Factors Affecting the Use of E-Commerce Services for Purchasing Health Supplement Products by Senior Consumers in the Eastern Region of Thailand

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Abstract: - This research aims to 1) study the factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand, and 2) test the influence of the components of factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand. The quantitative research was conducted by surveying data from elderly individuals aged 60 and above. The tool used was a questionnaire, and multivariate statistics were applied, leading to the development of a structural equation model (SEM). The research findings revealed that the structural equation model of factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand was consistent with the empirical data, with a p-value of 0.06, CMIN/DF = 1.17, GFI = 0.96, and RMSEA = 0.01, with statistical significance at 0.001, meeting the established criteria. The analysis of variables within the newly developed model showed that, when considering the overall influence, brand equity had the most direct impact on service confidence, with a coefficient = 0.91. This was followed by digital marketing, which had a direct influence on brand equity = 0.83 and product value = 0.53. Service confidence had a direct influence on customer satisfaction = 0.37, and product value also had a direct influence on customer satisfaction = 0.37 respectively. This shows that senior consumers prefer buying products from reliable distributors. The brand reflects the image of the organization and its products, making the brand easily recognizable and boosting senior consumer's confidence in using the product.

Key-Words: - Exploratory Factor Analysis, Structural Equation Model, Factors Affect, E-commerce Services, Health Supplements, Senior Consumers.

1 Introduction

In general, e-commerce is at the heart of business operations in the modern era. Entrepreneurs are constantly seeking opportunities to expand their sales channels to increase accessibility and convenience for their customers. As a result, the e-commerce business has experienced continuous growth, partly due to changes in consumer behavior and greater adoption of technology. According to Digital Thailand in 2024, 63.21 million Thais (88%) are using the internet, averaging 7 hours and 58 minutes per day. The most popular social media platforms in Thailand are Facebook, LINE, and TikTok, respectively, which are used to connect with family and friends, stay informed, and shop online. A high percentage, 66.90%, of Thais use e-commerce platforms to purchase goods and services. In 2023, the value of the Thai e-commerce market reached 634 billion baht, and it is expected to increase to 694 billion baht in 2024, with an average annual growth rate of 6%. By 2025, the market is projected to reach 750 billion baht, [1].

As Thailand experiences an increase in its aging population or retirees each year [2], data from [3], reveals that elderly individuals aged 60 and over account for 1 in 5 of the total population,

approximately 13 million people out of Thailand's 66,057,967 citizens. It is projected that by 2027, the number of elderly individuals aged 60 and over will rise to 16 million, an increase of about 13% from the current proportion. Meanwhile, the United Nations' World Population Prospects report [4] predicts that the global population will reach 8 billion people, with 10% of them being aged 65 and over, and this percentage is expected to increase to 16% by 2050.

As the elderly population grows and life expectancy increases, there is a rising trend in health awareness and care. This leads to a higher demand for products that support physical health, contributing to the continuous growth of businesses related to the elderly. One such business is the health supplement industry, which seniors commonly consume. These include immune-boosting products, skin moisturizing products, bone-strengthening products, weight control products, general health supplements, and sleep and brain health supplements, [5]. The health supplement market has been growing steadily, with a market value of 65.55 billion baht in 2021, 72.07 billion baht in 2022, and 77.79 billion baht in 2023, [6]. Thus, the use of e-commerce services for buying and selling products has become a highly popular channel, providing convenience for customers who can purchase goods anytime and anywhere, safely. E-commerce platforms include e-marketplaces like Shopee and Lazada, as well as Social Commerce platforms like Facebook, TikTok, Instagram, X, and Line. The elderly are in a phase of life where they focus on healthy aging and are increasingly aware of the importance of health care, whether through exercise, eating nutritious food, or using health products. They rely on the internet to search for health information online, including disease information, health care tips, or supplement product reviews. They also use e-commerce services to purchase goods, as they often face mobility limitations and challenges in traveling to buy products and services themselves.

Therefore, the researcher is interested in studying the factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand, a group with high purchasing power. This presents a business opportunity for companies related to health supplements to design products and services that meet the needs of the elderly. Providing services through e-commerce channels should focus on convenience, safety, and promoting long-term health improvement.

1.1 Research Objectives
1) To study the factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand.
2) To examine the influence of the components of factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand.

2 Literature Review

2.1 Digital Marketing Concept
The concept of digital marketing is a strategy that uses advertisements, sales, and customer communication through e-commerce service channels, which come in various forms such as websites, e-marketplaces, and social commerce. Digital marketing leverages technology and strategies to enhance marketing efficiency, reach new customers, increase sales, and contribute to business success. According to [7], digital marketing involves using digital technologies to support marketing efforts for products, businesses, and brands through various digital media forms, aiming to enhance marketing operations. This includes creating, communicating, and presenting product-related information to quickly deliver product value to the target customers. [8] explained that digital marketing channels are methods that businesses use to sell products and conduct business activities such as buying, selling goods and services, and managing financial transactions related to e-commerce. These channels include Facebook, Instagram, Line, Chatbots, YouTube, and the creation of QR codes suited to the products. [9] stated that digital marketing plays a crucial role in building customer loyalty by raising brand awareness through various channels such as social media, email, and websites. [10] mentioned that digital marketing is an effective tool for reaching customers and increasing sales, allowing businesses of all sizes to promote their products and services efficiently. [11] said that digital marketing serves as a bridge between trust and brand loyalty, conveying the quality of products or services through marketing communication strategies, ultimately influencing purchasing decisions.

2.2 Brand Equity Concept

Brand equity is essential for the success of products. The use of names, words, symbols, or marks in design helps enhance brand equity. A well-designed brand can be easily remembered and distinctive, influencing emotions and facilitating communication between customers and the brand. [12] stated that brand equity affects emotions, perceptions, and customer engagement, which can be represented in various media types, such as websites, digital films, and campaigns, and may also take the form of smartphone games. [13] mentioned that building brand equity is a key strategy for developing ongoing relationships and connections with customers to deliver product value. [14] found that organizations that can create a good corporate image will lead partners or buyers to make purchasing decisions based on trust in the organization and its products, including the brand. A brand with strong equity developed over many years will prompt the organization to focus on continuously improving and modernizing the brand to maintain a competitive advantage over similar products. Data-driven marketing, such as using influencers to promote products, is an effective tool for reaching target audiences to deliver product value, which can enhance brand awareness and increase sales, [15].

2.3 Service Confidence Concept

Providing e-commerce services for buying and selling products involves a commitment to customer care throughout the purchasing process, from the initial stages to completion. This includes attentiveness, follow-up, problem-solving, fulfilling promises, and expressing gratitude to customers, which can significantly create a positive impression and build trust among customers. [16] stated that in E-Marketplaces, customers rely on trust from both sellers and the marketplace since they must engage in financial transactions. Therefore, policies regarding financial transactions, payment methods, infrastructure, and website functionality are factors that contribute to customers' trust in purchasing goods and services. [17] noted that online trust is one of the most critical components of business strategy, as it fosters positive word-of-mouth during online shopping. This helps reduce various risks, such as the transmission of customers' personal information and payment data. Encouraging customer participation in discussions and knowledge exchanges continuously provides customers with accurate and clear information. Additionally, if errors occur, businesses must be ready to take responsibility and resolve issues quickly and transparently. Treating customers as agreed upon leads to increased customer confidence in the products and greater awareness of the brand's value, which becomes ingrained in the customers' minds, [18].

2.4 Product Value Concept

Developing diverse products with specifications clearly stated on labels, attractive and sturdy packaging, and quality that offers value for money enhances customer confidence in using e-commerce services. [19] noted that a perceived product quality that exceeds expectations leads to positive attitudes and influences customer behavior, driving loyalty and repeat purchases in the future. This contributes to the financial success of the business and other aspects of the organization. Creating standards for products with verifiable information that is accurate, clear, and systematically complete helps ensure customers have a positive experience each time they receive a product, [18]. Customer satisfaction or dissatisfaction with a purchased item depends on the presentation of the product and services aligned with the product's quality. Consumer satisfaction arises from receiving accurate information or hearing from others about the quality of the product, [20]. [21], stated that customers perceive product quality through advertising media, which serves as a guide for assessing the quality of goods or services. General customers who are highly aware of a brand's advertising tend to also be aware of the product's quality.

2.5 Customer Satisfaction

Customer satisfaction refers to the feelings that arise from motivations based on the learning and experiences gained from using e-commerce services. This leads customers to feel positive or negative, in agreement or disagreement, pleased or displeased, ultimately influencing their purchase decisions. This aligns with [22] who discussed the quality of e-commerce services, which includes factors such as efficiency, system availability, fulfillment, and the privacy of personal data. These factors impact customer trust and satisfaction when shopping online. [23] found that the quality of e-commerce services, including seller efficiency, service reliability, and the confidentiality of personal information, significantly affects buyer satisfaction. [24] defined customer

satisfaction as the level of feeling a person experiences when they are either satisfied or dissatisfied after comparing the perceived benefits and value derived from purchasing goods or services with their expectations. Each consumer may have a different level of satisfaction, generally depending on past purchasing experiences. [25] stated that factors affecting satisfaction and the intention to purchase online depend on customers' perceptions and experiences with online stores. Factors such as price, convenience of purchase, product information, return policies, financial risks, product risks, and shipping risks greatly impact customer satisfaction. Providing good service, promotions, advertising, and the safety of online media for buying and selling products will enhance customer satisfaction, [26].

2.6 Conceptual Framework
The research on the factors affecting the use of e-commerce services for purchasing health supplement products by senior consumers in the eastern region of Thailand synthesized the following components:

1) Examining documents, concepts, theories, and related research on factors affecting the use of e-commerce services for purchasing health supplements by senior consumers.

2) Identifying variables and components related to the research, including aspects of Digital Marketing, Brand Equity, Product Value, Service Confidence, and Customer Satisfaction.

3) Utilizing the 5 components to establish a conceptual framework for the research, as illustrated in Figure 1. This framework presents a hypothetical model of the factors affecting the use of e-commerce services for purchasing health supplements by senior consumers, ensuring alignment with empirical data.

Fig. 1: Research Conceptual Framework

3 Research Methodology

3.1 Population and Sampling
The population for this research consists of elderly individuals aged 60 and above residing in three provinces in the eastern region of Thailand: Chanthaburi, Chachoengsao, Chonburi, Trat, Prachinburi, Rayong, Samut Prakan, and Sa Kaeo, totaling 907,053 individuals, [27]. The sample size was determined using Taro Yamane's sample size calculation table, [28], with a confidence level of 95% and a margin of error of ±5%, resulting in a sample size of 500 individuals. Data collection for the sample was conducted from August to December 2023 using a cluster sampling method. The population was divided into 3 subgroups of elderly individuals aged 60 and above living in Rayong, Chonburi, and Chachoengsao. The population in each group shares similar characteristics, and simple random sampling was employed to achieve the desired sample size proportion, [29].

3.2 Research Tools
The research tool is a questionnaire based on a Rating Scale, which employs a five-point Likert scale for evaluating responses. This scale provides appropriate options for respondents, [30]. The researcher then presented the draft questionnaire along with an evaluation form to 5 experts who have knowledge and experience relevant to the study. This was done to assess the quality of the tool by examining the Index of Item-Objective Congruence (IOC). The results of the IOC check showed values ranging from 0.50 to 1.00, which meets the acceptable standard, [31]. Subsequently, the researcher conducted a try-out of the questionnaire with a group of 30 individuals who shared similar characteristics with the target population of this study. This was to analyze the discrimination value of items in the questionnaire that were in the form of checklist questions. The questions that were in the form of a rating scale were analyzed using the standard deviation (S.D.). The questions that were in the form of a rating scale were analyzed using correlation coefficients. The reliability of the questionnaire was found to have a discrimination value between 0.61 and 0.72 and the overall reliability of the questionnaire was 0.97, which meets the acceptable standard, [32]. The research tool was then used to collect data by requesting the sample group to complete the questionnaire.

3.3 Data Analysis

The researcher conducted exploratory factor analysis (EFA) by calculating the correlation coefficients of each variable, extracting components using the principal component method, and rotating the factor axes using the Varimax rotation method. A structural equation model (SEM) was then developed using statistical and social science software (AMOS). The consistency and coherence of the developed structural relationship model with empirical data were assessed.

4 Results

The statistics used for data analysis included multivariate statistics to test hypotheses, which comprised causal path analysis, confirmatory factor analysis to validate indicators, and structural equation modeling. The model's fit was assessed against empirical data according to Arbuckle's criteria, [33]. The criteria used to evaluate the goodness-of-fit for the structural equation model are presented in Table 1.

Table 1. Criteria for Evaluating the Goodness-of-Fit of the Structural Equation Model

Evaluating the Data–Model Fit	Criteria
CMIN–p (probability level of chi-square)	Greater than 0.05
CMIN/DF (relative chi-square)	Less than 2
GFI (Goodness-of-Fit Index)	Greater than 0.90
RMSEA (Root Mean Square Error of Approximation)	Less than 0.08

4.1 Results of the Exploratory Factor Analysis

The exploratory factor analysis was conducted using the responses to 40 questions from a sample of 500 participants. The components were extracted using the Principal Component Analysis method, and the component axes were rotated using the Varimax method. The analysis was based on the factor loading, the number of variables included as indicators, and the eigenvalues of the components according to the predetermined criteria. Each component was named based on the characteristics that the grouped variables collectively pointed to, in line with the conceptual framework and theory. Five components were identified: Digital Marketing, Brand Equity, Product Value, Service Confidence,

and Customer Satisfaction. The researcher applied the following criteria: each component must have at least 3 variables describing it, the cumulative percentage of variance must be greater than 60% [34], the eigenvalues of the components must be greater than 1, [35], and the factor loadings of the variables must be greater than 0.3, [36]. The components were arranged in descending order according to their cumulative variance, as shown in Table 2.

Table 2. The results of the exploratory factor analysis

Component Name	Number of Variables	Eigenvalues	Percentage of Variance	Cumulative Percentage of Variance
1. Brand Equity	10	18.521	46.303	46.303
2. Digital Marketing	10	2.001	5.002	51.306
3. Service Confidence	8	1.505	3.762	55.067
4. Product Value	6	1.195	2.988	58.055
5. Customer Satisfaction	6	1.060	2.650	60.706
Total	40	24.282	60.706	-

From Table 2, the results of the exploratory factor analysis show that the factors affecting the use of e-commerce services for purchasing health supplements products among senior consumers include the following: Brand Equity: consisting of 10 variables, Digital Marketing: consisting of 10 variables, Service Confidence: consisting of 8 variables, Product Value: consisting of 6 variables and Customer Satisfaction: consisting of 6 variables. None of the variables failed to meet the evaluation criteria.

4.2 Results of the Hypothesis Model Analysis

The analysis of the influence of various variables developed within the Structural Equation Model (SEM) yielded the results shown in Figure 2 and Table 3.
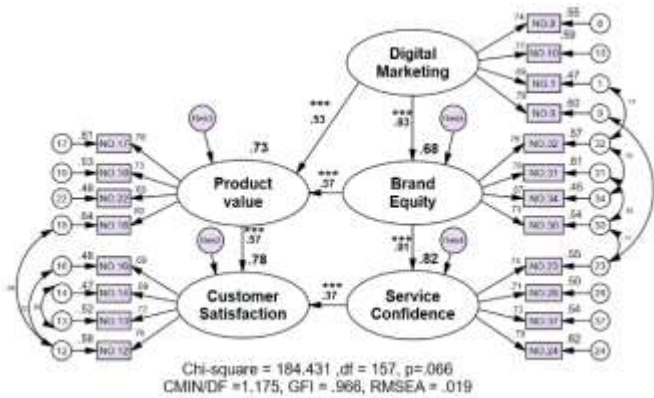
Fig. 2: Diagram Showing the Relationships in the Structural Equation Model

Table 3. Hypotheses test result of the structural equation model after modification

H	Path	Estimate		R^2	Variance	CR.
		Std	Unstd			
H1	Digital Marketing ---> Brand Equity	0.83	0.82	0.68	0.07	13.618
H2	Brand Equity ---> Service Confidence	0.91	1.03	0.82	0.05	14.443
H3	Digital Marketing ---> Product Value	0.53	0.52	0.73	0.06	6.230
H4	Brand Equity ---> Product Value	0.37	0.36	0.73	0.06	4.524
H5	Service Confidence ---> Customer Satisfaction	0.37	0.33	0.78	0.05	5.820
H6	Product Value ---> Customer Satisfaction	0.57	0.59	0.78	0.05	8.535

The hypotheses testing results were summarized as follows:

H1 testing result: The 'Digital Marketing' element showed a variance = 0.23 and influenced the 'Brand Equity' element with a Standardized Regression Weight = 0.83 and squared multiple correlations (R^2) = 0.68 with a variance = 0.07 at the statistically significant level of 0.001

H2 testing result: The 'Brand Equity' element showed a variance = 0.07 and influenced the 'Service Confidence' element with a Standardized Regression Weight = 0.91 and squared multiple correlations (R^2) = 0.82 with a variance = 0.05 at the statistically significant level of 0.001

H3 testing result: The 'Digital Marketing' element showed a variance = 0.23 and influenced the 'Product Value' element with a Standardized Regression Weight = 0.53 and squared multiple correlations (R^2) = 0.73 with a variance = 0.06 at the statistically significant level of 0.001

H4 testing result: The 'Brand Equity' element showed a variance = 0.07 and influenced the 'Product Value' element with a Standardized Regression Weight = 0.37 and squared multiple correlations (R^2) = 0.73 with a variance = 0.06 at the statistically significant level of 0.001

H5 testing result: The 'Service Confidence' element showed a variance = 0.05 and influenced the 'Customer Satisfaction' element with a Standardized Regression Weight = 0.37 and squared multiple correlations (R^2) = 0.73 with a variance = 0.05 at the statistically significant level of 0.001

H6 testing result: The 'Product Value' element showed a variance = 0.06 and influenced the 'Customer Satisfaction' element with a Standardized Regression Weight = 0.57 and squared multiple correlations (R^2) = 0.78 with a variance = 0.05 at the statistically significant level of 0.001

The mean and standardized regression weight result of the structural equation model for the four elements after modification in the standardized mode, sorted by the weighted score ranking shown in Table 4.

The analysis to verify the consistency of the structural equation model regarding the factors affecting the use of e-commerce services for purchasing health supplements by senior consumers, as shown in Figure 2, indicates that the empirical data are consistent. The results are as follows: p-value = 0.06, CMIN/DF = 1.17, GFI = 0.96, and RMSEA = 0.01, which are statistically significant at 0.001. This aligns with the literature and empirical data, meeting the established criteria.

Table 4. Observed Variables

Observed variable factors	Regression weight	Mean
Digital Marketing		
No. 9: Digital marketing media have various tools that are easy to understand and convenient for purchasing products.	0.78	4.44
No. 10: Digital marketing media clearly categorize products and display accurate details.	0.77	4.41
No. 8: Digital marketing media are aesthetically pleasing and attract attention for use.	0.74	4.42
No. 1: Orders can be processed quickly and accurately.	0.69	4.47
Customer Satisfaction		
No. 12: The purchasing process is straightforward from start to finish.	0.58	4.46
No. 13: Discounts and promotions are regularly offered.	0.52	4.44
No. 16: There is a warranty in case the product is damaged.	0.48	4.37
No. 14: Products can be delivered accurately and completely to the buyer.	0.47	4.45
Product Value		
No. 18: There is a wide variety of products available for convenient purchasing.	0.64	4.50
No. 17: Products have beautiful and durable packaging.	0.61	4.51
No. 19: The quality of the products is worth the price.	0.53	4.46
No. 22: Products have properties that match the specified details.	0.48	4.46
Service Confidence		
No. 24: Sellers distributing the products are credible.	0.79	4.40
No. 23: There are secure payment methods for transactions.	0.74	4.39
No. 37: There is a support system to assist customers when they encounter issues during the purchase process.	0.73	4.39
No. 28: There are policies in place to protect customers' personal data.	0.71	4.13
Brand Equity		
No. 31: The brand is trustworthy.	0.78	4.39
No. 32: The brand has a long history that reflects the organization's image.	0.76	4.43
No. 30: The brand is easy to remember, influencing customer perception.	0.73	4.43
No. 34: Influencers help promote and recommend the brand.	0.67	4.45

5 Discussion

5.1 Digital Marketing Influences Brand Equity

The study found that digital marketing serves as a platform for presenting health supplement products through e-commerce services, providing complete and clear product details and easy-to-remember branding to attract customer attention. This leads to an awareness of brand value that influences purchase decisions. This is consistent with [37], who mentioned that in this digital era, technological developments have significantly changed the business paradigm, especially in the e-commerce industry. E-commerce platforms have become one of the main media for many companies to sell their products and services online. However, the increasing number of competitors on e-commerce platforms requires companies to have an effective marketing strategy to increase sales conversion and gain a competitive advantage. The purpose of this research is to analyze and identify effective digital marketing strategies for increasing sales conversion on e-commerce platforms. The study results show that to increase sales conversions on e-commerce platforms, digital marketing strategies play a crucial role. Additionally, [38], study aims to determine how consumers in the health sector affect the decision-making process to understand the value that the consumer shows about a product or service in a business in digital marketing, which is the most important commercial shopping channel of today. It has been concluded that consumers give more importance to digital marketing channels and that this area should be more focused on in the health sector. Therefore, elderly consumers should be shielded from this limited and biased perspective. This can be done by giving older people access to more comprehensive or accessible information.

5.2 Brand Equity Influences Service Confidence

The study found that, when considering the overall influence, brand equity had the most direct impact on service confidence. The presentation of health supplement brands with a long-standing history reflects the organization's image through e-commerce service channels, which affects emotions, perceptions, and confidence in products and services. [39], found that Brand equity is a rapidly growing field of research. Companies rely primarily on new and creative ways of improving high brand value. The main aim of this research was to examine the impact of brand equity and brand satisfaction on brand loyalty, particularly online shopping, in the context of the e-commerce industry by considering brand satisfaction as a mediating variable. The results revealed that brand equity and brand satisfaction had a significant positive impact on brand loyalty, and brand satisfaction partially mediated the relationship

between brand equity and brand satisfaction. This is consistent with [40], The main objective of this research was to construct and validate an instrument to measure the value dimensions of banking brands in the elderly segment. The results show the existence of six dimensions. All of these correspond to previous brand equity literature, except for the dimension loyalty and brand friendliness, which emerges from the study as a single construct. Given the particularities of the elderly as a consumer, it is concluded that the banking sector should continue consolidating its brand value in this market segment. Since this sector has been showing representative demographic growth at a global level, such a goal is positioned as a fundamental objective for organizations that have a high market orientation. Furthermore, [41], based on a quantitative study, the results show that brand experience has a positive influence on consumer-based brand equity. Sensory and emotional experiences evidenced a higher influence in all the dimensions of brand equity. Multigroup analysis also shows that intellectual experience triggers brand equity consumers in consumers with positive brand behavior.

5.3 Digital Marketing Influences Product Value

The study found that presenting a variety of health supplement products, with details indicating their benefits and usage, allows customers to conveniently choose and purchase through e-commerce service channels. The use of various tools that facilitate ordering highlights the value of the products to the customers. According to [42], It was stated in research that recently, internet usage among elderly adults has been increasing and becoming more mainstream; with the aging population in Taiwan, concerns over health are on the rise, and this is directly related to the products that people eat. The main objectives of this study were to develop an integrated extensibility model incorporating the technology acceptance model and to investigate the impact of health consciousness on elderly adults' acceptance of technology in relation to traceability information websites in Taiwan. This is consistent with [43] that technology, and particularly the internet, has transformed consumer and business behaviors. An aging population is impacted by these contextual and operational changes. Understanding these impacts within an aging population is important for businesses, organizations, individuals, and their e-

commerce activities. The study increases understanding of the online behavior of older consumers. These findings point to a shifting relationship between aging consumers and e-commerce activities. Age and the contextual situation impact e-commerce, have implications for access and capability, and link to questions over isolation. Additionally, research by [44], on hotel management strategies for elderly tourists in central Thailand found that marketing strategy components have a direct influence on hotel management components.

5.4 Brand Equity Influences Product Value

The study found that having influencers, who act as brand representatives, and promote health supplement products through e-commerce service channels helps build a personal relationship with customers and create a positive brand image. This is achieved by sharing their own experiences and creating trustworthy product content, which delivers the value of the product to the customer. This aligns with [45]. Their findings show that elderly consumers tend to remain attached to the same brands for longer durations and that there is a limited effect of nostalgia for old brands encountered earlier in life. There are also differences in brand usage within age groups so that among both older and younger consumers, some change brands frequently while others remain loyal. However, [46], recently examined the use of older and newer brands in a large empirical study of the grocery purchases made by elderly consumers. Their results did not replicate those of previous studies but show that elderly consumers do not purchase older brands more often than they purchase younger brands. Older consumers also do not principally buy older brands. Therefore, brands of all ages compete for consumers of all ages. Findings indicate that for newer brands, older consumers should not be ignored as a market for growing the brand. For older brands, despite the default advantage of long-term exposure to older consumers, such advantage will fade if these brands fail to maintain a competitive presence in the market, as older consumers try and become loyal to newer brands.

5.5 Service Confidence Influences Customer Satisfaction

The study found that purchasing health supplements through reliable e-commerce service channels, which offer regular promotional discounts, assist customers when issues arise, provide secure payment methods,

and have a policy to protect customer data, directly impacts customer satisfaction. This is consistent with [47], The purpose of this research was to explore the confidence and trust affecting online shopping decisions of agriculture products for elderly people in Thailand. The results showed that confidence and trust had a statistically significant effect on the elderly's online shopping decisions. Trust was found to be the most influential factor, followed by the elderly's confidence in making online shopping decisions. Furthermore, [48], The findings show that website security has significant positive effects on socially responsible buyers, panic buyers, and the level of customer satisfaction. Therefore, financial transaction policies, payment methods, infrastructure, and the website play crucial roles in building customer trust in purchasing products and services. Another research topic that has received some research attention is how elderly consumers respond to services. Services are more important to the elderly than to younger consumer groups. Elderly consumers make a larger share of their expenditures on services and evaluate services more in terms of the social benefits that they derive from them, [45].

5.6 Product Value Influences Customer Satisfaction

The presentation of health supplements through e-commerce services, where product attributes match the specified details, the product quality is worth the price, the packaging is beautiful and durable, and there is a guarantee in case of damage, along with accurate and complete delivery to the buyer, leads to customer satisfaction. According to [49], the purpose of this paper is to present the results of surveys conducted in the field of level of e-commerce services quality. The level of customer satisfaction was measured using the Servqual method. To compare two groups: the quality of e-commerce services before purchase and the quality of e-commerce services after the purchase. A comparison of the Servqual weighted and unweighted results shows that customers valued the guarantee/safety dimension the most. It can therefore be expected that customers perceive e-commerce services with increasing trust and consider them increasingly reliable which is also confirmed by the growing tendencies in the forecasts of e-commerce services in Poland. This is consistent with [50], this review provides insight into consumer attitudes toward functional food (FF), with the purpose of better understanding the needs and behavior regarding this kind of product. The research papers showed that nutritional knowledge is the most important of these. Older people are more interested in functional products than younger consumers, because of their stronger belief in the health benefits of FF.

6 Conclusion

The analysis of variables within the newly developed model shown in Figure 2, when considering the overall influence, brand equity had the most direct impact on service confidence, with a coefficient = 0.91. The researcher has acquired the following knowledge, which business operators should be aware of,

1) Senior consumers prioritize clear product details, ease of purchase, and a straightforward ordering process. Secure payment and purchasing systems are also important.

2) Product warranties, accurate and complete delivery, along with promotions and discounts, contribute to senior consumer satisfaction.

3) Sellers present a wide variety of products for senior consumers to choose from, products that match their specified attributes, attractive packaging, and products that offer good value for money to help attract senior consumer's interest.

4) Senior consumers prefer buying products from reliable distributors. The brand reflects the image of the organization and its products, making the brand easily recognizable and boosting senior consumer's confidence in using the product.

5) In previous generations, advertisements often featured famous singers or actors as product endorsers, which Baby Boomers are familiar with. For this reason, influencers who promote the brand are trusted and can easily lead to purchase decisions in the online world.

7 Suggestions

1) As the elderly population increases and the average age rises, there will be a growing focus on health care. Thus, the demand for products that support physical well-being will rise accordingly. Supplement sellers should focus on enhancing the potential of their products by using materials and production processes that demonstrate greater

responsibility toward society and consumers. This will foster brand loyalty in the future.

2) Relevant government agencies may establish supportive policies that facilitate the supplement business sector and promote Thailand as a health hub. This would help increase sales of goods and services and promote sustainable growth for businesses.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this work the authors used LanguageTool in order to modify a few phrases in the abstract and introduction sections to enhance academic quality. After using this tool/service, the authors reviewed and edited the content as needed and takes full responsibility for the content of the publication.

References:

[1] Digital Thailand. (2024). Overview of internet use, [Online]. https://citly.me/3L2jw (Accessed Date: June 30, 2024)

[2] World Health Organization. (2023). Thailand's leadership and innovations towards healthy ageing, [Online]. https://www.who.int/southeastasia/news/feature-stories/detail/thailands-leadership-and-innovation-towards-healthy-ageing (Accessed Date: November 23, 2024)

[3] Leenoi, P. (2024). Aged Society: Embracing Challenges and Unlocking Opportunities, [Online]. https://www.krungsri.com/en/research/research-intelligence/silver-economy (Accessed Date: November 23, 2024)

[4] United Nations. (2024). World Population Prospects 2024, [Online]. https://population.un.org/wpp/ (Accessed Date: October 2, 2024)

[5] Horizon grand view research. (2024). Thailand Nutritional Supplements Market Size & Outlook, [Online]. https://www.grandviewresearch.com/horizon/outlook/mineral-supplements-market/thailand (Accessed Date: November 23, 2024)

[6] Kasikorn Research Center. (2023). The market for health food and beverages for the elderly in 2024 has grown in order to accommodate the increasing number of elderly people, but it still faces challenges, [Online]. https://www.kasikornresearch.com/EN/analysis/k-econ/business/Pages/Food-Industry-CIS3446-KR-22-12-2023.aspx (Accessed Date: July 5, 2024)

[7] Kannan, P.K., & Li, H.A. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing, 34*(1), 22-45. https://doi.org/10.1016/j.ijresmar.2016.11.006.

[8] Kotler, P. (2017). *Marketing 4.0: moving from traditional to digital Hoboken*. New Jersey: John Wiley and Sons.

[9] Cherukur, R. B. & Priya, P. (2020). A Study on Impact of Digital Marketing in Customer Purchase in Chennai. *Journal of Contemporary Issues in Business and Government. 26*(2), 967-973. https://doi.org/10.47750/cibg.2020.26.02.136.

[10] Basimakopoulou, M., Theologou, K., & Tzavaras, P. (2022). A Literature Review on Digital Marketing: The Evolution of a Revolution. *Journal of Social Media Marketing, 1*(1), 30–40. https://doi.org/10.33422/jsmm.v1i1.901.

[11] Althuwaini, S. (2022). The Effect of Social Media Activities on Brand Loyalty for Banks: The Role of Brand Trust. *Administrative Sciences, 12*(4), 148. https://doi.org/10.3390/admsci12040148.

[12] Nandy, M., & Roy, S. S. (2022). Transformation from Traditional to Digital Marketing Communications: A Case Study on Parle-G Brand. *Adhyayan: A Journal of Management Sciences, 12*(01), 51-65. https://doi.org/10.21567/adhyayan.v12i1.7.

[13] Cherukur, M. R. B. (2020). A study on employee training and development in Hyundai organisation–Chennai. *The journal of contemporary issues in business and government, 26*(2), 944-950. https://doi.org/10.47750/cibg.2020.26.02.133.

[14] Ardhana, N. A., Mariam, S., & Ramli, A. H. (2024). The Role of Corporate Image, Quality Service and Customer Satisfaction To Intention Behavior and Customer Loyalty. *Jurnal Ilmiah Manajemen Kesatuan, 12*(5), 1715-1730. https://doi.org/10.37641/jimkes.v12i5.2825.

[15] Trisnayanti, N. M. A., Sudiarta, M., & Puspita, N. P. L. A. (2022). Application of Digital Marketing in Increasing Brand Awareness with

The Concept of Aida at Movenpick Resort and Spa Jimbaran Bali. *Repositori Politeknik Negeri Bali, 1*(1), 1-8.

[16] Kim, M. S., & Ahn, J. H. (2007). *Management of trust in the E-marketplace: The role of the buyer's experience in building trust. Journal of Information Technology, 22*(2), 119–132. https://doi.org/10.1057/palgrave.jit.2000095.

[17] Bauman, A., & Bachmann, R. (2017). Online consumer trust: Trends in research. *Journal of Technology Management and Innovation, 12*(2), 68-79. http://dx.doi.org/10.4067/S0718-27242017000200008.

[18] Mungwongsa, Y., & Ketchompu, D. (2024). Relationships Between Online Marketing Strategy and Marketing Success of Electronics Retail Businesses in Thailand. *Ph.D. in Social Sciences Journal, 14*(1), 119-130.

[19] Lovelock, C., & Wirtz, J. (2011). *Services marketing: people, technology, strategy*, 7th Ed. NJ: Pearson Prentice Hall.

[20] Khankaew, C. (2019). Digital marketing strategy and marketing performance evidence from service businesses in Thailand. *Chulalongkorn Business Review, 41*(159), 1-32.

[21] Yoo, B. & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research, 52*(1), 1-14. https://doi.org/10.1016/S0148-2963(99)00098-3.

[22] Al-dweeri, R. M., Obeidat, Z. M., Al-dwiry, M. A., Alshurideh, M. T., & Alhorani, A. M. (2017). The impact of e-service quality and e-loyalty on online shopping: moderating effect of e-satisfaction and e-trust. *International journal of marketing studies, 9*(2), 92-103. http://doi.org/10.5539/ijms.v9n2p92.

[23] Sansompron, N. & Duangjan, C. (2023). Factors Influencing Buyers' Repurchase Intention for OTOP Products through the E-commerce Marketplace in Thailand. *Journal of Humanities and Social Sciences Mahasarakham University, 43*(2), 299-312.

[24] Kotler, P., & Armstrong, G. (2010). *Principles of marketing*. Pearson education.

[25] Chou, S. W., & Hsu, C. S. (2016). Understanding online repurchase intention: Social exchange theory and shopping habit. *Information Systems and e-Business*

Management, 14(1), 19-45. https://doi.org/10.1007/s10257-015-0272-9.

[26] Ilyas, R., Tamsah, M., & Putra. (2020). Reflective model of brand awareness on repurchase intention and customer satisfaction. *Journal of Asian Finance, Economics and Business, 7*(9), 427-438. https://doi.org/10.13106/jafeb.2020.vol7.no9.427.

[27] Department of Older Person. (2021). Situation of the Thai older persons 2021, [Online]. https://www.dop.go.th/download/knowledge/th 1663828576-1747_1.pdf (Accessed Date: July 16, 2024).

[28] Yamane, T. (1973). *Statistics: An introductory analysis.*

[29] Silpcharu, T. (2017). *Statistical research and analysis with SPSS and AMOS*, 15th Ed. Bangkok: Business R&D.

[30] Joshi, A., Kale, S., Chandel, S. & Pal, D.K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science and Technology, 7*(4), 396. https://doi.org/10.9734/BJAST/2015/14975.

[31] Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion referenced test item validity. *Dutch Journal of Educational Research, 2*(2), 49-60.

[32] Nunnally, J. C. (1975). *Psychometric theory— 25 years ago and now. Educational Researcher, 4*(10), 7-21. https://doi.org/10.3102/0013189X004010007.

[33] Arbuckle, J. L. (2016). *AMOS 20.0 users guide*. Crawfordville, FL: Amos Development Corporation.

[34] Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*, 4th Ed. Allyn and Bacon.

[35] Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and psychological measurement, 20*(1), 141-151. https://doi.org/10.1177/001316446002000116.

[36] Stevens, J. P. (1996). *Applied multivariate statistics for the social sciences*, 3rd Ed. Lawrence Erlbaum Associates.

[37] Purnomo, Y. J. (2023). Digital marketing strategy to increase sales conversion on e-commerce platforms. *Journal of Contemporary Administration and Management*

(ADMAN), *1*(2), 54-62. https://doi.org/10.61100/adman.v1i2.23.

[38] Basal, M., Sarkbay, O. F., & Kilicaslan, A. (2023). Brand equity in digital marketing: what does it mean in the health sector and how does it affect consumer decisions?. In *E3S Web of Conferences* (Vol. 402, p. 13020). EDP Sciences. https://doi.org/10.1051/e3sconf/202340213020.

[39] Mokha, A. K. (2021). Brand equity, brand satisfaction, and brand loyalty: A study of select e-commerce industry. *International Journal of Online Marketing (IJOM)*, *11*(3), 34-50. https://doi.org/10.4018/IJOM.2021070103.

[40] López-Rodríguez, C. E., & Sandoval-Escobar, M. (2023). Dimensions of brand equity for the banking sector: A study in the elderly segment. *Journal of International Studies*, *16*(4), 205-219.

[41] Pina, R., & Dias, Á. (2021). The influence of brand experiences on consumer-based brand equity. *Journal of brand Management*, *28*(2), 99-115. https://doi.org/10.1057/s41262-020-00215-5.

[42] Lin, H. C., & Kuo, S. H. (2020). How does health consciousness influence attitudes of elderly people towards traceable agricultural products? Perspectives of the technology acceptance model. *Ageing & Society*, *40*(8), 1808-1821. https://doi.org/10.1017/S0144686X19000308.

[43] Rybaczewska, M., & Sparks, L. (2022). Ageing consumers and e-commerce activities. *Ageing & Society*, *42*(8), 1879-1898. https://doi.org/10.1017/S0144686X20001932.

[44] Ramart, P., & Subanjui, R. (2024). Guidelines for Hotel Business Management for Elderly Tourists in the Central Region of Thailand. *WSEAS Transactions on Business and Economics, 21*, 12-20. https://doi.org/10.37394/23207.2024.21.2.

[45] Berg, H., & Liljedal, K. T. (2022). Elderly consumers in marketing research: A systematic literature review and directions for future research. *International Journal of Consumer Studies*, *46*(5), 1640-1664. https://doi.org/10.1111/ijcs.12830.

[46] Phua, P., Kennedy, R., Trinh, G., Page, B., & Hartnett, N. (2020). Examining older consumers' loyalty towards older brands in grocery retailing. *Journal of Retailing and Consumer Services*, 52, 101893. https://doi.org/10.1016/j.jretconser.2019.101893.

[47] Potjanajaruwit, P. (2023). Confidence and trust in online shopping decisions of agriculture product for elderly people in Thailand. In *E3S Web of Conferences* (Vol. 389, p. 03023). EDP Sciences. https://doi.org/10.1051/e3sconf/202338903023.

[48] Valdez-Juárez, L. E., Gallardo-Vázquez, D., & Ramos-Escobar, E. A. (2021). Online buyers and open innovation: Security, experience, and satisfaction. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 37. https://doi.org/10.3390/joitmc7010037.

[49] Gajewska, T., Zimon, D., Kaczor, G., & Madzík, P. (2020). The impact of the level of customer satisfaction on the quality of e-commerce services. *International Journal of Productivity and Performance Management*, *69*(4), 666-684. https://doi.org/10.1108/IJPPM-01-2019-0018.

[50] Topolska, K., Florkiewicz, A., & Filipiak-Florkiewicz, A. (2021). Functional food—consumer motivations and expectations. *International journal of environmental research and public health*, *18*(10), 5327. https://doi.org/10.3390/ijerph18105327.