

# The antecedents of brand trust for mobile devices in Vietnam

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## KEYWORDS

Brand personality,  
Brand trust,  
Marketing operations,  
Mobile devices.

## ABSTRACT

This study explores the relationships between brand personality, brand identification, perceived quality of the brand, and brand trust and the moderating role of age in the above relationships. The questionnaire was sent to respondents in Vietnam in 2019 to gather data on consumer behavior toward mobile gadgets, including laptops, mobile handsets, and tablets. The time span of three years is suitable for psychology issues regarding technological branding that may change for decades. We collected 228 cases for the research, of which 175 cases were used. The paper uses the survey-based methodology and SEM analysis technique with the sample collected in Vietnam. According to our findings, the antecedents of brand personality, brand identification, and perceived quality have positive impacts on brand trust. Additionally, we also find that age, a generation measurement, has a negative moderating effect on the relationship between brand personality and brand trust, and age positively moderates the relationship between perceived quality and brand trust. However, age has no moderating effect on the relationship between brand identification and brand trust. We also present the contributions to academic and managerial areas.

## 1. Introduction

### 1.1. Motivations

Trust enables the establishment of expectations that range from high to low for others. The basis of trust is on the willingness of others to take on risks, whereas risk itself is characterized by varying expectations. Positive results enhance the establishment of trust, while bad results undermine it (Deutsch, 1958). In order to foster and sustain brand loyalty in both

business-to-business and business-to-customer interactions, trust plays a crucial role. According to Chaudhuri and Holbrook (2001), pricing elasticity and market share confidence have the potential to influence behavioral and attitude loyalty. Trust is built on the establishment of acceptable boundaries.

Contrary to certainty, Lewis and Weigert (1985) argue that trust reduces risk. Many researchers have adopted a similar notion (Boon & Holmes, 1991). Trust, as described by Boon and Holmes (1991), is a favorable perception of someone's intentions

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towards oneself in the face of challenges. Brand trust in high-involvement scenarios has a direct impact on consumer commitment, which in turn influences customer happiness (Delgado & Munuera, 2001).

According to Delgado (2004), brand trust refers to the consumer's confident expectations about the reliability and intentions of a brand in situations where there is a risk to the consumer. Delgado (2004) supports this definition by referring previous studies. This notion of brand trust consists of two elements: brand intentions and brand reliability. Brand reliability refers to the level of confidence the consumer has in the brand's capacity to deliver on its promised value. Brand intentions, on the other hand, refer to the extent to which the consumer feels the brand will prioritize the customer when unexpected product issues arise. Riorini and Widayati (2015) assert that trust plays a crucial role in enhancing customer-brand connections. Brand trust refers to the tendency to have faith in a brand that consistently meets its characteristics (Ledikwe et al., 2018). Brand trust is characterized by integrating two basic techniques, as indicated by the research.

According to the survey, brand trust is essential for the prosperity of a corporation. Hence, via the examination of the characteristics that precede brand trust, we may debunk any misunderstandings about how customers choose firms and what they think of when they recall past purchases and consumption choices. We have chosen Vietnam as the main focus of our research since it exhibits significant cultural differences when compared to other countries, particularly those in the Western world. Vietnam hence requires a distinct justification. The aforementioned questions will be addressed in our paper.

### ***1.2. Theoretical backgrounds: Psychological perspective in branding***

Brands that cater to psychological desires for self-fulfillment, group belonging, or personal growth provide symbolic advantages. Consumers may employ a brand to showcase their involvement with a social group, adhere to their personal ideas and express them, or boost their social position. The examination of brands as valuable entities that shape our identities has been thoroughly explored in the domains of psychology, anthropology, semiotics, and sociology (Bagozzi et al., 2021). It provided a clear understanding of consumer behavior long before the

recognition of human nature and rational decision-making that replaced traditional economic theories. Decades of research in the field of literature have confirmed the psychological significance of brands as tangible entities. They assist in the process of making decisions by lessening the mental effort required, promote trust and connections via regular use, convey one's sense of self to both oneself and others, and evoke daydreams, emotions, and aspirations. Although there has been a rise, the study of how brands impact consumers and their significance is still disjointed and lacking integration. Historically, brands attained popularity by emulating human traits, behavior, and goals. The relationship between brand and human psychology has not been given much attention, highlighting the importance of conducting research on human psychology (Jamaluddin et al., 2013) in branding.

### ***1.3. Research Objectives and Research Questions***

The above literature review has shown us the concepts of the main factors in this research. Accordingly, brand trust is essential in persuading customers to buy or be loyal to the brand. But less attention is paid to the impacts of antecedents on brand trust and especially to the variations of these impacts viewed from different age groups. This paper will thus conduct an empirical analysis of the effects of brand personality, brand identification, and perceived quality on brand trust with the moderating role of age for mobile gadgets in Vietnam. The research questions are as follows:

- How does brand personality, brand identification and perceived quality impact brand trust in mobile gadgets?
- How significant is the moderating effect of age on the above causal relationships?

## **2. Literature review and rationales for hypothesis development**

### ***2.1. The Impact of Brand Personality on Brand Trust***

Customers in our progressive society seek closeness, fondness, and a visual-oriented bond. Organizations create a distinct brand identity for their products and services to adapt to this cultural change and fulfill the needs of their customers.

Therefore, firms strive to infuse their products with unique characteristics that build a brand. Customers evaluate the worth of a brand by considering its personality characteristics, following the belief that brand personality is essential for brand equity and image (Keller, 1993).

Su and Tong (2016) assert that the presence of a unique and captivating brand personality can amplify the positive effects on brand outcomes related to attitudes and actions. The personality of a brand has a significant impact on the trust and loyalty that individuals have towards it. People form and uphold these views based on the brand's perspective. Brand personality has an impact on how consumers absorb product information. The potential exists for it to create conflict, impacting how consumers view brands, especially in terms of value and quality, cognition, and behavior (Su & Tong, 2016). Research indicates that a strong brand personality enhances consumer preference, emotional reactions, trust, and loyalty. In addition, the emotional connections between the company and its clients are strengthened (Su & Tong, 2016; Sung & Kim, 2010). Based on our previous analysis, we have made the following deduction:

*Hypothesis 1: Brand personality has a POSITIVE relationship with brand trust.*

## **2.2. The Impact of Brand Identification on Brand Trust**

Identification, as described by social identity theory, refers to a feeling of unity or connection with a particular organization or group (Kuenzel & Halliday, 2010). Another form of identification was a psychological connection to group traits (So et al., 2013). Identification, as described by clients, refers to a sense of connection or belonging to the organization (Bhattacharya et al., 1995). Client brand identification refers to the extent to which clients think that their image aligns with that of the brand (Bergkvist & Bech-Larsen, 2010). Moreover, the level of brand identification of an individual was indicated. These identities influenced behavior even when there were no contractual or statutory business characteristics present (Chou, 2013; Kuenzel & Halliday, 2010). Some academics believe that strong ties between clients and firms are formed when clients feel a connection with enterprises that help them meet their fundamental self-identity needs. An active,

intentional, and mutually agreed upon relationship between a client and a firm promotes clients to engage in rational behavior, which may include behaviors that could harm the firm (Bhattacharya & Sen, 2003). Nikhashemi et al. (2015) discovered a link between brand identification and trust. Consumers desire to align themselves with well-regarded enterprises or brands in order to increase their self-identity and self-esteem (Keh & Xie, 2009). Brand trust may arise as a consequence of brand identity (Dunn & Schweitzer, 2005). Multiple empirical research papers have shown that brand trust is impacted by brand identity (Rather & Camilleri, 2019; So et al., 2013). Based on our previous analysis, we have made the following deduction:

*Hypothesis 2: Brand identification has a POSITIVE relationship with brand trust.*

## **2.3. The Impact of Perceived Quality on Brand Trust**

Companies that offer superior products can gain the trust of consumers. Brand trust can significantly influence consumer purchasing. The quality of a product is determined by its marketing, engineering, production, and maintenance components, which contribute to its usefulness and ensure that it meets or exceeds the expectations of consumers or customers. Consumers' pleasure with product quality can bolster their faith in a brand by meeting their expectations (Wijaya, 2011). The unique characteristics of its products enhance its competitive advantage compared to its competitors. Prior to making a purchase, consumers assess the quality of a product. Prasetya and Sianturi (2019) found that customer trust is impacted by the perception of quality. Product excellence is demonstrated by quality, which in turn inspires consumer confidence. Walter et al. (2003) suggest that firms might increase consumer trust by offering positive experiences that showcase integrity, expertise, and honesty. According to Walter et al. (2003), when consumers use a high-quality product from a brand, they are more inclined to trust that brand. Based on our previous analysis, we have made the following deduction:

*Hypothesis 3: Perceived quality has a POSITIVE relationship with brand trust.*

## **2.4. The Moderating Effect of Age on the Relationship between Brand Personality and Brand Trust**

According to the initial concept of brand personality, individuals build a connection with a brand and express their uniqueness by perceiving the company's products as an extension of themselves (Azoulay & Kapferer, 2003). According to Sung and Kim (2010), emotional connections and symbolic value are both beneficial for establishing and sustaining meaningful relationships between consumers and brands. The personality of a brand serves as a symbol or representation of oneself. However, certain aspects of Vietnamese culture, such as the literature review, require a more thorough understanding. Unlike younger generations, elder generations demonstrate a higher inclination towards pragmatism, strategic thinking, and a consistent viewpoint. In this particular case, the brand personality appears to be characterized by candid and unadulterated emotions that previous generations overlooked when evaluating the trustworthiness of a company. Based on the prior research, the hypothesis can be concluded in the following manner:

*Hypothesis 4: Age NEGATIVELY moderates the relationship between brand personality and brand trust.*

### **2.5. The Moderating Effect of Age on the Relationship between Brand Identification and Brand Trust**

The study conducted by Marticotte et al. (2016) demonstrates a strong positive association between consumers' positive brand views and their degree of brand identification. According to the social identity theory, "solid brand identification" refers to the extent to which the identities of a brand and its consumers are comparable. Many people deliberately select brands in order to showcase their uniqueness and garner attention from others. According to Kim et al. (2001), the degree of brand familiarity impacts how much a certain identity is represented and strengthened. According to prior study and observations of Vietnamese culture, it can be inferred that older generations have less interest in visually striking or virtual pictures. Rather than associating their identity with the brand, people make purchase and utilization decisions based on their previous interactions with the organization. In contrast, younger generations appear to place greater importance on the distinctive characteristics and personalities of the brand in order to reinforce their connection. As a result, older generations will avoid using brand identification

methods to evaluate the trustworthiness of a specific brand. Based on the past research, the hypothesis can be inferred with the following conclusions:

*Hypothesis 5: Age NEGATIVELY moderates the relationship between brand identification and brand trust.*

### **2.6. The Moderating Effect of Age on the Relationship between Perceived Quality and Brand Trust**

Age-related alterations in consumer behavior can be ascribed to physiological and psychological aging processes, along with the accumulation of life experiences (Moschis, 1994). According to Darley and Smith (1995), as customers get older, they gain experience, become more familiar with, and have a deeper understanding of the products and services they use and consume. According to O'Neill and Palmer (2003), having previous experience increases the likelihood that an individual's expectations and viewpoints regarding a service contact will become more demanding. On the other hand, buyers who have little knowledge may find it difficult to distinguish between important features (Ganesan-Lim et al., 2008). The Vietnamese culture has been determined to be pragmatic and focused on long-term goals, particularly among the country's founding generations. These folks prioritize the effectiveness of items and services over their visual attractiveness or the emotional impact conveyed through advertising. One can get the following conclusion from the previously stated analysis:

*Hypothesis 6: Age POSITIVELY moderates the relationship between perceived quality and brand trust.*

## **3. Data collection and analytical methodology**

### **3.1. Data collection and analysis**

#### **3.1.1. Population and sampling**

Based on the research criteria, the collaborators used a simple random sample. To maintain the reliability of the components and verify that the survey was only completed by competent and knowledgeable individuals, a first screening question was included in the study. The selection of our samples is done in a completely random manner. A simple random sample is a sampling method where every unit in the

population has an equal chance of being selected, as described by Singh et al. (1996). This generates a basic random sample. Simple random sampling guarantees that every unit in the population has an identical probability of being chosen as a sample. I shared my contact information to facilitate communication with participants on any study-related concerns. Survey participants have the opportunity to discontinue their participation in the poll at any given moment. Participants have the option to exclude inquiries that they deemed unpleasant or uncomfortable to answer. Before submitting, participants are given the choice to review and modify their answers.

### *3.1.2. Methods employed for data collecting*

Sampling is the method of choosing a smaller group from a larger population to accurately reflect the total population or to gain understanding of broader social processes that go beyond the specific cases, individuals, or locations being studied. The probability of receiving a sample is calculated using either random or likelihood sampling methods (Strauss & Corbin, 1990). The process of collecting data has been improved in survey research (Weigold et al., 2013). Thanks to rapid technical progress and affordable personal computers, conducting internet surveys has become viable (Weigold et al., 2013). The proliferation of online surveys has been driven by academics' need to obtain audience data in a cost-efficient manner (Vaske, 2011). Online surveys offer rapidity, ease, cost-effectiveness, and convenience. Limitations of the study are the lack of a sample frame and the widespread use of filters in most email applications. These filters categorize unsolicited messages as spam, grayscale, or blacklist them (Sue & Ritter, 2012). The use of online surveys may lead to a proliferation of email questionnaires due to the benefits they offer (Sue & Ritter, 2012).

In order to collect information on consumer behavior toward mobile devices, such as laptops, mobile handsets, and tablets, the questionnaire was distributed to respondents in Vietnam from 2019 via Facebook, emails and other tools. The country of Vietnam was picked because it fits well with our framework, is committed to digital transformation, performs better than most developing countries (including Indonesia and similar countries), and has the potential to develop into a highly developed country. We collected 228 cases, of which 175 cases were used.

### *3.1.3. Investigation techniques*

The research model is evaluated using the partial least squares (PLS) method. Component-based structural equation modeling, often known as PLS (Partial Least Squares), allows for the analytical modeling of latent variable pathways. This approach was first introduced by Wold in 1982 and has been further developed by Chin et al. in 2003 and Qureshi and Compeau in 2009. The investigation in our study utilized Partial Least Squares (PLS), which is a statistically robust approach for examining hypotheses (Joreskog & Wold, 1982). The significance of the path was determined by conducting 500 re-samples and utilizing bootstrap statistics (Lohmoller, 1982; Chin, 2010). The product indicator technique, initially formulated by Kenny and Judd in 1984, was included into PLS by Chin et al. (2003) to investigate moderating interactions. By multiplying the indicators of predictor and moderator constructs, interaction terms were created. Before performing multiplication, the values of each predictor and moderator indicator are adjusted to have a mean of zero. As stated by Hair et al. (2019), PLS-SEM:

The goal of the analysis is to predict a conceptual framework. It is recommended to consider complex structural models that consist of multiple components, indicators, and relationships. The aim of this project is to enhance understanding of complexity by elaborating on current concepts through exploratory research. The path model may consist of one or more constructs that have been evaluated in a formative manner. PLS-SEM is particularly effective in doing business-to-business research that involves extensive sample sizes and small populations. Minimum sample size issues are crucial in PLS-SEM. The PLS-SEM methodology utilizes the '10-times rule' approach, which states that the minimum sample size should be ten times greater than the highest number of meaningful inner or outer model associations associated with any latent variable in the model (Hair et al., 2011). In order to run a model with six hypotheses, we need sixty cases. We meet the requirements by inputting 175 cases, tripling the minimum number.

## **3.2. Measurement Scales**

### *3.2.1. Brand Personality (PERS)*



We adapted the items developed by Jennifer Aaker (1997), who identified five dimensions: sincerity (SINC), excitement (EXCI), competence (COMP), sophistication (SOPH), and ruggedness, including fifteen ‘facets.’ For the case of the culture of Vietnam, we removed the sub-construct of ruggedness from the survey. Responses followed a five-point Likert-scale format (1 = Strongly disagree, 7 = Strongly agree).

### 3.2.2. Brand Identification (IDEN)

We used the six-item scales of brand identification (IDEN) developed by Mael and Ashforth (1992). Responses followed a five-point Likert-scale format (1 = Strongly disagree, 7 = Strongly agree).

### 3.2.3. Perceived Quality of Products (QUAL)

We adapted to the items developed by Garvin (1987). He proposed a well-known framework for thinking about product quality based on eight dimensions: performance (PER), features, reliability (RELI), conformance (CONF), durability (DURA), serviceability (SERV), aesthetics (AEST), and perceived quality. For the case of our research, due to the general meanings of the sub-construct of perceived quality and the similar characteristics of the sub-construct of features to the sub-construct of performance, we removed these two sub-constructs from the survey. Responses followed a five-point Likert-scale format (1 = Strongly disagree, 7 = Strongly agree).

### 3.2.4. Brand Trust (TRUST)

For measuring the concept of trust towards the brand, four items were taken. The scale by Gurviez and Korchia (2003) and Sirgy et al. (1997) was used and adapted for our survey. These question items are: The products of this brand make me feel safe; I trust the quality of the products of this brand; I think that this brand is always looking to improve its products to better satisfy the consumer needs; and I like this brand more than other brands in the same product category. Responses followed a five-point Likert-scale format (1 = Strongly disagree, 7 = Strongly agree).

## 4. Measurement model

### 4.1. The First-order Analysis

At each level of scale creation, the discriminant and convergent validity of each latent variable must be evaluated. An item is considered to have sufficient convergent validity if it analyzes a latent idea for which it was constructed. In order to assess the convergent validity of the items in this study, factor loadings were used. Items with high loading ( $> 0.5$ ) on their parent idea and little cross-loading on other components, according to Hair et al. (2010), had good convergent validity. All items have factor loadings above 0.5, which is the bare minimum needed for high convergent validity, as seen in Table 1.

Additionally, Table 1 demonstrates that Cronbach’s alpha is higher than the threshold of 0.6 for all structures. Schumacker and Lomax (2010) recommend that factor loadings be evaluated for statistical significance (p-values of 0.05), as the p-values are used as validation parameters in confirmatory factor analysis. Table 1 demonstrates that all subconstructs have a p-value less than 0.000. The discriminant validity of a construct was examined using AVE. Fornell and Larcker (1981) defined discriminant validity as the square root of the AVE of each question item being larger than its correlations with other question items. The analysis of the first-order factor structure in Table 2 demonstrated that this requirement was satisfied.

### 4.2. The Second-order Analysis

According to Hair et al., a higher-order construct ought to be assessed similarly to a lower-order construct (2006). As a result, while evaluating the second-order construct and the theoretical study, statistical validations for validity and reliability at the first-order level are equally important. Sincerity, enthusiasm, skill, and sophistication consequently emerge as brand personality markers. The factor scores of sincerity, enthusiasm, competence, and sophistication produced by SmartPLS were used to build brand personality indicators. The results (Table 3) reveal that brand identification showed significant loadings associated with honesty, excitement, competence, and sophistication (above 0.5,  $p < 0.001$ ). With a Cronbach’s alpha of 0.921, brand personality reliability was demonstrated. In Table 4, the square root of AVE, which was larger than the maximum shared variance among the components,

**Table 1. The first-order factor analysis and Cronbach's Alpha**

| Items | Factor Loadings | t-statistics | p-values | Cronbach's Alpha |
|-------|-----------------|--------------|----------|------------------|
| AEST1 | 0.929           | 21.926       | 0.000    | 0.875            |
| AEST2 | 0.919           | 16.016       | 0.000    |                  |
| AEST3 | 0.834           | 23.446       | 0.000    |                  |
| COMP1 | 0.872           | 27.650       | 0.000    | 0.860            |
| COMP2 | 0.881           | 22.758       | 0.000    |                  |
| COMP3 | 0.898           | 24.867       | 0.000    |                  |
| CONF1 | 0.893           | 20.417       | 0.000    | 0.792            |
| CONF2 | 0.925           | 16.584       | 0.000    |                  |
| DURA1 | 0.867           | 17.069       | 0.000    | 0.735            |
| DURA2 | 0.909           | 14.443       | 0.000    |                  |
| EXCI1 | 0.850           | 22.520       | 0.000    | 0.893            |
| EXCI2 | 0.868           | 22.302       | 0.000    |                  |
| EXCI3 | 0.922           | 25.593       | 0.000    |                  |
| EXCI4 | 0.842           | 22.895       | 0.000    |                  |
| IDEN1 | 0.797           | 10.282       | 0.000    | 0.898            |
| IDEN2 | 0.851           | 17.042       | 0.000    |                  |
| IDEN3 | 0.877           | 16.626       | 0.000    |                  |
| IDEN4 | 0.892           | 18.730       | 0.000    |                  |
| IDEN5 | 0.793           | 14.547       | 0.000    |                  |

|        |       |        |       |       |
|--------|-------|--------|-------|-------|
| PER1   | 0.606 | 7.182  | 0.000 | 0.870 |
| PER2   | 0.730 | 8.948  | 0.000 |       |
| PER3   | 0.828 | 14.503 | 0.000 |       |
| PER4   | 0.753 | 10.494 | 0.000 |       |
| PER5   | 0.729 | 9.174  | 0.000 |       |
| PER6   | 0.749 | 9.016  | 0.000 |       |
| PER7   | 0.771 | 10.276 | 0.000 |       |
| PER8   | 0.614 | 10.138 | 0.000 |       |
| RELI1  | 0.868 | 15.088 | 0.000 | 0.871 |
| RELI2  | 0.920 | 20.202 | 0.000 |       |
| RELI3  | 0.887 | 18.908 | 0.000 |       |
| SERV1  | 0.885 | 20.687 | 0.000 | 0.769 |
| SERV2  | 0.916 | 15.294 | 0.000 |       |
| SINC1  | 0.862 | 23.391 | 0.000 | 0.904 |
| SINC2  | 0.849 | 16.069 | 0.000 |       |
| SINC3  | 0.922 | 18.464 | 0.000 |       |
| SINC4  | 0.890 | 18.239 | 0.000 |       |
| SOPH1  | 0.924 | 15.345 | 0.000 | 0.791 |
| SOPH2  | 0.893 | 20.562 | 0.000 |       |
| TRUST1 | 0.825 | 11.521 | 0.000 | 0.866 |
| TRUST2 | 0.869 | 18.856 | 0.000 |       |
| TRUST3 | 0.820 | 16.265 | 0.000 |       |
| TRUST4 | 0.866 | 14.810 | 0.000 |       |
| AGE    | 1.000 |        |       |       |

**Table 2. The first-order discriminant validity test**

| Subcon-structs | AEST    | AGE     | IDEN  | TRUST | COMP  | CONF  | DURA  | EXCI  | PER   | RELI  | SERV  | SINC  | SOPH  |
|----------------|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| AEST           | 0.895   |         |       |       |       |       |       |       |       |       |       |       |       |
| AGE            | (0.194) | 1.000   |       |       |       |       |       |       |       |       |       |       |       |
| IDEN           | 0.523   | (0.193) | 0.843 |       |       |       |       |       |       |       |       |       |       |
| TRUST          | 0.566   | (0.093) | 0.679 | 0.845 |       |       |       |       |       |       |       |       |       |
| COMP           | 0.539   | (0.083) | 0.576 | 0.608 | 0.884 |       |       |       |       |       |       |       |       |
| CONF           | 0.573   | (0.134) | 0.463 | 0.528 | 0.530 | 0.909 |       |       |       |       |       |       |       |
| DURA           | 0.567   | (0.128) | 0.346 | 0.385 | 0.399 | 0.435 | 0.888 |       |       |       |       |       |       |
| EXCI           | 0.611   | (0.155) | 0.639 | 0.553 | 0.796 | 0.544 | 0.443 | 0.871 |       |       |       |       |       |
| PER            | 0.625   | (0.246) | 0.554 | 0.563 | 0.460 | 0.628 | 0.423 | 0.468 | 0.726 |       |       |       |       |
| RELI           | 0.464   | (0.206) | 0.302 | 0.377 | 0.365 | 0.525 | 0.523 | 0.385 | 0.443 | 0.892 |       |       |       |
| SERV           | 0.562   | (0.224) | 0.481 | 0.441 | 0.340 | 0.438 | 0.451 | 0.431 | 0.568 | 0.440 | 0.901 |       |       |
| SINC           | 0.639   | (0.180) | 0.585 | 0.522 | 0.748 | 0.540 | 0.484 | 0.774 | 0.516 | 0.419 | 0.529 | 0.881 |       |
| SOPH           | 0.475   | (0.085) | 0.639 | 0.585 | 0.762 | 0.446 | 0.374 | 0.730 | 0.427 | 0.407 | 0.354 | 0.651 | 0.909 |

**Table 3. The second-order factor analysis and Cronbach's Alpha**

| Items  | Factor Loadings | t-statistics | p-value | Cronbach's Alpha |
|--------|-----------------|--------------|---------|------------------|
| AGE    |                 |              |         |                  |
| COMP   | 0.924           | 61.408       | 0.000   | 0.921            |
| EXCI   | 0.916           | 40.929       | 0.000   |                  |
| SINC   | 0.876           | 34.949       | 0.000   |                  |
| SOPH   | 0.879           | 34.364       | 0.000   |                  |
| AEST   | 0.838           | 26.830       | 0.000   | 0.862            |
| CONF   | 0.794           | 20.948       | 0.000   |                  |
| DURA   | 0.707           | 9.744        | 0.000   |                  |
| PER    | 0.823           | 20.897       | 0.000   |                  |
| RELI   | 0.703           | 10.902       | 0.000   |                  |
| SERV   | 0.742           | 14.685       | 0.000   |                  |
| IDEN1  | 0.797           | 20.734       | 0.000   | 0.898            |
| IDEN2  | 0.851           | 24.607       | 0.000   |                  |
| IDEN3  | 0.877           | 31.808       | 0.000   |                  |
| IDEN4  | 0.892           | 46.644       | 0.000   |                  |
| IDEN5  | 0.793           | 21.663       | 0.000   |                  |
| TRUST1 | 0.825           | 22.054       | 0.000   | 0.866            |
| TRUST2 | 0.868           | 25.107       | 0.000   |                  |
| TRUST3 | 0.820           | 22.006       | 0.000   |                  |
| TRUST4 | 0.866           | 29.841       | 0.000   |                  |

**Table 4. The second-order discriminant validity test**

| Items/<br>Sub-constructs | AGE    | IDEN  | PERS  | TRUST | QUAL  |
|--------------------------|--------|-------|-------|-------|-------|
| AGE                      | 1.000  |       |       |       |       |
| IDEN                     | -0.193 | 0.843 |       |       |       |
| PERS                     | -0.137 | 0.678 | 0.899 |       |       |
| TRUST                    | -0.093 | 0.679 | 0.632 | 0.845 |       |
| QUAL                     | -0.245 | 0.590 | 0.673 | 0.630 | 0.770 |

**Table 5. Fitness of the model**

| Dependent Variable | R Square | R Square Adjusted |
|--------------------|----------|-------------------|
| BRAND TRUST        | 0.586    | 0.568             |

further supports the discriminant validity of brand personality.

As indices of perceived quality, performance, dependability, compliance, durability, usability, and aesthetics are used. Utilizing SmartPLS factor scores for performance, dependability, compliance, durability, serviceability, and aesthetics, indicators

for perceived quality were developed. The results (Table 3) demonstrate that perceived quality was significantly influenced by performance, reliability, compliance, durability, usability, and aesthetics (above 0.5,  $p < 0.001$ ). With a Cronbach's alpha of 0.862, the reliability of perceived quality was verified. As shown in Table 4, the square root of AVE, which was larger than the maximum shared variance among the components, further supports the discriminant validity of perceived quality.

### 4.3. Analytical Techniques

PLS-SEM, a component-based structural equation modeling technique that permits route analytical modeling with latent variables, was used to test the research model (Chin et al., 2003). Jöreskog and Wold (1982) recommend PLS for theory research, which is exactly what we did in our work. Bootstrap statistics with 500 re-samples were used by Lohmöller (1989) to prove route importance. As recommended by Kenny and Judd (1984) and then implemented in PLS by Chin et al., the product indicator approach was used to analyze moderating connections, in which interaction terms were produced by multiplying the indicators of the predictor and moderator constructs (2003).

## 5. Structural model and findings

Table 5 provides the results of the structural model. The model explains 56.8 percent of the variance in trust in the brand. Table 6 summarizes the results of hypothesis testing:

*H1: Brand personality has a POSITIVE relationship with brand trust is SUPPORTED with  $\beta = 0.229$ ,  $p = 0.023$ , and a one-tailed test.*

*H2: Brand identification has a POSITIVE relationship with brand trust is SUPPORTED with  $\beta = 0.382$ ,  $p = 0.000$ , and a one-tailed test.*

*H3: Perceived quality has a POSITIVE relationship with brand trust and is SUPPORTED with  $\beta = 0.266$ ,  $p = 0.002$ , and a one-tailed test.*

*H4: The hypothesis that age NEGATIVELY moderates the relationship between brand personality and brand trust is SUPPORTED with  $\beta = (-0.210)$ ,  $p = 0.013$ , and a one-tailed test.*

*H5: The hypothesis that age POSITIVELY moderates the relationship between brand identification and brand trust is UNSUPPORTED*



**Table 6. Hypothesis testing of coefficients**

| Hypothesis | Signs of Hypothesis | Independent Variable | Coefficient | p-values | Decisions   |
|------------|---------------------|----------------------|-------------|----------|-------------|
| H1         | +                   | PERS                 | 0.229       | 0.023    | Supported   |
| H2         | +                   | IDEN                 | 0.382       | 0.000    | Supported   |
| H3         | +                   | QUAL                 | 0.266       | 0.002    | Supported   |
|            |                     | AGE                  | 0.103       | 0.034    |             |
| H4         | -                   | AGE*PERS             | (-0.210)    | 0.013    | Supported   |
| H5         | -                   | AGE*IDEN             | 0.000       | 0.499    | Unsupported |
| H6         | +                   | AGE*QUAL             | 0.158       | 0.016    | Supported   |

with  $p = 0.499$  and a one-tailed test.

H6: The hypothesis that age *POSITIVELY* moderates the relationship between perceived quality and brand trust is *SUPPORTED* with  $\beta = 0.158$ ,  $p < 0.016$ , and a one-tailed test.

## 6. Theoretical contributions

### 6.1. Confirmation of the Roles of the Antecedents of Brand Trust for the Mobile Gadgets in Vietnam

Our study confirms the effects of brand personality, brand identification, and perceived quality on brand trust as its initial contribution. These connections have been demonstrated in earlier research, but only in the context of wealthy nations. One of the original studies done in Vietnam is ours. It has been established that Vietnam shares some global patterns in consumer behavior with other countries. Particularly, brand personality contributes to consumers' ability to trust a brand. They consider and think about the brand in the same way that humans do, and the more they do so, the more they will trust the brand.

Additionally, our study demonstrates how brand identification affects consumers' trust in a company. According to analysis, customers' trust in a brand will increase if they believe it may help them define who they are and become associated with it. Though this is a pretty conventional notion of the antecedents of brand trust, perceived quality seems to be the pragmatic indication, particularly in the instance of Vietnam. The most important indicators in Vietnam are practical usage and principal function judged by perceived quality, especially for the elderly generation. As a result, perceived quality will increase consumers' brand confidence and trust.

### 6.2. Introduction of the Moderating Roles of Age in the Relationship between the Antecedents and Brand Trust

In business and marketing, age is a moderator that has long been valued. However, in this instance, we are among the first researchers to use age disparities as modifiers, enhancing or reducing the associations between the antecedents and brand trust. Particularly, younger generations place a higher value on brand personality, while older generations place a lower value on it. Younger generations appear to be sensitive to brand personality according to our survey, just like other new phenomena in the digital age. Young individuals want to identify their personalities and convey them to the world. They, therefore, prefer the brand that would enable them to market their personality. The older generations, on the other hand, tend to focus more on practical concerns like performance, durability, or quality, for which they need time to investigate and make accurate assessments. Therefore, when customers consider their faith in the brand, they will concentrate on the perceived quality. Since all generations exhibit the same consumption habits when considering the impact of brand identification on brand trust, age does not appear to play a significant part in this analysis.

## 7. Managerial implications

### 7.1. Implications of the Antecedents of Brand Trust

According to the study's findings, companies that sell mobile devices should run marketing efforts to demonstrate their brand's personality, recognition, and perceived quality. To enhance the brand personality and make the customers recognize the brand as a human, a relative, or a friend, the corporation should

humanize the brand through campaigns like music concerts with renowned people, sports activities, and the like. In order for customers to associate the brand with their image and identity and help it develop emotion and interactions, they need also to adapt the brand's message to each customer and market the brand's attractiveness. Thirdly, the business can also bolster consumer perceptions of the brand's quality by sharing tales about the items' dependability and longevity on platforms like Facebook and YouTube, to mention a couple. Along with the items themselves and client services, the business can also advertise the brand's quality by providing skilled service, which will improve customers' perceptions of the brand's quality.

### **7.2. Implications of the Moderating Roles of Age**

Age is an important customer demographic that has a big impact on businesses' marketing operations. Young consumers are one of the most desirable and developing market segments for companies; despite having low purchasing power, they are essential to the sale of many products (Hwang & Kandampully, 2012). Brand managers frequently hold the opinion that younger consumers are an easy target for their new and innovative brands because they are less likely to hold firm opinions about them, which demonstrates their shared concern for brand loyalty as they favor young, cutting-edge brands compared to older consumers (Hwang & Kandampully, 2012). Younger consumer profiles are much more prevalent for new and growing companies, while older consumer profiles are more prevalent for declining brands.

According to the results of our study, the company should emphasize the personality traits identified in the aforementioned analyses if it wants to appeal to younger customers. In contrast, if the business wants to appeal to older generations, it should promote quality because older clients place great value on it. Because age is not a component that can improve or weaken the influence of brand identity on brand trust, they can still utilize brand identification promotion techniques to reach both generations.

## **8. Conclusions, limitations, and future research**

### **8.1. Conclusions**

The relationship-marketing literature has identified

trust as a factor influencing customer loyalty (Berry, 1983). Brand loyalty is positively impacted by brand trust, which is a key element in long-term consumer relationships, according to recent research (Sung et al., 2010). The development of highly valued trade connections supported by brand trust leads to higher levels of brand loyalty (Morgan & Hunt, 1994). According to Chaudhuri and Holbrook (2001), brand trust has a significant impact on consumer attitudes and repurchase loyalty. Our research advances knowledge of the factors that influence brand trust and the moderating effect of age.

As a result, it has been demonstrated that brand personality, brand identification, and perceived brand quality are the precursors of customer trust in a brand. Age is also supported as the factor that moderates the aforementioned correlations at the same time. Particularly in the instance of Vietnam, our findings on these moderating effects are among the pioneering discoveries from an academic standpoint. The study's findings also offer some suggestions for how branding and marketing operations should be handled in terms of business management. Based on the moderating effects for each antecedent, managers and business people can use our research's findings to build marketing and branding initiatives and target the appropriate age groups.

### **8.2. Limitations**

The antecedents of brand trust have been studied in numerous nations, and in most cases, the antecedents of brand trust have a significant influence on brand trust. Although it appears to be generic and universal, our paper also demonstrates several limits that may call for additional research for different countries. That is age's moderating impact. In contrast to western culture, Hofstede claims that Vietnamese culture is long-lasting and collectivist. Vietnamese consumption might be split into two groups as a result of the new phenomena of globalization and Internet-based marketing initiatives. The typical viewpoint of the elder generations is similar to the theory put forward by Hofstede (2001). However, the younger generations—the Z generations—are the ones most impacted by the new globalization and social media period. Thus, as compared to past generations, younger generations are more open-minded and outgoing. Thus, they share characteristics with other young people around the world. This crucial point

needs to be carefully considered when extrapolating our research's findings to studies conducted in other western countries, where the culture is characterized by open-mindedness and short-termism, and where all age groups might have the same moderating effects on the relationships between the antecedents and brand trust.

Although the antecedents have a significant impact on brand trust, the second constraint is related to the customers' genuine brand loyalty when they want to repurchase new products. Brand loyalty does not always follow brand trust. In order to determine the effects of brand personality, brand identification, and perceived quality on brand loyalty and real intention to repurchase the company's items, we need to do an additional study.

### 8.3. Future Research

The aforementioned restrictions recommend that we carry out additional studies to examine the moderating effects of age variables in other cultures, including western nations. Additionally, we must do research in Vietnam on actual product repurchases or referrals to other peers based on brand personality, brand identity, and perceived quality as the independent factors (the actual repurchase, or the recommendation is the measurement of brand loyalty).

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