on Facebook, allows Facebook users to launch free stores on their Facebook pages. Payvment was shut down in 2013 and transferred all its users to Ecwid, which was an ecommerce widget built to support buying without leaving Facebook. Based on Facebook Apps statistics, Facebook storefront apps have tens of thousands of registered users: Ecwid has 100,000+ monthly users, Shopify, Bigcommerce has 10,000+ monthly users, and Storeya has 10,000+ monthly users. However, with Storeya, buyers are directed to other sites to complete a purchase. Local businesses and name brands use Facebook Page to keep connected to customers, announce sales events, etc. Some Facebook groups act like a local community that users within a certain geographic location trade second-hand goods, and seek buying opinions and product information. A

Shopify 2013 research revealed that an average of 85% of all orders from social media come from Facebook (Macdonald, 2013). Thus, social networks (and their features) are still playing a critical role in the online shopping arena.

College students are actively involved in social networks (SNWs) like Facebook, Twitter, Pinterest, and Snapchat on a daily basis. A recent study about college students' social network impact on reading practices showed that the average time college students spend on SNWs was 16.13 hours per week (Huang & Capps, 2013). It is worth noting that college students' (18-34 years old, 21.6 million) discretionary spending had reached $163 billion U.S. dollars in 2014 (Refuel Agency, 2014). With their online purchasing power, heavy use of SNWs, and being technology-savvy (Lester, Forman, & Loyd, 2006), it is important to understand students' attitudes towards online social shopping. Using students as surrogates for marketing research has also been justified by past studies (Fuchs & Sarstedt, 2009; Lamb & Stem, 1980). The current research aimed at exploring U.S. college students' attitudes towards online shopping with SNWs features.

Theoretical Framework

The current research examined college students' attitudes towards social online shopping, a relatively new technology in regard to ecommerce within the Agricultural sector, and their intention to adopt or reject this technology. This study addressed the *American Association for Agricultural Education National Research Agenda* priority of new technologies, practices, and products adoption decisions (Lindner, Rodriguez, Strong, Jones, & Layfield. 2016). This study was bounded by Rogers (2003) innovation

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adoption and diffusion theory (IAD), theory of reasoned action (TRA; Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980) and technology acceptance model (TAM; Davis, 1989).

Three-Sector Theory

The modern economy has three sectors: the primary sector, the secondary sector, and the tertiary sector (Fisher, 1939). In the primary sector, raw materials are obtained; in the second sector, raw materials are manufactured; and, end products and services are provided to consumers in the tertiary sector. This study deals with the tertiary agricultural sector that involves selling and distribution of agricultural products (e.g., clothes, food) with regards to social online shopping.

Innovation Adoption and Diffusion (IAD)

The innovation adoption and diffusion theory (Rogers, 2003) is often used to investigate the process people take to adopt a technological innovation. Adoption was defined as the decision of "full use of an innovation as the best course of action available" and rejection as a decision "not to adopt an innovation" (Rogers, 2003, p. 177). There are six stages in a decision-making process of whether to accept an innovation: no knowledge, knowledge, persuasion, decision, implementation, and confirmation. Past online shopping experience and past social online shopping experience are both previous practices that compose the prior conditions for innovation adoption and diffusion (IAD) of social online shopping; thus, should be examined in this study. Facebook usage is associated with three aspects: communication behaviors, personality variables that include demographic characteristics and shopping style (Delafrooz, Paim, & Khatibi,

2010), and socioeconomic characteristics. Together these three aspects determine the knowledge step in the innovation-decision process.

Theory of Reasoned Action (TRA)

Martin Ajzen and Icek Fishbein developed the theory of reasoned action and it has been used to predict behavioral intention (BI) and attitude towards a behavior. Past researches, especially social science researches, had used TRA as theoretical framework and had proved its compatibility with the prediction of online shopping behaviors. For example, Delafrooz et al.'s (2010) study was based on TRA to explore students' online shopping behavior. Chuchinprakarn (2011) applied TRA to online shopping intention and behavior among employees in Thailand.

Technology Acceptance Model (TAM)

As the extension of TRA, TAM was first developed to model the process of people accepting and using a technology (Davis, 1989). Only two components, perceived usefulness (PU) and perceived ease-of-use (PEOU) were included in the original model. Later, two major upgrades of this model were TAM 2 (Venkatesh & Davis, 2000; Venkatesh, 2000) and TAM 3 (Venkatesh & Bala, 2008). TAM 2 added antecedents of PU (e.g., *subjective norm*), and TAM 3 added antecedents of PEOU (e.g., *perceived enjoyment,* or PE) to the original model.

Many scholars use the Technology Acceptance Model to study attitudes towards online shopping. Dennis, Morgan, Wright, and Jayawardhena (2010) examined the influences of social e-shopping in enhancing young women's online shopping behavior. Harris and Dennis (2011) explored how e-retailers should engage customers on

Facebook based on TAM. Cha's (2009) research also integrated TAM elements into her questionnaire design, which were PE, PU, and PEOU when shopping on social networking websites with regards to real/physical products versus virtual products. Delafrooz et al. (2010) concluded that TAM elements along with shopper's personalities (hedonic or utilitarian shopper) significantly influenced college students' online shopping behavior in Malaysia. Chen et al. (2002) examined the factors that set apart virtual (online) stores from physical stores based on TRA and TAM.

Significance of the Study

Research has explored online shopping behaviors of college students (Delafrooz et al. 2010; Lester et al., 2006). A few studies included the social media aspect and how it affects the online shopping experience (Cha, 2009; Dennis et al., 2010; Harris & Dennis, 2011).

Dennis et al. (2010) argued that young women aged 18-24 years in the United Kingdom were the dominant users of social networking sites comparing to other sections of the population; they only sampled from female undergraduate students from a UK university. To avoid the effect different product type might have on shopping motivations, the study was limited to shopping for clothing. Although this study is very relevant to the topic of the current study, which examined attitude towards social online shopping, it ignored the male consumers and other types of product. Harris and Dennis (2011) approached their study from the retailers' perspective on how to engage online shoppers on Facebook. The researchers sampled students from two UK Colleges and

utilized a focus group discussion ($n = 26$). Future quantitative research was recommended in order to obtain generalizable data.

The current quantitative research was expected to fill the gap for the following reasons: First, both past online shopping experiences and the use of social media are investigated. Secondly, attitudes towards online shopping with social network features were examined, which is organized based on logic flow. Thirdly, since people's attitude does differ when shopping for different product types (Cha, 2009), the current research allows participants to choose the product types they shop for online most often. Finally, gender bias was eliminated by including male consumers in the research population.

Statement of the Problem

For the purpose of this study, the three-sector theory (Clark, 1940 &1957; Fisher, 1939; Jean Fourastié, 1954) was used to describe the Economic Sectors. According to this theory, the Economic Sector has three components: the primary sector (extraction of raw materials), secondary sector (manufacturing products with raw materials), and tertiary sector (distribution of services and products). To be more specific, the tertiary sector of Agriculture includes services associated with selling and distributing food, fiber, clothes, etc. For instance, the selling of clothes, home products (e.g., curtains) made of fabric, and boots made of leather are in the tertiary sector; however, selling of coal or silicone are not within the tertiary sector. This research focused on the distribution of products and services in the tertiary agriculture sector through online shopping. Online shopping, comparing to traditional shopping, has been associated with efficient product searching engines, more available options, and the entertainment

brought by surfing the Internet, as well as concerns regarding security and privacy issues. Social online shopping combines shopping online and social network features, which allows people to share their online shopping experience with their friends and family, and the social group they are in (e.g., colleagues, peers). College students have been active online shoppers and frequent users of social networks, making this population suitable for this study.

Innovation was defined as "an idea, practice, or project that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12). According to the *American Association for Agricultural Education National Research Agenda* article "New Technologies, Practices, and Products Adoption Decisions" (Lindner et al., 2016), one of the key problems we were facing today was to develop and diffuse new technologies to efficiently use scarce resources. Social shopping has only existed for less than 10 years, which is still a new concept. It provides online shoppers with social features including log-in with SNW identifications, sharing with friends, SNW profile viewing, following (i.e., subscribing to users' updates), commenting (i.e., interaction with buyers/sellers), etc. While social shopping can make the online shopping experience more entertaining and interactive with some users perceiving it as enjoyable, efficient and useful; those features may also raise concerns about privacy and identity issue to some online shoppers.

Will social features add values to online shoppers' purchasing experience and affect their purchase decision? Or, might the social features be reasons that prevent online shoppers from using social shopping websites? This study was designed to find

out consumers' attitudes towards social online shopping so that online merchandisers know how to use social features to improve marketing strategies and thus increase profit in the future. The goal was to examine the relationship between college undergraduate students' attitudes towards online social shopping and their intensity of social network usage along with past online shopping experience.

Purpose of the Study

The purpose of this study was to understand the attitudes of college students towards online social shopping in the United States and to determine the factors that affect their attitudes, based on the TAR (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980), TAM (Davis, 1989), and the IAD (Rogers, 1976).

Objectives

1. Describe past online shopping experience, past social online shopping experience, stage of adoption of social online shopping, and social network usage.

2. Describe subjective norm and behavioral intention regarding social online shopping.

3. Describe perceived usefulness, perceived ease of use, and perceived enjoyment for social shopping websites.

4. Determine if differences exist between participants' attitude towards online social shopping based upon past online shopping frequency, users' stage of adoption of social online shopping, and social network intensity.

5. Determine how subjective norm and *attitude* affect behavioral intention.

6. Describe extraneous variables (i.e., confidence in using SNW identity to login to

social online shopping websites, compatibility, trust) that might affect adoption of social shopping websites.

7. Determine if differences exist between participants' attitudes towards online social shopping based upon personal characteristics (i.e., academic major, connection to agriculture-related organizations, age group, gender, ethnicity, and monthly discretionary spending).

Definitions of Terms

Attitude. Attitude towards a behavior is the degree to which performance of the behavior is positively or negatively valued (Ajzen & Fishbein, 1980).

Behavioral Intention (BI). "A person's perceived or subjective probability that he or she will engage in a given behavior" (Committee on Communication for Behavior Change in the 21st Century, 2002, p. 31).

Compatibility (perceived fit). "The compatibility of using a virtual store with existing values and beliefs, previously introduced ideas, and potential adopters' needs" (Chen et al., 2002, p. 710).

Facebook Intensity (FBI). The Facebook Intensity scale is used to measure Facebook usage beyond simple measures of frequency and duration, incorporating emotional connectedness to the site and its integration into individuals' daily activities. (Ellison, Steinfield, & Lampe, 2007).

Hedonic shoppers. Shopping as emotional entertainment, defined by Babin et al. (1994).

Marketplace. An online marketplace is where multiple third party retailers sell the products, but the marketplace operator processes the transactions.

Perceived Enjoyment (PE). PE has been defined as "the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use" (Venkatesh, 2000, p. 351).

Perceived Ease Of Use (PEOU). PEOU is defined as the degree to which a person believes that using a particular system would be free of effort (Davis, 1989).

Perceived security. It was defined as "the extent to which one believes that the World Wide Web is secure for transmitting sensitive information." (Salisbury, Pearson, Pearson, Miller, 2001, p. 166)

Perceived Usefulness (PU). PU is the degree to which a person believes that using a particular system would enhance his or her performance,

Socioeconomic characteristics. Includes a person's income, wealth, education, occupation, etc., that are usually used to predict an individual's social behavior.

Social Network Sites (SNWs). "Web-based services that allow individuals to: (i) construct a public or semi-public profile within a bounded system; (ii) articulate a list of other users with whom they share a connection; and (iii) view and traverse their list of connections and those made by others within the system". (Boyd & Ellison, 2007, p. 211)

Social Presence (SP). Social presence was defined as the extent to which a medium allows users to experience others as being psychologically present (Fulk, Steinfield, Schmitz, & Power, 1987).

Social shopping. Also known as social commerce, which was defined as "the use of social strategies to anticipate, personalize and energize the shopping experience." (Cecere, Owyang, Li, Etlinger, & Tran, 2010, p. 7) Refer to Table 43 for categories and examples of social shopping.

Subjective Norm (SN). Subjective norm is the perceived social pressure to engage or not to engage in a behavior.

Utilitarian shoppers. Using cognitive processing to achieve shopping goals (Babin et al., 1994).

Virtual product. "A good or product traded in the non-physical realm, typically in online communities and games. A virtual good has no tangible substance and no real intrinsic value; its value resides solely in what the user is willing to pay for it." ("Virtual Good", n.d., para. 1)

Limitations of the Study

This study focused on social online shopping, which is a newly emerged online shopping method. Therefore, participants may not have been aware of the concept of social shopping at the time of this research. The study is limited by the extent of the participants' understanding of the subject. Further, not all types of social online shopping were addressed in the study. The study is also limited and bound by attributes of the survey questionnaire in regard to actual survey questions and characteristics of the survey such as length and readability. Given that the targeted population consisted of undergraduate students within the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, the study is limited to this group.

CHAPTER II

LITERATURE REVIEW

This chapter introduced the theoretical framework in detail, including the three-sector theory, five social online shopping platforms, the theory of reasoned action, the technology acceptance model, the innovation adoption and diffusion theory, as well as the stages of adoption, and characteristics of the innovation. Finally, past literature related to the current study was reviewed to provide a foundation for the significance of the study.

Three-Sector Theory

Fisher (1939) proposed a macroeconomic theory that divided modern Economics into three sectors based on the major type of activities involved: Primary, Secondary, and Tertiary sectors. This theory was further developed by Clark (1940 & 1957) and Schäfers (2002). The Primary sector involves activities to obtain raw materials, for instance, extracting coal from earth to be used later to fuel a fabric weaving machine. Then, in the Secondary sector, products are manufactured (i.e., clothes are made with the coal-fueled machine). In the Tertiary sector, goods or services are provided (i.e., clothes are sold to consumers or other businesses). The current research deals particularly with the Tertiary agriculture sector that involves the selling and distribution of agricultural products (e.g., clothes, fiber, food) as they relate to social online shopping. During a social online shopping trip, both physical (agricultural) products and services are distributed. Services may include airplane tickets, pest control services, restaurant reviews, etc. which are purchased/viewed by online shoppers.

<center>**Five Types of Social Shopping**</center>

There are five categories of social shopping: (a) group shopping sites, (b) shopping communities, (c) recommendation engines, (d) social shopping marketplaces, and (e) shared shopping mechanisms. Each of these categories is described in the following section.

Group Shopping Sites

According to the news article "Social Shop Till You Drop: A Quick Primer" (Yin, 2010), social shopping was categorized into three types. The first category is group shopping sites, for example, "deal of the day" websites Groupon (http://www.groupon.com) and LivingSocial (http://www.livingsocial.com). Its offline analogies would be wholesalers like Costco and Sam's Club. Instead of buying a wholesale amount of product for a cheaper unit price at a warehouse store, online shoppers can purchase one item at a lower price at a group shopping website. For example, a 17 in. by 24 in. bath rug is on sale on Groupon for $USD 7.99, but the total quantity of bath rugs is limited to two per order, and the deal price is only valid for a short time, so it is important that a consumer makes the purchase before quantities runs out or the deal ends. Nowadays, group shopping sites put more of their emphasis on local restaurant/spa vouchers, airline/cruise ship tickets, hotel reservations, etc., making deals more customized to individual shopper's geographic location and seasonal demands.

Shopping Communities

The second category is shopping communities, where online shoppers discuss product reviews and deals, which is quite similar to a sports or travel clubs in the offline environment. Examples of this category include Dealsea (http://www.dealsea.com) and Slickdeals (http://slickdeals.net).

Dealsea is a simple website that lists merchandise discounts and is continuously updated throughout the day. No registration is required to browse or to comment, and participants can choose to publish with a nickname, or post anonymously. Dealsea posts coupon codes (i.e., a combination of numbers and letters to be entered during the online checkout process to obtain a discount) or a special link to a secret deal page. Shoppers browse deals by departments, for instance, computers, beauty, fashion, etc., or search by keywords. Registered users can post a deal to the main page to share with other Dealsea users as well. People are also able to comment below the deal information to ask about product quality, price history, or request promotional codes that were received exclusively by other shoppers. Furthermore, Dealsea provides an extra function called *price tracker*, which visually displays the historic prices of a product using a line chart.

Slickdeals provides similar functions to those associated with Dealsea; however, Slickdeals is more of a forum rather than a web page. Registered users of Slickdeals can vote for a deal by clicking a thumbs-up button, thus a *deal score* is generated for the deal by adding up the number of thumbs up minus the number of thumbs down. Other users will be able to view deals by its deal score, the number of replies/views, etc., which is similar to sorting a message thread in a regular forum.

Additional examples of shopping communities include DealNews (http://www.dealnews.com) and Dealam (http://www.dealam.com). Slickdeals and DealNews allow users to share a deal via social networks (SNWs), while Dealsea and Dealam do not provide such function.

Shopping communities like Dealsea and Slickdeals create a sense of community by involving a community of online shoppers with real purchase experience and honest opinions. Consumers interact with each other online via discussion and information/opinion exchanges. The goal of a shopping community is to help fellow online shoppers to find quality products at lower prices.

Recommendation Engines

The third category consists of recommendation engines that mimic the advice people can obtain from an in-store shopping assistant or fellow shopper (e.g., friends, family). Examples of recommendation engines include reviews on Amazon (http://www.amazon.com) and Google Shopping (http://www.google.com/shopping) for products in all departments, MakeupAlley (http://www.makeupalley.com) for makeup and skincare products, and Yelp (http://www.yelp.com) for local businesses and services. A recommendation engine usually provides price comparison and customer ratings at the same time.

Yelp is a good example to demonstrate how a recommendation engine works. Yelp is associated with restaurant selection. Before booking a seat at a restaurant, two options are presented among various businesses: option one is to ask Yelp for a recommendation (Yelp can list restaurants based on geographic locations, food style

(e.g., American, Asian, Japanese, Korean, Mediterranean, Mexican, etc.), average ratings, price range) and option two is to search for a specific restaurant's name on Yelp.com to view it is current ratings. Yelp utilizes a five-point rating system which ranges from one-star to five-star. A user's rating varies from very disappointed to very satisfied towards his/her dining experience. In the review section, a user will explain why he/she rated that restaurant from aspects including taste/freshness of food, service, overall quality/price ratio, etc. Besides customer ratings, Yelp also lists business information like business hours and amenities (e.g., outdoor seating, parking, free Wi-Fi (wireless network connection), noise level, kids-friendly). A customer would be able to make dining decisions based on one's specific needs from browsing through a restaurant's Yelp page. A similar rating system to Yelp is called Trip Advisor (http://tripadvisor.com) which also includes dining, hotel, airline tickets, and local attractions.

BrightLocal's annual Local Consumer Review Survey (2014) revealed that for the question "Do you trust online customer reviews as much as personal recommendations?" a total of 88% of consumers answered they trust online reviews as much as personal recommendations. Online shoppers value the reviews provided by other customers and will take actions based on the ratings, for instance, 57% of survey participants would visit a merchant's website if the review was positive (Anderson, July, 2014). An article entitled "Top Buyer Objections by Industry" reported that among 20.8 million shoppers who were involved in 894,400 transactions, positive customer reviews were reported as more important than price. In fact, the study reported positive customer

reviews to be the most important factor that affects online customers' purchase decision in some categories, for instance, the apparel department (Cassidy, 2013). Thus, recommendation engines serve a very important role in the online shopping world. Two additional categories, social shopping marketplaces and shared shopping mechanisms, were later added to incorporate more platforms and functions of social shopping.

Social Shopping Marketplaces

An online shopping marketplace works like a farmer's market or a bazaar, where people can buy all kinds of products in one place instead of visiting different websites to buy different kinds of products. For instance, you can buy a cooking pot from seller A, a beach dress from seller B, and then a handmade basket from seller C, but only have to checkout once within that website. A social shopping marketplace adds the social aspect to a traditional online marketplace in the way that buyers and sellers are able to have conversations about the products, and a buyer can subscribe to another buyer/seller's updates (e.g., new inventory, promotions, shopping lists). To be more specific, online shoppers can engage in a more socially enriched shopping experience beyond what they have experienced when shopping offline: they can ask questions, exchange opinions, express like or dislike, recommend (i.e., share via social media or email) products to other people. Further, a user's browsing history or shopping style self-evaluation enables a curated recommendation that can be generated by the social shopping website. People can also follow other users with similar tastes and obtain updates regarding the one(s) they follow. The recommendations and updates are presented as a *live feed*; a user can

choose to link his/her account with a social network account, and other users will see that user's personal profile if it is set to be visible to the public. PC Magazine listed the ten best social shopping websites as of 2014 (Kamenec, 2014). Appendix 1 summarizes social features embedded in popular social shopping websites. Due to the limitation of time and resource, this study will mainly focus on this type of social shopping, i.e., social shopping marketplaces. Note that eBay.com is a social shopping marketplace because of the social networks sharing feature and the function that buyers can follow a certain seller to see what is new and on sale. However, eBay is lacking the product review function and there is no means of communication between buyers.

Shared Shopping Mechanisms

The fifth category of social online shopping was designed to facilitate catalog-based e-commerce sites. To be more specific, a catalog-based e-commerce means customers can click and view product details, and make a purchase while browsing a web page that looks exactly like a catalog printed on paper. E-catalogs condense product listing, and may appear to be easier to search for a specific product. A shared shopping mechanism "allow[s] shoppers to form ad hoc collaborative shopping groups in which one person can drive an online shopping experience for one or more other people, using real-time communication among themselves and with the retailer" (Social shopping, 2016, May, para. 2). No existing examples of shared shopping mechanisms could be identified. Thus, due to the lack of reference with regards to the last category, this study did not cover this type of social online shopping, i.e., shared shopping mechanisms.

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Theory of Reasoned Action (TRA)

Theory of Reasoned Action (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980) is a well-established theory that has been used to predict human behaviors, especially in the social sciences. Researchers have used TRA to examine college fraternity and sorority hazing (Richardson, Wang, & Hall, 2012), coupon usage (Shimp & Kavas, 1984), and attitude towards renewable energy (Bang, Ellinger, Hadjimarcou, & Traichal, 2000).

There are four components in TRA: (a) subjective norm (SN), (b) attitude towards a behavior, (c) behavioral intention (BI), and (d) behavior. Subjective norm can be understood as the influence of friends, family, or the opinion of the majority of people in a person's SNW, and the extent to which a person is willing to follow others' behavior. Attitude towards a behavior is composed of the person's expected outcome, and the evaluation of the expected outcome (i.e., whether the outcome is favorable). Subjective norm and *attitude*, together, decide one's behavioral intention (Colman, 2015), which is the voluntary intention to conduct a behavior. Lastly, behavioral intention leads one to perform or not perform a behavior.

According to a meta-analysis of TRA, the use of TRA in consumer behavior studies is widely acceptable and proper (Sheppard, Hartwick, & Warshaw, 1988). The current study chose TRA as one of the theoretical frameworks after reviewing prior literature that focused on predicting online shopping, including Chuchinprakarn (2011), and Delafrooz et al.'s (2010) studies.

Chuchinprakarn (2011) applied TRA to online shopping intention and behavior among employees in Thailand. The researcher proposed that trust and confidence in using a credit card were the factors affecting consumer's attitudes towards online shopping; also, the influence of friends (i.e., subjective norm), along with past behavior related to online shopping, all contributed to one's intention of shopping online.

Delafrooz et al. (2010) explored Malaysia students' online shopping behavior and concluded that factors which significantly influenced consumer' attitudes towards online shopping included: utilitarian orientation, convenience, price and a wider selection (p. 137). To be more specific, the personality of shoppers (i.e., utilitarian or hedonic), whether the shopper prioritizes efficiency or enjoyment during the shopping process, and perceived benefits of online shopping (e.g., convenience, price, customer service, fun, wider selection, homepage design) all influenced the person's attitude towards online shopping. Delafrooz et al. (2010) also used the Technology Acceptance Model, an extension of TRA, as their theoretical framework, which will be introduced in in the following section.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was first developed by Davis (1989) to model the process of people accepting and using a technology as the extension of TRA. Only two components, perceived usefulness (PU) and perceived ease-of-use (PEOU), were included in the original model (Davis, 1989). Later, there were two major advancements to this model: TAM 2 (Venkatesh & Davis, 2000; Venkatesh, 2000), and TAM 3 (Venkatesh & Bala, 2008). TAM 2 added antecedents of PU (e.g., subjective

norm) to the original version, and TAM 3 added antecedents of PEOU (e.g., perceived enjoyment) to the original model.

In the original TAM model (Davis, 1989), PU and PEOU were the two main factors influencing attitude towards using a technology. PU was defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320). PEOU was defined as "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989, p. 320). The TAM model postulated that PEOU and PU determined the attitude towards a certain behavior.

Although it was criticized that PEOU might not have significant influence on attitude or behavioral intention, studies related to telemedicine (Hu, Chau, Sheng, & Tam, 1999), mobile commerce (Wu & Wang, 2005), and online banking (T. Pikkarainen, K. Pikkarainen, Karjaluoto, & Pahnila, 2004) all included PEOU in their models and found PEOU to be a significant factor. Furthermore, Tornatzky and Klein's (1982) research on innovations adoption and diffusion suggested that PEOU plays an important role in the adoption and diffusion process.

TAM has been one of the most popular models used to study user's acceptance of using a technology. King and He (2006) conducted a meta-analysis of TAM (Davis, 1989) on 88 studies to examine TAM's validity and robustness in its application, and the different effects of TAM under several conditions. Their results showed that TAM measures (i.e., perceived usefulness and behavioral intention) were reliable to use within many contexts including e-commerce and Internet usage, general usage, and job-office

application usage, concluding that TAM was a powerful and robust predictive model (p. 751).

Using TAM as a theoretical framework is supported by past literature. Many scholars have used TAM to study attitudes towards online shopping behaviors. For example, Cha (2009) used TAM to examine shopping on social networking websites with regards to real/physical products versus virtual products; Chen et al. (2002) explored factors that enticed shoppers to shop online instead of in a physical store based on an extended TAM. Delafrooz et al. (2010) concluded that TAM elements along with shopper's personalities (i.e., hedonic or utilitarian shopper) significantly influenced college students' online shopping behavior in Malaysia. Dennis et al. (2010) examined the influences of social e-shopping in enhancing young women's online shopping behavior; and, Harris and Dennis (2011) explored how e-retailers should engage customers on Facebook based on TAM.

Innovation Adoption and Diffusion (IAD)

Lindner et al. (2016) stated that social science researchers should focus on utilizing new technologies and policy designs to effectively allocate resources, which in turn would maintain the chains of production, distribution, and marketing of agricultural products. It is critical to understand how and why online shoppers adopt social shopping as a new technology that serves the distribution of agricultural products.

Rogers published his book *Diffusion of Innovations* in 1962, and since then his innovation adoption and diffusion theory has been the most popular theory that explains how new technologies or innovations can be adopted and spread among users. Rogers

used his theory to examine the adoption of agricultural technologies (e.g., hybrid seeds, equipment, and techniques) among independent farmers (Valente & Rogers, 1995). Though there have been criticisms about Rogers (2003) adoption and diffusion theory, in general the theory has been well established as appropriate for use as a theoretical framework to understand adoption and diffusion in the agricultural education field (Lindner et al., 2016). For example, King, Curry, Meyers, Doerfert, and Burris (2015) used Rogers (2003) adoption and diffusion theory to explore the value of online resources in facilitating ecommerce (p. 269).

There are four fundamental elements in IAD: (a) *innovation* (new technology); (b) *communication channels*, i.e., the medium through which information is transferred from one unit of user(s) to another; (c) *time*, which is essential since innovations cannot be adopted immediately; (d) the *social system* where that innovation exists. All four elements are indispensable and without any of which the adoption and diffusion process would stop.

The current study used Rogers' (2003) adoption and diffusion theory as one of the theoretical frameworks to explore how online shoppers accept the idea of online social shopping.

Stages of Adoption

The adoption of an innovation is all about the user (i.e., adopter, and in this case, online shoppers). However, the adoption of an innovation cannot happen promptly, but must go through six stages: *no knowledge*, *knowledge*, *persuasion*, *decision*, *implementation*, and *confirmation*. This study investigated which stage online shoppers

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were at in their adoption of social online shopping. By doing so, social shopping merchants would know the starting point to motivate online shoppers' adoption of this new shopping platform, and therefore promote their businesses.

In the *no knowledge* stage, an individual has no idea about the innovation at all. In the second stage of adoption (*knowledge*), an individual will have just heard about an innovation, and he/she may not be motivated to find more information about that innovation. Take online social shopping at Wanelo as an example: Mary saw a banner on her computer screen saying "Want, Need, Love- The Best Shopping App." Mary had never heard of Wanelo before, and so far, she only knew it was an App for shopping. The third stage is *persuasion*: the individual is interested in the innovation and is eager to find out more about the innovation. The second day, while surfing on the Internet, Mary saw someone mentioning Wanelo again: "Does anyone use Wanelo? I heard it has lots of novelty stuff on sale." Out of curiosity, Mary searched "Wanelo" on her computer because she wanted to see what kind of novelty products were sold there. The characteristics of innovation are evaluated by the individual at this stage, and will further affect the next stage (*decision*). In this case, Mary navigated through the website, viewed products, prices, and noticed the Wanelo App was available for both IOS and Android systems. That meant she could use Wanelo to shop on her phone. During the fourth stage (*decision*), Mary decided to give Wanelo a try since she liked what Wanelo could offer her. The fifth stage is *implementation*. Mary clicked the "JOIN" button on the website. And finally, the last stage of adoption is *confirmation*. After clicking the "JOIN" button, a window prompted saying "You must download the app to use all of Wanelo" and

asked for Mary's cellphone number to obtain a download link. Mary didn't like the idea that she had to give away her cellphone number just to browse all the functions offered. Thus, she decided to close the window, i.e., she decided not to adopt Wanelo.

Another example of a social shopping website is Fancy (http://fancy.com). Fancy offers similar social shopping features to Wanelo, without requesting a cellphone number or registration. However, whether Mary will adopt Fancy or not remains unknown. As stated above, the characteristics of an innovation play decisive roles in the adoption process. These characteristics include relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). In the following section, Fancy will be used as an example to demonstrate these characteristics.

Characteristics of Innovations

The first characteristic of an innovation is *relative advantage*. Rogers (2003) defined it as "the degree to which an innovation is perceived as better than the idea is supersedes" (p. 229). In layman's terms, it means the perceived benefit of using the innovation instead of using an alternative tool/technology. The relative advantages of online social shopping at Fancy comparing to a traditional online shopping website may include: curated product recommendations, login with social network credentials (e.g., Facebook, Google, or Twitter), and customized feed (i.e., subscription to a user/seller who has similar taste). The relative advantage can significantly affect the rate of the innovation adoption.

Compatibility is "the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers,

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2003, p. 240). Rogers (1995) concluded that an innovation would have a greater chance of being adopted by users, if "they are comfortable with and that is compatible with other technologies they already use" (Cha, 2009, p. 225). Past studies regarding online shopping also found compatibility to have great worth in facilitating the adoption of ecommerce. Chen et al. (2002) concluded that compatibility (C), PU, and PEOU "are the primary determinants of consumer attitude towards using virtual stores. Both compatibility and PEOU influence PU of virtual stores" (p. 715). Eastin (2002) also stressed the importance of compatibility in his study "Diffusion of E-commerce: An Analysis of The Adoption of Four E-commerce Activities." In case of social shopping, Fancy's compatibility can be evaluated by Mary in two ways: Mary's past experience of online shopping or online social shopping, and whether using Fancy fits Mary's shopping needs.

The third characteristic of innovation is *complexity*, which is "the degree to which an innovation is perceived as difficult to understand and use" (Rogers, 2003, p. 257). By definition, complexity parallels perceived ease of use (PEOU) in TAM (Davis, 1989). In the case of social online shopping, complexity can be judged from various aspects: the navigation of the social shopping website, the web page design, and the required skills involved in social online shopping (e.g., computer literacy, use of a mobile app). Most people can use a computer to browse a website, and shopping online is no longer a new phenomenon. However, the social features (i.e., social network credentials login, follow a store/user) may not be familiar to everyone; thus, the complexity of Fancy depends on the individual user, or Mary in this example.

The fourth characteristic, *trialability* refers to "the degree to which an innovation may be experimented with on a limited basis" (Rogers, 2003, p. 258). Since trialability is positively related to the rate of adoption, and a user can also reevaluate other characteristics of the innovation during the trial, the more a user can try out an innovation, the faster or easier he/she will adopt the innovation. In the example Wanelo, Mary decided not to adopt Wanelo when she was asked to give her cellphone number to fully explore Wanelo. The trialability of Wanelo was obviously very limited to users who did not want to reveal their personal information. In comparison, Fancy appears to have a larger degree of trialability since no registration was required unless a user wanted to buy or sell or interact with other users on Fancy. In addition, as the number of smartphone users increases, mobile compatibility (i.e., a website that can be viewed in multiple versions: a desktop version and a mobile version) and mobile app availability (i.e., Android/IOS system) can affect the trialability of a social shopping website as well. For instance, if Marry was using her smartphone to view Fancy, but the mobile view was not enabled and she couldn't view the website normally, she would most likely reject using Fancy.

The fifth characteristic of an innovation, *observability*, is "the degree to which the results of an innovation are visible to others" (Rogers, 2003, p. 258). Social online shopping emerged to fill the gap between online shopping and offline shopping with its social features to enhance user interaction, enjoyment, and efficiency of online shopping. If in Mary's case, using Fancy failed to make her feel entertained or feel that the product was easy to use, Mary may decide not to adopt Fancy.

Marketing Theories and Models Related to This Study

Engel, Blackwell and Kollat (EBK) Model

The EBK model was first introduced by Engel, Blackwell, and Kollat (1968) to describe consumer's decision making process which consisted of five stages: problem/need recognition (e.g., why do I need to buy a product), information search (e.g., what are available in the market), evaluation of alternatives (e.g., will a different product meet my need), purchase decision, and post-purchase behavior (e.g., the product experience I have while using this product). This model is similar to the Innovation Adoption and Diffusion theory, which can also be used to depict the decision-making process during the adoption of a product.

Consumer Market Segmentation

By dividing the market into different segments, a company can better understand the needs of a specific consumer population and tailor its marketing strategy to that population. A consumer market can be segmented based on three types of consumer characteristics: behavioral characteristics, psychographics characteristics, and profile characteristics. Behavioral characteristics include benefits sought from product, purchase occasion, purchase behavior, usage, perceptions, and beliefs. Psychographic characteristics include lifestyle and consumer personality. Profile characteristics include demographic characteristics (i.e., age, gender, life cycle, etc.), socio-economic, and geographic characteristics of consumers (Targeting & Segmentation, Wikibooks, n.d.).

Literature Related to Online Shopping and Social Online Shopping

Literature regarding online shopping or online social shopping has shown that gender (Cha, 2009; Dennis et al., 2010), product type (Cha, 2009; Delafrooz, et al., 2010; Lester et al., 2006), utilitarian versus hedonic shopping styles (Delafrooz et al., 2010; Dennis et al., 2010), past experience of shopping online (Chuchinprakarn, 2011), and trust (Chuchinprakarn, 2011; Harris & Dennis, 2011), all played important roles in people's decision-making processes. Motivations for shopping online, or in other words, perceived benefits, were found to be important in Cha (2009), Delafrooz (2010), and Lester et al. (2006). Cha (2009) also advised regarding the strong influence of age, perceived security, and social network experience. Ethnicity, income level, and education level, although investigated in some studies, were found not to significantly affect people's attitude towards online shopping.

Early literature has studied the consumers' acceptance of using online (i.e., virtual) stores. Chen et al. (2002) based their research on TRA, TAM, and IAD. They found that system use, which involved in product inquiry and purchasing activities, was a good indicator of success of commercial websites (p. 706). Frequency of using the Internet for product information inquiries was also found to be positively related to the chance of making an online purchase, and the value of the ecommerce website was positively related to site traffic volume (Chen et al., 2002, p. 706). Since the features of social shopping were intended to facilitate product searches and information exchanges by showing buyers' reviews, Q&A forum, etc., also to increase product views by the sharing function, we would expect the success of social online shopping websites.

Furthermore, a consumer-centered view of the consumer's willingness to adopt is key to the success of the electronic market (Chen et al., 2002, p. 707). The authors concluded that classic theories, including TRA, TAM, and IAD, were valid in explaining consumers' behaviors in the ecommerce field; while PEOU and compatibility could influence PU, together the three of them determined consumer attitude towards using a virtual store (p. 715).

Hassanein and Head (2007) explored how sociability can be added to positively impact the online shopping experience. They found that by increasing the perceived social presence of web stores (i.e., making product descriptions and pictures more socially rich to consumers) online shoppers showed higher levels of enjoyment, perceived usefulness, trust, and thus held a more positive attitude towards online shopping.

Chuchinprakarn's (2011) research entitled "Application of the Theory of Reasoned Action to On-line Shopping" studied online shopping habits and Internet use of full-time employees in Thailand. Results revealed that four factors significantly affected the intention to shop online, including (from highest influence to lowest influence) trust (i.e., reliability of online sellers), confidence in using a credit card, past behavior (i.e., their online shopping experience), and subjective norm (i.e., influence by others). Presently in the United States, most people have no problem using a credit card to complete an online transaction. Regardless, it is worth examining the trust factor within the social shopping context, i.e., whether shoppers think online sellers are reliable.

Lester et al. (2006) conducted research on undergraduate students enrolled in marketing and fashion merchandising classes in the Southern United States. The goal was to examine college students' Internet shopping and buying behaviors. Results revealed that students' online shopping intention was mostly oriented by product types, followed by the advantages (i.e., product search, price advantage, and fun) and disadvantages of online shopping (i.e., concerns regarding using a credit card, intangibility of online merchandise while purchasing).

Delafrooz et al. (2010) found that ninety percent of university students reported daily Internet access and accounted for two hundred billion $USD in purchases in the United States market (Gardyn, 2002). Because students are also the common consumers of market segments in their country (Sabri et al., 2008). The authors studied postgraduate students from one public university in Malaysia. Building upon TAM and TRA, Delafrooz et al.' (2010) research showed that the factors which significantly affected attitude towards online shopping included: utilitarian personality, convenience, price, and wider selection. Each of these were significantly and positively related to attitude. However, hedonic personality, customer service, and fun (enjoyment) had no significant effect on online shopping attitude. This might be due to participants' lack of online shopping experience. The authors concluded that e-retailers targeted at utilitarian customers should emphasize developing user-friendly functions to facilitate product searches. They also suggested that future research should include a wider sample and be expanded to non-student populations.

Cha (2009) was the first academic study about the concept of social shopping and the influences of social shopping on consumer shopping behavior. The researcher emphasized how product type (i.e., real versus virtual items) affects university students' attitudes on shopping on social networking websites. Besides TAM factors (i.e., perceived usefulness, ease of use, and enjoyment), questions regarding perceived security about submitting sensitive information over the Internet and through SNWs, students' experience with social networks and their shopping online experience were asked as well. Results revealed that age, gender, and product type (i.e., the ten most popular products students purchased online including both real and virtual items) were the factors that significantly affected students' attitudes towards online social shopping.

Dennis et al.'s (2010) study focused on young women 18-24 years of age from a university in the United Kingdom, aiming to find out social e-shopping's effects on young women's online shopping behavior compared with traditional online shopping. The researchers concluded that gender difference was significant in affecting young women's shopping style and motivation for online shopping (i.e., more men shopped online than women, but women preferred social e-shopping than traditional e-shopping). Furthermore, the perceived enjoyment (PE) and perceived ease of use were both positively related to young women's social shopping attitude. They also perceived more usefulness and enjoyment while taking part in social online shopping compared to traditional online shopping. Delafrooz et al. (2010) argued that although both could influence consumer attitude towards using a new technology system, the utilitarian and hedonic aspects of consumer experience reflected different benefits of online shopping.

Perceived ease of use and usefulness reflected the utilitarian aspect, and perceived enjoyment reflected the hedonic aspect (Monsuwe, Dellaert, & de Ruyter, 2004).

Harris and Dennis (2011) conducted research regarding how an e-retailer could engage customers on Facebook based on TAM and trust. They found participants only considered Facebook as their social space and did not want to use Facebook for product-related activities: information seeking, purchasing, etc. Although participants expressed mixed views about privacy issues, they expressed trust in Facebook posts regarding product reviews, tutorials, and recommendations. A hierarchy of trust (i.e., high to low) was found to be in the order of high to low trust: 1) real life friends who have expertise in the product, 2) Facebook friends, 3) expert blog, 4) independent review sites, 5) celebrities, and 6) e-retailer reviews. Some participants expressed positive thoughts about the benefits of Facebook login for shopping sites. Despite concerns about the authenticity of product reviews, recommendations from Facebook friends was found to significantly influence consumers' intention to use social online shopping features. This study has limitations since it only considered a student population. Future quantitative research was recommended.

CHAPTER III

METHODS

The type of research, subject characteristics, sampling procedures, pilot test, sample selection, instrumentation, validity and reliability, data collection, and data analysis are described in this chapter.

Type of Research

This research was designed to be descriptive and correlational. The research examined Agricultural Leadership, Education and Communications (ALEC) undergraduate students' attitudes towards social online shopping and identified factors affecting their attitudes. The research was based on (a) the Theory of Reasoned Action (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980), (b) the Technology Acceptance Model developed by Davis in 1989, and (c) Rogers' (2003) Innovation Adoption and Diffusion theory. Permission to conduct this research was obtained from the Texas A&M University Institutional Review Board for human subject research (IRB2016-0616D).

Subject Characteristics

The target population of this study was undergraduate students in the ALEC Department at Texas A&M University during the Fall 2016 semester. All adults, genders, ethnicities, and those who majored in either Agricultural Communication and Journalism (AGCJ), Agricultural Science (AGSC), Agricultural Leadership and Development (ALED), or University Studies – Leadership Studies (USAL-LED) were potential participants. College students are considered an appropriate sample since the student

population is of the interest within the current study, based upon Basil's (1996) study.

Also, targeting college students as a research population had significant value in past

TAM-related research (King & He, 2006).

The personal characteristics of responding undergraduate students in the ALEC

Department at Texas A&M University are describe below.

Major

Table 1 documents the academic majors of survey participants (N = 226). There

were 74 participants who majored in ALED, 61 participants who majored in AGSC, 55

participants who majored in AGCJ, and 36 participants who majored in USAL-LEAD.

Table 1
*Academic Majors of Participants Sampled from Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016*

Major	*f*	*%*
Agricultural Leadership and Development	74	32.7
Agricultural Science	61	27.0
Agricultural Communication and Journalism	55	24.3
University Studies – Leadership Studies	36	15.9

Note. *n* = 226.

Connection to Agricultural Organizations

Table 2 reports that almost half of the participants conveyed current or past

membership within FFA (49.1%). The second highest membership reported was in the

organization for the Future Agricultural Science Teachers (FAST; 18.1%).

Table 2
Distribution of Participants by Connection to Agricultural Organizations Reported by
Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Agricultural Organizations	*f*	*%*
FFA	111	49.1
FAST (Future Agricultural Science Teachers)	41	18.1
Other	23	10.2
Ag Communicators of Tomorrow	22	9.7
Collegiate FFA	13	5.8
Ag Ambassadors	1	.4

Note. *n* = 226.

Age Group

The distribution of participants by age group is shown in Table 3. Most

participants were in the 18-29 age group (f = 219). The youngest participant (s) was 18,

and the oldest was 52, with an average age of 21.58 (SD = 3.32; Table 3, Table 4).

Table 3

Distribution of Participants by Age Group Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Age Group	*f*	*%*
18 - 29	219	96.9
30 - 39	6	2.7
40 - 49	0	0.0
50 - 59	1	.4
60+	0	0.0

Note. *n* = 226.

Table 4

Participants' Ages Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Variable	*n*	*Min*	*Max*	*M*	*SD*
Year of birth	226	18	52	21.58	3.32

Gender

Table 5 reveals the distribution of gender of participants. Among the survey participants, 67.6% were female, and 32.3% were male.

Table 5

Distribution of Participants by Gender Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Gender	*f*	*%*
Female	153	67.6
Male	73	32.3

Note. *n* = 226.

Ethnicity

Distribution of ethnicity is displayed in Table 6. Among the participants, 80.9% were Caucasian, and 12% were Hispanic/Latino.

Table 6

Distribution of Participants by Ethnicity Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016

Ethnicity	*f*	*%*
Caucasian	182	80.9
Hispanic or Latino	27	12.0
African American	6	2.7
Asian/Pacific Islander	5	2.2
Other	3	1.3
Native American or American Indian	2	.9

Note. *n* = 226.

Discretionary Spending

The majority of the participants (67.3%) had no more than $200 as discretionary

spending each month, and 21.3% of them reported to have no more than $400 each

month (see Table 7). On average, participants reported spending $212.87 each month on

non-essential purchases (see Table 8).

Table 7

Distribution of Participants by Monthly Discretionary Spending Reported by Texas
A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Discretionary spending per month	*f*	*%*
$0-200	142	67.3
$201-400	45	21.3
$401-600	12	5.7
$801-1000	7	3.3
$601-800	5	2.4

Note. *n* = 211.

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Table 8

Descriptive Statistics for Monthly Discretionary Spending Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

	n	Min	Max	M	SD
Monthly Discretionary Spending	211	0	1000	212.87	192.22

Sampling Procedures

For the purpose of this study, the required sample size was calculated based on Cochran's (1977) sample size formula for continuous data. Assuming the alpha level at .05, and the acceptability of error was 3%, the estimated standard deviation of the scale would be 1.125 with t = 1.96 in each tail for the alpha level at .025. Thus, the calculated sample size was 267, which was larger than 5% of the population (1130* 5% = 56). Cochran (1977) suggested that a correction formula should be used to calculate the sample size. The expected response rate was 50%; thus, the sample size was expanded to 423.

During Fall 2016, there were four majors offered in undergraduate programs in the ALEC Department at Texas A&M University: Agricultural Communication and Journalism (AGCJ), Agricultural Science (AGSC), Agricultural Leadership and Development (ALED), and University Studies-Leadership Studies (USAL-LED). A stratified probabilistic sampling technique was used to calculate how many participants were required in each major, i.e., the sample was drawn proportionally from the total 1,130 undergraduate students based on their majors. During the Fall 2016 semester, the numbers of undergraduate students in each major were: 278 in AGCJ, 141 in AGSC, 431

in ALED, and 280 in USAL-LEAD. Therefore, the desired sample size for each major was 106 in AGCJ, 54 in AGSC, 165 in ALED, and 107 in USAL-LEAD.

Originally, a Qualtrics survey questionnaire was sent in an email to randomly sampled ALEC undergraduate students. However, this collection method did not result in a sufficient number of responses; thus, intercept data collection was employed using social media collection and personal contact collection methods. A total of 246 survey responses were obtained as a result of these collection methods. During data preparation, the following types of responses were removed: people who were not with the ALEC Department, people who answered "no" to the survey consent, and duplicate entries. In order to maintain consistency, the second response of any participant who took the survey was removed from the data set. In the end, 226 valid responses were collected and the final response rate was 20% (N = 1,130).

Pilot Study

Data collection for the pilot study began on September 20th, 2016 when a recruiting email with a unique link to the online survey was sent to the participants. Only two responses were collected after one reminder. To obtain sufficient responses, a link was posted on a Facebook group consisting of Texas A&M University students on October 11th, 2016. A total of 114 responses were collected via the social media collection method.

Instrument

The questionnaire used in this study was based on the reviewed literature and researcher developed questions. The questionnaire had six parts: (a) past social shopping

experiences, (b) online shopping habits, (c) social network usage, (d) questions based on the Theory of Reasoned Action (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980), (e) questions based on Rogers' (2003) Innovation Adoption and Diffusion theory, and (f) demographic questions.

The first part of the instrument asked about participants' past social online shopping experience by first defining social online shopping and giving examples in five categories. Then, a multiple-choice question was asked to see which stage of adoption participants were at. Participants were asked to choose from the following options: "I have never heard of social online shopping," "I have heard of social online shopping, but have not decided whether or not I like or dislike social online shopping," "I have decided that I like or dislike social online shopping," "I have decided that I will or will not use social online shopping," "I am using social online shopping," and "I have used social online shopping long enough to evaluate whether or not social online shopping will be part of my online purchasing platform." The last question asked participants whether they had made a purchase on a social shopping website by choosing from "yes," "no," and "I'm not sure."

The second part of the instrument measured participant's online shopping habits by measuring their frequency of online shopping, types of products they shop for most online, their perceived benefits of shopping online, and the reason preventing them from shopping online. Multiple-choice questions were used in this part of the instrument.

The third part of the instrument was used to measure participants' social networks' (SNWs) intensity, and their opinions regarding the value/usefulness of SNWs.

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Questions were modified from Ellison et al.'s (2007) Facebook Intensity Scale. Participants were asked to answer multiple-choice questions, Likert-type questions to indicate their main motivations of using SNWs, daily time spent on SNWs, number of friends, and how they value SWNs in their lives. Scale point values used were 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, and 1 = strongly disagree. Scores obtained from Likert-type questions were described and interpreted as follows: 1.0-1.5 = Strongly disagree, 1.51-2.50 = Disagree, 2.51-3.50 = Neither agree nor disagree, 3.51-4.50 = Agree, 4.51-5.0 = Strongly agree. This set of scale point values was used throughout the research for all Likert-type questions.

The fourth part of the instrument was based on the Theory of Reasoned Action (TRA) to measure participants' subjective norm (SN), behavioral intention (BI), and concerns regarding buying from an online social website. Both multiple-choice questions and Likert-type scale questions were used.

The fifth part of the instrument was based upon the Technology Acceptance Model (TAM), which consisted of three Likert-type scale questions. Three variables were measured: perceived ease of use (PEOU), perceived usefulness (PU), and perceived enjoyment (PE).

The final part of the instrument collected demographic information by asking participants' academic major, whether they were/are members of an agricultural organization, age, gender, ethnicity, and monthly discretionary spending.

Validity and Reliability

A panel of experts were used to establish face and content validity of the instrument (see Appendix 2). Reliability was tested using a pilot test among 30 randomly selected undergraduate ALEC students who were not part of the sample of the study at Texas A&M University.

Cronbach's (1951) alpha coefficient was calculated for internal consistency. Reliability levels for the internal scales are shown in Table 9. Cronbach's α coefficients for each internal scale exceeded .80, indicating an acceptable level of reliability (Gall, Gall, & Borg, 2007).

Table 9

Reliability of Internal Scales of the Survey Questionnaire Developed and Adapted Based on Previous Studies

	Cronbach alpha coefficients	
Internal Scales	Pilot Study ($n = 144$)	Primary Study ($n = 226$)
Subjective Norm	.91	.92
Behavioral Intention	.85	.92
Perceived Ease of Use (PEOU)	.95	.95
Perceived Usefulness (PU)	.91	.93
Perceived Enjoyment (PE)	.97	.96
Social Network (SNW) Statement	.77	.84

Note. Reliability coefficients greater than .80 were considered acceptable. Therefore, no items were deleted.

Data Collection

Data were collected using three methods: an online survey questionnaire in Qualtrics, personal contact, and via social media.

An official recruiting email was sent on October 18th, 2016 to 432 randomly selected ALEC undergraduate students at Texas A&M University. Participants were assured that their participation would remain confidential. After two days' non-response, the first reminder was sent to non-respondents. The second reminder was sent on October 25, 2016, and a final (6th) reminder on November 14, 2016.

Following submission and approval of an IRB amendment requesting to use additional data collection strategies, additional data was collected via personal contact and social media collection. Both methods were targeted at the entire ALEC undergraduate student population (N = 1,130). Fifty-nine responses were obtained via personal contact and 21 responses were obtained via social media.

A total of 246 responses were obtained via the three collection methods, and 226 of these were deemed valid after removing disqualified participants and redundancies. Valid responses for each collection method were: 146 via email, 59 via personal contact, and 21 via social media, resulting in a 20% response rate (n = 226, N = 1,130) for this study. Responses collected via each of the three methods were compared and were not found to be significantly different. Thus, collected data was treated as a whole.

Data Analysis

Statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS, 20.0). Initially, the a priori alpha level for all statistical procedures was

set at .05. However, a *Bonferroni* correction was needed to correct for multiple comparisons (i.e., inflated alpha coefficient). Therefore, the corrected alpha level was .01. Because of the limitation of this study, including the multiple comparisons, the outcome of some statistical analysis was not significant.

The independent variables for the study were (a) major, (b) connection to agricultural organizations, (c) age, (d) gender, (e) ethnicity, (f) monthly discretionary spending, (f) perceived benefit of shopping online, (g) preferred shopping method, (h) adoption stage of social online shopping. The dependent variables were online shopping experience, social network usage, perceived ease of use, perceived usefulness, perceived enjoyment, subjective norm, and behavioral intention. The data was skewed, therefore the skewness of data contributed to error in later analysis.

Objective One

The first objective was to describe participants' past online shopping experience, past social online shopping experience, stage of adoption of social online shopping, and social network intensity. Frequencies and percentages were calculated to describe each categorical data, and central tendency was used to describe interval data. According to Gall et al. (2007), using frequencies and percentages is appropriate when describing categorical data.

Objective Two

The second objective was to describe subjective norm and behavioral intention regarding social online shopping using central tendency (M, SD) of scores derived from Likert-type questions.

Objective Three

The third objective was to describe perceived usefulness, perceived ease of use, perceived enjoyment for social shopping websites using central tendency (M, SD) of scores derived from Likert-type questions.

Objective Four

The fourth objective was to determine if differences existed between participants' attitudes towards online social shopping based upon past online shopping frequency, users' stages of adoption of social online shopping, and social network intensity.

Objective Five

The fifth objective was to determine the relationship among subjective norm, behavioral intention, and the overall attitude towards social online shopping.

Objective Six

The sixth objective was to describe extraneous variables (i.e., confidence in using SNW identity to login to social online shopping websites, compatibility, and trust) that might affect adoption of a social shopping website. Frequencies and percentages were calculated based upon each variable.

Objective Seven

The last objective was to determine if differences existed between participants' attitudes towards online social shopping based upon personal characteristics (i.e., academic major, experience with agriculture-related organizations, age, gender, ethnicity, and monthly discretionary spending).

CHAPTER IV

FINDINGS

This chapter presents the response rate, addresses non-response error, and provides findings for each of the seven research objectives.

Response Rate

The target population was undergraduate students enrolled during the Fall 2016 semester in the ALEC Department at Texas A&M University. There were 1,130 students enrolled during Fall 2016 based on registration records. According to Cochran (1977)'s sample size formula, 216 responses were needed for this study. Data for this study was collected using three different methods: Qualtrics email distribution, personal contact, and a link through social media. Numbers of responses collected with each method were: 146 responses for email collection, 59 responses for in-person collection, and 21 responses via social media. For the email collection method, a 33% response rate was achieved, which was higher than the 20% response rate reported by Kaplowitz, Hadlock, and Levine's (2004) study. Regarding total data collection (including all three methods), 246 responses were collected before removing duplicated and invalid responses, and 226 valid responses remained after data cleaning, resulting in a final response rate of 20%.

Non-Response Error

Nonresponse error was controlled by comparing early responses to late responses, and mode effect was controlled by comparing results based upon data collection methods (i.e., Qualtrics email distribution, personal contact, and social media). First, the difference in participants' overall attitude towards social online shopping was compared

based on the three collection methods (i.e., email, personal contact, and social media

collection). As indicated in Table 10, the significance value was .17, which exceeded

Bonferroni corrected significance value (.01). Therefore, there was no difference in

overall attitude towards social online shopping based upon the survey collection methods

$(F(2,206) = 1.78, p > .01)$. Due to unequal sample size, the power of ANOVA was .16.

Table 10
Grand Mean of Attitude Towards Social Online Shopping Grouped by Collection Methods, Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Data Collection Method	n	M	SD	F	p
Email	146	3.75	.65	1.78	.17
Personal Contact	59	3.84	.54		
Social Media	21	4.03	.52		

Note. Overall $M = 3.80$, $SD = .62$. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

Early response was defined as those individuals responding within 14 days. Early

responses were compared with late responses to see if a difference existed between the

overall attitude towards social online shopping between these individuals. Table 11

reveals no significant difference between early and late responses (t (144) = .03, p >.01).

Therefore, non-response would not be a threat to the external validity of this survey

(Lindner et al., 2001). Due to unequal sample size, the power of the independent t-test

was .15.

Table 11

Differences Between Attitude Towards Social Online Shopping Based on Early versus Late Responses, Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Response	*M*	*SD*	*n*	*t*	*p*
Early	3.57	1.04	120	.03	.98
Late	3.58	.94	26		

Objective One: Findings

This section focused on the online shopping experience, social online shopping experience, stages in the adoption-decision process, and social network (SNW) intensity of survey participants.

Participants' preferred shopping method for school supplies was shown in Table 12. Eighty-six percent of participants chose to go to a physical store (e.g., Office Depot), and 11.4% of participants indicated they would buy from online retailers (e.g., Amazon.com). A majority (51.3%, f = 116) of them reported shopping once per month, followed by 33.2% shopping 2-3 times a month (see Table 13).

Past Online Shopping Experience

Table 12

Distribution of Participants by Preferred Shopping Method Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Preferred Shopping Method	*f*	*%*
Go to a physical store	190	86.4
Internet-based Retailers	25	11.4
Company website	4	1.8
Mail order	1	0.5

Note. n = 220.

Table 13

Distribution of Participants by Online Shopping Frequency Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Online Shopping Frequency	*f*	*%*
Daily	3	1.3
2-3 times a week	6	2.7
Once a week	21	9.3
2-3 times a month	75	33.2
Less than once a month	116	51.3
Never	5	2.2

Note. *n* = 226.

A list of 15 major types of agricultural or agricultural-related products that could be obtained online, including both virtual and physical products (see Table 14), was presented to the participants. Each of these products was in the tertiary sector of agriculture. Participants were asked to check all the types of products they had purchased online. Result showed that clothing, clothing accessories, shoes, and home products were the major categories participants had bought online. Food products (i.e., groceries, beverages, local produce, restaurant vouchers) accounted for 26.1%, and agriculture-related services accounted for 15%. When asked, "What was the key benefit of online shopping?," 26.2% said online shopping saves time, followed by "I can shop any time" (19.9%) and "better price" (19.0%; see Table 15). There were also five participants who indicated they had never shopped online, and the reason was because "I do not know how to shop online."

Table 14
Most Purchased Products by Type Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016

Product Type (Check all that apply)	*f*	*%*
Clothing	188	83.2
Accessory (e.g., belt)	156	69.0
Shoes	144	63.7
Home Products (e.g., beddings, tablecloths, etc.)	136	60.2
Gift Items (e.g., flowers, steaks, fruit basket, cheese)	85	37.6
Other	44	19.5
Tickets for agricultural-related events	36	15.9
Services (e.g., cooking lessons, horse riding lessons, etc.)	26	11.5
Food-Vouchers for restaurant	23	10.2
Farm Equipment	21	9.3
Animal Food (e.g., pet, farm)	18	8.0
Food-Groceries	17	7.5
Food-Beverages	15	6.6
Services- Pest control	6	2.7
Food through local seller (i.e., produce, eggs, meat)	4	1.8
Services- Lawn care	2	0.9

Table 15
Perceived Benefits of Online Shopping Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016.

Perceived Benefit	*f*	*%*
Saves time	58	26.2
Better price	42	19.0
Wider selection	28	12.7
I enjoy browsing through products and finding interesting stuff.	23	10.4
I can shop anytime.	44	19.9
The ability to compare	26	11.8

Note. *n* = 221.

Stages in the Adoption-Decision Process

There were six stages in the innovation-decision process: no knowledge, knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). Most survey participants selected that they were in the "implementation" (f = 68), "confirmation" (f =49), "no knowledge" (f = 46) or "knowledge" (f = 38) stages. The remaining participants were in the "persuasion" (f = 15), and "decision" (f = 10) stages (see Table 16). Furthermore, 93.4% of survey participants indicated they had shopped on a social shopping website (see Table 17).

Table 16
Distribution of Participants by Innovation-Adoption Stage Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

SIAP[a]	Corresponding Items	f	%
No knowledge	I have never heard of social online shopping.	46	20.4
Knowledge	I have heard of social online shopping, but have not decided whether or not I like or dislike social online shopping.	38	16.8
Persuasion	I have decided that I like or dislike social online shopping.	15	6.6
Decision	I have decided that I will or will not use social online shopping.	10	4.4
Implementation	I am using social online shopping.	68	30.1
Confirmation	I have used social online shopping long enough to evaluate whether or not social online shopping will be part of my online purchasing platform.	49	21.7

Note. n = 226. [a.] SIAP = Stage in Innovation Adoption Process.

55

Table 17
Purchase History on Social Shopping Websites Reported by Texas A&M University
ALEC Undergraduate Students Enrolled in Fall 2016

Have you ever purchased anything on a social shopping website?	*f*	*%*
Yes	211	93.36
No	13	5.75
Not sure	2	0.89

Note. *n* = 226.

Social Network Intensity

As shared in Table 18, the top three most popular social networks reported by

participants were Facebook (41.6%), Instagram (19.9%), and Snapchat (18.1%). The

main reason for visiting the SNW (see Table 19) was "Interacting with Friends/Family"

(59.8%), followed by "Entertainment" (i.e., play games, watch videos) (23.2%). More

than half (53.9%) of the participants spent less than one hour, and 13% spent more than

3 hours each day on SNWs (see Table 20). Approximately 44% of participants reported

they had more than 351 friends on their favorite SNWs (see Table 21).

Table 18
Favorite Social Network Reported by Texas A&M University ALEC Undergraduate
Students Enrolled in Fall 2016

Most Preferred Social Network	*f*	*%*
Facebook	94	41.6
Instagram	45	19.9
Snapchat	41	18.1
Other (Google+, YouTube, Tumblr, Reddit, Groupme, etc.)	18	7.9
Pinterest	13	5.8
Twitter	13	5.8
I am not on any social network	2	0.9

Note. *n* = 226.

Table 19

Motivation for Visiting Social Networks Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

The major reason I visit the selected social network is?	*f*	*%*
Interacting with Friends/family	134	59.8
Entertainment (play games, watch videos, etc.)	52	23.2
Seeking information or inspiration	27	12.1
Professional use (business/research purpose)	8	3.6
Seeking friends	2	0.9
Express my opinion/emotion (seeking social support)	1	0.4

Note. *n* = 224.

Table 20

Frequency Table for Time Spent on Selected SNW per Day Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

How much time do you usually spend on selected SNW?	*f*	*%*
0-29 minutes per day	59	26.5
30-59 minutes per day	61	27.4
1-2 hours per day	74	33.1
3-4 hours per day	21	9.4
More than 5 hours per day	8	3.6

Note. Overall *n* = 223, *M* = 2.36, *SD* = 1.08. *Scale: 1 = 0-29 minutes per day, 2 = 30-59 minutes per day, 3 = 1-2 hours per day, 4 = 3-4 hours per day, 5 = More than 5 hours per day*.

Table 21

Frequency Table for Number of Friends on Selected Social Networks Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Approximately how many friends do you have on selected SNW?	*f*	*%*
0-50	27	12.2
51-150	42	19.0
151-250	29	13.1
251-350	26	11.8
351+	97	43.9

Note. Overall *n* = 221, *M* = 3.56, *SD* = 1.50. Scale: *1 = 0-50*, 2 = *51-150*, 3 = *151-250*, 4 = *251-350*, 5 = *351+*.

Table 22
Attitude Towards Social Networks Usage Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Please indicate your level of agreement with the following statement	*n*	*M*	*SD*
Visiting this SNW is part of my everyday activity.	224	4.25	0.96
I'm proud to tell people I'm on this SNW.	224	3.65	1.00
This SNW has become part of my daily routine.	224	4.03	1.00
I feel out of touch when I have not logged onto it for a while	224	3.09	1.24
I feel I'm part of the community of this SNW	223	3.34	1.04
I would feel sorry if it was shut down.	224	3.43	1.15

Note. Overall *M* = 3.63, *SD* = 1.14. Scale: 1 = *Strongly Disagree,* 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree.*

The Social Network (SNW) Intensity score was an adaptation of the Facebook Intensity calculation (Ellison et al., 2007). It was calculated as an average of time spent, number of friends on SNW, and the score of the Likert-type question stated in Table 22. A description of the SNW Intensity score is illustrated in Table 23.

Table 23
Descriptive Statistics for Social Network Intensity Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

	n	*Min*	*Max*	*M*	*SD*
Social Network Intensity	224	1.50	4.88	3.47	0.70

Objective Two: Findings

The subjective norm (SN) and behavioral intention (BI) of participants in regards to social online shopping was addressed in objective two. A five-point scale was used to measure level of agreement to statements (i.e., 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*). Participants showed

intention to follow the opinion of their friends/family (i.e., people who are important to them; see Table 24), and intention to shop on a social shopping website (see Table 25).

Subjective Norm

Table 24
Participants' Subjective Norm Regarding Social Online Shopping Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Subjective Norm Items	n	M	SD
Most of my friends think social online shopping is popular.	226	3.74	0.86
Most of the people who are important to me think social online shopping is popular.	226	3.56	0.86
It is common to my friends to go social online shopping.	226	3.74	0.87
Most of my friends think that I should shop on a social shopping website.	226	3.21	0.92
Most of the people who are important to me think that I should shop on a social shopping website.	226	3.17	0.90
Social online shopping is popular among my friends.	226	3.65	0.97
A lot of my friends have been doing social online shopping.	226	3.72	0.87

Note. Overall *M* = 3.57, *SD* = .73. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

Behavioral Intention

Table 25

Distribution of Participants by Behavioral Intention Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Behavioral Intention Items	*n*	*M*	*SD*
I will purchase goods from a social shopping website in the future.	226	3.86	0.97
I will use social online shopping to discover new products.	226	3.86	0.84
I will buy products from a social shopping website.	226	3.94	0.84
I want to get shopping ideas from a socials shopping website.	225	3.65	0.97
I want to find inspirations from a social shopping website.	225	3.56	1.01
I can use the help from a social shopping website.	225	3.78	0.90
I will go to a social shopping website to see what other people are buying.	225	3.26	1.07

Note. Overall *M* = 3.77, *SD* = .72. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

Objective Three: Findings

Objective three was to describe participants' perceived ease of use (PEOU), perceived usefulness (PU), and perceived enjoyment (PE) for social shopping websites. A five-point scale was used to measure level of agreement to statements (i.e., 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*). Based on results shown in Table 26, 27, and 28, students tended to perceive social shopping websites as easy to use, useful, and enjoyable.

Perceived Ease of Use

Table 26
Perceived Ease of Use Reported by Texas A&M University ALEC Undergraduate
Students Enrolled in Fall 2016

Perceived Ease of Use Items	*n*	*M*	*SD*
Social shopping website is easy to use.	209	4.05	.66
My interaction with the social shopping website is clear and understandable.	209	3.93	.74
Learning to use a social shopping website is easy.	209	4.02	.66
It is easy to get a social shopping website to do what I want it to do.	209	3.89	.77
It is simple to use a social shopping website.	209	3.99	.70
It is easy to navigate around a social shopping website.	208	3.96	.70
Using a social shopping website is not complicated.	209	3.98	.74

Note. Overall *M* = 3.98, *SD* = .67. Scale: 1 = *Strongly Disagree,* 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree.*

Perceived Usefulness

Table 27
Perceived Usefulness Reported by Texas A&M University ALEC Undergraduate
Students Enrolled in Fall 2016

Perceived Usefulness Items	*n*	*M*	*SD*
Social shopping helps me to discover new products.	209	3.84	.78
Social shopping increases my productivity in discovering products.	208	3.66	.88
Social shopping websites' recommendations are useful.	209	3.66	.89
Social shopping websites are helpful to me.	208	3.78	.83
Social online shopping is beneficial.	207	3.75	.85
Social shopping websites help me get shopping ideas.	208	3.71	.87
Social shopping websites help me get shopping idea more quickly.	206	3.71	.87

Note. Overall *M* = 3.73, *SD* = .72. Scale: 1 = *Strongly Disagree,* 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree.*

Perceived Enjoyment

Table 28
Perceived Enjoyment Reported by Texas A&M University ALEC Undergraduate
Students Enrolled in Fall 2016

Perceived Enjoyment Items	n	M	SD
I had fun shopping on a social shopping website.	207	3.69	.83
I found my visit to the website interesting.	207	3.69	.88
Social online shopping is interesting.	206	3.68	.89
Social online shopping is entertaining.	207	3.64	.89
It is enjoyable doing social online shopping	207	3.71	.86
I enjoy doing social online shopping.	207	3.75	.86
I feel happy when browsing social shopping websites.	206	3.55	.88

Note. Overall $M = 3.67$, $SD = .77$. Scale: 1 = *Strongly Disagree,* 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree.*

The overall attitude towards social online shopping was calculated as the summated mean of perceived ease of use, perceived usefulness, and perceived enjoyment. The descriptive statistics of overall attitude is shown in Table 29.

Table 29
Descriptive Statistics of Grand Mean of Attitude Towards Social Online Shopping
Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall
2016

Variable	n	M	SD
Attitude	209	3.80	.62

Objective Four: Findings

Objective four examined whether or not differences existed between participants' attitudes towards online social shopping based upon past online shopping experience, users' stage of adoption of social online shopping, and social network usage.

First, the correlation between past online shopping experience, past social online shopping experience, users' stage of adoption of social online shopping, and social network usage was tested (see Table 30). All factors, except for SNW intensity, were correlated with each other. Therefore, the overall attitude was compared separately against each factor with *ANOVA* tests.

Table 30
Person Correlation Coefficients of Adoption Stage, Social Shopping Experience, Online Shopping Frequency, and SNW Intensity for Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

		1	2	3	4
1. Adoption stage	Pearson Correlation	1	-	-	-
2. Social shopping experience	Pearson Correlation	-.25*	1	-	-
3. Online shopping frequency	Pearson Correlation	.22*	-.20*	1	-
4. SNW intensity	Pearson Correlation	-.07	-.06	.07	1

** Correlation is significant at the *p* < .05 (2-tailed).

A significant difference was found among the attitude score of participants at different adoption stages, F(5, 203) = 8.81, p < .01. The power of ANOVA was .82 (> .80; see Table 31).

Table 31

One-Way Analysis of Variance Summary for the Effect of Adoption Stage on Attitude
Towards Social Online Shopping Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016

Adoption Stage	n	M	SD	F	p
No Knowledge	46	3.48	.60	8.81	.00
Knowledge	38	3.65	.42		
Persuasion	15	3.50	.71		
Decision	10	3.24	.55		
Implementation	68	4.01	.61		
Confirmation	49	40.3	.52		

Note. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 =
Agree, 5 = *Strongly Agree.*

Findings in Table 32 revealed that significant difference existed among *attitude*

score of participants with different online shopping frequencies $F(5, 203) = 4.83$, $p = .00$.

The power of *ANOVA* was .57.

Table 32

One-Way Analysis of Variance Summary for the Effect of Online Shopping Frequency on
Attitude Towards Social Online Shopping Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016

Online Shopping Frequency	n	M	SD	F	p
Never	2	2.79	0.64	4.83	.00
Once a month	106	3.67	0.50		
2-3 times a month	72	3.87	0.72		
Once a week	20	4.24	0.54		
2-3 times a week	6	3.98	0.25		
Daily	3	3.95	0.45		

Note. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 =
Agree, 5 = *Strongly Agree.*

Because SNW intensity was not correlated with other independent variables, a

regression was run to verify its influence on the dependent variable, *attitude*. It was

indicated in Table 33 that SNW intensity was not a good predictor of attitude towards

social online shopping ($R = .22$). And, the adjusted R^2 was .04, meaning that only

approximately 4% of variation in overall attitude towards social online shopping can be

explained with this model. The power of regression was .89 (effect size $f^2 = .05$, $F(1, 206)$

$= 10.07$). The general form of the equation to predict *attitude* from SNW Intensity is (see

Table 33):

$$\text{Attitude} = 3.13 + .19 \text{ (SNW Intensity)}$$

Table 33
*Regression of Predictors for Attitude Towards Social Online Shopping from Social
Network Intensity Reported by Texas A&M University ALEC Undergraduate Students
Enrolled in Fall 2016*

Construct			R	R^2	B	β	t	p
Attitude	Model 1	Social Network Intensity	.22	.04	.19	.22	3.17	.00
		(Constant)			3.13		14.74	.00

Note. Predictors: (Constant), Social Network Intensity.

Objective Five: Findings

Objective five addressed the relationship among SN, *attitude,* and BI. SN, BI and

attitude were correlated with each other (see Table 34), thus a new variable was created

as the grand mean of SN and *attitude*. A multiple regression was then carried out to

generate a prediction equation, and $R = .80$, indicating a good level of prediction. And,

the adjusted R^2 was .64, meaning that approximately 64% of variation in BI can be

explained with this model. The power of regression was 1.0, $f^2 = 1.74$, $F(1, 224) =$

389.87, $p = .00$ (see Table 35). Thus, the general form of the equation to predict BI from

SN and *attitude* is:

$$\text{BI} = .29 + .94 * \text{Mean of (SN + Attitude)}$$

Table 34
Pearson Correlation Coefficients of Behavioral Intention, Subjective Norm, and Attitude
for Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

		1	2	3
1. BI	Pearson Correlation	1	-	-
2. SN	Pearson Correlation	.70*	1	-
3. Attitude	Pearson Correlation	.80*	.72*	1

* Correlation is significant at the $p < .05$ level (2-tailed).

Table 35
Regression of Predictors for Behavioral Intention Towards Social Online Shopping from
Subjective Norm and Attitude Towards Social Online Shopping Reported by Texas A&M
University ALEC Undergraduate Students Enrolled in Fall 2016

Construct			R	R^2	B	β	t	p
Behavioral Intention	Model 1	Mean of (SN + Attitude)	.80	.64	.94	.80	19.75	.00
		(Constant)			.29		1.64	.10

Note. Predictors: (Constant), Subjective Norm+ Attitude

Objective Six: Findings

Objective six focused on describing how extraneous variables (i.e., confidence in using SNW identity to login social online shopping websites, compatibility, and trust) might affect adoption of a social shopping website. While 38.1% of students reported no concern about social online shopping, 26.5% reported they do "not feel comfortable using my social network credentials to log onto social shopping websites," and 18.8% chose "I do not trust the sellers on social shopping websites" (see Table 36).

Table 36

Distribution of Participants by Concerns for Social Online Shopping Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Concerns	*f*	*%*
I have no concerns about social online shopping.	85	38.1
I do not feel comfortable using my social network credentials to log onto social shopping websites.	59	26.5
I do not trust the sellers on social shopping websites.	42	18.8
I do not like sharing my shopping experience with other people.	19	8.5
I do not see the benefits of doing social online shopping.	7	3.1
I do not need recommendations when shopping online.	7	3.1
I cannot find the product I'm looking for on social shopping websites.	4	1.8

Note. n = 223.

Objective Seven: Findings

Objective seven examined if differences existed between participants' attitudes towards online social shopping based upon personal characteristics (i.e., academic major, connection to agriculture-related organizations, age, gender, ethnicity, and monthly discretionary spending).

First, the correlation between each factor was tested (see Table 37). Age, ethnicity, gender, major, and connection to agricultural organization were correlated with each other. Therefore, overall attitude was compared separately against each factor with independent *t*-tests except for discretionary spending per month. Monthly discretionary spending was not correlated with other demographic variables.

Table 37

Pearson Correlation Coefficients of Major, Age, Gender, Ethnicity, Monthly Discretionary Spending, and Connection to Agricultural Organizations for Responding Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

		1	2	3	4	5	6
1. Age	Pearson Correlation	1	-	-	-	-	-
2. Ethnicity	Pearson Correlation	.10	1	-	-	-	-
3. Gender	Pearson Correlation	-.11	-.16*	1	-	-	-
4. Major	Pearson Correlation	.05	.05	.17*	1	-	-
5. Monthly Discretionary Spending	Pearson Correlation	.09	-.01	-.12	-.10	1	-
6. Connection to Agricultural Organizations	Pearson Correlation	-.18*	-.09	.08	-.17*	-.04	1

* Correlation is significant at the .05 level (2-tailed).

No significant difference existed among the *attitude* score of participants with different ethnicities, $F(5, 203) = 4.83$, $p = .52 > .01$, $1- \beta = .13$, $f^2 = .09$ (see Table 38).

Table 38

One-Way Analysis of Variance Summary Table for the Effect of Ethnicity on Attitude Towards Social Online Shopping Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Ethnicity	n	M	SD	F	p
African American	6	3.63	0.45	.85	.52
Asian/ Pacific Islander	5	3.62	0.53		
Caucasian	169	3.79	0.62		
Hispanic or Latino	24	3.99	0.67		
Native American or American Indian	2	3.43	0.61		
Other (please specify)	3	3.62	0.33		

Note. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

No significant difference existed among attitude scores of participants with

different majors, F(3, 205) = 0.83, p = .48 > .01, 1- β = .11, f 2= .07 (see Table 39).

Table 39
One-Way Analysis of Variance Summary Table for the Effect of Major on Attitude
Towards Social Online Shopping Reported by Texas A&M University ALEC
Undergraduate Students Enrolled in Fall 2016

Major	*n*	*M*	*SD*	*F*	*p*
Agricultural Leadership and Development	67	3.79	0.60	.83	.48
Agricultural Science	53	3.90	0.56		
Agricultural Communication and Journalism	36	3.73	0.59		
University Studies – Leadership Studies	53	3.74	0.70		

Note. Scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly Agree*.

Table 40 reveals that *t*(207) = .83, *p* = .40 which exceeded .01. Thus, there was

no significant difference between *attitude* score due to different genders (1- β = .12, *f*

^{2}= .115).

Table 40
Differences Between Attitude Towards Social Online Shopping Based on Genders
Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall
2016

Response	*M*	*SD*	*n*	*df*	*t*	*p*	*Cohen's d*
Male	3.74	.59	67	207	.83	.40	0.12
Female	3.82	.63	142				

Table 41 reveals that *t*(207) = 1.02, *p* = .31 which exceeded .01. Thus, there was

no significant difference between *attitude* score whether participants were members of

an agricultural organization or not (1- β = .34, *f* ^{2}= .248).

Table 41
Differences Between Attitude Towards Social Online Shopping Based on Connection to Agricultural Organizations Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Had Been A Member of at Least One Ag Organization	*M*	*SD*	*n*	*df*	*t*	*p*
Yes	3.76	.60	77	207	1.02	.31
No	3.85	.64	132			

Age and monthly discretionary spending were both interval type data, and were not correlated with each other. Thus, a multiple regression was run to find a model to predict *attitude* by these two variables. It was shown in Table 42 that the adjusted R^2 = .001, indicating a poor model fit ($F(2, 191) = 1.12$), and both *p* values for age and monthly discretionary spending, exceeded .01. Therefore, age and monthly discretionary spending were not a significant predictor of attitude towards social online shopping.

According to the coefficients shown in Table 42, the general form of the equation to predict *attitude* from age and discretionary spending is:

$$\text{Attitude} = 3.86 - .01(\text{Age}) + 0(\text{Discretionary Spending})$$

Table 42
Regression of Predictors for Attitude Towards Social Online Shopping from Age and Monthly Discretionary Spending Reported by Texas A&M University ALEC Undergraduate Students Enrolled in Fall 2016

Construct			*R*	R^2	*B*	*β*	*t*	*p*
Attitude	Model 1	Age	.11	.001	-.01	-.04	.48	.63
		Monthly Discretionary Spending			.00	.11	1.45	.15
		(Constant)			3.86		13.23	.00

Note. Predictors: (Constant), Age, Monthly Discretionary Spending.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study's objectives and a summary of methodology. Then, conclusions, implications, and recommendations are presented by objective based upon the findings. Finally, a summary of recommendations for future research and practice is proposed.

Summary of Objectives

The goal of this research was to examine Texas A&M University ALEC undergraduate students' attitudes towards social online shopping. The Theory of Reasoned Action (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980), the Technology Acceptance Model (Davis, 1989), and the Innovation Adoption and Diffusion theory (Rogers, 2003) served as the framework for the study. The research objectives were to:

1. Describe past online shopping experience, past social online shopping experience, stage of adoption of social online shopping, and social network (SNW) usage.

2. Describe subjective norm (SN) and behavioral intention (BI) regarding social online shopping.

3. Describe perceived usefulness (PU), perceived ease of use (PEOU), perceived enjoyment (PE) for social shopping websites.

4. Determine if differences existed between participants' attitudes towards online social shopping based upon past online shopping frequency, users' stage of adoption of social online shopping, and social network intensity.

5. Determine how subjective norm and *attitude* affected behavioral intention.

6. Describe extraneous variables (i.e., confidence in using SNW identity to login social online shopping websites, compatibility, and trust) that might affect the adoption of a social shopping website.

7. Determine if differences existed between participants' attitudes towards online social shopping based upon personal characteristics (i.e., academic major, connection to an agriculture-related organization, age, gender, ethnicity, and monthly discretionary spending).

Summary of Methodology

The target population for the study was undergraduate students enrolled during the Fall 2016 semester within the Department of Agricultural Leadership, Education, and Communications at Texas A&M University. An online survey questionnaire was developed by the researcher and implemented via Qualtrics. The reliability level for the instrument was calculated using Cronbach's (1951) alpha, reliability ranged from .835 to .955, which indicated a reliable internal scale (Gall, et al., 2007).

To ensure sufficient data, after the sixth email reminder, data was collected in person within the Agriculture and Life Sciences Building and via a posted survey link on social networks accessible by ALEC students. The final response rate was 52% ($n =$ 226).

The Statistical Package for the Social Sciences (SPSS, 20.0) was used in data analysis. The a priori alpha level for all statistical procedures was originally set at .05. However, due to the multiple comparisons conducted, a *Bonferroni* correction was used

to adjust the inflated alpha coefficient to a level of .01. Objectives one, two, three, and six were analyzed using descriptive methods. Objectives four, five, and seven were analyzed using correlational methods. The independent variables for the study were: (a) major, (b) connection to agricultural organizations, (c) age, (d) gender, (e) ethnicity, (f) monthly discretionary spending, (f) perceived benefit of shopping online, (g) preferred shopping method, and (h) adoption stage of social online shopping. The dependent variables were: (a) online shopping experience, (b) social network usage, (c) perceived ease of use, (d) perceived usefulness, (e) perceived enjoyment, (f) subjective norm, and (g) behavioral intention.

Conclusions, Implications, and Recommendations

Each of the seven objectives is addressed individually. For each objective, a summary of the findings is provided and then corresponding conclusions, implications and recommendations follow. Within each objective, findings are presented in numerical order based on percentages.

Objective One: Conclusions

Objective one was to describe past online shopping frequency, stage of adoption of social online shopping, and social network intensity.

Past online shopping experience.

Most of the participants (51.3%, f = 116) shopped less than once per month, followed by 33.2% (f = 75) who shopped 2-3 times a month, 9.3% (f = 21) shopped once a week, 2.7% (f = 6) shopped 2-3 times per week, 2.2% (f = 5) reported they had never shopped online before, and 1.3% (f = 3) of participants reported that they shopped online

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daily. For the five participants who had no online shopping experience, the reason provided was "I do not know how to shop online." In comparison, Lester et al.'s (2006) study found that 91.1% of the 782 college students in his study shopped online at least two or more times a year. It was concluded that most of the participants did participate in online shopping, and the shopping frequency is in a growing trend over time. However, the frequency for most (51.3%) of the participants was less than once per month, and not very many (13.3%, f = 30) shopped frequently online (i.e., more than once a week).

A list of 15 major types of agricultural or agricultural-related products that could be obtained online was presented to the participants. Participants reported that clothing, clothing accessories, shoes, and home products were the categories (i.e., more than 60%) from which they bought online; agriculture-related services (i.e., tickets for ag-related events, lessons, pest control, and lawn care services) accounted for 59.3%; food products (i.e., restaurant vouchers, animal food, groceries, beverages, and local produce) accounted for 34.1%. It was concluded that participants were purchasing agricultural products online.

When asked, "Which of the following do you think is the most important benefit of shopping online?," 26.2% (f = 58) of participants reported that online shopping saves time, followed by "I can shop any time" (19.9%, f = 44) and "better price" (19.0%, f = 42). Other reasons included "wider selection" (12.7%, f = 28), "the ability to compare" (11.8%, f = 26), and "I enjoy browsing through products and finding interesting stuff" (10.4%, f = 23). It was concluded that participants perceive multiple benefits of shopping online; there was no one aspect that was mentioned predominantly more than

others. Responses were spread across three major reasons: time-savings, shop any time, and better price.

Stages in the adoption-decision process.

In examining social online shopping, individuals were asked to identify their self-perceived stage in the innovation-adoption process. Six stages in the innovation-decision process were considered: no knowledge, knowledge, persuasion, decision, implementation, and confirmation. Most participants identified that they were in the "implementation" (30.1%, f = 68), "confirmation" (21.7%, f = 49), "no knowledge" (20.4%, f =46) or "knowledge" (16.8%, f = 38) stages. The remaining participants were in the "persuasion" (6.6%, f = 15) and "decision" (4.4%, f = 10) stages. Based on the self-reported answers, most of the survey participants (51%) perceived themselves as being at the implementation and confirmation stages of social online shopping, and about 20% of participants were not aware of social online shopping.

However, when participants were presented with examples of social online shopping, and asked if they had shopped on a social shopping website, 93.4% (f = 211) of participants said that they had shopped on a social shopping website, while 5.8% (f = 13) of participants reported that they had not shopped on a social shopping website, and .9% (f = 2) of participants indicated that they were not sure about it. Given this contradictory response to the first question about the innovation-adoption process, it was concluded that participants may not interpret social online shopping in their innovation-decision stage without reference to an online entity. Thus, individuals were in fact shopping in a social online shopping environment without identifying it as such.

Social Network (SNW) intensity.

Participants' preferred social network platforms were reported as Facebook (41.6%, f = 94), Instagram (19.9%, f = 45), and Snapchat (18.1%, f = 41); the remaining participants (19.5%, f = 44) indicated Pinterest, Twitter, Google+, YouTube, and Tumblr. Two participants (0.9%) said they were not on any social network. It was concluded that the majority of participants were familiar with SNW, and the three most popular SNW platforms were Facebook, Instagram, and Snapchat.

The primary reason reported for visiting their favorite SNW platform was to "Interact with Friends/Family" (59.8%, f = 134), followed by "Entertainment" (i.e., play games, watch videos) (23.2%, f = 52), "Seek information or inspiration" (12.1%, f = 27), "Professional use" (3.6%, f = 8), "Seek friends" (.9%, f = 2), and "Express my Opinion/Emotion" (.4%, f = 1). Furthermore, 33.2% (f = 74) of participants spent 1-2 hours per day on selected SNW; 27.4% (f = 61) spent 30-59 minutes per day, 26.5% (f =59) spent less than 30 minutes per day, 9.4% (f = 21) spent 3-4 hours per day, and 3.6% (f = 8) of participants spent more than 5 hours on their favorite SNW. It was concluded that the primary reason for participants to be on SNWs was to interact with friends and family and take part in entertainment; more than half (73.5%) of the participants spent more than 30 minutes a day on a SNW. The question regarding time spent on SNWs served to provide a score that was later used for the calculation of social network intensity; as time spent on SNWs increased, social network intensity score increased also.

Most participants (43.9%, f = 97) reported more than 350 friends on their favorite SNW, followed by 19% (f = 42) reporting 51-150 friends, 13.1% (f = 29) reporting 151-

200 friends, 12.2% (f = 27) reporting less than 51 friends, and 11.8% (f = 26) reporting 251-300 friends. The question about friends on SNW was related to the calculation of the SNW Intensity score; as the number of friends increased, the SNW Intensity score increased also. The formula for the SNW Intensity score is discussed with the associated objective (Objective One).

Six Likert-type questions designed by Ellison et al. (2007) to measure the emotional connection to Facebook were modified to measure the participant's emotional connection to their favorite SNW. On a five-point scale (ranging from strongly disagree to strongly agree) the following means resulted for the participants as a whole: M =4.25 (SD = 0.96) for statement "Visiting this SNW is part of my everyday activity"; M = 3.65 (SD = 1.00) for statement "I'm proud to tell people I'm on this SNW"; M = 4.03 (SD = 1.00) for statement "This SNW has become part of my daily routine"; M = 3.09 (SD = 1.24) for statement "I feel out of touch when I have not logged onto it for a while"; M = 3.34 (SD = 1.04) for statement "I feel I'm part of the community of this SNW"; M = 3.43 (SD = 1.15) for statement "I would feel sorry if it was shut down". The overall mean was M = 3.63 (SD = 1.14). This question served to provide a score that was later used in the calculation of SNW Intensity. As this score increased; the SNW Intensity score increased as well.

Social network intensity was calculated as the average of scores of questions regarding time spent on a social network, number of friends on a social network, and scores from a series of Likert-type questions. The SNW intensity score resulted in 3.47, with a minimum of 1.5 and maximum of 4.88 (n = 224, SD = .70). It was concluded that

on a level of one to five (ranging from strongly disconnected to strongly connected), participants tended to be emotionally connected to their favorite SNWs.

Objective One: Implications

Consumer market segmentation indicated it was important to divide consumers into different segmentations in order to better understand and meet their needs. Purchase behavior (frequency) and benefit sought were two indicators used in consumer behavioral segmentation. Results showed that online shopping was not as popular as it was presumed among survey participants, online merchants should provide incentives to consumers to encourage them to visit their sites and shop online. Based on the findings of Delafrooz et al.'s (2010) study, convenience and price were the most prominent advantages of online shopping. Hence, social shopping websites should be designed to make the entire shopping experience easy and offer competitive prices as well. Secondly, a good selection of products was considered a dominant factor for motivating online shopping. Given that participants reported buying agricultural products (i.e., clothes, accessories, food, services) online, there is an opportunity for individuals to market additional agricultural products in these online venues.

Most participants (93.36%) associated social online shopping with big names (e.g., Amazon.com), and recalled that they had made purchases on social shopping websites. However, there were approximately 20% of participants who were in the "no knowledge" stage of adoption of social online shopping. This contradiction implied that participants were not differentiating between traditional online shopping and social online shopping.

The usage of SNWs is related to a person's lifestyle, which was a variable in consumer's psychographic segmentation in consumer segmentation theory. Most participants spent 1-2 hours on their favorite SNWs, and it was slightly less than what was found in Huang and Capps's (2013) study (16.13 hours per week on average). Knight-McCord et al.'s (2016) research revealed the most popular social media sites among college students were Instagram (29%), Snapchat (24%), and Facebook (23%). While for the current study, 41.6% of participants preferred Facebook, followed by Instagram (19.9%), and Snapchat (18.1%). This implied that Facebook's popularity may have decreased among college students and may no longer the dominant SNW platform, at least for this population. For online merchants, it makes sense that they market to the SNWs (i.e., Facebook, Instagram, and Snapchat) reported as participants' favorite because of the popularity reported among college students. Furthermore, given the conclusion that individuals may be unaware that they were participating in social online shopping, agricultural companies must use marketing strategies that communicate to the consumers in ways that they will understand.

Objective One: Recommendations

Although Cha 's (2009) study found that experience with social network sites was negatively correlated with attitude towards shopping for virtual goods on social network websites, this study found that in general, the extent to which participants were engaged in their favorite social network sites was positively related to their attitude towards social online shopping. Types of products were discussed in this study; however, the difference in *attitude* was not compared against product type. Future research is

recommended to explore the difference between attitude towards social online shopping for virtual versus physical products, as well as new versus used products. It is also recommended that for practice, agricultural companies recognize the potential for marketing products via Facebook, Instagram, and Snapchat given the results of this study.

Objective Two: Conclusions

Objective two was to describe the subjective norm and behavioral intention regarding social online shopping.

Subjective norm.

SN was defined as the influence of friends, family, or the opinion of the majority of people in a person's social network, and the extent to which a person is willing to follow others' behavior. If the majority of friends, family, or opinion leaders think positively about social online shopping, in order to fit in with peers, one would be more likely to have a positive attitude about social online shopping. In looking at the subjective norm of social online shopping for participants, it was found that the mean was $M = 3.574$ ($SD = 0.73$) on a five-point scale (ranging from strongly disagree to strongly agree). It was concluded that participants tended to agree that they would follow the opinion of people who were important in their lives (i.e., family, friends) regarding social online shopping.

Behavioral intention.

BI was defined as a person's perceived likelihood that he/she will engage in a certain behavior. For this study, the behavioral intention to shop on social shopping

websites can be understood as a person's expectation to make a purchase on a social shopping website in the future. The mean of participants' behavioral intention scores was $M = 3.766$ ($SD = 0.718$) on a five-point scale (ranging from *strongly disagree* to *strongly agree*). Thus, it was concluded that participants tended to agree that they would make a purchase on a social shopping website in the future.

Objective Two: Implications

The subjective norm and intention to purchase were both slightly in agreement; however, they did not fall in the strongly agree category. Thus, the implication exists that the individual self-reporting of involvement in social online shopping is lower than what was anticipated. There is still room for growth in terms of adoption of social online shopping.

Objective Two: Recommendations

Future research is recommended to explore the factors that may influence people's subjective norm and behavioral intention for social online shopping. Additional research could determine if SN and BI continue to increase over time as people gain more knowledge and experience with social online shopping.

Objective Three: Conclusions

Objective three was to describe perceived ease of use, perceived usefulness, and perceived enjoyment for social shopping websites.

PEOU was defined as the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). In this case, PEOU refers to how comfortable a person feels when shopping on a social shopping website. PU was defined

as the degree to which a person believes that using a particular system would enhance his/her performance. In this study, PU referred to how much a person feels a social shopping website can fulfill his/her shopping needs. Finally, PE was defined as "the extent to which the activity of using a specific system is perceived to be enjoyable, aside from any performance consequences resulting from system use" (Venkatesh, 2000, p. 351). In this study, PE measured the enjoyment participants reported regarding use of a social shopping website.

The mean of PEOU was 3.98 (SD = .67); the mean of PU was 3.73 (SD = .72); and, the mean of PE was 3.67 (SD = .77). The overall attitude (attitude) towards social online shopping was calculated as the summated mean of perceived ease of use, perceived usefulness, and perceived enjoyment, which resulted in a M = 3.80 (n = 209, SD = .62, Min = 1, Max = 5). It was concluded that participants tended to agree that social shopping websites were perceived as useful, ease to use, and enjoyable to use.

Objective Three: Implications

Based on Roger's (2003) Innovation Adoption and Diffusion Theory, an innovation's characteristics (i.e., relative advantage, compatibility, complexity, trialability, and observability) play vital roles in the adoption process. Moreover, PEOU, PU, and PE were found to have direct and indirect significant influence on BI (Gefen & Straub, 2003; Shen, 2012). Hence, the implication exists that the more people perceive a social shopping website as easy to use, useful, and enjoyable to use, they are more likely to adopt the social shopping website, and more likely to make a purchase on the social shopping website in the future.

Objective Three: Recommendations

Future research is recommended to examine participant's PEOU, PU, and PE of a specific social shopping website by offering them hands-on experience with the SNW website. Because technology is ever evolving, there should also be a follow-up study to determine if individuals' PEOU, PU, and PE increase over time as their access to these websites increases and their social shopping experience accumulates.

Objective Four: Conclusions

Objective four was to determine if differences existed among participants' attitudes towards online social shopping based upon past online shopping frequency, users' stage of adoption of social online shopping, and social network intensity.

A correlation test revealed that the adoption stage was weakly, positively correlated with online shopping frequency (r = .22, p < .01); SNW intensity was not significantly correlated with other variables. If a participant shopped more frequently online, he/she was more than likely at a higher stage of adoption of social online shopping.

Attitude scores were compared separately against each correlated factor using one-way ANOVA tests. Results revealed that the adoption stage had a significant effect on attitude towards social online shopping, $F(5, 203) = 8.81$, $p = .00$, $1-\beta = .57$. As participants advanced to a higher adoption stage, their attitude became more positive towards social online shopping. The largest difference in attitude existed between participants at the decision stage and confirmation stage (MD = -.79, p = .00); there was

no significant difference among participants' attitudes when they were at stages of no knowledge, knowledge, decision, and persuasion.

Analysis of participants' attitude based on their online shopping frequency revealed a significant difference, $F(5, 203) = 4.83$, $p = .00$, $1-\beta = .82$. Participants who shopped online more frequently also indicated a more positive attitude towards social online shopping. The largest difference in attitude existed between participants who had never shopped online and who usually shopped online once a week ($MD = -1.45$, $p = .00$). Participants who shopped 2-3 times a month, 2-3 time a week, and daily had shown no significant difference in their attitude scores.

A simple linear regression showed that SNW Intensity was also a significant factor affecting attitude scores, $F(1, 206) = 10.07$, $p < .01$, $1-\beta = .89$. The general form of the equation to predict attitude from SNW Intensity is:

$$\text{Attitude} = 3.13 + .19 \text{ (SNW Intensity)}$$

It was concluded that the adoption stage of social online shopping and past online shopping frequency both significantly affected participants' attitude towards social online shopping. In other words, participants' attitude towards social online shopping became more positive if they moved to the next level of adoption stage, or if they shopped online more frequently. Although SNW Intensity was not a strong indicator of attitude, as a person feels more emotionally attached to his/her favorite SNW, he/she is likely to have a more positive attitude towards social online shopping.

Objective Four: Implications

Based upon conclusions from this study, online merchants can expect the most change in attitude in two situations: when consumers move from the decision stage to the confirmation stage; and when consumers who have never bought anything online begin to shop once a month online. Emphasis should be given to the advantages of online shopping as compared to offline shopping, and the benefits of social online shopping compared to traditional online shopping. Participants' SNW Intensity was not found to be a strong predictor of attitude towards social online shopping, which implies that people may not associate the use of SNWs closely with social online shopping. This finding was consistent with participants' primary reason of visiting their favorite SNWs, i.e. to interact with friends and family.

Objective Four: Recommendations

Future research is recommended to explore the motivation of using social networks to find shopping ideas and inspirations and its relationship with attitude towards social online shopping. Based on results, online merchants should focus on increasing the awareness of social online shopping among consumers since consumers may not be aware that they are participating in social online shopping. Although people primarily use SNWs to interact with friends and family, it is recommended that online merchants use SNWs to reach potential buyers (e.g., college students) considering the time individuals spend each day with SNWs and the emotional connection they have with SNWs. In other words, online merchants who do not provide opportunities within SNWs are missing opportunities to make a sale.

Objective Five: Conclusions

Objective five was to determine how the subjective norm and attitude affect behavioral intention.

Subjective norm (SN), behavioral intention (BI) and overall attitude towards social online shopping (attitude) were positively correlated with each other. A multiple regression generated the following prediction equation (R = .80, R2 = .64, 1- β =1.0). Thus, the general form of the equation to predict BI from SN and attitude is:

$$BI = .29 + .94 * \text{Mean of (SN + attitude)}$$

It was concluded that Subjective Norm and attitude were good indicators of BI. As people become more willing to follow other's opinions and the more positive people feel about social online shopping, the more likely they are to make a purchase on a social shopping website in the future.

Objective Five: Implications

Results have shown that SN and attitude towards social online shopping, together, form a strong indicator of BI. This conclusion supported the Theory of Reasoned Action (Ajzen & Fishbein, 1975; Ajzen & Fishbein, 1980), and Chuchinprakarn's (2009) study regarding intention to shop online. The implication exists that the model proposed by the Theory of Reasoned Action holds true for the assessment of social online shopping, and other studies can use similar approaches to determine behavioral intention by considering subjective norm and attitude. Furthermore, the implication exists that opinion leaders (influencers) play a very important role in a consumer's journey regarding social online shopping. As stated in the EBK model and IAD theory, before

making a purchasing decision, a consumer will try to gather all the information possible related to the product, including other people's opinions and recommendations. Online merchants should utilize the power of influencers (opinion leaders) to market their products.

Objective Five: Recommendations

Additional research is needed that includes higher numbers of participants to understand the behavioral intention of college students to shop on social shopping websites. It is believed that research outcomes will evolve as individuals gain more knowledge and experience with regards to social online shopping.

Objective Six: Conclusions

Objective six was to describe extraneous variables (i.e., confidence in using SNW identity to login social online shopping websites, compatibility, and trust) that might affect the adoption of a social shopping website.

While 38.1% (f = 85) of participants reported no concern about social online shopping, the remaining participants expressed concerns and opinions. The following concerns were expressed: 26.5% (f = 59) indicated, "I do not feel comfortable using my social network credentials to log onto social shopping websites", 18.8% (f = 42) chose "I do not trust the sellers on social shopping websites," and 8.5% (f = 19) chose "I do not like sharing my shop experience with other people." The following opinions were expressed: 3.1% (f = 7) chose "I do not see the benefits of doing social online shopping," 3.1% (f = 7) chose "I do not need recommendations when shopping online," and 1.8% (f = 4) indicated that "I cannot find the product I'm looking for on social shopping

websites." It was concluded that the majority (61.9%) of participants held concerns and opinions regarding social online shopping which would influence their interaction with social online shopping. This was in contrast to the percentage (93.36%) of participants who had shopped on a social shopping website. Thus, it is possible that these concerns and opinions are not seen as barriers to using social shopping websites.

Objective Six: Implications

Harris and Dennis's (2011) study showed participants expressed mixed feelings about logging in with Facebook credentials for online purchasing. Some recognized the convenience of the Facebook login while others worried about privacy issues. Both Dennis et al. 's (2010) and Harris and Dennis's (2011) studies proposed that combining social networking with online shopping would be welcomed especially by young people (Harris & Dennis, 2011). However, this study found that there were still concerns regarding social online shopping among college students, including concerns for login identity, privacy, trust with sellers, and perceived usefulness of social shopping websites. Cha (2009) reported that the perceived security of shopping services "pose a barrier for social networking sites that wish to offer shopping services for real items" (p. 86). The current findings are in line with Cha's finding. This is interesting given the seven-year gap between these two studies, which implies that security concerns associated with social online shopping is still a pressing issue to be resolved.

Objective Six: Recommendations

Merchants engaged in social online shopping should address consumers' concerns regarding social online shopping, including offering different login options,

clarifying user privacy policies, implementing or improving current seller rating systems and website security, and making curated recommendations customized to consumers' needs. Further examination of barriers to social online shopping is recommended.

Objective Seven: Conclusions

Objective seven was to determine if differences existed between participants' attitudes towards online social shopping based upon personal characteristics (i.e., academic major, connection to an agriculture-related organizations, age, gender, ethnicity, and monthly discretionary spending).

Correlation tests revealed that gender and connection to agricultural organizations were weakly, positively correlated ($r = .17$, $p < .05$); gender and ethnicity were weakly, negatively correlated ($r = -.16$, $p < .05$); major and gender were weakly, positively correlated ($r = .17$, $p < .05$); and connection to agricultural organizations and age were weakly, negatively correlated ($r = -.20$, $p < .01$). Based on independent t-tests, it was concluded that ethnicity, major, gender, and connection to agricultural organizations did not significantly affect overall attitude towards social online shopping.

Multiple regression showed that age and monthly discretionary spending were not significant predictors of overall attitude, $F(2, 191) = 1.12$, $p = .33$ ($> .01$). The prediction equation had a poor fit ($R2 = .001$):

$$\text{Attitude} = 3.86 - .01 \text{ (Age)} + 0 \text{ (Discretionary Spending)}$$

In summary, it was concluded that personal characteristics (i.e., age, gender, academic major, ethnicity, experience with agricultural organizations, and discretionary spending) had no significant influence on attitude towards social online shopping.

Objective Seven: Implications

The personal characteristics of the research population (i.e., ALEC undergraduate students) had no significant influence on attitude towards social online shopping. This finding is in line with Cha's (2009) study which concluded that "age was negatively associated with attitude towards shopping for real items on social networks" (p. 87) and gender was not statistically significant. The reason might be a result of the research sample having narrow age groups and limited types of occupations (i.e., only part-time and full-time students) and academic majors.

Objective Seven: Recommendations

Although demographic characteristics did not significantly affect ALEC undergraduate students' attitudes toward social online shopping, consumer market segmentation theory indicates that profiling consumers based on their demographic, socio-economic, and geographic characteristics are important in developing marketing strategies. Future research is recommended to consider another populations with different characteristics, for instance, individuals who are beyond college and who hold diverse occupations (Delafrooz, et al., 2010), or at different geographic locations. This would also allow for consideration of multiple age groups.

Summary of Recommendations for Future Research

The sample for this study was 226 undergraduate students enrolled in the AELC Department at Texas A&M University during Fall 2016. It is recommended that future research be conducted with more diverse populations: individuals across a greater age

range, individuals with a variety of occupations, and samples across multiple departments or universities.

While there are five types of social online shopping, only one type was addressed in this study. Further, only a limited assessment of product type was addressed. Therefore, future research is recommended to explore the difference between attitude towards social online shopping by comparing different types of social online shopping and by comparing virtual versus physical products, as well as new versus used products.

Social online shopping will eventually become a more mature and familiar technology to online shoppers. As individuals gain more knowledge and experience with social online shopping, a follow-up study is encouraged to examine individuals' subjective norm and behavioral intention in regard to social online shopping, as well as their PEOU, PU, and PE when participating in social online shopping.

Examination of individuals' PEOU, PU, and PE may be best completed by studying a specific social shopping website following an experimental process in which hands-on experience is provided and assessed. Further exploration of social features' influence on attitude should also be considered in order to better understand what characteristics are important to social shoppers.

Summary of Recommendations for Practice

Suggestions for improvement of study implementation are as follows. During the design stage of the study, it was anticipated that a 50% response rate would be achieved. During initial data collection, a response rate of 33% for the email collection method was obtained. In order to obtain sufficient responses, additional strategies (personal

contact and social media collection) were utilized. It is recommended that researchers plan for a lower than desired response rate and have in place strategies to obtain the responses needed. Further, the length of the survey questionnaire might have discouraged completion; thus, future studies should carefully consider each question and reduce the length of the survey questionnaire if possible.

This study focused on understanding college students' attitudes towards social online shopping. Considering the time college students spend each day on SNWs, and the emotional connection they have with their SNWs, as well as the different types of agricultural products they buy online, there is the potential for marketing agricultural products via Facebook, Instagram, and Snapchat (the top three most popular SNWs). Additionally, college students were not aware that they were already participating in social online shopping, i.e. social online shopping is becoming synonymous with online shopping. Therefore, agricultural companies should consider placing their products in these venues, or risk missing opportunities. Furthermore, online merchants should strive to address consumers' concerns regarding social shopping, including offering a variety of login options, clarifying user privacy policies, implementing or improving current seller rating systems and website security, making curated recommendations customized to consumers' needs, and designing social shopping websites to be easy and pleasant to use. Further examination of barriers to social online shopping is also recommended.

REFERENCES

Anderson, M. (2014, July 1). *Local consumer review survey 2014*. Retrieved from

    http://www.brightlocal.com/2014/07/01/local-consumer-review-survey-2014/

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social*

    behavior. Eaglewood Cliffs, NJ: Prentice-Hall Inc.

Ajzen, I., & Fishbein, M. (1975). *Belief, attitude, intention and behavior: An*

    introduction to theory and research. Boston, MA: Addison-Wesley.

Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring hedonic

    and utilitarian shopping value. *Journal of Consumer Research, 20*(4), 644-656.

Bang, H. K., Ellinger, A. E., Hadjimarcou, J., & Traichal, P. A. (2000). Consumer

    concern, knowledge, belief, and attitude toward renewable energy: An

    application of the reasoned action theory. *Psychology & Marketing, 17*(6), 449-

    468. doi: 10.1002/(SICI)1520-6793(200006)17:6<449::AID-MAR2>3.0.CO;2-8

Basil, M. D. (1996). Standpoint: The use of student samples in communication research.

    Journal of Broadcasting & Electronic Media, 40(3). doi:

    10.1080/08838159609364364

Boyd, D. M., & Ellison, N. B. (2007), Social network sites: Definition, history, and

    scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230. doi:

    10.1111/j.1083-6101.2007.00393.x

Cassidy, B. (2013, December 10). *Top Buyer Objections by Industry [Infographic].*

    Retrieved from http://blog.granify.com/ecommerce-conversion-rate-

    optimization/

Cecere, L., Owyang, J., Li, C., Etlinger, S., & Tran, C. (2010). Rise of social

    commerce: A trail guide for the social commerce pioneer. Retrieved from:

    http://digitalintelligencetoday.com/documents/Altimeter_2010.pdf

Cha, J. (2009). Shopping on social networking web sites: Attitudes toward real versus

    virtual items. *Journal of Interactive Advertising, 10*(1), 77-93. doi:

    10.1080/15252019.2009.10722164

Chen, L., Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: An

    extended technology acceptance perspective. *Information & Management, 39*(8),

    705-719. doi: 10.1016/S0378-7206(01)00127-6

Chuchinprakarn, S. (2011). Application of the theory of reasoned action to on-line

    shopping. *Knowledge Center E-paper Bangkok University*, 1-7.

Clark, C. (1940) (1957). *The conditions of economic progress.* London: MacMillan and

    Co Limited.

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York, NY: John Wiley &

    Sons.

Colman, A. (2015, January). *Theory of reasoned action. A dictionary of psychology* (4th

    ed.). doi: 10.1093/acref/9780199657681.001.0001

Committee on Communication for Behavior Change in the 21st Century (2002).

    Speaking of Health: Assessing Health Communication Strategies for Diverse

    Populations. Doi: 10.17226/10018

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests.

    Psychometrika,16(3), 297-334. doi:10.1007/BF02310555

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of

    information technology. *MIS Quarterly, 13*(3), 319-340. doi: 10.2307/249008

Delafrooz, N., Paim, L. H., & Khatibi, A. (2010). Students' online shopping behavior:

    An empirical study. *Journal of American Science, 6*(1), 137-147.

Dennis, C., Morgan, A., Wright, L. T., & Jayawardhena, C. (2010). The influences of

    social e-shopping in enhancing young women's online shopping

    behaviour. *Journal of Customer Behaviour, 9*(2), 151-174.

Eastin, M. S. (2002). Diffusion of e-commerce: An analysis of the adoption of four e-

    commerce activities. *Telematics and Informatics, 19*(3), 251-267.

Eler, A. (2011, November 25). Give up facebook: You're not a mall. ReadWrite.

    Retrieved from

    http://readwrite.com/2011/11/25/facebook_give_up_social_commerce_will_neve

    r_catch

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of facebook "friends":

    Social capital and college students' use of online social network sites. *Journal of*

    Computer-Mediated Communication, 12(4), 1143-1168. doi: 10.1111/j.1083-

    6101.2007.00367.x

Engel, F., Kollat, T., & Blackwell, D. (1968). *Consumer behavior* (1st ed.). New York,

    NY: Holt, Rinehart and Winston.

Fisher, A. G. (1939). Production, primary, secondary and tertiary. *Economic*

    Record, 15(1), 24-38.

Fourastié, J. (1954). *The great hope of the 20th century*. Cologne: Köln-Deutz.

Fuchs, S., & Sarstedt, M. (2009). Is there a tacit acceptance of student samples in marketing and management research?. *International Journal of Data Analysis Techniques and Strategies*, *2*(1), 62-72.

Fulk, J., Steinfield, C. W., Schmitz, J., & Power, J. G. (1987). A social information processing model of media use in organizations. *Communication Research, 14*(5), 529-552. doi: 10.1177/009365087014005005

Gall, M.D., Gall, J.P., & Borg, W.R. (2007). *Educational research: An introduction* (8th ed.). Boston, NY: Pearson Education.

Gardyn, R. (2002). Educated consumers. *American Demographics, 24*(10), 18-19.

Gefen, D., & Straub, D. W. (2003). Managing user trust in b2c e-services. *e-Service Journal, 2*(2), 7-24.

Harris, L., & Dennis, C. (2011). Engaging customers on facebook: Challenges for e-retailers. *Journal of Consumer Behaviour, 10*(6), 338-346. doi: 10.1002/cb.375

Hassanein, K., & Head, M. (2007). Manipulating perceived social presence through the web interface and its impact on attitude towards online shopping. International *Journal of Human-Computer Studies, 65*(8), 689-708. doi: 10.1016/j.ijhcs.2006.11.018

Hu, P. J., Chau, P. Y., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems, 16*(2), 91-112. doi: 10.1080/07421222.1999.11518247

Huang, S., & Capps, M. (2013). Impact of online social network on American college

students' reading practices. *College Quarterly, 16*(1), 1-14.

Jones, M. A. (1999). Entertaining shopping experiences: An exploratory

investigation. *Journal of Retailing and Consumer Services, 6*(3), 129-139. doi:

10.1016/S0969-6989(98)00028-9

Kamenec, K. (2014, November). 10 Best social shopping sites right now. *PC Magazine*.

Retrieved from

http://www.pcmag.com/article2/0%2c2817%2c2424710%2c00.asp

Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail

survey response rates. *Public Opinion Quarterly, 68*(1), 94-101.

Kim, Y. K. (2002). Consumer value: An application to mall and Internet shopping.

International Journal of Retail & Distribution Management, 30(12), 595-602.

doi: 10.1108/09590550210453075

King, J., Curry, W. A., Meyers, C., Doerfert, D., & Burris, S. (2015). Perceptions of

online swine auction websites: A qualitative study. *Proceedings of the 2015*

American Association for Agricultural Education, 268-271. Retrieved from

http://www.aaaeonline.org/Resources/Documents/National/2015%20Poster%20S

ession%20Proceedings.pdf

King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance

model. *Information & Management, 43*(6), 740-755. doi:

10.1016/j.im.2006.05.003

Knight-McCord, J., Cleary, D., Grant, N., Herron, A., Lacey, T., Livingston, T., & Emanuel, R. (2016). What social media sites do college students use most?. *Journal of Undergraduate Ethnic Minority Psychology, 2*, 21.

Lamb Jr, C. W., & Stem Jr, D. E. (1980). An evaluation of students as surrogates in marketing studies. *Advances in Consumer Research*, *7*(1).

Lester, D. H., Forman, A. M., & Loyd, D. (2006). Internet shopping and buying behavior of college students. *Services Marketing Quarterly, 27*(2), 123-138. doi: 10.1300/J396v27n02_08

Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53. doi: 10.1002/hrdq.1052

Lindner, J. R., Rodriguez, M. T., Strong, R., Jones, D., Layfield, D. (2016). New technologies, practices, and products adoption decisions. *American Association for Agricultural Education National Research Agenda, 2016-2020,* 19-27.

Macdonald, M. (2013). *Which Social Media Platforms Drive the Most Sales? [Infographic]*. Retrieved from https://www.shopify.com/blog/12731545-which-social-media-platforms-drive-the-most-sales-infographic

McGrath, M. A., & Otnes, C. (1995). Unacquainted influencers: When strangers interact in the retail setting. *Journal of Business Research, 32*(3), 261-272. doi: 10.1016/0148-2963(94)00051-F

Monsuwe, T. P., Dellaert, B. G. C., & de Ruyter, K. R. (2004). What drives consumers

    to shop online? A literature review. *International Journal of Services Industry*

    Management, 15(1), 102-121. doi: 10.1108/09564230410523358

Park, N., & Lee, S. (2014). College students' motivations for facebook use and

    psychological outcomes. *Journal of Broadcasting & Electronic Media, 58*(4),

    601-620. doi: 10.1080/08838151.2014.966355

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer

    acceptance of online banking: An extension of the technology acceptance model.

    Internet Research, 14(3), 224-235.

Refuel Agency (2014). College explorer 2014. Retrieved from

    http://www.refuelagency.com/wp-

    content/themes/refuelagency/college_explorer/college_explorer_2014_high_leve

    l_review.pdf

Richardson, B. K., Wang, Z., & Hall, C. A. (2012). Blowing the whistle against greek

    hazing: The theory of reasoned action as a framework for reporting intentions.

    Communication Studies, 63(2), 172-193. doi: 10.1080/10510974.2011.624396

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York, NY: Free Press.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Rogers, D., (2011, September). The future of the social web: social graphs vs. interest

    graphs. Retrieved from https://newsroom.cisco.com/press-release-

    content?type=webcontent&articleId=484141

Rogers, E. M. (1976). New product adoption and diffusion. *Journal of Consumer Research, 2*(4), 290-301.

Sabri, M. F., Othman, M. A., Masud, J., Paim, L., MacDonald, M., & K Hira, T. (2008). Financial behavior and problems among college students in Malaysia: Research and education implication. *Consumer Interests Annual, 54*, 167-170.

Salisbury, W. D., Pearson, R. A., Pearson, A. W., & Miller, D. W. (2001). Perceived security and world wide web purchase intention. *Industrial Management & Data Systems, 101*(4), 165-177. doi: 10.1108/02635570110390071

Schäfers, B. (2002). *Social structure and social change in Germany* (7th ed.). Stuttgart: Lucius und Lucius.

Shen, J. (2012). Social comparison, social presence, and enjoyment in the acceptance of social shopping websites. *Journal of Electronic Commerce Research, 13*(3), 198-212.

Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research, 15*(3), 325-343. doi: http://dx.doi.org.ezproxy.library.tamu.edu/10.1086/209170

Shimp, T. A., & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research, 11*(3), 795-809. doi: 10.1086/209015

Social shopping. (2016, May). Wikipedia, the free encyclopedia. Retrieved from https://en.wikipedia.org/w/index.php?title=Social_shopping&oldid=721205647

Statista. (2013). *Facebook's advertising revenue worldwide from 2012 to 2016 (in billion*

U.S. dollars)*. Retrieved from

http://www.statista.com/statistics/271258/facebooks-advertising-revenue-

worldwide/

Targeting & Segmentation. (n.d.). Wikibooks. Retrieved from

https://en.wikibooks.org/wiki/Marketing/Targeting_%26_Segmentation#Segmen

tation_Variables

Tedeschi, B. (2006, September 11). Like shopping? Social networking? Try social

shopping. New York Times. Retrieved from

http://www.nytimes.com/2006/09/11/technology/11ecom.html?_r=2&ref=busine

ss&oref=slogin&

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation

adoption-implementation: A meta-analysis of findings. *IEEE Transactions on*

Engineering Management, EM-29(1), 28-45. doi:10.1109/tem.1982.6447463

Valente, T. W., & Rogers, E. M. (1995). The origins and development of the diffusion of

innovations paradigm as an example of scientific growth. *Science*

Communication, 16(3), 242-273. doi: 10.1177/1075547095016003002

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating perceived

behavioral control, computer anxiety and enjoyment into the technology

acceptance model. *Information Systems Research, 11*(4), 342-365.

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research

    agenda on interventions. *Decision Sciences, 39*(2), 273-315. doi: 10.1111/j.1540-

    5915.2008.00192.x

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology

    acceptance model: Four longitudinal field studies. *Management Science, 46*(2),

    186-204. doi: 10.1287/mnsc.46.2.186.11926

Virtual Good (n.d.). *Virtual good.* Retrieved from

    http://www.investopedia.com/terms/v/virtual-

    good.asp?ad=dirN&qo=investopediaSiteSearch&qsrc=0&o=40186

Wu, J. H., & Wang, S. C. (2005). What drives mobile commerce?: An empirical

    evaluation of the revised technology acceptance model. *Information &*

    Management, 42(5), 719-729. doi: 10.1016/j.im.2004.07.001

Yin, W. (July, 2010). Social shop till you drop: a quick primer. *GIGAOM*. Retrieved

    from https://gigaom.com/2010/07/11/social-commerce/

APPENDIX A

Acronyms

ALEC. Agricultural Leadership, Education, and Communications

BI. Behavioral intention

C. Compatibility

EBK. Engel, Blackwell and Kollat Model

IAD. Innovation adoption and diffusion

PEOU. Perceived ease of use

PU. Perceived usefulness

PE. Perceived enjoyment

SNW. Social network

SN. Subjective norm

TRA. Theory of Reasoned Action

TAM. Technology Acceptance Model

Table 43

Social Features of Popular Social Shopping Websites

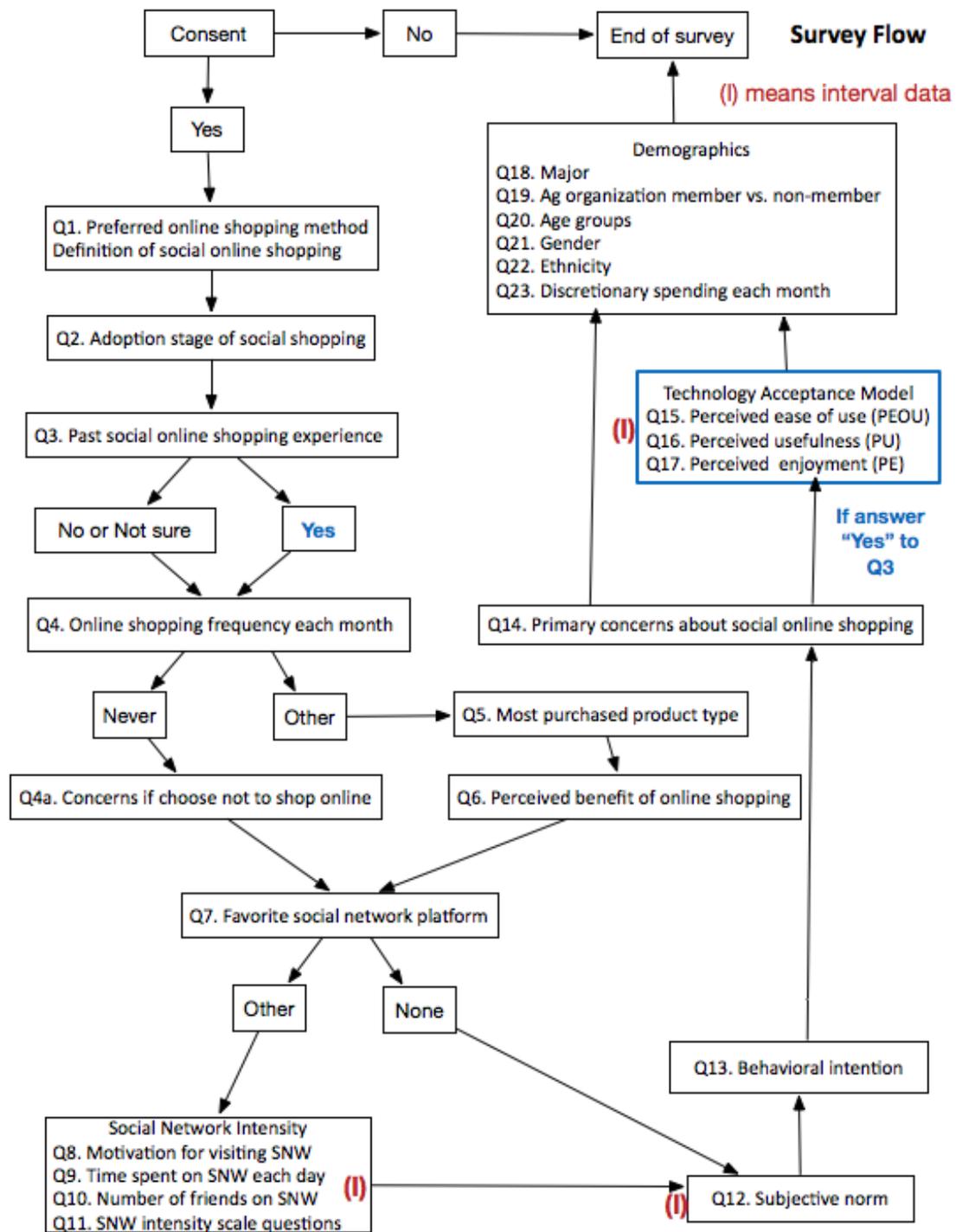| Info				social features										
Website	regular email login	SNW login	invite SNW friends	follow users	follow stores	allow control of wall post	SNW shares style	Curated	user interaction	add own item	add to wishlist	Like item	visible user profile	mobile app
Ownza.com	Y	F	Y	Y	Y	Y	F,P,T	Y	Y	Y	Y	Y	items	Y
Wanelo.com	Y	F	Y	Y	Y	N/A	P	Y	Y	Y	Y	Y	SNWs, items	Y
Shopcade.com	Y	F,T,G	F,T	Y	Y	Y	F,T,G,P	Y	Y	Y	Y	Y	Y	Y
Polyvore.com	Y	F,T,G	?	Y	Y	Y	F,T,Tu,P	?	Y	Y	Y	Y	Y	Y
Fab.com	Y	F	F,T	N	N		F,T,Tu,P		N	N	Y	N	Y	Y
ASOS.com	Y	F	N	N/A	N	Y	F,T,P,G,W	N	Message se	N, but ca	Y	N	N	Y
Pinterest.com	Y	F,T,G,Y	N	Y	Y	?	G,Yah,Email,F,T, St,	Y	Y	Y	Y	Y	F, items	Y
Fancy.com	Y	F,T,G	F,T,G,G	Y	Y	Y	F,T,G,L,	Y	N	Y, and S	Y	Y	N	Y
Etsy.com	Y	F,G	G,Yah	Y	Y	?	T,Tum, F, P	?	Y	Y and sel	Y	Y	Y	Y
Faveable.com	Y	F	N	N	N		F,T,G	Y	Comment o	N	N	Y	Y	N
Opensky.com	Y	F,G	F,G,Yah,A	N	Y	?	N	N	Comment o	N	N	Y	N	Y
Luvocracy	Y		Y	Y						Y				Y

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Figure 1 Survey Flow

TEXAS A&M
UNIVERSITY

DATE: September 09, 2016

MEMORANDUM

TO: James Lindner
TAMU - College Of Agriculture - Ag Leadership, Education & Communication

FROM: Dr. David Martin
Chair, TAMU IRB

SUBJECT: Expedited Approval

Study Number: IRB2016-0616

Title: Attitude towards online social shopping

Date of Determination:

Approval Date: 09/09/2016

Continuing Review Due: 08/01/2017

Expiration Date: 09/01/2017

Documents Reviewed and Approved: Only IRB-stamped approved versions of study materials (e.g., consent forms, recruitment materials, and questionnaires) can be distributed to human participants. Please log into iRIS to download the stamped, approved version of all study materials. If you are unable to locate the stamped version in iRIS, please contact the iRIS Support Team at 979.845.4969 or the IRB liaison assigned to your area.

Submission Components			
Study Document			
Title	Version Number	Version Date	Outcome
Wei Lu Qualtrics Survey-8.30	Version 1.0	08/31/2016	Approved
Reminder email	Version 1.0	08/31/2016	Approved
RecruitingLU	Version 1.0	08/31/2016	Approved
Study Consent Form			
Title	Version Number	Version Date	Outcome
Consent Form-Undergraduate Students' Attitude towards Online Social Shopping	Version 1.1	09/05/2016	Approved

Document of Consent: Waiver approved under 45 CFR 46.117 (c) 1 or 2/ 21 CFR 56.109 (c)1

Figure 2 IRB Application Approval Letter

Submission Approval DATE: October 17, 2016

MEMORANDUM

TO: Theresa PESL Murphrey
ALRSRCH - Agrilife Research - Ag Leadership, Education & Communication

FROM: Dr. David Martin
Chair, TAMU IRB

SUBJECT: Approval for Submission Response for IRB Amendment REF: 045694

Study Number:	IRB2016-0616D
Title:	Attitude towards online social shopping
Initial Application Approval Date:	09/09/2016
Continuing Review Due:	08/01/2017
Expiration Date:	09/01/2017

Documents Reviewed and Approved: Only IRB-stamped approved versions of study materials (e.g., consent forms, recruitment materials, and questionnaires) can be distributed to human participants. Please log into iRIS to download the stamped, approved version of all study materials. If you are unable to locate the stamped version in iRIS, please contact the iRIS Support Team at 979.845.4969 or the IRB liaison assigned to your area.

Submission Components			
Study Document			
Title	Version Number	Version Date	Outcome
Wei Lu Qualtrics survey Oct.13	Version 1.1	10/13/2016	Approved

Document of Consent: Waiver approved under 45 CFR 46.117 (c) 1 or 2/ 21 CFR 56.109 (c)1
Waiver of Consent:

Comments:
- Revised survey has been approved.
- New data collection process approved.
- Shannon Barbeau, Allison Dunn, Stacey Dewald, Jordyn Senkirik, and Matthew Marr have been added as research staff.

Figure 3 IRB Amendment Approval Letter

APPENDIX B

Survey Questionnaire

Consent Online Social Shopping Attitudes of Undergraduate Agricultural Students:
I am conducting a study exploring college students' attitude towards online social shopping and invite you to participate. I am asking that you to review the informed consent information sheet and complete the accompanying questionnaire; your participation will take about 20 minutes. Things you should know about your participation: Your participation is voluntary. You may stop participating at any time. You will not be compensated for participation. Participation involves no more than the minimal risk which occurs during daily life. Questionnaires are coded to allow the researcher to follow-up with non-respondents. Once data collection is over, all codes linking you to this study will be removed. No information about individual responses will be published (only aggregated data). Information about participants will be kept confidential to the extent permitted or required by law. Please contact me if you have any questions about this research project. Thank you.
Wei Lu
Graduate Student
Department of Agricultural Leadership, Education, and Communications
Texas A&M University
luwei1120@tamu.edu

○ I AGREE to participate (I have read the informed consent information sheet and agree to participate)
○ I DO NOT wish to participate

Q1 What is your preferred method of shopping for supplies such as pens, paper, & notebooks?
○ Company websites
○ Go to a physical store
○ Internet-based retailer
○ Mail order

Definition of Social Shopping:
Social shopping is defined as the use of social strategies to anticipate, personalize and energize the shopping experience. Five types of social shopping platforms: 1. Group shopping sites: Groupon, LivingSocial, etc. 2. Shopping communities: Online forums like Dealnews, Slickdeals, Dealsea, etc. 3. Recommendation engines: Amazon.com, Yelp, MakeUpAlley, etc. 4. Social shopping marketplaces: Wanelo.com, Fancy.com, Polyvore.com, etc. 5. Shared shopping mechanisms (a retiring form of social shopping).

Q2 Please choose the statement below that describes you the best.

❍ I have never heard of social online shopping
❍ I have heard of social online shopping, but have not decided whether or not I like or dislike social online shopping
❍ I have decided that I like or dislike social online shopping
❍ I have decided that I will or will not use social online shopping
❍ I am using social online shopping
❍ I have used social online shopping long enough to evaluate whether or not social online shopping will be part of my online purchasing platform

Q3 Have you ever purchased anything on a social shopping website? For example, Amazon, Best Buy, Groupon, Wanelo, etc.

❍ Yes
❍ No
❍ I am not sure

Q4 In a typical month how many times do you shop online?

❍ Never
❍ Less than once a month
❍ Once a month
❍ 2-3 times a month
❍ Once a week
❍ 2-3 times a week
❍ Daily

Q5 What types of products have you purchased online? (check all apply) (Note: All of these items are in the tertiary sector of agriculture.)

❑ Food - Groceries
❑ Food - Beverages
❑ Food - Vouchers for restaurant
❑ Food through Local Seller (i.e., Produce, eggs, meat)
❑ Clothing
❑ Shoes
❑ Accessory (e.g., belt)
❑ Home products (e.g., beddings, tablecloths, etc.)
❑ Farm Equipment
❑ Gift Items (e.g., flowers, steaks, fruit basket, cheese)
❑ Animal food (e.g., pet, farm)
❑ Services (e.g., cooking lessons, horse riding lessons, etc.
❑ Services - Lawn care
❑ Services - Pest Control
❑ Tickets for agricultural-related events
❑ Other _____

Q6 Please indicate which of the following you think is the most important benefit of shopping online?

❍ Saves time.
❍ The ability to compare.
❍ Better price.
❍ Wider selections.
❍ I enjoy browsing through products and finding interesting stuff.
❍ I can shop anytime.

Q4a Why do you NOT like to shop online?

❍ I do not know how to shop online.
❍ Safety concern (personal information, credit card information.)
❍ I like to see the physical product before I make a purchase decision.
❍ I do not trust online sellers.

Q7 Which one of the following social platforms do you use the most?

❍ I am not on any social network.
❍ Ask.fm
❍ ClassMate
❍ Facebook
❍ Flicker
❍ Google+
❍ Instagram
❍ LinkedIn
❍ MeetMe
❍ Meetup
❍ Pinterest
❍ Reddit
❍ Snapchat
❍ Tagged
❍ Tumblr
❍ Twitter
❍ Vine
❍ VK
❍ YouTube
❍ Other (please specify) _____

Q8 The major reason I visit ${q://QID42/ChoiceGroup/SelectedChoicesTextEntry} is?
❍ Seeking friends
❍ Interacting with friends/family
❍ Seeking information or inspiration
❍ Professional use (business/research purpose)
❍ Expressing my opinion/emotion (Seeking social support)
❍ Entertainment (play games, watch videos, etc.)

Q9 How much time do you usually spend
on ${q://QID42/ChoiceGroup/SelectedChoicesTextEntry} each day?
❍ 0-29 minutes per day
❍ 30-59 minutes per day
❍ 1-2 hours per day
❍ 3-4 hours per day
❍ More than 5 hours per day

Q10 Approximately how many friends/connections do you have
on ${q://QID42/ChoiceGroup/SelectedChoicesTextEntry}?
❍ 10 or less
❍ 11–50
❍ 51–100
❍ 101–150
❍ 151–200
❍ 201–250
❍ 251–300
❍ 301–350
❍ 351-400
❍ More than 400

Q11 Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Visiting ${q://QID42/ChoiceGroup/SelectedChoicesTextEntry} is part of my everyday activity.	❍	❍	❍	❍	❍
I am proud to tell people I am on ${q://QID42/ChoiceGroup/SelectedChoicesTextEntry}.	❍	❍	❍	❍	❍
${q://QID42/ChoiceGroup/SelectedChoicesTextEntry} has become part of my daily	❍	❍	❍	❍	❍

routine.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
I feel out of touch when I have not logged onto ${q://QID42/ChoiceGroup/SelectedChoices TextEntry} for a while.	❍	❍	❍	❍	❍
I feel I am part of the ${q://QID42/ChoiceGroup/SelectedChoices TextEntry} community.	❍	❍	❍	❍	❍
I would feel sorry if ${q://QID42/ChoiceGroup/SelectedChoices TextEntry} was shut down.	❍	❍	❍	❍	❍

Q12 Please indicate your level of agreement with the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
Most of my friends think social online shopping is popular.	❍	❍	❍	❍	❍
Most of the people who are important to me think social online shopping is popular.	❍	❍	❍	❍	❍
It is common to my friends to go social online shopping.	❍	❍	❍	❍	❍
Most of my friends think that I should shop on a social shopping website.	❍	❍	❍	❍	❍
Most of the people who	❍	❍	❍	❍	❍

are important to me think that I should shop on a social shopping website.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
Social online shopping is popular among my friends.	○	○	○	○	○
A lot of my friends have been doing social online shopping.	○	○	○	○	○

Q13 Please indicate your level of agreement with the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
I will purchase goods from a social shopping website in the future.	○	○	○	○	○
I will use social online shopping to discover new products.	○	○	○	○	○
I will buy products from a social shopping website.	○	○	○	○	○
I want to get shopping ideas from a socials shopping website.	○	○	○	○	○
I want to find inspirations from	○	○	○	○	○

a social shopping website.					
I can use recommendations from a social shopping website.	○	○	○	○	○
I will go to a social shopping website to see what other people are buying.	○	○	○	○	○

Q14 Please select your primary concern about social online shopping.
○ I have no concerns about social online shopping.
○ I do not feel comfortable using my social network credentials to log onto social shopping websites.
○ I do not see the benefits of social online shopping.
○ I cannot find the product I am looking for on social shopping websites.
○ I do not trust the sellers on social shopping websites.
○ I do not need recommendations when shopping online.
○ I do not like sharing my shopping experience with other people.

Q15 Earlier you indicated that you had purchased something on a social shopping website such as Amazon, Best Buy, Groupon, Wanelo, etc.   Please indicate your level of agreement with the following statements about using social shopping websites.

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Social shopping websites are easy to use.	○	○	○	○	○
My interaction with the social shopping website is clear.	○	○	○	○	○
Learning to use a social	○	○	○	○	○

shopping website is easy.					
It is easy to get a social shopping website to do what I want it to do.	❍	❍	❍	❍	❍
It is simple to use a social shopping website.	❍	❍	❍	❍	❍
It is easy to navigate around a social shopping website.	❍	❍	❍	❍	❍
Using a social shopping website is not complicated.	❍	❍	❍	❍	❍

Q16 Please indicate your level of agreement with the following statements about using social shopping websites.

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Social shopping helps me to discover new products.	❍	❍	❍	❍	❍
Social shopping increases my productivity in discovering products.	❍	❍	❍	❍	❍
Social shopping recommendations are useful.	❍	❍	❍	❍	❍
Social shopping	❍	❍	❍	❍	❍

websites are
helpful to me.

Social online shopping is beneficial to me.	○	○	○	○	○
Social shopping websites help me get shopping ideas.	○	○	○	○	○
Social shopping websites help me get shopping idea more quickly.	○	○	○	○	○

Q17 Please indicate your level of agreement with the following statements about using social shopping websites.

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I have fun shopping on a social shopping website.	○	○	○	○	○
Visitings to social shopping websites are interesting to me.	○	○	○	○	○
Social online shopping is interesting to me.	○	○	○	○	○
Social online shopping is entertaining to me.	○	○	○	○	○
Social online shopping is enjoyable.	○	○	○	○	○
I enjoy social online	○	○	○	○	○

shopping.
I feel happy ❍ ❍ ❍ ❍ ❍
when
browsing
social
shopping
websites.

Q18 What is your major?
❍ AGCJ-Agricultural Communication and Journalism
❍ AGSC-Agricultural Science
❍ ALED-Agricultural Leadership and Development
❍ USAL-LEAD-University Studies-Leadership Studies
❍ Other _____

Q19 Are you (were you used to be) a member of the following organizations? (Check all that apply)
❑ FFA (Future Farmers of America)
❑ Collegiate FFA
❑ FAST (Future Agricultural Science Teachers)
❑ ACT (Agricultural Communicators of Tomorrow)
❑ Ag Ambassadors
❑ Other (please specify) _____

Q20 What year were you born?
Enter four-digit year, example: 1980.

Q21 I consider myself to be
❍ Male
❍ Female

Q22 I consider my ethnicity to be
❍ African American
❍ Asian/ Pacific Islander
❍ Caucasian
❍ Hispanic or Latino
❍ Native American or American Indian
❍ Other (please specify) _____

Q23 What is your discretionary spending each month? (Discretionary spending refers to non-essential purchases which is different than necessities such as food, clothing, and shelter.)
_____ Slide the bar to choose