

## **Linking the Determinants of Online Shopping Behavior, Full Nest Consumers, and Behavioral Intentions - A Conceptual Review and Framework**

**Zhang Xiaoyang, Guo Hui<sup>1</sup>, Li Hongwei and Li Zhihui<sup>2</sup>**

<sup>1,2</sup> Innovation College, North-Chiang Mai University, 50230, Chiang Mai, Thailand

□Corresponding Author

**Article History:** Received: 11 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 10 May 2021

---

**Abstract:** Consumer shopping behavior is a complex process, and several factors affect purchase decisions. In recent times, there is a drastic shift in consumer buying behavior due to technological advancements and mobile shopping applications, and consumers are very much concerned about their purchase decisions of what, where, and how to buy. Online shopping outlets use both push and pull marketing strategies for a wide range of products. Hence, online sellers redefined the business model by making consumers actively visit their online stores even though they do not intend to buy anything. Most of the time, the sellers create the demand traffic; also, impulsive purchases are made by the consumers due to the 'online deals' or 'deal of the day.' Several studies have reported that the family life cycle's role is vital in understanding the consumer market for devising marketing strategies to satisfy various consumer groups' needs. The consumer needs want, and preferences change when they move on to the next stage of the family life cycle. Thus, this study aims to draw a theoretical link between the full nest consumers, online shopping behavior determinants, and online shopping behavioral intentions by proposing a conceptual framework with research propositions. The study identified the key determinants that affect the online shopping behavioral intentions, and the appropriate theoretical linkages were provided with respect to the full nest consumers.

---

**Keywords:** online shopping behavior; full nest consumers; family life cycle; behavioral intention.

---

### **1. Introduction**

The evolution of the internet, information and communication technologies (ICT), and the digital transformation of countries has led to the growth of digital business environments. The terms used in the digital business environment are electronic commerce, electronic business, electronic payment, electronic service, electronic marketing, electronic retailing, and electronic trade. Interchangeably, in the consumer perspective, it is used as online shopping, electronic shopping, internet shopping, and mobile shopping. The digital business environment has led consumers to access a wide variety of products and services. From the seller's point of view, the digital business environment has changed the way of doing business in order to sell their products and services to all parts of the World. Further, the vital point to note is that digitalization in both developed and developing countries enabled people to use the internet and smartphones actively as it became an essential part of their lives. Due to the Covid-19 crisis, online shopping has been drastically increasing, and it became an essential part of the consumers' life as it enables the consumers to shop online 24/7 all around the World with the assistance of chatbots and artificial intelligence to address the consumer demand and changing needs of the consumers.

Recently, the covid-19 pandemic has largely impacted people's lives and changed the habits, behavior, lifestyle, way of doing business, and consumption patterns. Also, consumer buying behavior is slowly transforming to a new stage. According to Kotler (2020), once the covid-19 crisis settles down, the consumers would be more aware of 'what they consume and how much they need to consume.' Biggs, Tawfik, Avasare, Fovargue, Shavdia, and Parker (2020) pointed out that the business environment shifts we thought to happen in five years or more occur in five months leading to grocery e-commerce. Similarly, in a Deloitte report, Sheehan (2020) stated that consumers from all demographics, particularly in the age group of above 50+, have shifted to digital and delivery. This trend is expected to continue even after the crisis is over and would have a long-term impact on business. Online grocery retailers must pay attention to the transformation of consumer buying behavior; and be more proactive in designing strategies around the trends and consumer behavior to succeed in the long run (Biggs et al., 2020).

The consumer buying behavior differs in the physical purchase and online mode. Online shopping requires an intensive search of products and services for comparison between sellers and the best deals. However, online shopping is increasing drastically with positive growth, although some negative aspects like the safety of transactions and reliability are negative. Several factors influence consumers' shopping behavior. Similarly, there are several factors or determinants that influence the online shopping behavior of consumers.

Further, online purchase decisions are also influenced by family members, relatives, friends, and fellow shoppers through 'electronic-word of mouth (EWoM).' More importantly, smartphones and artificial intelligence also play a significant role in influencing consumers' online shopping behavior. Subsequently, different stages

in the family life cycle (FLC) would also influence consumers' buying behavior towards certain products and services.

The family life cycle (FLC) is a concept borrowed from sociology for consumer behavior research applications. The FLC is widely used in marketing and consumer behavior literature. The FLC portrays the stages of a typical family structure. It is widely used in consumer behavior research as consumer characteristics and purchasing behavior varies in each stage of the family life cycle (FLC). Several consumer behavior models exist in the literature. In addition to that, over the past decade, several types of research have been conducted with a specific focus to analyze the online shopping behavior or e-shopping behavior of consumers. Thus, this study aims to develop a theoretical framework and research propositions by linking the online shopping behavior and family life cycle with a special focus on full nest consumers. Further, to do so, the authors would review the existing family life cycle and consumer behavior literature and propose suitable factors and analyze the impact of the family life cycle impact on online shopping behavior.

## 2. Concept of Family

Roberts, Voli, and Johnson (2015) pointed out that "the value in defining family is clearly in terms of its viability as a consumption unit and its participation in the marketplace." Trost (1990) pointed out that the concept 'family' are "not only the persons from an immediate nuclear family, but also kin of various sorts, friends, and pets." Further, the authors Roberts, Voli, and Johnson (2015) presented the inventory of variables for defining family as a consumption unit and influences of those variables in purchase decisions. They also defined the term 'family' as a combination of several variables such as age, marital status, presence or absence of children, modified notions of kinship structure of the household, age of all household members, numbers present within the household and also included the variable financial resources element mentioned by Wagner and Hanna (1983) to conceptualize the term family.

## 3. Family Life Cycle

The concept of the family life cycle (FLC) was first introduced during the 1930s in the 'systematic sourcebook in rural sociology' by Sorokin, Zimmerman, and Galpin (1931) and also noted in other studies related to family research (Loomis, 1936 and Lansing and Kish, 1957). For the past 70 years, the family life cycle concept is very popular and widely discussed in consumer expenditure research (Lansing and Morgan, 1955; Wells and Gubar, 1966; Derrick and Leheld, 1980; Wagner and Hanna, 1983; Schaninger and Danko, 1993; Van Rooyen and Du Plessis, 2003, and Robert, Voli, and Johnson, 2015, Bures, 2020, Shannon, Sthienrapapayut, Moschis, Teichert and Balikcioglu, 2020; Kim, Baek, and Choe, 2020; Amirtha, Sivakumar, and Hwang, 2021). Prior studies on FLC (Lansing and Morgan, 1955; Wells and Gubar, 1966; Derrick and Leheld, 1980; Arndt, 1979; Landon and Locander, 1979; and Jain 1975) have been conducted in various sectors such as consumer durables and housing, services, leisure/recreation, and shopping to analyze the consumer expenditure patterns. The family life cycle concept is used in consumer and marketing research to explain consumer economic behavior and expenditure behavior (Xiao, 1996). This FLC concept was introduced to the marketers by Lansing and Morgan (1955) using a seven-stage family life cycle model with reference purchase of durable goods to examine the family's financial position. FLC is used to study the financial characteristics and expenditure patterns of the family. The family life cycle variables represent "the effects of family composition on expenditures" (Wagner and Hanna, 1983).

The evolution of the family life cycle (FLC) was presented by Murphy and Staples (1979) as moving from the foundation era to the refinement era. The authors stated that the foundation era consisted of three important prominent studies conducted by the authors (Sorokin, Zimmerman, and Galpin, 1931 (Newly married couples, Couples with one or more children, Couples with one more self-supporting children, and Couples who are growing old ); Kirkpatrick, Cowles, and Tough, 1934 (Preschool family, Grade school family, High school family, and All adult family); and Loomis, 1936 (Childless couples, Families with children (elder child under 14), Families with older children (Over 14 and less than 36 years of age), and Old families) with four stages each. Next, the authors proposed the expansion era, which consisted of three significant studies conducted by the authors (Bigelow, 1942 (Establishment, Child-bearing and preschool period, Elementary school period, High school period, College, Period of recovery, and period of retirement); Glick 1947 (First Marriage, Birth of a first child, Birth of last-child, Marriage of first child, Marriage of last-child, Death of husband or wife, and Death of Spouse; and Duvall and Hill, 1948 (Childless, Birth of first to last-child, School-age, Birth of the last child to launching, Contracting (first launched to last launched, Aging companions (no children at home), One partner deceased)) with seven stages each. Finally, the refinement era consisted of three notable studies by the authors (Rodgers, 1962 (with 10 stages and 19 subcategories); Wells and Gubar, 1966 (Bachelor stage (young single people who stay away from home), Newly married couples (with no children), Full nest I (youngest child under 6), Full nest II (youngest child 6 or over), Full nest III (Older married couples with dependent children), Empty nest I (no children living at home, head in labor force), Empty nest II (head retired), Solitary survivor (in labor force), Solitary survivor (retired) with 9 stages; and Duvall, 1971 postulated 8 stages (Married couples (without children), Childbearing families (oldest child under 30 months, Families with preschool children (oldest, from

## Linking the Determinants of Online Shopping Behavior, Full Nest Consumers, and Behavioral Intentions - A Conceptual Review and Framework

---

2.6 years to 6 years), Families with school children (oldest, from 6 years to 13 years), Families with teenagers (oldest, from 13 years to 20 years), Families as launching centers, Middle-aged parents (empty nest to retirement), and Aging family members (retirement to death of both spouses). The authors' Murphy and Staples (1979) noted that the family life cycle stages have increased since the expansion era. Thus, the authors conceptualized the modernized family life cycle, which consisted of five stages with thirteen subcategories that utilized "the age of household head, marital status, and, to a lesser extent, children's ages to determine the length of the stages." They reviewed the evolution of FLCs, which laid a strong foundation for the literature, emphasizing consumer behavior across the FLC stages. The prominent and unique features of this modernized FLC are recognition of divorce and childless options. Thus, based on the prior studies and key insights from Murphy and Staples (1979) study, using family life cycle in consumer behavior research is valuable, and the changes in family composition and comprehensive lifestyle a recommends for the revision or inclusion of important variables in FLC.

Despite its popularity, there are critics towards FLC. Ferber (1979) commented that "income and spending patterns are influenced by many different variables, including education, occupation, age, and family composition; plus the fact that a major determinant of expenditure allocation is the level of income." Further, he pointed out that the family life cycle concept and the alternative definitions were not tested for various products and services in current living conditions. Wagner and Hanna (1983) stated that traditional FLC is an outdated concept as the new types of family structure emerged in its way. The authors Roberts, Voli, and Johnson (2015) explained that the traditional FLC does not include the variables such as the number of children and the number of persons living in the family.

However, it is observed that the traditional FLC does not include the variables namely, the couple without children, single parent, dependent home-maidens, emotional attachment with friends and their family, lover, living relationship partner, roommates, colleagues, neighbors, pets, babies of kins, and dependent grandparents, parents, and dependent children. This is also pointed out by Roberts et al. (2015) as the arising kinship or the extended families, and further specified that traditional FLC does not consider the other dependents or the young adults returning back home. The authors' Pol and Rader (1986) stated that the FLC is "operationalized as a static classificatory scheme and therefore cannot account for changing family structure, and researchers have failed to link family life cycle to the concept lifestyle - another concept so crucial to explaining variations in buyer behavior." Thus, without having the complete sets of information about the family characteristics, it is difficult for behavior to predict the demand or consumption for a specific product or service that a family will require. FLC is a powerful tool if it could capture 'the effects of changes in income and family composition on expenditures' (Wagner and Hanna, 1983). In real life, the individuals will not follow the same expenditure patterns for food, clothing, durables, leisure, and all other services. The family composition in the respective stages would contribute to the family expenditure in varying patterns for the same or different products and services.

The researchers in the field of consumer behavior and marketing have suggested the inclusion of important variables for increasing the FLC stages to accommodate the changes in the traditional family, namely, single-parent households, childless married couples (Murphy and Staples 1979; Stampfl 1978; Gilly and Enis 1982; Wagner and Hanna 1983). Gilly and Enis (1982) observed the changes happening in the traditional FLC and other emerging life cycle choices to women. The authors pointed out the importance of redefining the traditional FLC due to the emerging changes observed in the traditional family forms cited above. There were several critics observed in the literature for defining the stages of FLC; thus, Derrick and Lehfeld (1980) pondered that there is a gap in the literature that failed to explore the changing patterns of household consumption behavior when they move on to the following stages in the life cycle. Also, they offered a variety of alternatives for alleviating the problem in defining the family life cycle ranging from adding new stages in the FLC or revised FLC (Murphy and Staples, 1979). Therefore the researchers should be able to accommodate the changes by deciding on the inclusion of important variables in determining the stages of the family that best describes the family and formulating the family stages for developing a model that explains the form of consumer behavior. Stampfl (1978) opined that a set of variables must explain consumer behavior instead of using a single variable. Thus, Wagner and Hanna (1983) stated that the proposed revisions in the increasing the family life cycle stages are considered useful in predicting the expenditures of the family for the goods and services.

The study by Schaninger and Danko (1993) compared the FLC models of Duvall (1971), Well and Gubar (1966), Murphy and Staples (1979), and Gilly and Enis (1982) conceptually and empirically to identify the model that best satisfies the market segmentation needs. The authors concluded that Gilly and Enis (1982) FLC model with eleven stages outperformed the other models nearly in all the households by including the important variables or non-traditional family paths such as "delayed marriage and parenthood, childlessness, and remarriage and is the only model to include middle-aged or older bachelors, never-married or widowed single parents, cohabitating couples, and mature nest families."

Thus, this study would adopt the full nest categories including delayed full nest from the Gilly and Enis (1982): Bachelor I, Newlywed couple, Full Nest I (Youngest child less than six years of age), Full Nest II

(youngest child six years or over), Single Parent I, Single Parent II, Bachelor II, Childless couple, Delayed Full Nest (middle-aged couples with a youngest child less than six years of Age, Full Nest III (all children six years of age or older), Single Parent, Bachelor III, Empty Nest, Other.

#### 4. Overview of Consumer Behavior

The consumer behavior field is relatively new and emerged during the 1960s. Later, the field expanded by embracing theories and methods from psychology, sociology, anthropology, and statistics. Due to the high emphasis on understanding the individual consumer's thoughts, desires, and experiences, academic researches started focusing on thought processes and decision making of consumers rather than focusing only on strategies and decisions of marketing managers (Malter, Holbrook, Kahn, Parker, and Lehmann, 2020). The authors Zaichkowsky (1991) noted that "the 1940s view of the consumer in the marketplace was rooted in economic theory." Between the 1930s to 1940s, marketing scholars focused on consumer expenditure. Later, the transformation from mass marketing to market segmentation took place. The author presented the history of approaches to consumer decision-making. It explained, "how consumers make purchase decisions have evolved from the economic paradigm of the 1940s, through the irrational consumer of the 1950s and 1960s, to the information processor of the 1970s, up to the 1980s cognitive miser." The authors also stated that the consumers in the future will have a unique theoretical decision model that will emerge from the decision-making environment that is yet to arrive.

The American Marketing Association refers, consumer behavior as the study of how customers, both individuals, and organizations, satisfy their needs and wants by choosing, purchasing, using, and disposing of goods, ideas and services. Engel, Kollat, and Miniard (1986) defined consumer behavior as "those acts of individuals directly involved in obtaining, using, and disposing of economic goods and services, including the decision processes that precede and determine these acts." Henry Assael distinguished four types of consumer buying behavior: complex buying behavior, dissonance reducing buying behavior, habitual buying behavior, and variety-seeking buying behavior (Goswami and Baishya, 2019).

Several consumer behavior models explained the decision-making process of consumers. The models include the Nicosia Model, Howard – Sheth Model, Engel Kollat Blackwell Model, Sheth-family decision-making model, Bettman's information processing model of consumer choice Stimulus-Response Model. These models were compiled and explained in detail by Goswami and Baishya (2019). The Nicosia model (1966) focuses on the relationship between the firm and the potential consumers. The model's design is interactive, where the firm influences the consumer, and the consumer influences the firm. It is of four fields: the firm's attributes and the consumer's attributes, search and evaluation, the act of the purchase, and feedback. The Howard-Sheth model (1969) proposed three levels of decision making, namely, extensive problem solving (consumers beliefs and knowledge are limited and active information search), limiting problem-solving (consumers knowledge and beliefs are partial, not able to assess the brand differences), and habitual response behavior (consumers knowledge and beliefs are established and lead to purchase of one particular brand). The model consists of four major variables such as inputs, perceptual and learning constructs, outputs, and external variables. The Engel Kollat Blackwell Model (1968) consists of four parts: information input, information processing, decision process, and variables influencing the decision process. This model explains that the consumer decision-making process is influenced by the environment, individual differences, and psychological processes. Later, Engel, Blackwell, and Miniard (1990) model was developed based on the Engel Kollat and Blackwell model; and it consisted of seven stage decision-making process that starts with need recognition, information search, pre-purchase evaluation of products and services, purchase, consumption, postpurchase consumption evaluation, and divestment. The Sheth (1974) family decision-making model conceptualized the theoretical framework for family buying decisions. He suggested that joint family decision-making is more prevalent in middle-class families, newly married couples, perceived risk in buying decisions, and importance of purchase to family. Bettman's (1979) Information Processing Model of Consumer Choice model emphasizes that consumers rarely involve in complex analysis of various alternatives as their information processing capacity is limited, and thus they make simple decisions. This model has seven stages: processing capacity, motivation, attention and perceptual encoding, information acquisition and evaluation, memory, decision process, consumption, and learning process. Finally, the stimulus-response model describes that the environmental and marketing mix stimuli enter the buyer's black box (buyer's mind) and produce purchase responses or other choices (Ramya and Mohamed Ali, 2016). Thus, it is observed that each model helped to understand the developments in consumer buying behavior research. In general, for certain high involvement products and services, it is observed that consumers go through the five stages (Kotler, 2012) for buying decision-making process viz. need recognition, information search, evaluation of alternatives, purchase decision, and postpurchase behavior. Further, several factors influence consumer buying behavior, such as personal, psychological, cultural, social, economic, political, and technological.

## 5. Online shopping behavior

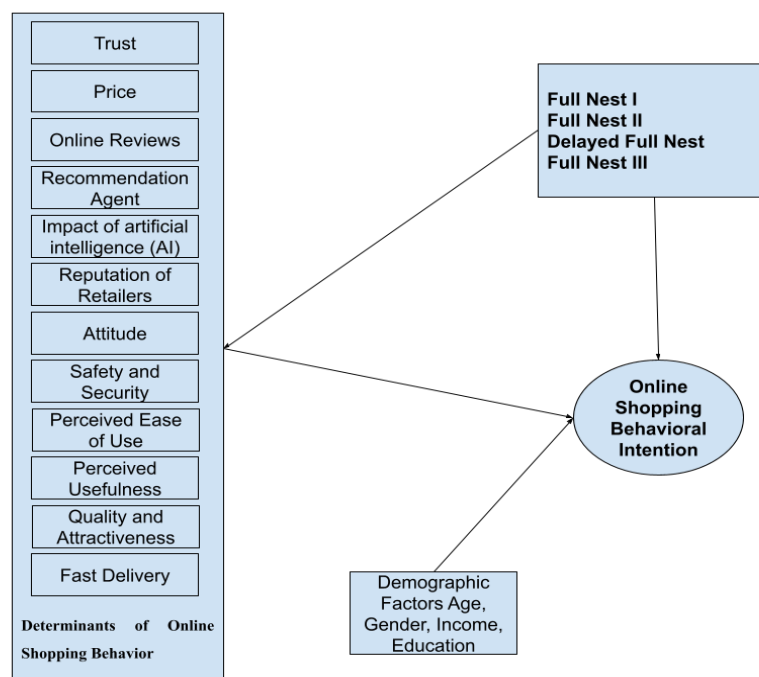
Shopping involves time, energy, and money. Shopping is an interesting activity in a family without children, where they have enough free time and would like to enjoy their shopping in a physical store atmosphere rather than in an online environment (Amirtha and Sivakumar, 2018). In recent years, "the technological changes have significantly influenced the nature of consumption as the customer journey has transitioned to include more interaction on digital platforms that complements interaction in physical stores." The drastic shift has enforced a conceptual challenge in understanding the technological changes which affect consumption. The authors raised the question, "Does the medium through which consumption occurs fundamentally alter the psychological and social processes identified in earlier research?"

Moreover, the authors opined that this shift enables marketers and researchers to collect more data at various stages of the consumer journey. Thus, this helps to analyze the consumer behavior using various ways that are not done before the transition (Malter, Holbrook, Kahn, Parker, and Lehmann, 2020). As a result of this, new sources of data, improved robust analytical tools with improved tracking and prediction of consumer acquisition, retention and consumption rates (Ding, DeSarbo, Hanssens, Jedidi, Lynch, and Lehmann, 2020), new methods, and improved models and perspectives emerged in consumer behavior research.

Consumers exhibit online shopping behavior during their online purchases, which is influenced by several factors that may or may not end up in a purchase. The online purchase experience may be positive or negative. Due to the emergence of online retail models, many consumer researchers focus on conceptualizing and analyzing online shopping behavior. The previous studies either conceptualized new theory or adopted the existing models related to technology such as Theory of Reasoned Action (TRA: Fishbein and Ajzen, 1975), Theory of Planned Behavior (TPB: Ajzen, 1991), and Technology Acceptance Model (TAM: Davis, 1989). This study considered the few notable studies related to online shopping behavior conducted in the past five years due to the shift in consumption and lifestyle patterns and recent developments in technology. However, Hostler, Yoon, and Guimaraes (2012) study is an exemption and considered for the study as it assessed the crucial factor in recent times. They assessed the impact of a recommendation agent (RA) on consumer shopping. The results of their study indicated that RA affects product promotion effectiveness. The study by Baubonienė and Gulevičiūtė (2015) explored the factors that encourage consumers to shop online by analyzing those advantages such as security, fast delivery, comparable price, convenience, lower prices, and a wider choice. Their study results indicated that the major factors influencing consumers' online shopping behavior are convenience, simplicity, and better price. The socio-demographic characteristics are noted as a major factor that influences online shopping. Their analysis revealed that men shop more through online mode because of the lower price, and the respondents in the age group of 25–35 years more often shop online due to lack of time and availability of a wide range of products. Nittala (2015) analyzed the factors influencing the online shopping behavior of urban consumers in India. The study found that perceived risk and price positively influence online shopping behavior, whereas positive attitude, product risk, and financial risk negatively influence online shopping behavior. The study by Shahzad (2015) focused on five online factors: financial risk, product performance risk, delivery risk, trust and security, and website design. His research findings revealed that website design is the most influential and significant factor, whereas the product performance risk and trust & security significantly impact consumers' online shopping behavior. The study also indicated that the factors financial risk and delivery risk have no significant impact on consumers' online shopping behavior. Lim, Osman, Salahuddin, Romle, and Abdullah (2016) determined the relationship between subjective norms, perceived usefulness, and online shopping behavior while mediated by purchase intention. Their study concluded that subjective norm and perceived usefulness have a significant positive influence on online purchase intention, whereas subjective norm and perceived usefulness have an insignificant negative impact on online shopping behavior. Sivakumar and Gunasekaran (2017) conceptualized millennial consumers' online shopping behavior with four factors: consumer innovativeness, perceived benefits, perceived risks, attitude, and intention. Their study results revealed that high quality and attractiveness of the site is the most important factor that influences customer satisfaction level, while the other factors convenience, cost-effective and rich experience; website layout with comprehensive information and promised delivery; innovative products and time-saving) showed a moderate relationship with online customer satisfaction. The authors concluded that the factors influencing millennial customers' online shopping behavior (i.e., quality and attractiveness; convenience, cost-effective, and rich experience; innovative products; timesaving) are statistically significant in influencing the customer satisfaction level. Whereas the factors: quality and attractiveness; and convenience, cost-effective, and rich experience were the most dominant factors that influence overall satisfaction; while the factor website layout with comprehensive information and promised delivery does not influence customer satisfaction of online shopping customers. The study by Dakduk, Horst, Santalla, Molina, and Malavé (2017) integrated and explained the intentions to shop online in Colombia using a theoretical integration of TRA, TPB, TAM in Columbia to determine the purchase intention of internet users. Their study results confirmed that the intention to purchase online is based on the consumer attitudes towards e-commerce, which are explained by the variables, namely, perceived usefulness, perceived use of use, and subjective norms. Amirtha and Sivakumar (2018) conducted a study on family life cycle stage influences of e-

shopping acceptance by Indian women using the technology acceptance model (perceived usefulness, perceived ease of use, attitude, and behavioral intention). They found that the different FLC stages have a significant impact on the e-shopping behavior of women. Also, their study pointed out that families with younger children choose to shop online. Sharmila and Dhanishta (2018) developed a conceptual framework and empirically tested the factors influencing online shopping behavior. Their study utilized various factors such as demographic, TAM variables, TRA and TPB variables, retailers' reputation, trust, and price. Their study revealed that perceived ease of use, perceived usefulness, subjective norms, behavioral intention, and attitudes influence consumers' online shopping behavior. The authors Wu, Ke, and Nguyen (2018) analyzed the online shopping behavior using utilitarian and hedonic perspectives. Also, they developed a research framework that integrates the three most important variables, such as value, trust, and attitude, that may affect consumers' online purchasing behaviors. Their constructs consisted of several factors, namely: hedonic related website design, functional related website design, hedonic value (mediating variable), emotional trust (mediating variable), utilitarian value (mediating variable), rational trust (mediating variable), affective based attitude, cognitive-based behaviors personality (moderating variable), and electronic word of mouth. Their study results indicated that the attitude formation plays a crucial role in the determinants of the consumers' online shopping decision making. The study by Salim, Alfansi, Dart, Anggarawati and Amin (2019) found that consumers' perceived risk has a negative effect on shopping intention, and consumer trust has a positive effect on shopping intention. Vasić, Kilibarda, and Kaurin (2019) analyzed the online shopping determinants on consumer satisfaction. The authors developed a conceptual model with seven variables: security, information availability, shipping, quality, pricing, time, and customer satisfaction. The model was tested and validated through CFA. Their study results confirmed that the variables shipping, pricing, and information availability have the greatest impact on e-customer satisfaction in the Serbian market. Whereas the variables quality, time, and safety attributed to lower impact. The authors Ventri and Kolbe (2020) investigated the online purchase intention in emerging markets by focusing on the impact of perceived usefulness of online reviews, trust, and perceived risk. The authors found that the perceived usefulness of online reviews influences trust and online purchase intention. Their study also reported that the variable trust has an inverse relationship with perceived risk and positively influences online purchase intention, whereas the variable perceived risk does not directly influence online purchase intention. The results suggest that companies should seek to enhance customers to share their positive online opinions to improve trust and encourage online purchases. Nagy and Hajdú (2021) used the TAM model for investigating consumer acceptance of the use of Artificial Intelligence in online shopping. They used various factors such as perceived usefulness, perceived ease of use, trust, attitude, and behavioral intention. Their study noted that the factor trust was one of the major factors influencing consumer attitudes towards Artificial Intelligence. The above studies discussed the major factors that influence the online shopping behavior of consumers. Based on the prior studies, the conceptual framework was developed and depicted along with the major factors that influence online shopping behavioral intention.

### Framework and Propositions



**Figure 1.** Conceptual Framework

## Linking the Determinants of Online Shopping Behavior, Full Nest Consumers, and Behavioral Intentions - A Conceptual Review and Framework

---

The below Table1 presents the meaning, definition, and propositions of key factors.

**Table 1.** Meaning, definitions, and propositions.

S. No.	Meaning and Definition of Key Factors	Propositions
1	<b>Trust:</b> Li, Kim, and Park (2007) defined trust or consumer trust as “a set of specific beliefs dealing primarily with the integrity, benevolence, and ability of another party.”	The consumer trust in the online shopping website affects the online shopping behavioral intention of consumers.
2	<b>Price:</b> The price of the product on the online shopping website which is comparatively less than the physical store with seasonal deals and discounts. As there are so many online sellers in the marketplace it is easy to make a comparison of the price.	The price of the product in the online store influences the online shopping behavioral intention of consumers.
3	<b>Online Reviews:</b> Online reviews are the ratings and review comments given by the other consumer for a particular product. The consumers are able to interact with each other in the online marketplace.	The online reviews and ratings for a particular product affects the online shopping behavioral intention of consumers.
4	<b>Recommendation Agent:</b> Usually, online shopping websites like Amazon will have a recommendation agent that makes people visit the product/brand page and sometimes makes people purchase. It suggests similar products or informs consumers that other consumers bought these products together with your chosen product. RA is used for promoting products.	The recommendation agent in the online shopping website influences online shopping behavioral intention of consumers.
5	<b>Impact of Artificial Intelligence:</b> Artificial intelligence creates an impact on online shopping behavior by understanding the product or information search made by the users in the websites or search engines and providing personalized market offerings. Also, in other ways, the user activity is monitored in social media and mobile phones and provides alternative shopping routes through promotions. AI also analyzes the big data of consumer shopping behavior and interacts with both sellers and consumers for product promotions and personalized emails for improving the shopping experience.	Artificial intelligence creates a positive impact on online shopping behavioral intention of consumers.
6	<b>Reputation of retailers:</b> Reputation of the retailers indicates the good name and popularity of online sellers in the marketplace.	The reputation of retailers in online marketplace affects the online shopping behavioral intention of consumers.
7	<b>Attitude:</b> Fishbein and Ajzen (1975) defined attitude as an “Individual’s positive or negative feeling about performing the target behavior”	The consumers attitude towards an online store affects the online shopping behavioral intention of consumers.
8	<b>Safety and Security:</b> The website must be safe to use and highly secure with privacy protection measures. As consumers are very much aware in recent times, they can scrutinize the websites that are safe and secure to make purchases.	The safety and security of the online shopping website influences online shopping behavioral intention of consumers.

9	<p><b>Perceived Ease of Use:</b> Davis (1989) defined Perceived ease of use, as "the degree to which a person believes that using a particular system would be free of effort." Here it implies ease of use of online shopping websites (Amirtha and Sivakumar, 2018).</p>	<p>The perceived ease of use influences the consumers online shopping behavioral intention.</p>
10	<p><b>Perceived Usefulness:</b> Davis (1989) defined Perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance." Here it means the shopping performance or shopping effectiveness of consumers (Amirtha and Sivakumar, 2018)</p>	<p>The perceived usefulness influences the consumers online shopping behavioral intention.</p>
11	<p><b>Quality and Attractiveness:</b> Quality is referred to as the product conforms to consumer requirements. Attractiveness is referred to here as the ability of online shopping websites or online stores to instigate consumers to visit the website/store or make online purchases.</p>	<p>The quality of the product and attractiveness of the website or online store influences consumers' online shopping behavioral intention.</p>
12	<p><b>Fast Delivery:</b> Fast delivery is referred to as delivering products to the consumers as soon as possible by coordinating with the sellers and logistics service providers</p>	<p>Delivery makes a significant impact on the online shopping behavioral intentions of consumers.</p>
13	<p><b>Demographic factors Age, Gender, Income, and Education</b></p>	<p>The demographic factors age, gender, income, and education influence online shopping behavioral intentions of consumers.</p>
14	<p><b>Full Nest Consumers</b>                  Full Nest I (Married couple with Youngest Child less than 6 years of age)                  Full Nest II (Married couple with Youngest Child 6 years of age or over)                  Delayed Full Nest (Middle-Aged couples with the youngest child less than 6 years of age)                  Full Nest III (Married couple with all Children 6 years of age or older)</p>	<p>Full Nest I, Full Nest II, Delayed Full Nest, and Full Nest III affects the determinants (trust, price, online reviews, recommendation agent, impact of artificial intelligence, reputation of retailers, attitude, safety and security, perceived ease of use, perceived usefulness, quality and attractiveness, fast delivery) of online shopping behavior and behavioral intentions.</p>
15	<p><b>Behavioral Intention:</b> Ajzen (1991) defined intention as "To the extent that a person has the required opportunities and resources, and intends to perform the behavior, he or she should succeed in doing so." Ajzen (1985) defined "intention in terms of trying to perform a given behavior rather than in relation to actual performance."</p>	

## 6. Conclusion

This study aimed to draw theoretical linkages between full nest consumers, online shopping behavior determinants, and behavioral intentions. After reviewing the prior studies, it was evident that FLC and the key factor determinants have strong theoretical and empirical evidence. This study compiled and synthesized the twelve key determinant factors according to the recent developments and shifts in consumer shopping behavior. The consumer shopping behavior would vary in each stage of the FLC; the bigger consumer spending would happen in the full nest stage. Hence it was considered for this study. There are various established models for consumer behavior. However, it is challenging to conceptualize online shopping behavior for long-term use and applications, as technological advancements continuously occur. There are very limited studies that link the family life cycle and e-shopping behavior. Thus, this conceptual framework would be used for further testing and validating the model empirically. The major limitation of this study is it does not test the model empirically.



Future studies may focus on testing the model empirically and analyze the relationship between the key factors and the family life cycle. Also, several product categories could be studied along with the family life cycle to analyze the full nest consumers' shopping frequency and spending patterns.

### References

1. Amirtha, R. and Sivakumar, V.J. (2018) Does family life cycle stage influence eshopping acceptance by Indian women? An examination using the technology acceptance model. *Behaviour & Information Technology*, 37(3), 267-294, DOI: 10.1080/0144929X.2018.1434560
2. Amirtha, R., Sivakumar, V. J., & Hwang, Y. (2021). Influence of Perceived Risk Dimensions on e-Shopping Behavioural Intention among Women—A Family Life Cycle Stage Perspective. *Journal of Theoretical and Applied Electronic Commerce Research*, 16, 320-355. Doi:10.3390/jtaer16030022
3. Arndt, J. (1979). Family Life Cycle As a Determinant of Size and Composition of Household Expenditures. *NA - Advances in Consumer Research*, Volume 06, editions. William L. Wilkie, Ann Arbor, MI: Association for Consumer Research, Pages: 128-132.
4. Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Actionócontrol: From cognition to behavior* (pp. 11639). Heidelberg: Springer.
5. Ajzen, I. (1991). Theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.
6. Baubonienė, Ž., & Gulevičiūtė, G. (2015). E-commerce factors influencing consumers 'online shopping decision. *SOCIAL TECHNOLOGIES*, 5(1), p. 74–81. doi:10.13165/ST-15-5-1-06
7. Bettman, J. R. (1979). Memory Factors in Consumer Choice: A Review, *Journal of Marketing*, 43(2), 37-53.
8. Bigelow, H. F. (1942). Money and Marriage. In *Marriage and the Family* editions. Howard Becker and Reuben Hill, Boston: Heath and Company, 382-386
9. Biggs, C., Tawfik, K., Avasare, A., Fovargue, H., Shavdia, D., and Parker, G. (2020). The \$2.5 Trillion Opportunity for Grocers That Are First to the Future. Retrieved from: <https://www.bcg.com/publications/2020/understanding-how-covid-19-is-radically-transforming-grocery-retail-business-models>
10. Bures, R. M. (2021). Integrating Pets into the Family Life Cycle. In *Well-Being Over the Life Course* (pp. 11-23). Springer, Cham.
11. Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *Management Information System Quarterly*, 13(3), 319-340.
12. Dakduk, S., Horst, E. T., Santalla, Z., Molina, G., & Malavé, J. (2017). Customer behavior in electronic commerce: a Bayesian approach. *Journal of theoretical and applied electronic commerce research*, 12(2), 1-20. DOI: 10.4067/S0718-18762017000200002
13. Derrick, F. W., & Lehfeld, A. K. (1980). The family life cycle: An alternative approach. *Journal of Consumer Research*, 7(2), 214-217.
14. Ding, Y., DeSarbo, W. S., Hanssens, D. M., Jedidi, K., Lynch, J. G., & Lehmann, D. R. (2020). The past, present, and future of measurement and methods in marketing analysis. *Marketing Letters*, 31, 175-186. <https://doi.org/10.1007/s11002-020-09527-7>
15. Duvall, E.M. and Hill, R. (1948). Report of the Committee on the Dynamics of Family Interaction. In *National Conference on Family Life*, Mimeo-graphed, Washington, DC.
16. Duvall, E. M. (1957). *Family development*. Philadelphia: Lippincott.
17. Engel, J.F., Kollat, D.T. , and Blackwell, R.D. (1968). *Consumer Behavior*. New York.
18. Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1990). *Consumer behavior*. Dryden Press.
19. Ferber, R. (1979). Comments on papers on life cycle analysis. *NA - Advances in Consumer Research*, Volume 6 editions, William L. Wilkie, Ann Arbor, MI: Association for Consumer Research, Pages: 146-148.
20. Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Boston, MA: Addison-Wesley.
21. Gilly, M. C., & Enis, B. M. (1982). Recycling the family life cycle: A proposal for redefinition. *NA - Advances in Consumer Research* Volume 09, editions, Andrew Mitchell, Ann Arbor, MI: Association for Consumer Research, Pages: 271-276.

22. Glick, P. C. (1947). The Family Cycle. *American Sociological Review*, 12, 164-74.
23. Goswami, A., and Baishya, R. (2019). CONSUMER BEHAVIOUR. Self-Learning Material (SLM) of the Krishna Kanta Handiqui State Open University. Retrieved from: [https://kkhsou.ac.in/eslm/E-SLM-Learner/4th%20Sem/Master%20Degree/MBA\\_4th\\_SEM/Consumer%20Behaviour/consumer%20beh\\_B2.pdf](https://kkhsou.ac.in/eslm/E-SLM-Learner/4th%20Sem/Master%20Degree/MBA_4th_SEM/Consumer%20Behaviour/consumer%20beh_B2.pdf)
24. Hostler, R. E., Yoon, V. Y., & Guimaraes, T. (2012). Recommendation agent impact on consumer online shopping: The Movie Magic case study. *Expert Systems with Applications*, 39(3), 2989-2999. doi:10.1016/j.eswa.2011.08.160
25. Howard, J. A., & Sheth, J. N. (1969). *Theory of buyer behavior*. John Wiley and Sons.
26. Jain, S. C. (1975). Life cycle revisited: applications in consumer research. *NA - Advances in Consumer Research*, Volume 02, editions, Mary Jane Schlinger, Ann Arbor, MI: Association for Consumer Research, 39-50.
27. Kim, H., Baek, J., & Choe, Y. (2020). Family life cycle and preferences for a mega-sporting event package: The case of the 2018 PyeongChang Winter Olympic Games. *Tourism Economics*, 1354816620907780. <https://doi.org/10.1177/1354816620907780>
28. Kirkpatrick, E. L., Tough, R., & Cowles, M. L. (1934). The life cycle of the farm family in relation to its standards of living and ability to provide. *Research Bulletin No. 121*, Madison, WI: University of Wisconsin Agricultural Experiment Station
29. Kotler, P. (2020). The Consumer in the Age of Coronavirus. *Journal of Creating Value* 6(1) 12–15, 2020. DOI: 10.1177/2394964320922794.
30. Kotler, P. and Keller, K.L. (2012). *Marketing Management*. Fourteenth Edition, Pearson Education.
31. Landon, E. L., & Locander, W. B. (1979). Family Life Cycle and Leisure Behavior Research. *NA - Advances in consumer research*, Volume 06, editions, William L. Wilkie, Ann Arbor, MI: Association for Consumer Research, Pages: 133-138.
32. Lansing, J. B., & Kish, L. (1957). Family life cycle as an independent variable. *American sociological review*, 22(5), 512-519.
33. Lansing, J. B., & Morgan, J. N. (1955). Consumer finances over the life cycle. In Lincoln H. Clark edition, *Consumer behavior*, 2(4), New York: New York University Press, 36-50.
34. Lim, Y. J., Osman, A., Salahuddin, S. N., Romle, A. R., & Abdullah, S. (2016). Factors influencing online shopping behavior: the mediating role of purchase intention. *Procedia economics and finance*, 35, 401-410.
35. Loomis, C. P. (1936). The Study of the Life Cycle of Families. *Rural Sociology*, 1(2), 180.
36. Malter, M. S., Holbrook, M. B., Kahn, B. E., Parker, J. R., & Lehmann, D. R. (2020). The past, present, and future of consumer research. *Marketing Letters*, 31(2), 137-149. <https://doi.org/10.1007/s11002-020-09526-8>
37. Murphy, P. E., & Staples, W. A. (1979). A modernized family life cycle. *Journal of consumer research*, 6(1), 12-22.
38. Nagy, S., & Hajdú, N. (2021). Consumer Acceptance of the Use of Artificial Intelligence in Online Shopping: Evidence from Hungary. *Amfiteatru Economic*, 23(56), 155-173.
39. Nicosia, F. M. (1966) *Consumer Decision Processes: Marketing and Advertising Implications*. Englewood Cliffs, NJ: Prentice-Hall.
40. Nittala, R. (2015). Factors influencing online shopping behavior of urban consumers in India. *International Journal of Online Marketing (IJOM)*, 5(1), 38-50. DOI: 10.4018/IJOM.2015010103
41. Pol, L. G., & Rader, C. H. (1986). The family life cycle concept revisited: A need for new considerations. *Journal of Consumer Studies & Home Economics*, 10(2), 171-184. <https://doi.org/10.1111/j.1470-6431.1986.tb00117.x>
42. Ramya, N., and Mohamed Ali, SA. (2016). Factors affecting consumer buying behavior. *International Journal of Applied Research*, 2(10), 76-80
43. Roberts, S. D., Voli, P. K., & Johnson, K. (2015). Beyond the Family Life Cycle: An Inventory of Variables for Defining the Family as a Consumption Unit. In *Proceedings of the 1992 Academy of Marketing Science (AMS) Annual Conference* (pp. 71-75). Springer.

44. Rodgers, R.H. (1962). Improvements in the Construction and Analysis of Family Life Cycle Categories. unpublished Ph.D. thesis, University of Minnesota.
45. Salim, M., Alfansi, L., Dart, E., Anggarawati, S., & Amin, A. (2019). Indonesian millennials online shopping behavior. *International Review of Management and Marketing*, 9(3), 41-48.
46. Schaninger, C. M., & Danko, W. D. (1993). A conceptual and empirical comparison of alternative household life cycle models. *Journal of Consumer Research*, 19(4), 580-594.
47. Shahzad, H. (2015). Online Shopping Behavior. Masters Thesis. Uppsala University, Sweden. Retrieved from: <https://www.diva-portal.org/smash/get/diva2:853275/FULLTEXT01.pdf>
48. Shannon, R., Sthienrapapayut, T., Moschis, G. P., Teichert, T., & Balikcioglu, B. (2020). Family life cycle and the life course paradigm: A four-country comparative study of consumer expenditures. *Journal of Global Scholars of Marketing Science*, 30(1), 34-44. DOI: 10.1080/21639159.2019.1613913.
49. Sharmila, P., and Dhanishta, B. (2018). Developing and testing a pioneer model for online shopping behavior for natural flowers: Evidence from Mauritius. *Studies in Business and Economics*, 13(1), 128-147. DOI 10.2478/sbe-2018-0011
50. Sheehan, E. (2020). Understanding the Impact of Covid-19-Grocery and Food Retail. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/COVID-19/COVID-19-Grocery-Consumer-sector.pdf>
51. Sheth, J. N. (1974). A theory of family buying decisions. *Models of Buyer Behavior*, 17-33.
52. SivaKumar, A., & Gunasekaran, A. (2017). An empirical study on the factors affecting online shopping behavior of millennial consumers. *Journal of Internet Commerce*, 16(3), 219-230. <https://doi.org/10.1080/15332861.2017.1317150>
53. Sorokin, P., Zimmerman, C. C., & Galpin, C. J. (1931). *A systematic source book in rural sociology*, Minneapolis: University of Minnesota Press.
54. Stampfl, R. W. (1978). The consumer life cycle. *Journal of Consumer Affairs*, 12(2), 209-219.
55. Trost, J. (1990). Do We Mean the Same by the Concept of Family?. *Communication Research* 17 (4), 431-433. <https://doi.org/10.1177%2F009365090017004002>
56. Van Rooyen, J., & Du Plessis, P. J. (2003). A conceptual and empirical validation of the household lifecycle concept in South Africa. *SA Journal of Industrial Psychology*, 29(3), 30-37.
57. Vasić, N., Kilibarda, M., & Kaurin, T. (2019). The influence of online shopping determinants on customer satisfaction in the Serbian market. *Journal of theoretical and applied electronic commerce research*, 14(2), 70-89. <http://dx.doi.org/10.4067/S0718-18762019000200107>
58. Ventre, I., & Kolbe, D. (2020). The impact of perceived usefulness of online reviews, trust and perceived risk on online purchase intention in emerging markets: A Mexican perspective. *Journal of International Consumer Marketing*, 32(4), 287-299. <https://doi.org/10.1080/08961530.2020.1712293>
59. Wagner, J., & Hanna, S. (1983). The effectiveness of family life cycle variables in consumer expenditure research. *Journal of Consumer Research*, 10(3), 281-291.
60. Wells, W. D., & Gubar, G. (1966). Life cycle concept in marketing research. *Journal of Marketing Research*, 3(4), 355-363. <https://doi.org/10.1177%2F002224376600300403>
61. Wu, W. Y., Ke, C. C., & Nguyen, P. T. (2018). Online shopping behavior in electronic commerce: an integrative model from utilitarian and hedonic perspectives. *International Journal of Entrepreneurship*, 22(3), 1-16.
62. Xiao, J. J. (1996). Effects of family income and life cycle stages on financial asset ownership. *Journal of Financial Counseling and Planning*, 7, 21.
63. Zaichkowsky, J. L. (1991). Consumer behavior: Yesterday, today, and tomorrow. *Business Horizons*, 34(3), 51-59. [https://doi.org/10.1016/0007-6813\(91\)90094-C](https://doi.org/10.1016/0007-6813(91)90094-C)