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A Study on the Dimensions of Consumer Cooperative Quality in Korea

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Abstract: This study aims to develop a model for quality as perceived by the members of consumer cooperatives. The dimensions of consumer cooperative quality need to include both product and service quality so as to reflect the characteristics of the retail industry. Furthermore, corporate social responsibility (CSR) and psychological ownership (PO) should also be involved due to their values and principles being crucial for consumer cooperatives. This study proposes a model for consumer cooperative quality by integrating the dimensions of service, product, CSR, and PO dimensions. We conducted exploratory and confirmatory factor analyses to validate the proposed model based on 773 samples from the members of Korea's four largest consumer cooperatives. The results showed that a three-level hierarchical factor model could represent the structure of perceived quality for consumer cooperatives. Additionally, we identified the components of quality constructs that reflect the unique features of consumer cooperatives in Korea. This study contributes to the literature by proposing a quality model that explores the relationship between quality and CSR, which should be examined in the stream of research in multi-dimensional quality studies.

Keywords: *Korean Consumer Cooperatives, Product Quality, Service Quality, Social Value Quality, Comparative Model Analysis, Structural Equation Modeling*

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1. Introduction

The Korean consumer cooperative is a unique type of retail business that supplies food and daily necessities to consumers. However, they have two characteristics that set them apart from the commercial retail industry. Firstly, consumer cooperatives have maintained a strong tradition of corporate social responsibility (hereinafter referred to as “CSR”) since their first establishment. They conduct business and promotes consumption centered around social issues such as domestic agriculture and environment, food safety, and the production and sale of eco-friendly food. This commitment has significantly impacted the movement (Shin and Lee, 2018; Jeong, Kim, and Kim, 2011). The four major consumer cooperatives in Korea are Hansallim, which originated from the farmers and eco-life movement; Dure-Consumer Cooperatives, which emerged from the consumer movement derived from credit unions; HangbokJungshim Consumer Cooperatives, which represents the women's movement; and iCOOP, which combines the labor and local movements. Most consumer cooperatives have developed by strengthening their dual characteristics as associations and businesses in order to address social issues. In other words, CSR has been a central business mission for Korean consumer cooperatives (Shin, Park, and Lee, 2016). Secondly, consumer cooperatives members and consumers possess characteristics that differentiate them from consumers of traditional retail companies. They view consumer cooperatives as a means to address social problems and are motivated by extrinsic factors, such as the benefits of accessing safe and eco-friendly food at reasonable prices, and intrinsic factors that drive their engagement in consumption and participation activities (Roessl, 2010).

With revision of the Consumer Cooperatives Act in 2010, there was explosive growth in the number of members, and sales had greatly increased by 2016. The sales of the four consumer cooperatives together exceeded KRW 1 trillion. However, consumer cooperatives have recently been seeking to improve their service quality and delivery speed to match that of retail companies. This is due to the increase in non-face-to-face transactions during and after the COVID-19 crisis, digitalization of the supply chain, and the need for massive investment to address numerous challenges. In this competitive environment, consumer

cooperatives must actively respond to changes in the external environment. Nevertheless, consumer cooperatives growth has been stagnant for the past five years. There are several ways to determine the cause of this. However, a fundamental starting point is to focus on quality, which precisely identifies what members expect from cooperative products and services. In other words, it involves members accurately defining the quality they expect from consumer cooperatives as retailer. Every business must persist in its core competencies to survive with a competitive edge, and quality is the most critical. Quality is vital in attracting and retaining new customers, so companies must understand how consumers perceive it. From this perspective, many studies have been conducted on defining quality from the consumer's point of view. One of the key conclusions is that quality is composed of multiple dimensions rather than a single dimension (Parasuraman et al., 1988; Brady and Cronin, 2001; Rust and Oliver, 1994). Since the distribution industry is essentially a service industry that sells products, both product quality and service quality must be considered from the perspective of customer perceptions. Several studies have been conducted to define quality in the distribution industry, with the most seminal based on the SERVQUAL model by Parasuraman et al. (1988) and the SERVERF model by Cronin and Taylor (1992). However, these studies have limitations as they do not involve product attributes. Dabholkar, Thorpe, and Rentz (1996) developed RSQ (Retail Service Quality) to measure service quality suitable for the retail industry context but did not include product or service characteristics. Yuen and Chane (2010) considered both product and service quality but only included some general product quality concepts. Therefore, a quality model study that encompasses both product and service dimensions is necessary to define the quality of consumer cooperatives, operating in the context of retail business.

On the other hand, numerous studies have recently been conducted on the relationship between CSR and quality. Since quality is perceptively defined by customers, evaluating customer perceptions of CSR activities is likely to impact their evaluation quality. From this perspective, some studies attempt to incorporate CSR into the concept of quality (Sureshchandar et al., 2002). However, a limitation exists as these studies only consider service quality and CSR, never integrating the concept of product quality.

Furthermore, due to the governance structure of consumer cooperatives and the hybrid roles of their members as consumers and owners, members may have a sense of psychological ownership (PO). Ownership is frequently associated with cooperative ownership, granting individuals the right to use or control a cooperative as an object (Furby, 1978). Hansmann (1999) argued that ownership is central to cooperatives. Tuominen, Jusila, and Rantanen (2010) found a strong connection between consumer cooperatives organizations and their members, highlighting that PO is a characteristic unique to them. Therefore, it is reasonable to assume that PO also influences member perceptions of quality due to their roles.

In summary, many studies have evaluated quality in the retail industry. However, most focus on service quality, with only a few incorporating the quality of products. Additionally, it is challenging to find research that considers the impact of corporate CSR activities and PO on perception of quality, which has recently gained attention from researchers and practitioners.

This study aims to develop an integrated CC quality model that incorporates both product quality and service quality while considering the unique characteristics of CC, CSR factors relevant to the context, and PO factors of CC. This approach represents a new way to generalize members' conceptual judgments of perceived quality.

The structure of this study is as follows: Chapter 2 to 5 explores the theoretical background, including the concepts of quality, CSR, PO, and a review of previous research. Chapter 6 describes the research methods, including the operational definition of variables, research subjects, and data collection and presents the research results, including the characteristics of the sample, exploratory factor analysis, and confirmatory factor analysis. Finally, Chapter 7 concludes the study by discussing the research findings, implications, and limitations.

2. Background Theory

2.1 Quality

Definition of quality

From the consumer's perspective, quality is highly subjective, and the criteria for defining it can vary depending on individuals, industry, products, and organizations. Different people have different sets of perceived criteria for defining quality, often based on their position in the value chain. Garvin (1984) proposed five approaches to defining quality: transcendent, product, user, manufacturing, and value. While quality is often described as the superiority of a product, it must be defined by transcendental or judgmental factors and generally meet the standard of excellence agreed upon by most people. However, since excellence in quality is abstract and subjective, the standards for such excellence may also be subjective.

In other words, the level of quality perceived by consumers' is based on the difference between their expectations and experiences. Subjective characteristics and the overall level of direct experience have a more significant impact on perceived quality than objective factors. Perceived quality can be defined as a subjective judgment of the relative superiority of quality, irrespective of its physical attributes. Steenkamp (1990) studied the process by which consumers perceive quality and developed a quality perception model in which consumers evaluate quality through a three-step process.

Garvin (1987) identified eight factors in the quality dimensions of a product: Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics, and Perceived Quality. Garvin emphasized against the strategic errors of business which emphasizes that managers should assume that quality can only be managed internally in the production process. Instead, they should actively and attentively consider customer needs and preferences. In summary, quality is a subjective concept that can depend on individual perspectives. The definition of quality perception involves a complex evaluation process and is crucial for effectively improving quality to understand their perceptions.

SERVQUAL, SERVPERF, RSQS

In the retail industry, which primarily involves delivering products to customers, many studies on quality definitions have focused on service quality rather than manufacturing. Service-based businesses

establish quality standards through operating procedures, but consumers perceive and evaluate quality based on their personal expectations and service experiences. Therefore, resolving quality issues sometimes requires customer interactions, such as information exchange and assurance (Evans and Lindsay, 2014)

The most widely adopted model in service quality studies is the SERVQUAL model (Parasuraman et al. ,1988). The early studies proposed ten quality dimensions: Tangible, Reliability, Responsiveness, Competency, Courtesy, Security, Accessibility, Communication, Customer Understanding, and the discrepancy between consumer perception and normative expectation for service performance. Later, Parasuraman et al. (1991) consolidated these dimensions into five dimensions of service quality: Reliability, Assurance, Tangible, Empathy, and Responsiveness. They found that these dimensions constitute the quality perceived by customers. Many studies have attempted to define quality in the retail industry based on this model (Siu and Cheung, 2001; Kim and Jin, 2002; Siu and Chow, 2003; Kaul, 2005).

However, the SERVQUAL model has also faced criticism. The first is related to measuring expectations. Cronin and Taylor (1994) argued that defining service quality as the difference between expected and perceived levels could lead to validity problems in measuring expected levels. The second issue is the model's validity. Carman (1990) pointed out that the model's generalization may not apply to specific industries and may not adequately capture the unique variables of specific service industry contexts. The third criticism is directed at the perception-to-expectation gap analysis method used to measure service quality. In summary, while the SERVQUAL model has been widely used, it has also faced criticisms regarding the measurement of expectations, its applicability to specific industries, and the perception-to-expectation gap analysis method.

Regarding its validity, Dabholkar et al. (1996) proposed the RSQS model as one model suitable for the retail industry context. The RSQS model considers physical aspects, promises, accuracy, and human resources. It also includes personal interaction dimensions such as inspiring confidence, courtesy,

problem-solving, and policy in five distribution store environments. The RSQS model employed a triangulation research method, including phenomenological interviews, exploratory depth interviews, and surveys with customers visiting retail stores.

A total of 28 measurement items were developed by combining 11 items derived from qualitative surveys with 17 existing items from the SERVQUAL model. The data analysis revealed hierarchical factor structures with five dimensions and three sub-dimensions. Additionally, the study demonstrated the internal validity (e.g., validity, criterion, construct) of the RSQS model through correlation analysis between purchase intention, word-of-mouth intention, and the measured service quality dimensions.

In summary, the RSQS model provides a comprehensive framework for evaluating service quality in the retail industry, considering specific dimensions relevant to the distribution context. The model's development involved a rigorous research methodology and exhibited validity in predicting consumer behavior.

Consumer Cooperatives, as one part of the retail industry, need a definition of the quality perceived by its members based on the RSQS model, which is designed specifically for the retail industry context. Han and Hong (2004) conducted a study to test the effectiveness of the RSQS model compared to the existing SERVQUAL or SERVPERF models in measuring retail service quality. The results of their study, as presented in Table 1, demonstrate that RSQS is a more suitable measurement method for the retail industry. Considering these concepts, this study proposes a high-order factor model based on RSQS to uncover the quality structure that CC members perceive. This model aims to capture the critical dimensions and factors that contribute to the overall quality evaluation in the context of CC.

3. Corporate Social Responsibility (CSR)

3.1 CSR Concept

Carroll (1991) is known for his seminal model that argued the four dimensions of CSR. He defined CSR as the framework of economic, legal, ethical, and philanthropic responsibilities that society expects

from organizations at a given time. These four dimensions are mapped in the pyramid model of social responsibility, which encompasses economic responsibility refers to the obligation to generate profits and contribute to economic development, and legal responsibility entails compliance with laws and regulations. Although not legally mandated, philanthropic responsibility encompasses socially desirable actions and behaviors that involve engaging in community activities.

This study adopts Carroll's (1991) definition of CSR as "the social responsibility of a company to its stakeholders." It recognizes that businesses must fulfill their economic and legal responsibilities to society. Additionally, the study considers ethical responsibility, which entails voluntary corporate social activities. Dahlsrud (2008) proposed a five-dimensional categorization of CSR, which includes the environmental dimension (related to the natural environment), social dimension (concerning corporate and social relationships), economic dimension (from a socio-economic or financial perspective), stakeholder dimension (involving stakeholders and their groups), and voluntary level (focusing on law-abiding behavior). In this study, when evaluating consumer cooperative CSR activities, Carroll's (1991) four dimensions and Dahlsrud's (2008) environmental dimension are involved. The authors of this present study aim to investigate whether consumer cooperative members consider these evaluations in their perception of quality.

3.2. CSR and Quality

Brown and Dacin (1997) defined "corporate capability (quality)" as a company's ability to produce and deliver its products. They argued that companies implementing CSR activities are generally evaluated more positively by consumers than those not engaging in such activities. Huang, Yen, Liu, and Huang (2014) demonstrated a positive impact of CSR on corporate image, service quality, and purchase intention, which suggested that CSR activities protecting the interests of various stakeholders and educating employees about consumer rights contribute to strengthening service quality and complying with laws and regulations.

Berens, Van Riel, and Rekom (2007) explored the individual associations between CSR and quality

and found that consumer behavior changes based on different cognitive situations related to the former. They showed that consumer perception of CSR influences behavior, highlighting the strong correlation between consumers' subjective values and corporate CSR activities. Banerjee and Wathieu (2017) demonstrated that CSR could replace product quality in a competitive market due to the warm glow effect experienced by consumers. Their research indicated that CSR gradually enhances consumer utility, typically dominated by product quality and price.

Sureshchandar et al. (2002) used confirmatory factor analysis in their study to identify the determinants of service quality perceived by customers. They reformulated the five dimensions of SERVQUAL and added additional factors relevant to service quality. The factors identified were reliability, responsiveness, assurance, empathy (categorized as human service provision factors), tangibility (defined as service-scape), and service products or core services and non-human elements for systematization of service provision, including CSR. In summary, numerous studies have demonstrated that CSR activities influence consumers' perception of quality with a predominantly positive impact. This study aims to expand upon previous research by incorporating the consumer perception of cooperatives' CSR activities as an additional dimension in the evaluation of quality perceived by consumers. Quality is defined by integrating various set of values that consumers gain from companies, and therefore, the evaluation of CSR and the quality of products and services are expected to be reflected in the process of quality assessments. This issue holds particular importance for members of consumer cooperatives, which have fulfilled to do their orientation of CSR activities as a fundamental business mission.

4. Psychological Ownership (PO)

4.1 Definitions

PO, or psychological ownership, refers to the feeling of ownership an individual has towards a target, which can be an object, concept, organization, or other people. It may or may not be supported by legal ownership rights (Pierce et al., 2001). PO goes beyond simply owning an object and extends to

identifying oneself as an owner or member of a particular entity. (Pierce et al., 2001).

Humans develop a personal stake in objects because their possessions reflect their identity. The feeling of ownership arises from the connection between one's identity and the target, and the desire to maintain ownership is driven by the positive or negative evaluation of that connection (Pierce et al., 2001). This emotional attachment to the object contributes to the establishment of a mental bond.

Dittmar (1992) argues that it is a universal psychological experience for individuals to develop associations between themselves and various objects of ownership, such as houses, cars, and even others. Pierce et al. (2001) suggest that possessiveness becomes inherent to human nature through psychological experience, leading individuals to develop a sense of ownership for both material and intangible objects. Possessiveness has significant psychological consequences, fulfilling behavioral and emotional needs. According to Pierce et al. (2001), PO is characterized as an individual's cognitive and emotional state of feeling ownership over an object and perceiving it as an extension of the self. It involves psychologically merging the individual's identity with the target object. Belk (1988) argues that the possessive object plays a central role in shaping the owner's identity and becomes part of their expanded self. The object, when possessed, becomes part of the emotional self, creating a sense of belonging and attachment (Furby, 1978; Issacs, 1933).

4.2 Source of PO

Psychological possession exists due to various functions and motivations that contribute to an individual's state of ownership. One primary motivation is the desire for efficacy and effectiveness, which is associated with the ability to successfully produce desired outcomes and exert control over one's environment (Pierce et al., 2001). When individuals believe their efforts and actions can influence and shape the target, they develop a sense of ownership and investment (Pickford et al., 2016). This motivation is linked to self-efficacy, as individuals perceive their ability to influence the target as a reflection of their competence and effectiveness (Avey et al., 2009).

Identity is another crucial motivation for psychological possession. The sense of self-identity is closely

related to individual personality, and humans express and recognize themselves through their possessions and attachments to objects. Possessions become symbolic expressions of oneself, and individuals develop a strong connection between oneself(ego) and the owned object. This sense of ownership helps individuals maintain a distinct identity and resist sharing responsibility with others who may seek to possess the same object (Pickford et al., 2016).

Having a sense of place and belonging also contributes to psychological possession. Humans have an innate need to belong, and ownership provides a way to fulfill this need. When individuals feel a sense of belonging to an organization or a particular role, they are more likely to develop a sense of ownership toward it. This sense of ownership strengthens the relationship between individuals and the organization, fostering loyalty and commitment (Pierce et al., 2001; Pickford et al., 2016).

These motivations and emotions lead to the desire to possess and feel ownership. Efficacy and effectiveness, self-identity, and a sense of place (belonging) are vital sources that contribute to the formation of psychological possession. In addition, feelings of ownership enable individuals to achieve basic human motives, and these sources can contribute to PO. Psychological possession can be seen as an extension of attachment to both the object (e.g., a consumer cooperative) and the self (member him or herself), and it can influence the subjective value and evaluation of quality through this mechanism. Therefore, it can be interpreted as meaning that the source of PO should impact the quality by perceived members.

5. The Link between Cooperative Value, CSR, and PO with Quality

5.1. The Value of Cooperatives, Members, and CSR.

The Identity Statement of cooperatives, as defined by the International Cooperative Alliance (ICA, 1995), states that a cooperative is an autonomous association of individuals who voluntarily come together to fulfill their every economic, social, and cultural need and aspiration through a collectively owned and democratically controlled enterprise. The cooperative values encompass self-help, self-

responsibility, democracy, equality, equity, and solidarity. Additionally, cooperative members adhere to ethical values such as honesty, openness, social responsibility, and concern for others, based on the traditions of the cooperative founders.

Sheth et al. (1991) proposed five dimensions that should influence consumers' consumption value. Functional value refers to a product's practical and physical features, such as quality, functionality, price, and service. Social value pertains to the social class or group associated with the product. Emotional value involves the positive or negative emotions experienced during consumption of the product. Conditional value is related to specific situational factors affecting product consumption. Epistemic value is associated with novelty and curiosity stimulated by the product.

From the consumer's perspective, social value is perceived during the product selection and service provision processes. Individual value encompasses functional, social, situation, and cognitive value, which are all influenced by the degree of trust in the product's eco-friendly production process. The relationship between society and business is interconnected, and they influence each other. CC members evaluate the quality of the cooperative by aligning it with cooperative values, considering functional value, social value, situational value, and cognitive value.

The European Commission, in parallel with cooperatives, mutual aid, and member-owned organizations, has a long-standing tradition of CSR and economic activities. Participatory management and stakeholder engagement are emphasized, making cooperatives a reference point for other organizations (Server & Capo, 2011).

Carroll and Brown (2012) define a stake as an interest or share in a business, which can involve claims or demands for payment or fair treatment. The interaction between stakeholders and business is potentially bidirectional. Stakeholders possess legal claims and interests, including rights to fair treatment and personal privacy, which can be considered moral rights. Economic responsibility has the most significant impact on stakeholders, such as owners and shareholders, as the company's economic performance directly affects them.

In summary, the cooperative values, as defined by the ICA, and the various dimensions of consumer consumption value, including functional, social, emotional, conditional, and epistemic value, play a role in how consumer cooperative members perceive the quality of the cooperative. Stakeholders, with their legal and moral rights, have an important influence on corporate management, particularly in terms of economic responsibility.

From the perspective of cooperatives, members have a dual role as both owners and consumers. Stakeholders, as defined by Alkhafaji (1989), are groups responsible for business. Therefore, CSR is highly relevant at the stakeholder level, and cooperative members actively participate in decision-making and policy-making processes, exercising their right to vote for agents who directly impact the cooperative's management. The participation of members in CSR activities is closely associated with their stakeholder role.

Hansen et al., (2011) highlight the importance of considering the interests of various stakeholders, including organizational members, consumers, and suppliers, and fostering mutually beneficial relationships. Active participation in cooperative organizations can be driven by the motivation to address these stakeholder interests.

The right to vote held by cooperative members aligns with their motivation to participate in CSR initiatives. There is an implicit and explicit relationship between cooperative identity and CSR. Social responsibility becomes a crucial aspect for cooperative members, and they can maintain consistency in evaluating CSR criteria when assessing the cooperative or its products.

5.2. Social-value Quality as a Macro-level Concept with PO and CSR.

In the conceptual definition of social value, Ra et al. (2018) emphasizes social value as various norms from a sociological point of view. They understand value as people's desires, needs, and utility from an economic standpoint, and emphasize social value as a product. They propose that all organizations in society, including government, corporations, and non-profit organizations, are production organizations that create the values needed by society. These values are then converted into products and services to meet social needs.

According to the Social Enterprise Promotion Agency (2020), social value means not only economic value but also the value that can contribute to the public interest and community development in various areas such as society, environment, and culture. This includes considerations for safety, environment, socially disadvantaged individuals, creation of quality jobs, mutually beneficial cooperation, and social integration.

Furthermore, as a sub-component of social value, social responsibility is one of the ethical beliefs that constitute the social value of cooperatives. PO is strongly associated with cooperatives in terms of ownership, the extended self, and organizational control pathways. Numerous studies examining the relationship between social responsibility and quality perception conclude that social responsibility activities positively influence consumers' perception of quality. Moreover, PO is an important variable that explains cooperative values and member participation behavior, demonstrating a strong cooperative connection within the cooperative context. Thus, it is reasonable to assume that PO has the potential to influence the perception of quality, which reflects members' self-worth.

In summary, considering that quality is defined by consumers who perceive a variety of values from companies, this study suggests that the evaluation of quality by cooperative members should encompass not only product and service quality but also quality related to social values.

Therefore, in this study, CSR and PO constitute sub-factors with of the Social-value Quality concept as per the discussion in the previous section.

6. Research Methodology

6.1. Definition of Variables

To verify the conceptual research model, constructs and observational variables were defined based on a review of relevant literature and expert opinions. First, product quality was defined as 'product quality perceived by members', with product safety, reliability, and functionality as sub-concepts. Observation variables used to measure this were those employed by Yuen and Chane (2010) and Kwon and Park (2020). Additional latent variables deemed necessary within the context of the CC, the subject of this study, were included, such as product taste and aroma, the safety of raw materials, clear ingredient

labeling, reliability of the production process, and the eco-friendliness of product packaging.

The concept of service quality was defined as 'service quality perceived by members', with sub-concepts identified as the physical aspect of service, reliability, interaction, problem solving, and policy. In assessing the model based on studies by Dabholkar et al. (1996) and Yuen and Chane (2010), certain aspects such as “clean and well-organized, convenient parking and transportation, prompt service, and accurate calculation of expedited resolution of member complaints, as well as convenient operating hours for shopping”, were modified, supplemented, or further developed according to the specific context of this study.

CSR is defined as 'the social value of cooperatives perceived by members', with sub-concepts encompassing economic, legal, ethical, discretionary, and environmental responsibility. Observational variables include “long-term success, compliance with fair trade orders and related laws, and comprehensive code of ethics” (Salmones, Crespo, and Bosque, 2005; Sureshchandar et al., 2002). Additional observational variables were developed, such as returning profits to society and providing eco-friendly products and services. The definition of these observational variables was refined through interviews with consumer cooperative experts.

PO (Psychological Ownership) was defined as the same and utilized questionnaire items applied in the study by Van Dyne and Pierce (2004) and incorporated observational variables such as 'I own and feel that I own this cooperative, and whether all members own it together.'

In total, 66 observational variables were defined, including 21 related to product quality, 24 related to service quality, and 21 related to social value quality. Questionnaire items were developed based on these observational variables, taking into account the expertise of cooperative experts obtained through interviews.

Data Collection and Sample

A questionnaire was developed using a Likert 7-point scale, incorporating the previously defined observational variables. To ensure the validity of measurement, the draft questionnaire underwent

multiple rounds of revision and advice from cooperative experts. Ambiguities in item wording were addressed through these revisions, resulting in a final version of the questionnaire.

Based on the number of members, the developed questionnaire was distributed to members of four CCs in Korea: Hansalim, i-COOP, Dure, and Hangbokjungshim. To increase the response rate, the authors requested the assistance of managers in encouraging members to participate. The survey was conducted online over a two-month period from April to June 2021. A total of 782 responses were obtained, and after considering missing values, 773 samples were used for the analysis.

6.2 Research Analysis

Sample Description

Frequency analysis was conducted to identify the respondents' demographic characteristics to confirm the sample's effectiveness. As for gender, females accounted for 93.1%. Most of the consumer cooperative members are women, which is generally the case for cooperatives in Korea. As for age, those in their 40s numbered the highest 355 (45.9%), followed by those in their 50s at 262 (33.9%), those in their 20s/30s at 101 (13.1%), and those in their 60s at 55 (7.1%). As for the number of years of membership in the cooperative, 228 (29.5%) members with less than five years numbered the highest, followed by 195 (25.2%) with 5 to 9 years, 177 (22.9%) with 14 or more years, and 195 (22.9%), with 9 to 14 years. 171 (22.1%) were found. Since the passage of the Consumer Cooperative Act in 1999, legal legitimacy has been acquired, and as the number of Co-op stores to be expanded, the number of members has increased dramatically as discussed in Chapter I.

Exploratory Factor Analysis

Before conducting confirmatory factor analysis (CFA) to validate the research model, exploratory factor analysis (EFA) was performed. The purpose of EFA was to confirm whether the 60 observed variables developed in the study were appropriately loaded onto their intended concepts and to identify the primary factor and high-order factor structure proposed in the conceptual research model. Since previous studies utilized different sub-factors for product, service, and social value quality, EFA was

deemed appropriate as a precedent to CFA. SPSS 26.0 was used as the analysis tool for EFA, employing the principal component analysis method and varimax rotation to examine the loading between observed variables and primary factors.

The results of the analysis revealed that the 60 items were grouped into eight concepts. The following are the eight primary factors identified in this process as shown in Table 3.

Product Quality: This factor encompassed three primary factors: production process, product function, and product packaging. Product packaging seemed to reflect the eco-friendliness and product safety values emphasized in Korea.

Service Quality: This factor included four primary factors: reliability, appearance, convenience, and policy. The concept of service quality was derived from Dabholkar et al.'s (1996) RSQS model, incorporating the dimensions of reliability, appearance, convenience, and policy.

CSR Awareness: Contrary to expectations, the factors related to CSR perception were not distinct but rather grouped into one factor. Members tended to evaluate economic, legal, ethical, discretionary, and environmental responsibility as a single concept when assessing the CSR level of the co-op. Although this result deviated from the original expectation, it can be accepted based on previous studies suggesting that the dimensions of CSR perceived by consumers can be integrated or separated depending on the context. Hence, the primary factor related to CSR was named CSR awareness.

PO (Perceived Ownership): The PO factor was also consolidated into one factor. According to previous studies, the CSR and PO recognition factors were integrated into a higher-level concept, namely, social value and quality.

The outcomes of the EFA provided insights into the factor structure of the observed variables and confirmed the grouping of items into the identified primary factors. These results laid the foundation for the subsequent CFA to further validate the research model. In the subsequent step of CFA, the relationship between the primary factors identified through exploratory factor analysis (EFA) and the observed variables was examined. In this process, a selection was made from the initial set of 60 observed

variables, focusing on those that exhibited large factor loadings. The rationale behind this selection was to avoid including too many observed variables, which could potentially decrease the goodness of fit of the CFA model. Consequently, a total of 35 items were chosen for further analysis.

For each of the eight primary factors identified in the EFA, the CFA model was constructed using a minimum of 3 to a maximum of 8 observed variables. The selection of variables within this range was based on their strong factor loadings and their alignment with the conceptual definitions of the primary factors. These observed variables serve as indicators for their respective primary factors in the CFA model.

Table 3 provides a summary of the definitions of the selected observed variables and their corresponding factor loadings from the EFA. This table serves as a reference for understanding the relationships between the observed variables and the primary factors in the subsequent CFA analysis.

Confirmatory Factor Analysis

Based on the outcomes of the exploratory factor analysis, a 3-order hierarchical factor model, illustrated in Figure 2, was proposed. To validate this model, a confirmatory factor analysis (CFA) was conducted using AMOS 21.0. The original data collected earlier was utilized as input for the CFA, and the maximum likelihood (ML) estimation method employed to estimate the model parameters. The goodness-of-fit of the model was assessed, and the results are presented in Table 4.

To evaluate the model fit, fit indices and their corresponding acceptance levels were selected based on the criteria proposed by Hair et al. (2010). After assessing the goodness-of-fit, it is evident that the proposed tertiary factor model of quality in this study demonstrates an excellent level of fit.

Comparative Model Analysis

To support the higher-order factor model proposed in the study, various fit indices, such as CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), and SRMR (Standardized Root Mean Square Residual), were used to assess how well the proposed model explains the covariance structure among observed variables. Additionally, a comparison was made with other alternative models that were theoretically derived (Crede and Harms, 2015) as shown in <Figure 3>. According to the proposal in

Crede and Harms (2015), in order to provide support for the higher-order factor model proposed in this study, the goodness-of-fit of the proposed model should be superior to the alternative models that it implicitly encompasses (Alternative Models 1 and 2), as well as other nested alternative models (Alternative Model 3). Additionally, the fit of the proposed model should not be significantly worse than Alternative Model 4. Alternative model 1(Orthogonal) is a model in which the primary factors constitute secondary factors, but the secondary factors have an independent relationship. Alternative Model 2(Single Factor) is a model in which the primary factor is loaded into all single-parent factors. Alternative Models 1 and 2 can all be seen as nested in the proposed model. Alternative Model 3(Oblique) is a model in which the first-order factors are loaded into three second-order factors, and the second-order factors are related to each other. Alternative model 4(Bi-Factor) shows that the primary factor is loaded into the secondary factor and another factor (Bi-Factor) simultaneously. In this comparison, in order to support the higher-order factor model proposed in this study, every fit index of the proposed model must be superior to the alternative models (Alternative Models 1 and 2) implicit in it and other alternative models (Alternative Models 3 and 4). If the proposed model is nested with alternative model 4, every fit index in the proposed model should not have more than one of the goodness of fit aspects be worse than Alternative Model 4 (Crede and Harms, 2015).

There should be a remarkable improvement in the fit over to the more parsimonious alternative model, and the fit should not be significantly worse than the more complex alternative model.

It summarizes the results of the comparison of goodness of fit between the proposed and alternative models in this study, as shown in <Table 5>. The proposed model demonstrated a higher level of improvement in goodness of fit than the simpler Alternative Models 1 and 2, as well as the more complex Alternative Model 4. There was a significant decrease in the chi-square (χ^2) value relative to degrees of freedom, and the goodness-of-fit indices such as CFI/TLI and SRMR/RMSEA also showed significant improvement. Additionally, there was a noticeable decrease in the AIC, indicating that the proposed model outperforms Alternative Models 1 and 2 in all aspects.

However, Alternative Model 3 exhibited better-fit indices than the proposed model. The $\Delta\chi^2/df$ value between Alternative Model 3 and the proposed model was 11.5, indicating an improvement in absolute agreement even when considering degrees of freedom. Nevertheless, the remaining fit indices showed little difference between the proposed model and Alternative Model 3.

In summary, the 3-factor model of quality proposed in this study generally outperforms the other alternative models. Despite Alternative Model 3 having slightly better fitness, the theoretical background and simplicity of the proposed model support its adequacy.

The power of third-order factor

To evaluate the explanatory power of the top-level factor (third-order factor) in the covariance structure between sub-factors, the target coefficient (TC) proposed by Marsh (1987) and the relative normed fit index (RNFI) proposed by Mulaik et al. (1989) were used in the study. Although TC and RNFI have slightly different calculation methods, they both indicate the extent to which the higher-dimensional factors explain the covariance structure between the lower-dimensional factors.

After performing the calculations, the values of TC=0.988 and RNFI=0.989 were obtained. These values indicate that the third-order factor (quality) explains 98.9% of the covariance among the second-order factors (product quality, service quality, and CSR perception). This suggests that the third-order factor accurately represents the covariance structure between the second-order factors. Therefore, it can be concluded that the results of the confirmatory factor analysis (CFA) strongly support the three-order hierarchical factor structure of quality proposed in the study.

7. Discussion

Conclusion and Implications

The purpose of this study was to identify the dimensions of quality perceived by members of consumer cooperatives and develop a quality model specific to consumer cooperatives. Through a review of prior research and exploratory factor analysis, a third-factor model of cooperative quality was established,

consisting of product quality, service quality, and social value quality factors and their sub-factors. This model was further validated using confirmatory factor analysis, which included comparing it with alternative models to ensure its validity.

The implications of the study results are as follows. Firstly, it was confirmed that the quality perceived by consumer cooperative members can be conceptualized as a model integrating product quality, service quality, and social value quality. This means that when members evaluate the quality of consumer cooperatives, they consider not only the quality of products and services but also the evaluation of social responsibility activities and psychological ownership based on their own judgment standards. In other words, the quality of a consumer cooperative is evaluated based on these three factors as criteria, each representing a specific dimension. This finding is in line with previous studies that have shown the positive impact of social value perception on quality evaluation. It also highlights the significance of social value recognition (social responsibility, psychological ownership) as sub-dimensions contributing to the overall quality evaluation.

Secondly, it was found that the perceived quality of consumer cooperatives by members follows a third-order hierarchical factor structure. Consumer perception of quality is multifaceted, and to capture this complexity, researchers have advocated for higher-order factor models that comprehensively explain various underlying factors. The quality model proposed in this study expands and integrates social value quality attributes that are specifically relevant to the context of cooperatives, going beyond the existing focus on service quality in the retail industry. This contributes to a more comprehensive understanding of quality in the cooperative sector.

Thirdly, the study identifies the unique characteristics of consumer cooperatives in terms of the multi-dimensional nature of quality. As perceptions of quality are subjective and context-dependent, the components of a quality model can vary across industries and companies. By identifying these unique dimensions, this study contributes to the research field of quality definition.

Fourthly, the study identifies several distinctive components of the quality model that reflect the

cooperative context. One notable sub-dimension of product quality is the factor of 'product packaging,' which has not been previously observed in similar studies. This factor captures the participatory nature of consumer behavior in cooperatives, where members have a hybrid identity as both owners and users.

Fifthly, the study establishes the dimension of social value quality in addition to product and service quality. Social value emphasizes the importance of community-oriented goals rather than solely focusing on profit and efficiency. By delivering social value through CSR activities and fostering psychological ownership among members, consumer cooperatives can provide a dimension of quality that aligns with their cooperative identity and values. This finding supports the notion that achieving economic and social performance simultaneously is facilitated through the promotion of social value within consumer cooperatives.

Practical Implications

The study's findings have several practical implications. Firstly, it is important for consumer cooperatives to recognize the attributes of product packaging as an important dimension of quality. With an increasing desire to protect the environment, consumer cooperative members value packaging safety, including considerations such as the avoidance of excessive packaging, the use of environmentally friendly materials, and the absence of harmful substances like environmental hormones. consumer cooperatives should be mindful of product packaging in their production and sales processes to meet the expectations of members who prioritize environmental sustainability.

Secondly, consumer cooperative should effectively communicate their social contribution activities with members. This study shows that members' awareness of social responsibility positively influences their perception of quality through social value quality. By providing accurate and timely information about their social responsibility activities, consumer cooperatives can enhance members' understanding and appreciation of these initiatives, which can lead to increased consumer loyalty and purchase intentions.

Thirdly, improving social value quality can lead to mutually beneficial outcomes through corporate social support and consumer response. To gain a competitive edge, consumer cooperatives need to engage

with the local community through CSR activities that enhance social value and promote psychological ownership. By demonstrating their commitment to social values, CCs can strengthen their relationship with members and the community, ultimately contributing to increased sales and organizational success.

While some scholars argue that social contribution activities and efforts to strengthen member participation may incur additional costs, others contend that these activities have a positive correlation with sales growth. Consumer Cooperatives should carefully consider the potential benefits of investing in social value initiatives and strive to strike a balance between fulfilling legal and economic responsibilities while actively promoting cooperative social values to their members.

Overall, these practical implications highlight the importance of considering product packaging, effectively communicating social contribution activities, and focusing on improving social value quality in order to enhance the perceived quality of consumer cooperatives and foster stronger relationships with members and the community\

Limitation

This study had several limitations. First, the sub-factors of CSR quality perception were grouped into one factor rather than being classified. As mentioned earlier, this is likely to result from the unique attitudes of the members, but there are still difficulties in generalization. Detailed analysis of the cause was not covered within the scope of this study, but it is necessary to reconfirm this in future studies.

Second, the sub-factors of the perception of the quality of social responsibility were grouped into one factor rather than classified separately. As mentioned earlier, this is likely due to the unique attitudes of cooperative members, but there are still difficulties in generalizing the findings. The detailed analysis of the underlying cause was not extensively addressed within the scope of this study, but it is important to reexamine this in future research.

Third, there is a lack of theoretical research on the factors influencing social value quality. It can be argued that the concept of social value is too broad and encompasses various interdisciplinary definitions and perspectives. Ramos (2006) suggests that conceptualizing values involves clarifying, justifying, and

explaining attitudes, norms, and values, and therefore, there should be substantial consensus among social scientists regarding the guiding directions and deep motivations of human behavior.

The authors of this present study have highlighted that this perspective can guide various studies exploring the relationship between values, attitudes, and individual behaviors, and can also serve as the basis for specific classifications of values. Therefore, it is necessary to conduct research that converges multiple disciplines and investigates high-level values.

Appendix

<Table 1: Comparative Analysis of Goodness of Fit>

Goodness of fit	SERVQUAL	SERVPERF	RSQS
Chi-squared	717.67	513.59	119.59
GFI	0.81	0.86	0.92
AGFI	0.76	0.82	0.86
CFI	0.91	0.98	0.98
NFI	0.93	0.97	0.98
RMR	0.31	0.08	0.05

<Table 2: Descriptive Statistics>

Description		Total(N=773)	
Age	20s ~30s	101	13.1%
	40 +	355	45.9%
	50 +	262	33.9%
	60 +	55	7.1%
Average monthly household income	No Response	5	0.6%
	< USD 2,280	82	10.6%
	USD 2,280 ~ < USD 3,800	263	34.0%
	USD 3,800 ~ USD 5,320	236	30.5%
	≥USD 5,320	187	24.2%

Subscription period	No Response	2	0.26%
	≤5 years	228	29.5%
	5 years ~ ≤9 years	195	22.1%
	9 years ~ <14 years	171	22.9%
	14 years or more	177	22.9%
Sex	Male	54	6.9%
	Female	719	93.1%

*Income: Reflects KRW ~ USD exchange rate(as of Dec. 7, 2022) of KRW 1,000 = USD 0.76

<Table 3 CFA Results>

Latent Variable	2 nd Variables	Definition	Loading
Production Process	P_PR1	No-use of genetically modified raw ingredients	.753
	P_PR2	No use of chemical additives	.729
	P_PR3	No-use of raw ingredients with pesticide residues	.687
	P_PR4	Manufactured to a high-quality level	.599
Product function	P_FN1	Primary agricultural product shape	.759
	P_FN2	Primary agricultural product color	.735
	P_FN3	Processed food color	.720
	P_FN4	Freshness product	.552
Package	P_PK1	Not Overpacked	.760
	P_PK2	Use of eco-friendly packaging materials	.746
	P_PK3	No use of packaging materials harmful to the human body, such as environmental hormones	.672
Reliability	S_RE1	Prompt handling of member complaints	.813
	S_RE2	Consistent response that resolves member	.813
	S_RE3	Coop believes in environmentally friendly production	.789
	S_RE4	Employees act appropriately in the circumstances	.782
	S_RE5	Employees have their own business expertise	.780
	S_RE6	Employees provide service quickly	.766
	S_RE7	Employee help members first, even if they are busy with other tasks.	.758
	S_RE8	Received sufficient training and support for services	.747
Appearance	S_PH1	Inside of the store is tidy	.736
	S_PH2	Store is clean	.701
	S_PH3	Products are easily visible	.602
	S_PH4	Employee have appropriate clothing and hygiene	.544

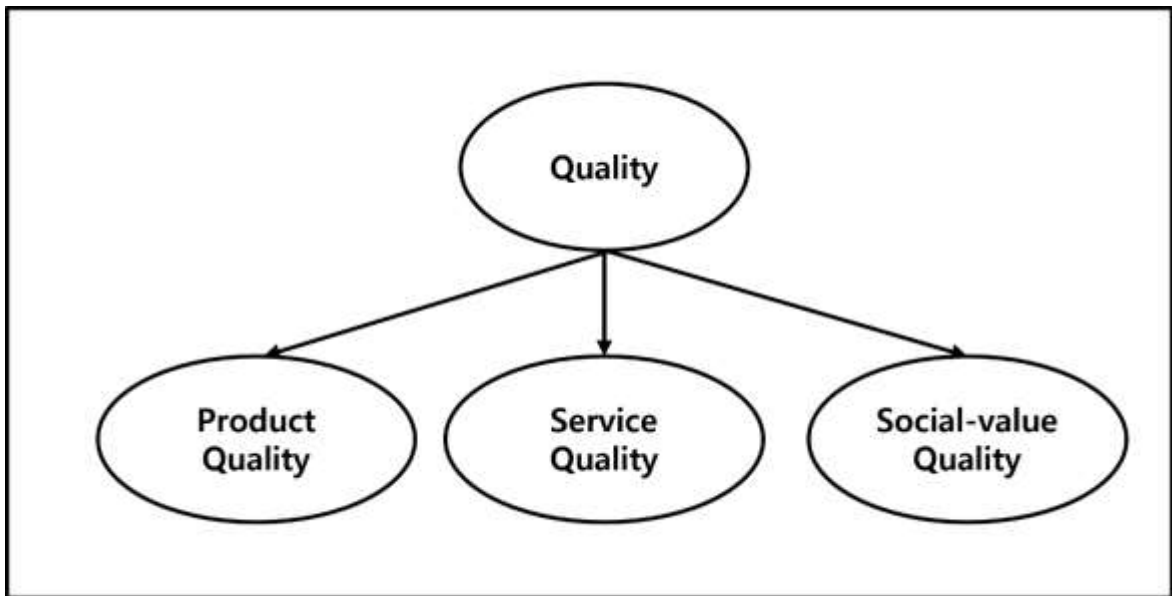
Convenience	S_CV1	Parking is convenient	.799
	S_CV2	Convenient access for the elderly, pregnant women, and accompanying children	.624
	S_CV3	Location is convenient for transportation access	.581
Policy	S_PO1	Operation of various systems that benefit members	.539
	S_PO2	Convenient operating hours for shopping	.531
	S_PO3	Variety of product assortment	.502
CSR	CSR1	Shows respect for appropriate social values and ethical norms	.827
	CSR2	Faithfully complies with fair trade orders and related laws	.804
	CSR3	Returns part of the profits to society	.802
	CSR4	Contributes to community development	.775
	CSR5	Contributes to national development through faithful payment of taxes	.767
	CSR6	Engage in environmental protection activities	.742
PO	PO1	I own this co-op.	.867
	PO2	I feel I own this co-op	.841
	PO3	We own this co-op	.589

<Table 4 Goodness of Fit>

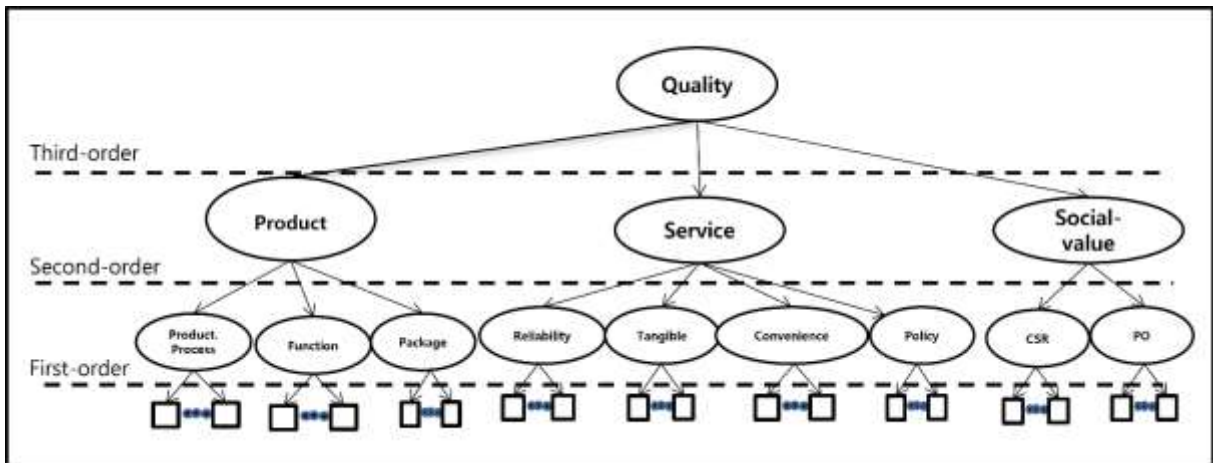
	χ^2	χ^2/df	CFI	TLI	SRMR	RMSEA
Indice	22513.06	3.84	.918	.911	.056	.061
Criterion			$\geq .90$	$\geq .90$	$\leq .08$	$\leq .08$

<Table 5: Comparative Analysis>

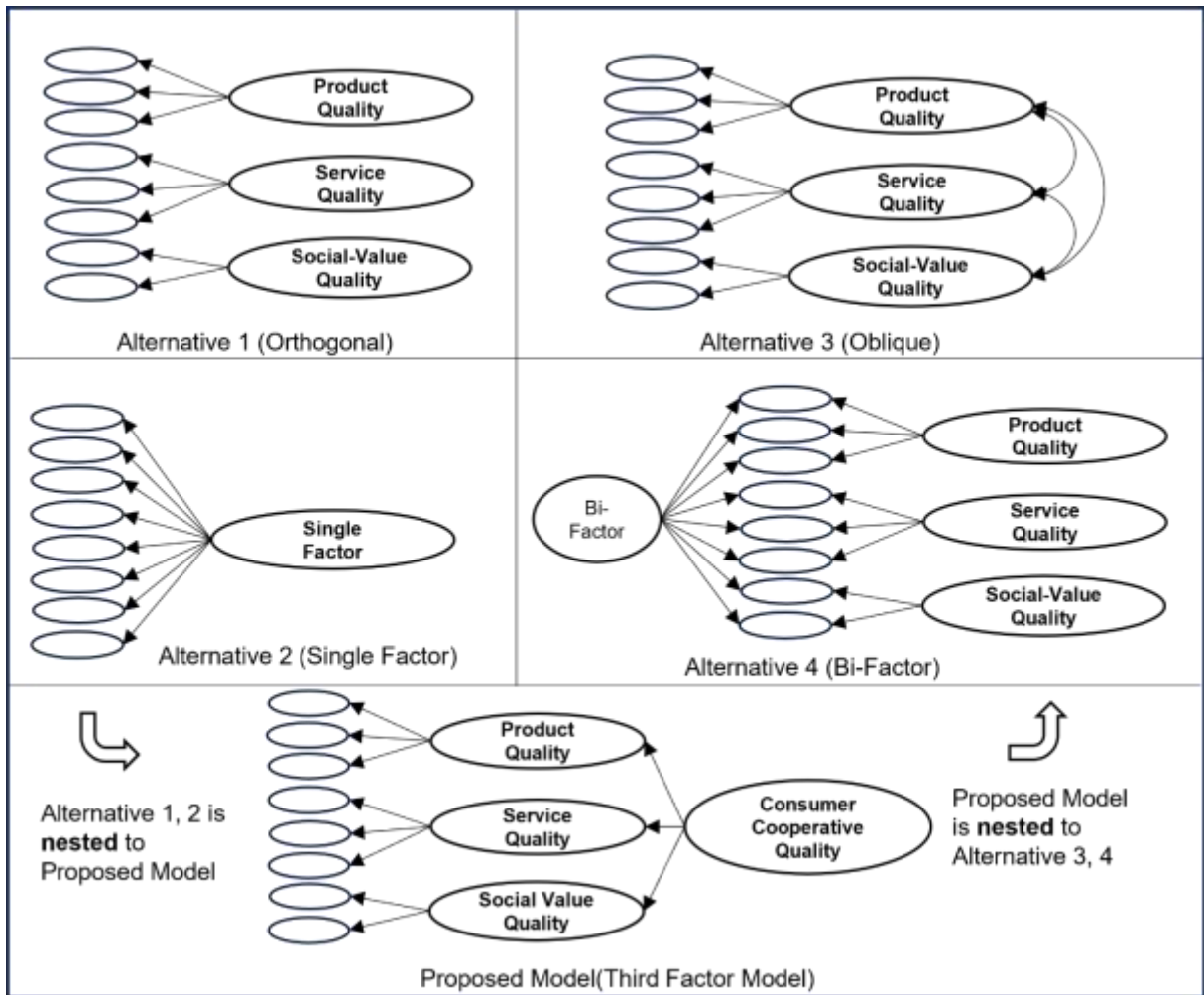
	χ^2	χ^2/df	CFI	TLI	SRMR	RMSEA	AIC
Alternative 1	3253.4	5.88	.800	.876	.288	.080	3407.4
Alternative 2	2570.8	4.66	.908	.900	.077	.069	2726.8
Proposed Model	2296.3	4.17	.920	.914	.057	.064	2454.3
Alternative 3	2284.8	4.15	.921	.914	.055	.064	2444.8
Alternative 4	2810.6	5.12	.897	.888	.211	.073	2967.6



<Figure 1: Conceptual Model>



<Figure 2: Proposed Model>



<Figure 3: Proposed and Competitive Models>

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