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Research Article

Broadening Influence: Scale Development for Subjective Norms Across Extended Social Groups in Green Purchasing

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ABSTRACT

Green consumption is integral in pursuing the Sustainable Development Goals (SDGs), stressing the importance of individual and collective decision-making. Despite adding the descriptive norm dimension, the subjective norms scale neglects the importance of broader reference groups. This study aims to develop a multidimensional scale to measure subjective norms in green consumption, incorporating both specific and general social pressures, addressing the limitations of the Theory of Planned Behavior (TPB), which traditionally focuses on specific reference groups. This exploratory study incorporates a pilot study with 200 participants and a main investigation with 300 participants, all chosen with a purposive sampling technique. The study's participants were consumers aged 18 and older with prior experience purchasing coffee who were aware of organic coffee and were deliberating about purchasing organic coffee products. Analysis techniques included item-to-total correlation, Cronbach's alpha, and Exploratory Factor Analysis (EFA). In the conducted pilot and main studies, the developed scale, comprising 14 items, exhibited robust reliability and validity. The findings elucidate that subjective norms influencing green consumption are informed by significant social networks and broader societal trends, thus offering an exhaustive delineation of the determinants that influence environmentally sustainable behaviors. Practical recommendations were articulated for both retailers and governmental entities aiming to foster organic coffee consumption. These include the strategic enhancement of marketing initiatives to highlight the communal endorsement of organic coffee by both specific and general social collectives and formulating policies and incentives that promote organic agriculture and sustainable practices. By integrating a broad spectrum of social influences, the scale development introduced in this study advances the understanding of consumer behavior and sustainability.

Keywords: multidimensional scale, organic coffee, general reference group, subjective norms, sustainable consumption.

1. Introduction

Green consumption has crystallized as an essential mechanism in the pursuit of the Sustainable Development Goals (SDGs), which encompass objectives such as eradicating poverty, safeguarding the

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environment, and securing prosperity universally[1, 2]. This paradigm emphasizes the importance of individual and collective decisions in addressing global challenges, suggesting that incremental behavioral changes can result in profound environmental and societal changes[3, 4]. By selecting environmentally benign and ethically produced products and services, green consumption is integral to sustainable living practices [5] . Given coffee's pervasiveness and its role to further sustainable agricultural methods, economic advancement, health enhancements, and climate mitigation, the shift toward organic coffee consumption is recognized as a significant sustainable initiative[6–8].

Between 2015 and 2019, coffee consumption in Indonesia increased by 54.3%, significantly surpassing the global growth rate of just 9.9%[9]. This marked increase underscores coffee's expanding role in local and global markets and highlights the potential impact of sustainable consumption practices. Moreover, Indonesia is one of the foremost producers of organic coffee globally. With the spreading coffee culture in Indonesia and its status as a notable organic coffee producer, this sector offers a valuable perspective to explore aspects of green consumption[10, 11].

However, the acceptance of organic coffee extends beyond mere accessibility and affordability [12]; it is deeply connected to subjective norms—those perceived social pressures that influence individual and collective behaviors toward sustainability [13, 14] . These norms significantly impact consumer choices, emphasizing the importance of understanding and directing these perceptions to promote sustainable consumption patterns [15, 16] . The complex relationship between social influences and commercial behaviors underscores the imperative for business to strategically synchronize their operations with the evolving societal narratives surrounding sustainability and ethical consumption [15, 16] . As social influences and commercial behavior are interrelated, businesses must align their practices strategically with the evolving social narratives regarding sustainability and ethical consumption[17, 18].

Notwithstanding the importance of subjective norms, existing literature often critiques the conventional methods of measuring them, arguing that they fail to capture the nuanced and multifaceted nature of social pressures, particularly in green consumption [19, 20] . While the subjective norms scale has been improved by incorporating the descriptive norms dimension [21] , it neglects the importance of broader reference groups (such as stranger's opinions) as the source of social pressure that has been proven in previous studies [22, 23] . The assessment continues to use a restricted reference group, for example, most people who are important to me or whose opinions I value [24] . Extant literature [25, 26] has not concentrated on crafting multidimensional scales of subjective norms that integrate specific and general reference groups. This oversight highlights the necessity for a multidimensional framework to measure subjective norms, melding both specific and general social pressures, to furnish a thorough perspective on the social dynamics steering green consumption behaviors. This investigation seeks to develop a multidimensional scale for evaluating subjective norms in green consumption, focusing on organic coffee consumption in Indonesia. By combining specific and general reference groups, this scale provides a more detailed representation of the social influences shaping consumer decisions, addressing the shortcomings in current assessments. The following questions drive the research: How do perceived social pressures from family, friends, and broader societal trends influence green consumption behavior? The paper is structured as follows: Firstly, the literature review section examines the theoretical underpinnings of subjective norms and their relevance to green consumption. Following this, the methods section describes the research design and methodology applied to the development of the scale. The

results and discussion section interpret our findings, accentuating the multidimensional nature of subjective norms and their implications for organic coffee consumption in Indonesia. The practical implications section provides strategic recommendations for retailers and governmental entities to increase organic coffee consumption. Conclusively, the conclusion section summarizes the study's main findings and suggests areas for future research.

2. Literature review

2.1 Social Norms and Subjective Norms

Individuals are often more likely to purchase a product when they perceive their choice will receive approval and support from their social circles[27, 28]. This observation highlights the vital role of social norms in shaping individual decision-making processes, acting as a metric for evaluating options [29] . Typically, individuals tend to adopt behaviors that align with societal expectations, choosing actions that conform to established norms to avoid negative repercussions or to attract positive reinforcement.

Social norms are the established rules governing behavior within groups and broader societies[30]. These norms develop through interactions among society's members, and their definitions usually rely on social evaluations or sanctions [31] . Evaluations involve normative agreements determining expected or prohibited behaviors, while sanctions may include any affirmative or punitive response intended to modify behavior.

The Theory of Planned Behavior (TPB) articulates social norms through subjective norms[32]. Subjective norms refer to the social acceptance or endorsement of behavior by others[33, 34]. In TPB, subjective norms are seen as a critical determinant of behavior, representing the perceived social pressure to perform or avoid specific actions[35]**.** This theory has been extensively employed in studies examining intentions and behaviors related to environmentally friendly practices, such as organic food consumption, explaining significant variations in purchase intentions and actual behaviors[36, 37].

Despite its broad application, TPB's portrayal of subjective norms has been critiqued, particularly concerning its predictive effectiveness regarding green consumption [38, 39] . This critique is supported by research findings that have demonstrated a lack of substantial impact of subjective norms on green purchase intentions[40, 41]. The limited predictive power of subjective norms has been attributed to its traditional focus solely on injunctive norms [42, 43] . The scale was then revised to include both injunctive (what is approved) and descriptive norms (what people actually do). This revision significantly enhances the influence of societal approval and observable behaviors on individual decision-making processes [44] . This enhancement has demonstrably raised the predictive power of the TPB, with studies like that by Rivis and Sheeran [45] showing that including descriptive norms can increase the theory's predictive accuracy for intentions by an additional 5% beyond its original constructs.

2.2 The Role of General Reference Groups

Notwithstanding the new multidimensional scale that has been developed, the TPB still utilized specific individuals or groups as the source of social pressure, referring to significant others such as family and friends. From the social identity perspective, subjective norms are influenced by specific reference groups. Accordingly, the concept suggests that specific others serve as suitable referents in this context.

However, Cialdini et al.[46] define injunctive norms as "characterize the perception of what most people approve or disapprove" (p. 203). An individual's social identity extends beyond specific group memberships to encompass roles within broader communities and society at large, indicating that the term 'others' encompasses groups, communities, and societal levels[47]. This argument suggests that social influences can originate from even unfamiliar individuals. In a similar vein, both Cialdini et al.[48] and Cialdini and Trost[49] use the term "most people" to discuss the scope of injunctive and descriptive norms. Furthermore, Zillich and Riesmeyer[50] articulate that the applicability of both injunctive and descriptive norms spans proximal, distal, and societal contexts. Reynolds et al. [51] identify a dual interpretation of "others" within the literature on social norms, distinguishing between the general concept of "most people" seen in numerous definitions and the specific referents highlighted in discussions of subjective norms. They argue that this dichotomy arises from varying perspectives on the concept of others. From a cultural socialization perspective, the socialization process involves the entire society, making the reference to "most people" relevant when discussing "others." The expanded viewpoint recognizes the influence of societal interactions, broadening the definition of subjective norms to encompass not just immediate social circles but also the broader societal environment.

Recent empirical research has begun to explore the impact of general reference groups on consumer behavior. This investigation sheds light on how societal trends and the actions of less familiar individuals can influence individual decisions, especially in the context of environmentally conscious consumption [52, 53] . This increasing corpus of studies stresses the complex nature of social influences, highlighting the necessity for a comprehensive measurement scale that captures this complexity.

In response to the gaps and critiques identified, this study proposes a multidimensional measurement of subjective norms that incorporates both specific and general reference groups, aiming to provide a more complete understanding of the social pressures that influence green consumption behaviors. This approach seeks to encompass a broader spectrum of influences by expanding the conceptual framework of subjective norms, thereby offering more profound insights into the dynamics that drive sustainable consumer behaviors.

2.3 Subjective Norms and Green Purchase

Subjective norms play a crucial role in influencing green purchase decisions by impacting various psychological aspects of consumer behavior. Studies have shown that subjective norms positively influence green attitudes and perceived behavioral control, which in turn affect green purchase intentions [54] . Additionally, subjective norms have been found to have a significant impact on green self-efficacy and green purchase attitudes, leading to an increased intention to engage in green purchasing behaviors[55]. Moreover, subjective norms have been identified as a key factor in shaping personal norms, implicit attitudes, and explicit attitudes, ultimately influencing the intention to visit green hotels[56]. Furthermore, subjective norms have been highlighted as a positive moderator between consumer attitudes, perceived behavior control, and eco-friendly purchase intentions, showcasing their pivotal role in driving sustainable consumption behaviors[57].

Subjective norms play a significant role in influencing green purchase behavior across various contexts. Studies on eco-friendly hotels show that subjective norms positively impact purchase intention [58] , while research on bamboo and rattan, products in Vietnam highlights that subjective norms directly affect purchase behavior [59] . Additionally, in the context of green cosmetics, subjective norms are found to significantly

influence both purchase behavior and intention among Indian consumers, with no significant gender differences observed [60]. Moreover, in the purchase of green cosmetics, subjective norms mediate between environmental knowledge, concern, health awareness, and purchase intention, emphasizing the importance of social influences in promoting green product consumption [61]. These findings collectively underscore the crucial role of subjective norms in shaping consumer behavior towards environmentally friendly products.

3. Methods

3.1 Research design.

This investigation launches an exploratory study into the role of social norms in shaping organic coffee consumption behaviors, specifically within the urban setting of Jakarta. Known for its dynamic coffee culture, Jakarta offers a compelling context for examining the influences of perceived social norms related to coffee consumption. This study examines the complex nature of social norms related to coffee consumption. The study was conducted between November 2023 and February 2024.

3.2 Participants

The research was carried out among coffee consumers in Jakarta, encompassing individuals who either reside in or engage in daily activities within the city. A recent survey indicated that Jakarta has one of the highest coffee consumption rates in the country [62]. Participants were required to be at least 18 years old to ensure they had sufficient autonomy in making coffee purchase decisions. Furthermore, participants needed to be aware of organic coffee, guaranteeing they possessed adequate knowledge to engage in informed pre-purchase evaluations. The participants were chosen using a purposive sampling method to ensure the representation of individuals meeting specific criteria.

3.3 Data Collection

The literature review findings were used as one of the materials for the focus group discussion. Ten participants participated in the discussion. The participants in the focus group are either coffee or organic product consumers. As part of FGD, participants were asked about the types of social pressure they experienced, events when this pressure occurred, and why they chose to act or not act according to the behaviors prompted by these pressures. The participants were also asked to discuss reference groups that often exerted social pressure on them. Following this, participants were asked to discuss verbs in a statement representing social pressure on injunctive and descriptive norms. Eight experts were involved in assessing the content validity of the scale.

Subsequently, an online survey was disseminated to 100 participants to evaluate the scale's readability. An additional 200 participants filled out the questionnaire in the pilot study. For the primary study, the sample size was increased to 300 respondents. The instrument consisted of three parts. The instrument began by filtering questions to ensure respondents met the criteria. In the second part, respondents were asked about their demographics. In the final section, items related to the research variables were discussed. A five-point Likert scale was used for both the pilot and main studies.

3.4 Technique of Analysis

The analysis began with item-to-total correlation and Cronbach's alpha to determine which items were suitable for further examination. Items with an average item-to-total correlation below .50 or those that increased Cronbach's alpha when removed were excluded from the scale. The identification of underlying variables involved Exploratory Factor Analysis (EFA) using principal components analysis and varimax

rotation. Item elimination during this phase was based on several criteria: factor loadings below .40, nearly equal loadings across dimensions, and items with the highest loadings in unintended dimensions.

A Confirmatory Factor Analysis (CFA) was conducted to determine whether the two-factor model of social norms was suitable compared to alternative models. Bollen [63] advocated benchmarking null models against progressively structured models, including: A model in which all indicators reflect a unified dimension, A two-factor model with only injunctive and descriptive norms, and four factors representing general and specific norms in both the injunctive and descriptive domains. The indices used to assess the model fit were the chi-square ($\chi 2$) value, the Adjusted Goodness of Fit Index (AGFI), and the Relative Fit Index (RNI).

Composite reliability was then assessed to evaluate the scale's reliability, with the coefficient calculated for each identified dimension. For validity, tests for convergent, discriminant, and criterion-related validity were conducted. The average variance extracted (AVE) was computed to assess the data's convergent validity. An AVE value exceeding 0.50 indicates convergent validity for each dimension. Each indicator must have the highest load on its intended construct to establish discriminant validity. Furthermore, criterion validity was examined by testing the effect of the formed dimensions on its relevant constructs.

4. Results And Discussions

4.1 Dimensions and Items Generation

The focus group discussion results, alongside items extracted from earlier studies, yielded 38 items for additional examination. These findings were subsequently presented to eight experts for content validity assessment. Items deemed representative by at least five experts were preserved for ongoing refinement. Representativeness was judged by indicator statement fitness with the conceptual definitions. Additionally, these experts were asked for recommendations on enhancing the scale. All responses received were integrated into the scale's refinement process.

The initial pool of 38 items was reduced by 13 items due to the opinion of five or more experts that they were not representative. Out of the 25 items retained, five were assigned as general injunctive norms (GI), eight as specific injunctive norms (SI), four as general descriptive norms (GD), and eight as specific descriptive norms (SD). A readability assessment was conducted before carrying out the pilot test. A survey was conducted online with 100 respondents. Three items in the survey were perceived as challenging to understand by over 20 percent due to their structure; three others were perceived as ambiguous. In light of the results, refinements were made. The Likert scale was used to measure all items.

4.2 Pilot test

Following its revision, the updated scale was subjected to a pilot test to evaluate its effectiveness after the adjustments. In this stage, 200 participants completed an online survey. This input was crucial for conducting the item removal process, performing an exploratory examination, and assessing the scale's reliability and validity.

The initial stage of item removal was initiated by performing a Cronbach analysis and assessing the item-to-total correlation for each dimension, adhering to the guidelines set forth by Churchill [64]. A separate Cronbach's alpha calculation was conducted for each dimension. Items exhibiting either a low correlation with the total or a low item-to-total correlation were excluded from further analysis. This procedure resulted in a refined set of 21 items, with each dimension displaying satisfactory Cronbach's alpha coefficients, which varied from .88 to .96. The mean item-to-total correlation for each dimension fell between .46 and .77,

aligning with the acceptable range of .20 to .80. At this step, four items (GI1, SD4, GD3, GD4) were eliminated due to their significant impact on enhancing the alpha values.

An exploratory analysis was then conducted to assess the scale's dimensionality after the item deletion. This examination utilized principal component analysis with varimax rotation to explore the structure of the scale. The determination of factor numbers was guided by eigenvalue analysis. An initial evaluation of dimensionality and reliability revealed a KM0 statistic value of .94 and a significance level of .00, indicating the appropriateness of proceeding with factor analysis. Contrary to the anticipated four factors, the analysis yielded two factors, combining specific injunctive norms with general injunctive norms into a single factor and similarly merging specific descriptive norms with general descriptive norms.

During this stage, items SI3, SI5, SI7, GI4, and SD3 were removed due to their misalignment with the expected factors. Additionally, items SD6 and SD8 were eliminated because of their nearly identical loading scores across the two factors. This refinement led to the exclusion of seven items and the retention of fourteen items. As outlined in Table 1, the factor loading for the remaining items varied from .53 to .94.

Table 1. The results of EFA on the pilot test

Rotated Component Matrix		
	Component	
	1	2
SI1	.61	
SI2	.89	
SI3*		.79
SI4	.93	
SI5*		.71
SI6	.83	
SI7*		.80
SI8	.92	
GI2	.87	
GI3	.89	
GI4*		.63
GI5	.93	
SD1		.73
SD2		.53
SD3*	.70	.50
SD5		.76
SD6*	.58	.56

SD7		.75
SD8*	.58	.51
GD1		.94
GD2		.93

**Removed from the scale*

Subsequently, Confirmatory Factor Analysis (CFA) was conducted to ascertain the suitability of the two-factor model of social norms compared to alternative models. In line with the methodology advocated by Bollen [63], a null model (indicating no discernible factor structure) was benchmarked against a series of structured models, including:

1. A singular factor model suggests that all indicators are reflective of a unified dimension.
2. A two-factor model delineates the scale into only injunctive and descriptive norms, as initially posited by Ajzen and Fishbein.
3. A four-factor model, delineating the scale to represent general and specific norms across both injunctive and descriptive domains as originally hypothesized.

Table 2 presents data that endorse the two-factor model as the most fitting solution. This model is characterized by the minimal chi-square ($\chi 2$) value, alongside the highest scores for the Adjusted Goodness of Fit Index (AGFI) and the Relative Fit Index (RNI), parameters recommended for comparative model analysis[65, 66].

Table 2. Comparative Analysis of Models' Dimensionalities—Pilot Test

Model	$\chi 2$	DF	AGFI	RNI
Null	146.85	90	0.88	-
Two-factor	131.80	89	0.89	0.24
Four-factor	144.4	86	0.88	-0.02

Confirmatory Factor Analysis (CFA) was utilized to validate the scale, employing various fit indices for assessment: the Root Mean Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the chi-square to degrees of freedom ratio (CMIN/DF), the Tucker-Lewis Index (TLI), and the Comparative Fit Index (CFI). The benchmarks for these indices were derived from earlier studies. As depicted in Table 3, the metrics for RMSEA, GFI, CMIN/DF, TLI, and CFI suggest that the scale demonstrates an adequate fit.

Table 3. The results of the scale's goodness of fit

Goodness of Fit Indices	Cut-Off Value	Results
Chi-Square	Small	136.53
Probability	> .05	.000
RMSEA	< .08	.06
GFI	> .90	.91
CMIN/DF	< 5.0	1.95
TLI	> .95	.98

CFI	> .95	.98

The range of factor loadings for the items, from .55 to .90, indicates satisfactory construct validity for the scale. The refined scale comprises 14 items, as detailed in the APPENDIX.

The subsequent analysis employed Fornell and Larcker's [67] methods for examining convergent and discriminant validity through cross-loadings. To fulfill the criteria for convergent validity, the average variance extracted (AVE) for each dimension must surpass .50, which was indeed the case, with AVE values ranging between .62 and .76. For discriminant validity, it was essential that each indicator's highest loading occurred on its intended construct. The criterion was successfully met in the testing. Furthermore, the scale demonstrated robust criterion-related validity, as evidenced by significant and positive correlations with related constructs, such as purchase intention, which exhibited a significance level of p= .00 and a correlation coefficient of .32. Overall, the scale's dimensions showed significant positive contributions. The composite reliability scores were impressive, with the injunctive norm at .96 and the descriptive norm at .90.

4.3 Main Study

For the main study, 300 participants were selected using a convenience sampling method. Similar to the pilot study, this collected data facilitated an exploratory analysis and evaluation of the scale's reliability and validity. The item-to-total correlation average across the two examined dimensions spanned from .37 to .74. During this phase, 25 items were initially considered, with four items (GI1, SD4, GD3, GD4) being removed to enhance Cronbach's alpha coefficient.

Consistent with findings from the preliminary survey, the results did not validate the hypothesized four-factor structure but instead revealed two factors: the injunctive and descriptive norms. These factors combined the specific and general aspects of both injunctive and descriptive norms into singular dimensions. After eliminating items that either loaded most strongly on an unintended dimension (SI3, SI5, SI7, GI4, SD3) or exhibited nearly equivalent loadings across multiple dimensions (SD6 and SD8), the analysis retained fourteen items. The factor loadings for these retained items ranged from .54 to .95.

Table 4. The results of EFA on the main study

Rotated Component Matrix

	Component	
	1	2
SI1		.54
SI2		.86
SI3*	.80	
SI4		.88
SI5*	.70	
SI6		.81
SI7*	.80	
SI8		.88
GI2		.89
GI3		.90
GI4*	.68	

GI5		.88
SD1	.75	
SD2	.54	
SD3*	.52	.66
SD5	.78	
SD6*	.62	.61
SD7	.79	
SD8*	.59	.55
GD1	.95	
GD2	.94	

**Removed from the scale*

The next step was conducting comparison model testing. The results, shown in Table 5, confirmed that the two factors were the best model solutions.

Table 5. Comparative Analysis of Models of Various Dimensionalities—Main Study.

Model	**χ2**	**DF**	**AGFI**	**RNI**
Null	104.30	65	.93	-
Two-factor	94.68	64	.93	.21
Four-factor	102.20	61	.92	-.04

The Confirmatory Factor Analysis (CFA) findings indicated that except for the chi-square probability and the chi-square to degrees of freedom ratio (CMIN/DF), all other fit indices suggested that the scale exhibits an adequate fit.

Table 6. The results of the scale's goodness of fit-Stage Two

Goodness of Fit Indices	**Cut-Off Value**	**Results**
Probability	> .05	.00
RMSEA	< .08	.07
GFI	> .90	.92
CMIN/DF	< 2.0	2.60
TLI	> .95	.97
CFI	> .95	.97

The scale demonstrated adequate construct validity, as evidenced by item factor loadings that varied from .44 to .99. Similar to the initial survey, the scale achieved convergent validity, with average variance extracted (AVE) for the dimensions at .71 and .64, respectively, surpassing the threshold of .50. This subsequent survey further confirmed discriminant validity, with each item's highest loading correctly aligned with its intended dimension. Additionally, the scale's criterion-related validity was affirmed through a positive and significant relationship between the dimensions and purchase intention, which served as the

associated construct (b=.63). The dimensions of the scale showed high composite reliability, with values of .95 for injunctive norms and .91 for the descriptive norms dimension.

4.4 Discussion

This study embarked on a novel exploration to develop a multidimensional scale for assessing subjective norms within the context of green consumption, particularly focusing on organic coffee consumption in Indonesia. Our findings validate the significance of integrating specific and general reference groups into conceptualizing subjective norms and clarify the complex interaction between these groups and consumer behavior towards organic coffee. This study differs from previous studies regarding the source and the dimensions of social pressure. Charlesworth et al. [68]employed specific reference groups (mother, partner, family) when developing scale. Ham et al. [69] explored the motives for buying green food by proposing social and descriptive norms as the dimensions of the subjective norms.

Despite lacking empirical support for the proposed four dimensions of subjective norms, our study indicated that the specific and general group reference indicators incorporated into the two dimensions (injunctive and descriptive norms) collectively influence green consumption decisions. This dichotomy is consistent with the theoretical advances proposed by Spears [70] , which posit that individual behaviors are influenced by various social forces, extending beyond immediate social circles to include broader societal trends. Incorporating general reference groups constitutes a significant deviation from traditional measures of subjective norms, which typically concentrate solely on specific reference groups. This expanded perspective acknowledges the impact of societal trends and the actions of unfamiliar others in shaping individual decisions. Our findings align with insights from Ejelöv et al.[52] and Xu et al. [53], highlighting the critical role of general reference groups in defining the social norms that govern green consumption. Moreover, identifying distinct dimensions of injunctive and descriptive norms aligns with previous research [71, 72] , underscoring the complex nature of social pressures and their cumulative effect on consumer choices.

The development of this multidimensional scale provides profound insights into green consumption patterns. By encompassing diverse sources of social pressure, this study illuminates the pathways through which consumer behavioral intentions towards organic coffee are shaped. These insights are vital for retailers and policymakers aiming to foster sustainable consumption practices, suggesting that strategies should extend beyond immediate social circles to leverage broader societal trends and perceptions. While the Theory of Planned Behavior (TPB) offers a robust framework for understanding the influence of subjective norms on behavior, our study enhances this theory by illustrating the added value of considering both specific and general social pressures. This nuanced understanding addresses critiques of the TPB's limited scope in capturing the intricate nature of social influences on green consumption. Our study advances existing knowledge by introducing a refined tool for measuring subjective norms in the context of green consumption, thereby facilitating a deeper understanding of the social factors driving sustainable behaviors.

The findings underline the significance of both specific and general subjective norms in shaping organic coffee consumption in Indonesia. Given the country's pronounced communal ties and the pervasive influence of social media, these norms play a crucial role in directing consumer behavior toward more sustainable practices. In Indonesia, the coffee-drinking culture is deeply embedded, often involving communal activities and social interactions with friends and family. These specific social groups are instrumental in shaping intentions and behaviors towards coffee consumption, including the choice of organic coffee. The injunctive norms from these groups, reflecting the perceived expectations of significant others, can strongly influence

individual decisions. For example, if family members or friends endorse and consume organic coffee, it may create a social expectation for an individual to follow suit, impacting their purchasing behavior.

Moreover, Indonesia's collective culture, where community and social harmony are highly valued, amplifies the impact of descriptive norms. These norms, developed through observing the behaviors of others, even strangers, have a particularly strong influence in societies where collective decisions and actions are prevalent. Observing a significant number of people choosing organic coffee can lead to a perception that this is a socially accepted and expected behavior. Social media further amplifies this perception, where trends and preferences can be swiftly observed and adopted.

The proliferation of social media platforms has markedly transformed the dynamics of social interaction, providing numerous opportunities for users to interact with content that showcases the lives and achievements of others [73] . This constant exposure often leads to social comparisons, as individuals measure their own achievements, appearances, and lifestyles against those of their online connections [74] . These comparisons may foster feelings of inadequacy and drive a compulsion to meet social expectations, thereby applying pressure to conform to prevailing norms.

Additionally, social media is a significant enhancer of social pressure exerted by relatively unknown individuals [75] . Consumer interaction positively affects their behavioral intention and impacts their brand perception [76] . This phenomenon is particularly observable in online forums where users post opinions or experiences that provoke responses from others, fostering a setting where behaviors are observed and emulated, as Hynes and Wilson [77] noted. Virtual communities enable groups of consumers to share their knowledge, enabling them to influence the perception of other consumers of brands [78] **.** In the context of environmentally conscious purchasing, the visibility of other consumers opting for organic products can influence individual intentions toward making similar purchases, as identified by Maciaszczyk and Kocot[79]**.**

Furthermore, social media's instant feedback mechanisms, such as likes, comments, and shares, play a crucial role in molding individuals' self-esteem and their quest for validation [80] . Users often seek social approval and aim to maintain a favorable online persona by aligning with popular opinions, trends, or posts, thereby shaping and reinforcing social norms. This dynamic emphasizes the significant impact of social media on individual behavior and broader societal expectations.

4.5 Practical Implication

For retailers marketing organic coffee, it is beneficial to tailor marketing strategies to emphasize the approval from both specific social groups (like family and friends) and broader societal trends. Incorporating customer testimonials and influencer endorsements can solidify the social acceptance of these products. For example, employing descriptive norms from wider reference groups can be particularly effective in settings such as coffee shops, where consumers often inquire about the choices of other patrons before making their selections. Descriptive norms are also important in online shopping scenarios, where consumers frequently rely on feedback and reviews from others who have purchased the product.

Retailers should also strategize the layout of their product assortment. Positioning organic coffee alongside non-organic varieties allows consumers to make direct comparisons, thus facilitating the recognition of the organic option's value. In environments where social influence is pronounced, such an arrangement can encourage consumers to opt for organic coffee under social pressure from their peers. With social media's pivotal role in shaping consumer preferences, retailers must also amplify their digital presence by promoting their organic coffee offerings and highlighting their commitment to sustainability.

Governments can create policies and provide incentives for organic farming, promoting sustainable agricultural practices. This support can make organic coffee more accessible and affordable. Further, collaborative efforts between the government, private sector, and NGOs relevant to SDGs 12 and 17 can effectively promote organic coffee. For example, a joint campaign highlighting organic coffee's environmental and health benefits can have a more significant impact. Initiating educational initiatives to increase public awareness of organic products' environmental and health benefits will support Sustainable Development Goals 4 and 13.

Given that social pressure is influenced by the extent to which a behavior is (dis)approved by others, social norms will only exert a significant impact when a substantial number of consumers are involved. Hence, in collaboration with marketers, there is a need for governmental initiatives aimed at raising consumer awareness about the benefits of consuming organic coffee. As the population of organic coffee consumers grows, so too does the social pressure, emanating from both specific and broad reference groups, on those who have yet to adopt organic coffee consumption.

5. Conclusion, Limitations, And Future Research Suggestions

5.1 Conclusion

This study embarked on developing a multidimensional scale to measure subjective norms in green consumption, explicitly targeting the organic coffee market in Indonesia. By incorporating specific and general social pressures, our research addresses a critical gap in the TPB, which has traditionally focused on specific reference groups. Our research shows that diverse social pressures, including intimate social circles and broader societal influences profoundly shape subjective norms in green consumption. This revelation underlines the complexity inherent in consumer decision-making processes and the myriad factors impeding environmentally sustainable behaviors.

The primary contribution of this study is the expansion of the Theory of Planned Behavior (TPB) to incorporate a more nuanced understanding of subjective norms. By developing a scale that discerns both specific and general social pressures, we provide a comprehensive instrument for probing the determinants of green consumption behaviors. This enhancement proves especially pertinent in the context of promoting organic coffee consumption, where our findings advocate for marketing strategies and policies to consider not only direct social influences but also wider societal trends and perceptions.

Our investigation makes a significant addition to the fields of green consumption and sustainability by presenting empirical evidence that subjective norms, including a broad spectrum of social influences, are vital in molding consumer behaviors. This insight offers practical implications for retailers and policymakers, indicating that initiatives to foster sustainable consumption practices should harness both specific and general social pressures. Additionally, our research highlights the role of social media in magnifying social norms and influencing consumer choices, providing a contemporary lens on the dynamics of green consumption.

5.2 Limitations

While this study provides valuable insights for both academic and practical purposes, it has several limitations that could guide future research. Predominantly, the focus of our inquiry was restricted to the organic coffee sector in Indonesia, offering an in-depth yet narrow view into sustainable consumption practices. While this sector-specific approach facilitated a detailed exploration of consumer behaviors within a critical industry, it curtails our findings' generalizability to other green consumption sectors. Additionally, this study did not extensively explore the interactions and dynamics between the identified dimensions of

subjective norms—specific and general social pressures—and their collective or individual impacts on outcome variables, such as purchase intention or actual purchasing behavior. Elucidating the relative influence of these dimensions could provide refined insights for framing more effective interventions and policies aimed at enhancing sustainable consumption. The research context within Indonesia, providing rich cultural perspectives, also limits its broader applicability. The distinct social structure of Indonesia, marked by robust communal ties and collective decision-making, may affect the expression and impact of subjective norms differently compared to more individualistic societies.

5.3 Future Research Suggestions

Building on the limitations identified in our study on the development of a multidimensional scale for assessing subjective norms in green consumption, particularly within the organic coffee sector in Indonesia, we propose several directions for future research:

1. Future studies should apply and validate the developed scale across different sectors of green consumption beyond organic coffee. This broader application would help understand the scale's utility and reliability in various environmental and sustainability contexts, enhancing its generalizability and applicability.
2. Considering the unique cultural backdrop of the Indonesian context, future studies should endeavor to replicate the research in different cultural settings. Cross-cultural validation of the scale would illuminate the influence of cultural nuances on the perception and effectiveness of subjective norms in promoting green consumption behaviors. This effort could also identify cultural adaptability strategies for the scale's implementation in diverse societal contexts.
3. A quantitative approach is recommended to assess the relative impact of specific and general social pressures on outcome variables like purchase intention and behavior. By quantifying these effects, future research could provide a clearer understanding of how different social pressures contribute to shaping consumer choices, facilitating the design of nuanced and efficient marketing and policy interventions.
4. Future investigations could also explore integrating the developed scale with other behavioral theories beyond the TPB. This interdisciplinary approach might reveal new dimensions of consumer behavior and offer a more holistic understanding of the factors driving green consumption.

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Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Data Availability Statement

The datasets generated and analyzed during the current study are not publicly available. However, data are available from the corresponding author upon reasonable request. Further information about the data and conditions for access can be obtained by contacting the corresponding author at setyoferry@unj.ac.id.

Author’s Contribution

Setyo Ferry Wibowo: conceptualization, methodology, investigation, formal analysis, writing original draft, writing review, and editing.

Mukhamad Najib: conceptualization, methodology, formal analysis, supervision, writing review, and editing.

Ujang Sumarwan: conceptualization, methodology, supervision, review, and editing.

Yudha Heryawan Asnawi: conceptualization, methodology, supervision.

All authors have read and agreed to the published version of the manuscript.

References

1. Guevara S, Julián IP (2019) Sustainable Consumption and Production: A Crucial Goal for Sustainable Development—Reflections on the Spanish SDG Implementation Report. Journal of Sustainability Research. https://doi.org/10.20900/jsr20190019
2. Ogiemwonyi O, Jan MT (2023) The correlative influence of consumer ethical beliefs, environmental ethics, and moral obligation on green consumption behavior. Resources, Conservation & Recycling Advances 19:200171
3. Young OR (2024) Meeting the Grand Challenges of Planetary Governance: Is it Time for a Paradigm Shift? Environmental Policy and Law 54:79–87
4. Worrall R, O'Leary F (2019) Towards greater collective impact: Developing the collaborative capability of the local community development committees (LCDCs). Administration 67:73–83
5. Zhao G, Geng Y, Sun H, Tian X, Chen W, Wu D (2020) Mapping the knowledge of green consumption: a meta-analysis. Environmental Science and Pollution Research 27:44937–44950
6. Bosso H, Barbalho SM, de Alvares Goulart R, Otoboni AMMB (2023) Green coffee: economic relevance and a systematic review of the effects on human health. Crit Rev Food Sci Nutr 63:394–410
7. Bracken P, Burgess PJ, Girkin NT (2023) Opportunities for enhancing the climate resilience of coffee production through improved crop, soil and water management. Agroecology and Sustainable Food Systems 47:1125–1157
8. Chutani A, Mendoza L, Weinell B (2022) Session 2.1 Is Your Cup of Coffee Green? "Road Home" from Glasgow Youth Summit; Voices of Optimism and Agents of Change. https://doi.org/10.37099/mtu.dc.yeah-conference/dec2021/all-events/5
9. Foreign Agricultural Service (2019) Coffee: World Markets and Trade.
10. Organic Trade Association (2021) Global Organic Trade. country/Indonesia
11. Utama AP, Sumarwan U, Suroso AI, Najib M (2021) Roles of Regulation and Lifestyle on Indonesian Coffee Consumption Behavior Across Generations. International Journal of Sustainable Development and Planning 16:1153–1162
12. Sivapalan A, Heidt T von der, Scherrer P, Sorwar G (2021) A consumer values-based approach to enhancing green consumption. Sustain Prod Consum 28:699–715
13. Peattie K (2010) Green Consumption: Behavior and Norms. Annu Rev Environ Resour 35:195–228
14. Perry GLW, Richardson SJ, Harré N, et al (2021) Evaluating the Role of Social Norms in Fostering Pro-Environmental Behaviors. Front Environ Sci. https://doi.org/10.3389/fenvs.2021.620125
15. Al-Swidi A, Huque SMR, Hafeez MH, Shariff MNM (2014) The role of subjective norms in theory of planned behavior in the context of organic food consumption. British Food Journal 116:1561–1580
16. Shou Y, Shan X, Dai J, Xu D, Che W (2023) Actions speak louder than words? The impact of subjective norms in the supply chain on green innovation. International Journal of Operations & Production Management 43:879–898
17. Apadula LT, Predmore CE (2019) The Shift to "Social": Social and Commercial Entrepreneurship Must Meld to Meet Changing Consumer Preferences. Journal of Management Policy and Practice. https://doi.org/10.33423/jmpp.v20i1.1324
18. Anjorin KF, Raji MA, Olodo HB, Oyeyemi OP (2024) The influence of consumer behavior on sustainable marketing efforts. International Journal of Management & Entrepreneurship Research 6:1651–1676
19. Thøgersen J (2014) The Mediated Influences of Perceived Norms on Pro-environmental Behavior. Rev Econ Polit Vol. 124:179–193
20. Do VTH, Do LT (2024) The effectiveness of social norms in promoting green consumption. Social Responsibility Journal 20:444–461
21. La Barbera F, Ajzen I (2020) Control interactions in the theory of planned behavior: Rethinking the role of subjective norm. Eur J Psychol 16:401–417
22. Vesely S, Klöckner CA (2018) Global Social Norms and Environmental Behavior. Environ Behav 50:247–272

23. Schubert I, de Groot JIM, Newton AC (2021) Challenging the Status Quo through Social Influence: Changes in Sustainable Consumption through the Influence of Social Networks. Sustainability 13:5513
24. Lenhausen MR, Hopwood CJ, Bleidorn W (2023) Nature and Impact of Reference Group Effects in Personality Assessment Data. J Pers Assess 105:581–589
25. Forward SE (2019) Views on Public Transport and How Personal Experiences Can Contribute to a More Positive Attitude and Behavioural Change. Social Sciences . https://doi.org/10.3390/socsci8020047
26. Jellason NP, Baines RN, Conway JS, Ogbaga CC (2019) Climate Change Perceptions and Attitudes to Smallholder Adaptation in Northwestern Nigerian Drylands. Soc Sci 8:1–20
27. Chu KM (2018) Mediating influences of attitude on internal and external factors influencing consumers' intention to purchase organic foods in China. Sustainability 10:4690
28. Antwi S, Bei W, Ameyaw M (2021) Investigating the Moderating Role of Social Support in Online Shopping Intentions. Journal of Marketing and Consumer Research. https://doi.org/10.7176/JMCR/78-04
29. Gavrilets S (2021) Coevolution of actions, personal norms and beliefs about others in social dilemmas. Evol Hum Sci 3:e44
30. Loughmiller-Cardinal JA, Cardinal JS (2023) The Behavior of Information: A Reconsideration of Social Norms. Societies 13:111
31. Rhodes N (2020) Norms. In: The International Encyclopedia of Media Psychology. Wiley, pp 1–11
32. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211
33. Ajzen I (2005) Attitudes, Personality and Behaviour, 2nd ed. McGraw-Hill Education, Berkshire
34. Alm J, Schulze WD, von Bose C, Yan J (2019) Appeals to Social Norms and Taxpayer Compliance. South Econ J 86:638–666
35. Kalkstein DA, Hook CJ, Hard BM, Walton GM (2023) Social norms govern what behaviors come to mind—And what do not. J Pers Soc Psychol 124:1203–1229
36. Ateş H (2020) Merging Theory of Planned Behavior and Value Identity Personal norm model to explain pro-environmental behaviors. Sustain Prod Consum 24:169–180
37. Zulkepeli L, Fauzi MA, Mohd Suki N, Ahmad MH, Wider W, Rahamaddulla SR (2024) Pro-environmental behavior and the theory of planned behavior: a state of the art science mapping. Management of Environmental Quality: An International Journal 35:1415–1433
38. Ham M, Jeger M, Ivković AF (2015) The role of subjective norms in forming the intention to purchase green food. Economic Research-Ekonomska Istrazivanja 28:738–748
39. Ashraf MA (2024) "Go green" – evaluating the roles of environmental concerns, environmental social norms and green technology in fostering pro-green banking behaviors. Journal of Financial Reporting and Accounting 22:181–203
40. Al Mamun A, Nawi NC, Hayat N, Zainol NRB (2020) Predicting the Purchase Intention and Behaviour towards Green Skincare Products among Malaysian Consumers. Sustainability 12:10663
41. Kamalanon P, Chen J-S, Le T-T-Y (2022) "Why Do We Buy Green Products?" An Extended Theory of the Planned Behavior Model for Green Product Purchase Behavior. Sustainability 14:689
42. Armitage CJ, Conner M (2001) Efficacy of the theory of planned behaviour: A meta-analytic review. British journal of social psychology 40:471–499
43. Gavrilets S (2020) The dynamics of injunctive social norms. Evol Hum Sci 2:e60
44. Niemiec RM, Champine V, Vaske JJ, Mertens A (2020) Does the Impact of Norms Vary by Type of Norm and Type of Conservation Behavior? A Meta-Analysis. Soc Nat Resour 33:1024–1040
45. Rivis A, Sheeran P (2003) Descriptive norms as an additional predictor in the theory of planned behaviour: A meta-analysis. Current Psychology 22:218–233
46. Cialdini RB, Kallgren CA, Reno RR (1991) A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In: Adv Exp Soc Psychol. Elsevier, pp 201–234
47. He J (2023) Group Belongingness: Investigating the Formation, Maintenance, and Influencing Factors of Social Identity and Group Membership. Studies in Psychological Science 1:32–40
48. Cialdini RB, Kallgren CA, Reno RR (1991) A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In: Adv Exp Soc Psychol. Elsevier, pp 201–234
49. Cialdini RB, Trost MR (1998) Social influence: Social norms, conformity and compliance. In: Gilbert DT, Fiske ST, Lindzey G (eds) The Handbook of Social Psychology. McGraw-Hill, Boston, MA, pp 151–192
50. Zillich AF, Riesmeyer C (2021) Be Yourself: The Relative Importance of Personal and Social Norms for Adolescents' Self-Presentation on Instagram. Soc Media Soc 7:205630512110338
51. Reynolds KJ, Subašić E, Tindall K (2015) The Problem of Behaviour Change: From Social Norms to an Ingroup Focus. Soc Personal Psychol Compass 9:45–56
52. Ejelöv E, Bergquist M, Hansla A, Nilsson A (2022) Why are they eco-friendly? Attributing eco-friendly descriptive norms to intrinsic motivation increases pro-environmental purchase intention. PLoS One 17:e0265839

53. Xu Y, Du J, Khan MAS, Jin S, Altaf M, Anwar F, Sharif I (2022) Effects of Subjective Norms and Environmental Mechanism on Green Purchase Behavior: An Extended Model of Theory of Planned Behavior. Front Environ Sci. https://doi.org/10.3389/fenvs.2022.779629
54. Aisyah DD, Cahyasita D (2023) Investigating the factor influencing Indonesian Consumers' Intention to Purchase Green Products in Indonesia: Applying the Theory of Planned Behavior. Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo 25:92–102
55. Moazzam M, Ahmad M, Hussain A, Akram MA (2023) Examining the Factors That Shape Green Purchase Behavior: The Role of Subjective Norms, Self-Efficacy, Attitude and Intention. Bulletin of Business and Economics (BBE) 12:221–232
56. Wang L, Shao Y-X, Heng J-Y, Cheng Y, Xu Y, Wang Z-X, Wong PPW (2023) A Deeper Understanding of Attitude and Norm Applicable to Green Hotel Selection. Journal of Quality Assurance in Hospitality & Tourism 1–33
57. Harjadi D, Gunardi A (2022) Factors affecting eco-friendly purchase intention: subjective norms and ecological consciousness as moderators. Cogent Business & Management. https://doi.org/10.1080/23311975.2022.2148334
58. Tavitiyaman P, Zhang X, Chan HM (2024) Impact of environmental awareness and knowledge on purchase intention of an eco-friendly hotel: mediating role of habits and attitudes. Journal of Hospitality and Tourism Insights. https://doi.org/10.1108/JHTI-08-2023-0580
59. Nguyen L, Ngoc MTB, Dung NTK, Thao VP (2024) Factors Influencing Purchase Intention of Bamboo, Rattan and Schizostachyum Aciculare Products Among Consumers: The Moderating Role of Self-Efficacy. International Journal of Sustainable Development and Planning 19:2303–2318
60. Singh N, Rawat B, Shanker Chaubey D, Prakash Mani A, Singh A (2024) Understanding the Dynamics of consumer behaviour and purchase intentions for Green Cosmetic Products in North India: A Gender-Neutral Approach. F1000Res 13:611
61. Lius S, Salim L (2024) DO FEMALE GENERATION Z HAVE PURCHASE INTENTION ON GREEN COSMETIC BASED ON THEIR ENVIRONMENTAL KNOWLEDGE, ENVIRONMENTAL CONCERN, HEALTH CONSCIOUSNESS, ATTITUDE AND SUBJECTIVE NORM? Fokus Ekonomi : Jurnal Ilmiah Ekonomi 19:95–110
62. Safitri AM, Setiawan V (2019) Masyarakat Indonesia Doyan "Ngopi", Tapi Apakah Jumlahnya Sudah Aman? honestdoc Artikel
63. Bollen KA (1989) Structural Equations with Latent Variables. https://doi.org/10.1002/9781118619179
64. Churchill GA (1979) A Paradigm for Developing Better Measures of Marketing Constructs. Journal of Marketing Research 16:64–73
65. McDonald RP, Marsh HW (1990) Choosing a multivariate model: Noncentrality and goodness of fit. Psychol Bull 107:247–255
66. Bagozzi RP, Heatherton TF (1994) A general approach to representing multifaceted personality constructs: Application to state self-esteem. Struct Equ Modeling 1:35–67
67. Fornell C, Larcker DF (1981) Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research 18:39–50
68. Charlesworth J, McAlpine T, Martin A, Scott J, Mullan B (2023) Development, psychometric assessment, and predictive validity of a breastfeeding subjective norms scale among an Australian prospective cohort of first-time parents. Br J Health Psychol 28:690–704
69. Ham M, Jeger M, Ivković AF (2015) The role of subjective norms in forming the intention to purchase green food. Economic Research-Ekonomska Istrazivanja 28:738–748
70. Spears R (2021) Social Influence and Group Identity. Annu Rev Psychol 72:367–390
71. Saleem MA, Ismail H, Rao AA (2021) Actions Speak Louder than Words: Investigating the Interplay between Descriptive and Injunctive Norms to Promote Alternative Fuel Vehicles. Sustainability 13:9662
72. Saracevic S, Schlegelmilch BB, Wu T (2022) How normative appeals influence pro-environmental behavior: The role of individualism and collectivism. J Clean Prod 344:131086
73. Azzaakiyyah HK (2023) The Impact of Social Media Use on Social Interaction in Contemporary Society. Technology and Society Perspectives (TACIT) 1:1–9
74. Gomez M, Klare D, Ceballos N, Dailey S, Kaiser S, Howard K (2022) Do You Dare to Compare?: The Key Characteristics of Social Media Users Who Frequently Make Online Upward Social Comparisons. Int J Hum Comput Interact 38:938–948
75. Naranjo-Zolotov M, Turel O, Oliveira T, Lascano JE (2021) Drivers of online social media addiction in the context of public unrest: A sense of virtual community perspective. Comput Human Behav 121:106784
76. Chen H, Fu S, Lyu B (2024) Homestays in China: Mediator effects of brand perception upon host-guest interaction and Tourist behavior intention. Heliyon 10:e29820
77. Hynes N, Wilson J (2016) I do it, but don't tell anyone! Personal values, personal and social norms: Can social media play a role in changing pro-environmental behaviours? Technol Forecast Soc Change 111:349–359

78. Zhang J, Qi S, Lyu B (2021) A Receiver Perspective on Knowledge Sharing Impact on Consumer–Brand Relationship in Virtual Communities. Front Psychol. https://doi.org/10.3389/fpsyg.2021.685959
79. Maciaszczyk M, Kocot M (2021) Behavior of Online Prosumers in Organic Product Market as Determinant of Sustainable Consumption. Sustainability 13:1157
80. Sezgin M, Uler Ş (2020) The Role of Digital Feedback on the Self-Esteem of Digital Natives. Türkiye İletişim Araştırmaları Dergisi 46–62

Appendix A

Results of validity and reliability test

	Loading		AVE		CR		Cronbach	
	Pilot Study	**Main Study**	**Pilot Study**	**Main Study**	**Pilot Study**	**Main Study**	**Pilot Study**	**Main Study**
IN			0.481	0.441	0.881	0.862	0.879	0.861
SI1	0.653	0.608						
SI2	0.718	0.753						
SI4	0.676	0.614						
SI6	0.707	0.659						
SI8	0.749	0.682						
GI2	0.726	0.676						
GI3	0.643	0.656						

GI5	0.674	0.654						
DN			0.534	0.502	0.848	0.826	0.856	0.831
SD1	0.72	0.68						
SD4	0.669	0.669						
SD7	0.697	0.679						
GD2	0.72	0.652						
GD3	0.719	0.713						
GD4	0.725	0.641						

Appendix B

Results of criterion validity test

p-value		**t value**		**coefficient**	
Pilot study	**Main Study**	**Pilot study**	**Main Study**	**Pilot study**	**Main Study**
0.000	0.001	5.553	3.228	0.679	0.631

Appendix C

No	**Symbol***	**Final Items**
1.	SI1	Coffee enthusiasts whose opinions I respect need me to buy organic coffee next month
2.	SI2	My friends with whom I discuss coffee asked me to buy organic coffee the next month.
3.	SI4	Coffee enthusiasts whose opinions I value ask me to buy organic coffee next month.
4.	SI6	Coffee enthusiasts whose opinions I value think I must buy organic coffee next month.
5.	SI8	Coffee enthusiasts whose opinions I value suggest that I buy organic coffee next month.
6.	GI2	Most coffee enthusiasts think organic coffee is the type every coffee enthusiast must buy in the next month.
7.	GI3	Most coffee enthusiasts in Indonesia think that not consuming organic coffee in the next month is not a big problem (R).
8.	GI5	Most coffee enthusiasts in Indonesia think that not consuming organic coffee within the next month is

		reasonable (R).
9.	SD1	Most coffee enthusiasts whose opinions I value are buying organic coffee within the next month.
10.	SD2	Most of my colleagues who are coffee enthusiasts are buying organic coffee within the next month.
11.	SD5	Most coffee enthusiasts who have a similar income to me are buying organic coffee within the next month.
12.	SD7	Most coffee enthusiasts who are of a similar age to me will buy organic coffee within the next month.
13.	GD1	Most coffee enthusiasts, in general, are buying organic coffee within the next month.
14.	GD2	How many coffee enthusiasts, in general, are buying organic coffee within the next month?

** SI: Specific reference groups injunctive norms, GI: General reference groups injunctive norms, SD: Specific reference groups descriptive norms, GD: General reference groups descriptive norms*