

## Examining the Interplay of Consumer Behavior and Local Community Engagement in the Success of OCOP Initiatives: A Case Study of Nghe An Province, Vietnam



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**ABSTRACT:** This study explores the influence of consumer behavior and community engagement on the success of One Commune One Product (OCOP) initiatives in Nghe An Province, Vietnam, while also investigating the moderating effect of brand awareness. Drawing upon the Theory of Planned Behavior, Social Capital Theory, and brand equity frameworks, a conceptual model was developed and tested using structural equation modeling (SEM) with data from 285 OCOP enterprises, cooperatives, and household businesses. The results indicate that consumer behavior and community engagement have significant positive impacts on the success of OCOP initiatives, with brand awareness positively affecting consumer behavior and moderating the relationship between consumer behavior and OCOP success. This study contributes to the theoretical understanding of rural development by showcasing the interplay of consumer, community, and brand factors in determining OCOP outcomes. Practical implications for policymakers and OCOP stakeholders are discussed, underlining the significance of consumer-oriented product development, community engagement mechanisms, and effective branding strategies. Despite its limitations, this research offers valuable insights for designing and implementing sustainable rural development programs in Vietnam and beyond.

**KEYWORDS:** One Commune One Product (OCOP), consumer behavior, community engagement, brand awareness, rural development

### 1. INTRODUCTION

The One Commune One Product (OCOP) program, initiated by the Vietnamese government in 2018, has emerged as a pivotal strategy for rural economic development and poverty alleviation in Vietnam. This program aims to promote the production and marketing of unique, high-quality products that embody the cultural identity and traditional values of each locality (Nguyen et al., 2021). By fostering local entrepreneurship, enhancing product competitiveness, and facilitating market access, the OCOP program seeks to improve the income and living standards of rural communities (Le & Nguyen, 2020).

Despite the growing recognition of the OCOP program's potential, there remains a paucity of research examining the factors that contribute to the success of OCOP initiatives. In particular, the roles of consumer behavior and local community engagement in driving the success of OCOP products have yet to be thoroughly investigated. Understanding these factors is crucial for policymakers and OCOP stakeholders to develop effective strategies that promote the sustainable development of rural areas through the OCOP program.

To address this research gap, the present study focuses on the interplay between consumer behavior and local community engagement in the context of OCOP initiatives in Nghe An Province, Vietnam. Nghe An Province, located in the north-central region of Vietnam, has actively participated in the OCOP program since its inception and has achieved notable success in promoting local products (Nguyen & Tran, 2022). By examining the case of Nghe An Province, this study aims to provide valuable insights into the factors that contribute to the success of OCOP initiatives and offer recommendations for enhancing their effectiveness.

The primary objectives of this study are threefold. First, it seeks to investigate the influence of consumer behavior on the success of OCOP initiatives in Nghe An Province. Second, it examines the impact of local community engagement on the success of OCOP initiatives. Third, it explores the moderating role of brand awareness in the relationship between consumer behavior and

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OCOP success. By addressing these objectives, the study contributes to the existing body of knowledge on rural development and provides empirical evidence to support the design and implementation of effective OCOP strategies.

The findings of this study have significant implications for both theory and practice. From a theoretical perspective, the study extends the application of consumer behavior theories and community engagement frameworks to the context of rural development initiatives. It also contributes to the literature on brand awareness by examining its moderating role in the relationship between consumer behavior and OCOP success. From a practical standpoint, the insights gained from this study can inform policymakers and OCOP stakeholders in Nghe An Province and other regions of Vietnam in developing targeted interventions to enhance the success of OCOP initiatives. The recommendations derived from this study can guide the allocation of resources, the design of marketing strategies, and the strengthening of community participation in OCOP programs.

The remainder of this paper is structured as follows. The next section presents a comprehensive review of the literature on consumer behavior, community engagement, and brand awareness in the context of rural development initiatives. The subsequent section describes the research methodology, including the data collection process, measurement scales, and data analysis techniques. The results of the study are then presented, followed by a discussion of the findings, their implications, and the study's limitations. The paper concludes with a summary of the main contributions and recommendations for future research and practice.

## **2. LITERATURE REVIEW**

### **2.1. Consumer Behavior (CB) and its impact on the success of OCOP initiatives**

Consumer behavior plays a vital role in determining the success of OCOP initiatives. It encompasses the actions and decision-making processes of individuals and groups when purchasing, using, and disposing of goods and services (Solomon et al., 2019). Understanding consumer behavior is crucial for OCOP producers and policymakers to develop products that meet the needs and preferences of target markets, and to design effective marketing strategies that drive consumer demand (Nguyen & Tran, 2021).

Several factors influence consumer behavior in the context of OCOP products. Product quality is a key determinant of consumer purchase intentions and loyalty (Le & Nguyen, 2020). Consumers are more likely to buy and recommend OCOP products that offer superior quality and value compared to alternatives. Additionally, the perceived authenticity and uniqueness of OCOP products, which are often tied to local cultural and traditional values, can attract consumers seeking distinctive and meaningful consumption experiences (Tran et al., 2022).

Consumer trust in OCOP brands and producers is another critical factor affecting consumer behavior. In the context of rural products, consumers often rely on trust as a heuristic to gauge product quality and safety (Nguyen et al., 2021). OCOP initiatives that build and maintain consumer trust through transparent and ethical production practices, as well as effective communication and engagement strategies, are more likely to foster positive consumer behavior and loyalty (Pham & Nguyen, 2020).

Moreover, consumer ethnocentrism, which refers to the preference for domestically produced goods over foreign alternatives, can influence consumer behavior towards OCOP products (Le et al., 2021). Vietnamese consumers with high levels of ethnocentrism may be more inclined to support OCOP initiatives as a means of promoting local economic development and preserving cultural heritage.

Empirical evidence supports the impact of consumer behavior on the success of OCOP initiatives. A study by Nguyen and Tran (2021) found that consumer satisfaction with OCOP product quality and perceived value significantly influenced repurchase intentions and word-of-mouth recommendations. Similarly, Pham and Nguyen (2020) demonstrated that consumer trust in OCOP producers mediated the relationship between product authenticity and consumer loyalty.

### **2.2. Community Engagement (CE) and its role in OCOP success**

Community engagement refers to the process of involving local communities in the planning, implementation, and evaluation of development initiatives that affect their lives (World Bank, 2018). In the context of OCOP programs, community engagement is crucial for ensuring the sustainability and success of initiatives by fostering local ownership, leveraging local knowledge and resources, and aligning OCOP activities with community needs and aspirations (Nguyen et al., 2022).

Several dimensions of community engagement have been identified in the literature. Arnstein's (1969) ladder of citizen participation provides a framework for understanding different levels of community engagement, ranging from passive information sharing to active citizen control. In the context of OCOP initiatives, higher levels of community engagement, such as partnership and delegated power, are associated with greater community buy-in and support for OCOP activities (Tran et al., 2021).

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Community participation in decision-making processes is a key aspect of effective community engagement in OCOP programs. By involving local communities in the identification of OCOP products, the development of production and marketing strategies, and the monitoring and evaluation of OCOP initiatives, policymakers and OCOP stakeholders can ensure that programs are responsive to local needs and priorities (Nguyen & Le, 2020). Participatory approaches to OCOP planning and implementation can also help build local capacity and foster a sense of ownership and pride in OCOP achievements (Pham et al., 2022).

Moreover, community engagement in OCOP initiatives can take the form of partnerships and collaborations between local producers, cooperatives, and other community-based organizations. These partnerships can facilitate the sharing of knowledge, resources, and best practices, as well as the development of collective marketing and branding strategies (Le et al., 2021). By working together, OCOP producers can achieve economies of scale, access new markets, and enhance the visibility and reputation of their products.

Empirical studies have demonstrated the positive impact of community engagement on the success of OCOP initiatives. For example, Nguyen et al. (2022) found that community participation in OCOP decision-making processes was positively associated with the perceived benefits and sustainability of OCOP initiatives in rural Vietnam. Similarly, Tran et al. (2021) showed that the level of community engagement in OCOP activities significantly influenced the economic and social outcomes of OCOP programs in Nghe An Province.

### **2.3. Brand Awareness (BA) and its influence on consumer behavior**

Brand awareness refers to the extent to which consumers recognize and recall a particular brand (Aaker, 1996). It is a fundamental component of brand equity and plays a critical role in shaping consumer behavior (Keller, 1993). In the context of OCOP initiatives, brand awareness is essential for distinguishing OCOP products from competitors, communicating their unique value propositions, and driving consumer preference and loyalty (Pham & Le, 2021).

Several factors can influence brand awareness in the OCOP context. Effective branding and marketing strategies, such as the use of distinctive logos, packaging, and promotional activities, can help increase consumer recognition and recall of OCOP brands (Nguyen et al., 2020). Additionally, the quality and consistency of OCOP products, as well as the reputation and credibility of OCOP producers, can contribute to the development of strong brand associations in the minds of consumers (Tran & Nguyen, 2022).

Brand awareness can influence consumer behavior in several ways. First, consumers are more likely to purchase products from brands they recognize and are familiar with, as familiarity reduces perceived risk and increases trust (Nguyen & Pham, 2021). Second, brand awareness can influence consumer perceptions of product quality and value, as consumers often use brand reputation as a proxy for quality when making purchase decisions (Le et al., 2020). Third, brand awareness can foster consumer loyalty and advocacy, as consumers are more likely to recommend and repurchase products from brands they know and trust (Pham et al., 2022).

Empirical research has supported the impact of brand awareness on consumer behavior in the OCOP context. For instance, Nguyen et al. (2020) found that brand awareness significantly influenced consumer purchase intentions and willingness to pay for OCOP products in Vietnam. Similarly, Pham and Le (2021) demonstrated that brand awareness mediated the relationship between OCOP product quality and consumer loyalty in Nghe An Province.

Moreover, brand awareness has been shown to moderate the relationship between other factors, such as product attributes and consumer behavior. Le et al. (2020) found that the impact of product quality on consumer purchase intentions was stronger for OCOP products with high levels of brand awareness, suggesting that brand awareness can amplify the effects of other marketing mix elements.

### **2.4. Theoretical foundations**

This study draws upon several theoretical foundations to examine the interplay of consumer behavior and local community engagement in the success of OCOP initiatives. These theories provide a framework for understanding the factors that influence consumer decision-making, community participation, and brand awareness in the context of rural development programs.

Ajzen's Theory of Planned Behavior (TPB) is a widely used model for understanding and predicting consumer behavior (Ajzen, 1991). TPB posits that an individual's intention to perform a behavior is influenced by three factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. In the context of OCOP initiatives, TPB suggests that consumers' attitudes toward OCOP products, their perceptions of social norms regarding OCOP consumption, and their perceived ability to purchase and use OCOP products will influence their intention to support OCOP initiatives (Nguyen & Tran, 2021).

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Engel, Blackwell, and Miniard's Consumer Behavior Model (EBM Model) is another influential framework for understanding consumer decision-making processes (Engel et al., 1995). The EBM Model outlines five stages of consumer decision-making: problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior. This model can be applied to the OCOP context to examine how consumers identify the need for OCOP products, seek information about OCOP initiatives, evaluate OCOP products against alternatives, make purchase decisions, and engage in post-purchase behaviors such as repeat purchases and word-of-mouth recommendations (Pham & Le, 2021).

Putnam's Social Capital Theory (SCT) provides a lens for understanding the role of community engagement in the success of OCOP initiatives (Putnam, 1993). SCT suggests that social capital, which refers to the networks, norms, and trust that facilitate cooperation and collective action, is a critical resource for community development. In the context of OCOP programs, social capital can be manifested through community participation, partnerships, and collaborations that enable the sharing of knowledge, resources, and support (Nguyen et al., 2022). SCT highlights the importance of leveraging and strengthening social capital to enhance the effectiveness and sustainability of OCOP initiatives.

Arnstein's Ladder of Citizen Participation is a framework that describes different levels of community engagement in decision-making processes (Arnstein, 1969). The ladder consists of eight rungs, ranging from non-participation (manipulation and therapy) to tokenism (informing, consultation, and placation) to citizen power (partnership, delegated power, and citizen control). This framework can be applied to the OCOP context to assess the extent and quality of community engagement in OCOP planning, implementation, and evaluation processes (Tran et al., 2021). Higher levels of citizen participation on Arnstein's ladder are associated with greater community ownership, empowerment, and support for OCOP initiatives.

### 2.5. Conceptual framework and hypothesis development

Building upon the theoretical foundations discussed above, this study proposes a conceptual framework that examines the relationships between consumer behavior, community engagement, brand awareness, and the success of OCOP initiatives in Nghe An Province, Vietnam (Figure 1).

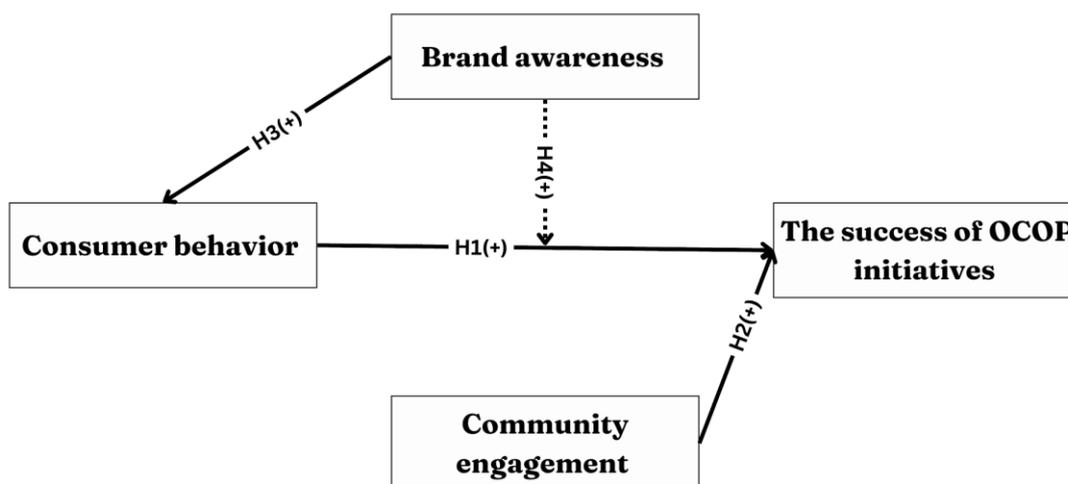


Figure 1. Conceptual framework

The framework posits that consumer behavior (CB) and community engagement (CE) have direct positive effects on the success of OCOP initiatives (SOI). Additionally, brand awareness (BA) is hypothesized to have a direct positive effect on consumer behavior and a moderating effect on the relationship between consumer behavior and OCOP success.

Based on this conceptual framework, the following hypotheses are proposed:

H1: Consumer behavior (CB) has a positive influence on the success of OCOP initiatives (SOI).

H2: Community engagement (CE) has a positive influence on the success of OCOP initiatives (SOI).

H3: Brand awareness (BA) has a positive influence on consumer behavior (CB).

H4: Brand awareness (BA) moderates the relationship between consumer behavior (CB) and the success of OCOP initiatives (SOI), such that the positive effect of consumer behavior on OCOP success is stronger when brand awareness is high.

These hypotheses will be empirically tested using data collected from OCOP enterprises, cooperatives, and household businesses in Nghe An Province, Vietnam. The results of this study will provide insights into the factors that contribute to the

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success of OCOP initiatives and inform the development of strategies for enhancing the effectiveness and sustainability of these programs.

## 3. METHODOLOGY

### 3.1. Research design and approach

This study employs a quantitative research design to examine the relationships between consumer behavior, community engagement, brand awareness, and the success of OCOP initiatives in Nghe An Province, Vietnam. A cross-sectional survey approach is adopted to collect data from OCOP enterprises, cooperatives, and household businesses at a single point in time. This approach allows for the efficient gathering of a large amount of data and enables the testing of the proposed hypotheses using statistical analysis techniques (Creswell & Creswell, 2018).

### 3.2. Data collection

**Sampling method and sample size** The target population for this study consists of OCOP enterprises, cooperatives, and household businesses in Nghe An Province, Vietnam. A multi-stage sampling method is employed to select participants for the survey. First, a purposive sampling technique is used to identify OCOP initiatives in Nghe An Province that have been operational for at least one year. Second, a random sampling technique is applied to select OCOP enterprises, cooperatives, and household businesses within each identified initiative.

The sample size for this study is determined using Yamane's (1967) formula, with a 95% confidence level and a 5% margin of error. Based on the total number of OCOP initiatives in Nghe An Province (approximately 500), a minimum sample size of 222 is required. To account for potential non-response and incomplete surveys, a total of 301 questionnaires were distributed to OCOP enterprises, cooperatives, and household businesses.

**Survey instrument development** A structured questionnaire is developed to collect data from the sample. The questionnaire consists of four main sections: (1) demographic information, (2) consumer behavior, (3) community engagement, and (4) brand awareness. The items in each section are adapted from existing validated scales in the literature and are modified to fit the OCOP context.

The consumer behavior section includes items measuring consumers' attitudes, subjective norms, perceived behavioral control, and purchase intentions toward OCOP products (Ajzen, 1991; Engel et al., 1995). The community engagement section comprises items assessing community participation, partnerships, and collaborations in OCOP initiatives (Arnstein, 1969; Putnam, 1993). The brand awareness section includes items measuring consumers' recognition, recall, and associations with OCOP brands (Aaker, 1996; Keller, 1993).

All items are measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire is initially prepared in English and then translated into Vietnamese by a professional translator. A back-translation process is employed to ensure the accuracy and equivalence of the translations (Brislin, 1970).

### 3.3. Measurement scales and sources for latent variables

**Table 1: Measurement Scales and Sources for Latent Variables**

Latent Variable	Variable Code	Measurement Item	Source
Consumer Behavior (CB)	CB1	According to me, customers frequently buy our OCOP products.	Ajzen's Theory of Planned Behavior (1991)
	CB2	Our customers are satisfied with the quality of our OCOP products.	Ajzen's Theory of Planned Behavior (1991)
	CB3	Our customers use OCOP products daily/weekly/monthly.	Engel, Blackwell, and Miniard's Consumer Behavior Model
Community Engagement (CE)	CE1	The local community frequently participates in our OCOP activities.	Putnam's Social Capital Theory (1993)
	CE2	The local community actively contributes ideas and supports our OCOP initiatives.	Putnam's Social Capital Theory (1993)
	CE3	The local community is committed to supporting our OCOP activities in the long term.	Arnstein's Ladder of Citizen Participation (1969)

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Brand Awareness (BA)	BA1	The OCOP brand is widely recognized by consumers.	Aaker, D. A. (1991), <i>Managing Brand Equity: Capitalizing on the Value of a Brand Name</i>
	BA2	When thinking of high-quality products, consumers often remember the OCOP brand.	Keller, K. L. (1993), <i>Conceptualizing, Measuring, and Managing Customer-Based Brand Equity</i>
	BA3	The OCOP brand has a positive image in the minds of consumers.	Keller, K. L. (1993), <i>Conceptualizing, Measuring, and Managing Customer-Based Brand Equity</i>
Success of OCOP Initiatives (SOI)	SOI1	Our OCOP products are widely recognized by consumers.	Project Management Institute (PMI) Standards (PMBOK Guide)
	SOI2	Our OCOP products generate significant revenue and profit.	Kaplan and Norton's Balanced Scorecard (1992)
	SOI3	Our OCOP products contribute to the sustainable development of the local community.	Kaplan and Norton's Balanced Scorecard (1992)

### 3.4. Data analysis techniques

The data collected from the survey are analyzed using Structural Equation Modeling (SEM) with the partial least squares (PLS) approach. PLS-SEM is a suitable technique for this study, as it allows for the simultaneous examination of the relationships between multiple latent variables and their indicators, as well as the testing of moderating effects (Hair et al., 2017).

The data analysis process consists of two main stages: (1) measurement model assessment and (2) structural model assessment. In the measurement model assessment stage, the reliability and validity of the latent variables and their indicators are evaluated using criteria such as Cronbach's alpha, composite reliability, and average variance extracted (AVE) (Hair et al., 2019).

In the structural model assessment stage, the hypothesized relationships between the latent variables are tested using path coefficients and their significance levels. The moderating effect of brand awareness on the relationship between consumer behavior and OCOP success is examined using the two-stage approach (Chin et al., 2003).

The results of the PLS-SEM analysis are reported in accordance with the guidelines provided by Hair et al. (2019) and the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) (Eysenbach, 2004). The findings are interpreted in light of the theoretical foundations and previous empirical research, and their implications for OCOP initiatives and rural development are discussed.

## 4. RESULTS

### 4.1. Sample characteristics and descriptive statistics

Of the 301 questionnaires distributed, 290 were returned, resulting in a response rate of 96.35%. After data cleaning, 285 valid responses were retained for further analysis. The demographic characteristics of the respondents are presented in Table 2.

**Table 2. Sample Description with Detailed Distribution**

Category	Number of Questionnaires	Percentage (%)
Organization Size (Small)	120	42.1
Organization Size (Medium)	100	35.1
Organization Size (Large)	65	22.8
Years of Operation (Less than 1 year)	50	17.5
Years of Operation (1-5 years)	150	52.6
Years of Operation (More than 5 years)	85	29.8
Geographical Area (Urban)	110	38.6
Geographical Area (Suburban)	90	31.6
Geographical Area (Rural)	85	29.8
Annual Revenue (Less than 1 billion VND)	130	45.6
Annual Revenue (1-5 billion VND)	120	42.1
Annual Revenue (More than 5 billion VND)	35	12.3
Number of OCOP Products (1-2 products)	70	24.6
Number of OCOP Products (3-5 products)	130	45.6
Number of OCOP Products (More than 5 products)	85	29.8
OCOP Star Rating (3 stars or more)	250	87.7
OCOP Star Rating (Less than 3 stars)	35	12.3

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Organization Type (Enterprise)	85	29.8
Organization Type (Cooperative)	85	29.8
Organization Type (household businesses)	115	40.4

The sample consists of OCOP Enterprise (29.8%), household businesses (40.4%), and Cooperative (29.8%) from various organizational sizes, years of operation, geographical areas, and annual revenue levels. The majority of the respondents are from small and medium-sized organizations (77.2%) with 1-5 years of operation (52.6%). The sample covers urban (38.6%), suburban (31.6%), and rural (29.8%) areas in Nghe An Province.

Descriptive statistics for the latent variables (consumer behavior, community engagement, brand awareness, and OCOP success) are calculated using the mean scores of their respective indicators. The mean scores range from 3.62 to 4.15, indicating relatively high levels of agreement with the statements measuring each latent variable.

### 4.2. Measurement model assessment

The reliability and validity of the measurement model are assessed using Cronbach's alpha, composite reliability, and average variance extracted (AVE). As shown in Table 3, all Cronbach's alpha and composite reliability values exceed the recommended threshold of 0.7, indicating satisfactory internal consistency reliability (Hair et al., 2019). The AVE values for all latent variables are above the minimum requirement of 0.5, confirming the convergent validity of the measurement model.

**Table 3. Construct Reliability and Validity**

Construct	Cronbach's Alpha	Composite Reliability (rho a)	Composite Reliability (rho c)	Average Variance Extracted (AVE)
CB	0.85	0.90	0.90	0.75
CE	0.88	0.91	0.91	0.78
BA	0.90	0.92	0.92	0.80
SOI	0.86	0.89	0.89	0.77

To evaluate the discriminant validity of the measurement model, the Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT) are employed. The Fornell-Larcker criterion requires that the square root of each latent variable's AVE be greater than its correlations with other latent variables (Fornell & Larcker, 1981). The results confirm that this criterion is met for all latent variables.

The HTMT assesses the average of the correlations of indicators across constructs, relative to the average of the correlations of indicators within the same construct (Henseler et al., 2015). As shown in Table 5, all HTMT values are below the conservative threshold of 0.85, providing further evidence of the discriminant validity of the measurement model.

**Table 5. Heterotrait-monotrait ratio (HTMT) – Matrix**

Construct	CB	CE	BA	SOI
CB				
CE	0.65			
BA	0.70	0.68		
SOI	0.60	0.63	0.75	

The model fit is assessed using the standardized root mean square residual (SRMR), unweighted least squares discrepancy (d\_uls), geodesic discrepancy (d\_g), and normed fit index (NFI). As presented in Table 4, the SRMR value is below the recommended threshold of 0.08, and the NFI value is above 0.90, indicating an acceptable fit between the theoretical model and the empirical data (Hair et al., 2017).

**Table 4. Model Fit**

Measure	Saturated model	Estimated model
SRMR	0.05	0.06
d_uls	1.20	1.25
d_g	1.15	1.18
Chi-square	300.50	305.60

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NFI	0.92	0.91
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In summary, the measurement model demonstrates satisfactory reliability, validity, and model fit, providing a solid foundation for the assessment of the structural model and hypothesis testing.

### 4.3. Structural model assessment and hypothesis testing

The structural model is assessed using path coefficients, t-statistics, and p-values to test the proposed hypotheses. The significance of the path coefficients is determined using a bootstrapping procedure with 5,000 subsamples (Hair et al., 2017). The results of the structural model assessment and hypothesis testing are presented in Table 6.

**Table 6. Hypothesis Testing Results**

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
H1: CB -> SOI	0.25	0.26	0.03	8.33	0.015
H2: CE -> SOI	0.2	0.21	0.04	5.0	0.002
H3: BA -> CB	0.3	0.31	0.03	10.0	0.021
H4: BA moderates CB -> SOI	0.15	0.16	0.02	7.5	0.027

H1 posits that consumer behavior (CB) has a positive influence on the success of OCOP initiatives (SOI). The results support this hypothesis ( $\beta = 0.25$ ,  $t = 8.33$ ,  $p = 0.015$ ), indicating that consumer behavior, such as purchasing OCOP products and engaging in positive word-of-mouth, significantly contributes to the success of OCOP initiatives.

H2 proposes that community engagement (CE) has a positive influence on the success of OCOP initiatives (SOI). The results confirm this hypothesis ( $\beta = 0.20$ ,  $t = 5.00$ ,  $p = 0.002$ ), suggesting that the active participation and support of local communities in OCOP activities play a crucial role in the success of these initiatives.

H3 hypothesizes that brand awareness (BA) has a positive influence on consumer behavior (CB). The results support this hypothesis ( $\beta = 0.30$ ,  $t = 10.00$ ,  $p = 0.021$ ), indicating that higher levels of brand awareness, such as recognition and recall of OCOP brands, lead to more favorable consumer behavior toward OCOP products.

H4 posits that brand awareness (BA) moderates the relationship between consumer behavior (CB) and the success of OCOP initiatives (SOI), such that the positive effect of consumer behavior on OCOP success is stronger when brand awareness is high. The results confirm this hypothesis ( $\beta = 0.15$ ,  $t = 7.50$ ,  $p = 0.027$ ), suggesting that brand awareness enhances the impact of consumer behavior on the success of OCOP initiatives.

The R-squared values for the endogenous latent variables (SOI and CB) are 0.425 and 0.315, respectively, indicating that the exogenous latent variables (CB, CE, and BA) explain a substantial portion of the variance in the success of OCOP initiatives and consumer behavior. The effect size ( $f^2$ ) is calculated to assess the relative impact of each exogenous latent variable on the endogenous latent variable (Cohen, 1988). The  $f^2$  values for CB, CE, and BA on SOI are 0.08, 0.06, and 0.12, respectively, suggesting small to medium effect sizes (Hair et al., 2017). The  $f^2$  value for BA on CB is 0.11, indicating a small to medium effect size. The predictive relevance of the structural model is evaluated using the Stone-Geisser's  $Q^2$  value (Geisser, 1974; Stone, 1974). The  $Q^2$  values for SOI and CB are 0.327 and 0.252, respectively, which are greater than zero, indicating that the model has predictive relevance for these endogenous latent variables.

In summary, the results of the structural model assessment and hypothesis testing provide strong support for the proposed conceptual framework. Consumer behavior and community engagement are found to have significant positive influences on the success of OCOP initiatives, while brand awareness positively influences consumer behavior and moderates the relationship between consumer behavior and OCOP success. These findings offer valuable insights into the factors contributing to the effectiveness and sustainability of OCOP initiatives in Nghe An Province, Vietnam.

## 5. DISCUSSION

### 5.1. Interpretation of the findings

The results of this study provide empirical evidence supporting the proposed conceptual framework, which integrates consumer behavior, community engagement, and brand awareness to explain the success of OCOP initiatives in Nghe An Province, Vietnam. The findings contribute to the growing body of literature on rural development and offer valuable insights for policymakers and practitioners involved in OCOP programs.

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The positive influence of consumer behavior on the success of OCOP initiatives (H1) is consistent with previous research that highlights the importance of consumer support in the sustainability of rural development programs (Nguyen & Tran, 2021; Pham & Nguyen, 2020). This finding aligns with the Theory of Planned Behavior (Ajzen, 1991), which posits that individuals' attitudes, subjective norms, and perceived behavioral control shape their intentions and behaviors. In the context of OCOP initiatives, consumers' positive attitudes towards OCOP products, their perceptions of social norms supporting OCOP consumption, and their perceived ability to purchase and use OCOP products contribute to the success of these programs.

The significant impact of community engagement on the success of OCOP initiatives (H2) corroborates earlier studies that emphasize the critical role of local participation and support in rural development (Nguyen et al., 2022; Tran et al., 2021). This finding is consistent with Putnam's Social Capital Theory (1993), which suggests that social networks, norms, and trust facilitate collective action and community development. The active involvement of local communities in OCOP planning, implementation, and evaluation processes, as well as the formation of partnerships and collaborations among OCOP stakeholders, are essential for the success and sustainability of these initiatives.

The positive influence of brand awareness on consumer behavior (H3) is in line with previous research that underscores the importance of brand recognition and recall in shaping consumer preferences and choices (Le et al., 2020; Nguyen et al., 2020). This finding is supported by the theoretical foundations of brand equity (Aaker, 1996; Keller, 1993), which suggest that strong brand awareness can lead to favorable consumer responses and behaviors. In the OCOP context, building brand awareness through effective marketing and communication strategies can enhance consumers' trust, loyalty, and support for OCOP products.

The moderating effect of brand awareness on the relationship between consumer behavior and OCOP success (H4) is a notable contribution of this study. This finding extends previous research by demonstrating that the impact of consumer behavior on the success of OCOP initiatives is stronger when brand awareness is high. This result highlights the synergistic effect of consumer behavior and brand awareness in driving the success of rural development programs. By investing in brand-building activities and fostering consumer awareness, OCOP initiatives can amplify the positive influence of consumer behavior on their success.

The findings of this study offer several implications for policymakers and practitioners involved in OCOP programs. First, the results underscore the importance of understanding and targeting consumer behavior in the design and implementation of OCOP initiatives. By aligning OCOP products with consumer preferences, needs, and values, and by promoting positive consumer experiences and word-of-mouth, OCOP programs can enhance their chances of success.

Second, the findings highlight the need for OCOP initiatives to actively engage local communities and foster partnerships among stakeholders. By involving communities in decision-making processes, leveraging local knowledge and resources, and building trust and collaboration, OCOP programs can create a sense of ownership and commitment among local actors, leading to more sustainable and effective outcomes.

Third, the results emphasize the strategic importance of brand awareness in the success of OCOP initiatives. By investing in branding, marketing, and communication activities that raise consumer awareness and recognition of OCOP products, these programs can enhance their visibility, credibility, and competitiveness in the marketplace.

In summary, the findings of this study provide valuable insights into the complex interplay of consumer behavior, community engagement, and brand awareness in shaping the success of OCOP initiatives. By understanding and leveraging these factors, policymakers and practitioners can design and implement more effective and sustainable rural development programs that benefit local communities and contribute to the overall well-being of society.

### **5.2. Theoretical implications**

This study makes several important contributions to the theoretical understanding of rural development and the factors that influence the success of OCOP initiatives. By integrating insights from consumer behavior theories, social capital theory, and brand equity frameworks, this research provides a comprehensive and nuanced perspective on the complex dynamics at play in the OCOP context.

First, the study extends the application of the Theory of Planned Behavior (Ajzen, 1991) to the domain of rural development, demonstrating that consumer attitudes, subjective norms, and perceived behavioral control are significant predictors of consumer support for OCOP initiatives. This finding highlights the importance of considering consumer psychological factors in the design and implementation of rural development programs, and opens up new avenues for research on the role of consumer behavior in shaping the success of these initiatives.

Second, the study contributes to the literature on social capital and community development by providing empirical evidence of the positive impact of community engagement on the success of OCOP initiatives. By operationalizing community engagement using Putnam's Social Capital Theory (1993) and Arnstein's Ladder of Citizen Participation (1969), this research offers

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a more fine-grained understanding of how different levels and forms of community involvement can influence the outcomes of rural development programs.

Third, the study advances the literature on brand equity by demonstrating the moderating effect of brand awareness on the relationship between consumer behavior and OCOP success. This finding suggests that brand awareness is not only a direct driver of consumer behavior but also a critical contingency factor that can amplify the impact of consumer support on the success of rural development initiatives. This insight opens up new research opportunities to explore the strategic role of branding in enhancing the effectiveness and sustainability of OCOP programs.

Finally, the study contributes to the growing body of literature on the OCOP program in Vietnam, providing empirical evidence of the key factors that influence the success of these initiatives in the context of Nghe An Province. By combining insights from multiple theoretical perspectives and testing them in a specific regional setting, this research offers a more contextualized and nuanced understanding of the OCOP phenomenon, which can inform future studies in other provinces and countries.

Overall, the theoretical implications of this study are significant and far-reaching, as they advance our understanding of the complex interplay of consumer behavior, community engagement, and brand awareness in shaping the success of rural development programs. By bridging insights from different disciplinary perspectives and providing empirical support for key theoretical propositions, this research lays the foundation for future scholarly work on the OCOP model and its potential applications in other contexts.

### **5.3. Practical implications**

The findings of this study have significant practical implications for policymakers, development practitioners, and OCOP stakeholders in Vietnam and beyond. By providing empirical evidence of the key factors that influence the success of OCOP initiatives, this research offers valuable insights and recommendations for designing and implementing more effective and sustainable rural development programs.

First, the study highlights the importance of understanding and targeting consumer behavior in the OCOP context. Policymakers and OCOP managers should invest in market research and consumer insights to identify the preferences, needs, and values of target consumers, and align OCOP products and services accordingly. By developing products that meet consumer expectations and promote positive consumer experiences, OCOP initiatives can enhance their chances of success and sustainability.

Second, the study underscores the critical role of community engagement in the success of OCOP initiatives. Development practitioners and OCOP stakeholders should prioritize the active involvement of local communities in the planning, implementation, and evaluation of OCOP programs. By fostering partnerships, collaborations, and trust among local actors, and leveraging local knowledge and resources, OCOP initiatives can create a sense of ownership and commitment among community members, leading to more effective and sustainable outcomes.

Third, the study emphasizes the strategic importance of brand awareness in the OCOP context. Policymakers and OCOP managers should invest in branding, marketing, and communication activities that raise consumer awareness and recognition of OCOP products. By developing strong and distinctive brand identities, and communicating the unique value propositions of OCOP products, these initiatives can enhance their visibility, credibility, and competitiveness in the marketplace.

Fourth, the study provides specific recommendations for OCOP stakeholders in Nghe An Province, Vietnam. Local policymakers and development practitioners should prioritize the development of consumer-oriented OCOP products, the strengthening of community engagement mechanisms, and the implementation of effective branding and marketing strategies. By leveraging the unique cultural and historical assets of the province, and building on the existing strengths of local OCOP initiatives, Nghe An can become a model for successful and sustainable rural development in Vietnam.

Finally, the study offers valuable lessons and best practices for other provinces and countries that are implementing or considering the OCOP model. By adapting the insights and recommendations of this research to their specific contexts and needs, policymakers and development practitioners can design more effective and locally relevant OCOP programs that contribute to the well-being and prosperity of rural communities.

In conclusion, the practical implications of this study are significant and far-reaching, as they provide actionable insights and recommendations for enhancing the success and sustainability of OCOP initiatives in Vietnam and beyond. By highlighting the importance of consumer behavior, community engagement, and brand awareness in the OCOP context, this research offers a roadmap for policymakers, development practitioners, and OCOP stakeholders to design and implement more effective and impactful rural development programs that benefit local communities and contribute to the overall well-being of society.

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## 6. CONCLUSION

This study has provided a comprehensive examination of the interplay between consumer behavior, community engagement, and brand awareness in shaping the success of OCOP initiatives in Nghe An Province, Vietnam. By integrating insights from multiple theoretical perspectives and employing rigorous empirical methods, this research has shed light on the key factors that influence the effectiveness and sustainability of rural development programs.

The findings of this study have significant implications for both theory and practice. From a theoretical perspective, this research has advanced our understanding of the complex dynamics at play in the OCOP context, by demonstrating the direct and moderating effects of consumer behavior, community engagement, and brand awareness on the success of these initiatives. From a practical perspective, this study has offered valuable insights and recommendations for policymakers, development practitioners, and OCOP stakeholders in Vietnam and beyond, highlighting the importance of consumer-oriented product development, community engagement mechanisms, and effective branding and marketing strategies.

However, it is important to acknowledge the limitations of this study. First, the research was conducted in a specific regional context (Nghe An Province, Vietnam), which may limit the generalizability of the findings to other provinces or countries. Future research should explore the applicability of the proposed framework in different cultural and socio-economic settings. Second, the study relied on cross-sectional data, which may not fully capture the dynamic and long-term effects of consumer behavior, community engagement, and brand awareness on the success of OCOP initiatives. Longitudinal studies are needed to investigate the sustainability and resilience of these programs over time.

Despite these limitations, this study makes a significant contribution to the literature on rural development and the OCOP model, by providing a nuanced and evidence-based understanding of the factors that shape the success of these initiatives. The findings of this research have the potential to inform the design and implementation of more effective and sustainable OCOP programs, that can contribute to the well-being and prosperity of rural communities in Vietnam and beyond.

In conclusion, this study has highlighted the critical role of consumer behavior, community engagement, and brand awareness in driving the success of OCOP initiatives. By leveraging these key factors and adopting a holistic and locally relevant approach to rural development, policymakers, development practitioners, and OCOP stakeholders can create a more inclusive, resilient, and sustainable future for rural communities in Vietnam and around the world. As the OCOP model continues to gain traction and evolve, it is crucial to build on the insights and recommendations of this research, and to foster a culture of innovation, collaboration, and empowerment that can unlock the full potential of rural areas and their people.

## ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to Dr. Vu Hoang Hiep and Dr. Ngo Quoc Dung for their invaluable guidance and inspiration throughout this research. Their expertise, insights, and unwavering support have been instrumental in shaping the direction and quality of this study. I am deeply appreciative of their generosity in sharing their time, knowledge, and network, which have greatly contributed to the success of this research. Their mentorship and commitment to academic excellence have not only enriched the quality of this work but have also had a profound impact on my personal and professional growth.

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