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Consumer Behavioral Determinants of Organic Vegetable Purchase Intention in Indonesia

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ABSTRACT: This study investigates the factors that influencing the buying intention of organic vegetable consumers in Indonesia by extending the means-end value framework with health benefit, environmental concern, perceived quality, trust, and perceived price, positioning perceived value as the mediating construct. Data were collected via a structured online questionnaire completed by 657 respondents who had purchased organic vegetables in major Indonesian urban areas, and the model was tested Using structural equation modeling with the partial least squares approach (PLS-SEM) with the average extracted variance and composite reliability values surpassing the suggested limits. Results show that environmental concern, perceived quality, trust, health benefit, and perceived price all significantly shape perceived value, with environmental concern the strongest predictor. Perceived value, in turn, is the strongest determinant of buying intention, confirming its role as the central mechanism linking product- and consumer-related motives to purchase behavior. However, health benefit and perceived price show no significant direct effect on buying intention, suggesting both operate indirectly through perceived value rather than as immediate purchase drivers. These findings imply that marketing strategies emphasizing environmental stewardship, verifiable certification, and fair pricing are likely more effective than communication relying solely on health claims, offering practical guidance for producers, retailers, and policymakers seeking to expand Indonesia's organic vegetable market.

1. INTRODUCTION

Consumers around the world are becoming increasingly conscious of the origin of their food and of the consequences of their dietary choices for personal health and for the natural environment. This awareness has driven a sustained expansion of the global organic food market, which has continued to grow in both cultivated area and retail value over the past two decades [1]. Organic agriculture is understood as a production system that maintains soil fertility and ecological balance while avoiding synthetic fertilisers, pesticides, and growth regulators, and its products are therefore perceived by consumers as safer and more environmentally responsible alternatives to conventionally produced food [2]. Among organic product categories, fresh vegetables occupy a strategic position because they are consumed daily, are highly perishable, and carry a comparatively high risk of pesticide residues, which makes them one of the entry points through which consumers first engage with organic consumption [3].

Indonesia is an agrarian country in which the agricultural sector remains a major contributor to employment and food security, yet decades of intensive use of chemical fertilisers and pesticides have contributed to soil degradation and to growing concern over food safety. In response, organic farming has been promoted through national initiatives and through the certification and Participatory Guarantee System schemes coordinated by the Indonesian Organic Alliance, with vegetables constituting one of the principal organic horticultural commodities [4]. Nevertheless, the domestic organic sector remains modest in scale relative to the country's total agricultural area, and organic produce is still distributed mainly through supermarkets, specialty stores,

and online platforms in large urban center. Previous work on Indonesian consumers indicates that awareness of organic food is growing but that knowledge of certification and of the actual attributes of organic products remains uneven [5]. Consequently, the gap between a generally favorable attitude toward organic vegetables and the comparatively low level of actual purchase remains an important practical problem for producers, retailers, and policy makers.

A considerable body of research has examined the determinants of organic food buying intention, identifying health consciousness, environmental concern, product quality, trust, and price as recurrent explanatory factors [6]. However, three gaps remain. First, most empirical evidence originates from developed markets or from other emerging economies, and its transferability to Indonesia, where income sensitivity and certification literacy differ substantially, cannot be assumed [7]. Second, studies frequently treat organic food as a single undifferentiated category, whereas the drivers of purchase are likely to differ for fresh vegetables, whose organic character is a credence attribute that consumers cannot verify by inspection either before or after consumption [8]. Third, the mechanism through which these determinants operate has received limited attention in the Indonesian context, particularly the role of perceived value as the evaluative judgement that translates product-related and consumer-related motives into behavioral intention [9].

Addressing these gaps, the present study examines the factors affecting the buying intention of organic vegetable consumers in Indonesia by extending the means-end framework with health benefit, environmental concern, perceived quality, trust, and perceived price, and by positioning perceived value as the mediating construct. The study contributes to the literature in three ways: it provides empirical evidence on organic vegetable consumption from a large emerging market that remains underrepresented in the organic food literature; it clarifies the relative importance of benefit-related and sacrifice-related determinants of perceived value; and it offers practical guidance for marketers on which attributes should be emphasized in communication and certification strategies. The empirical evidence and literature of this study are illustrated in Section 2. In Section 3, the objectives, conceptual framework, and the hypothesis of the study have been explained. Then the proposed methodology for data collection and analysis has been presented in Section 4. After that, the final analysis and findings have been incorporated in Section 5. Finally, a brief discussion of the results, conclusion, limitation, and future implication of the findings are included in the concluding section.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Health Benefit

Health-related motives consistently emerge as the most dominant driver of organic food consumption across both developed and emerging markets [6]. Health consciousness reflects the degree to which individuals integrate health considerations into their everyday consumption practices, and it has been shown to elevate organic purchase intention in emerging economies [10]. Young consumers who perceive organic produce as beneficial for personal well-being report stronger buying intentions, particularly in countries where food safety incidents are frequently reported [11]. Health consciousness also operates indirectly, since it shapes favorable attitudes that are subsequently translated into the intention to purchase organic products [12]. Meta-analytic evidence confirms that egoistic health motives explain organic buying behavior more strongly than altruistic motives do [8]. In developing-country contexts, perceived health benefit remains a decisive antecedent of buying intention even when consumers' objective knowledge of organic farming is limited [13]. Accordingly, health benefit is expected to enhance both the value that Indonesian consumers assign to organic vegetables and their intention to buy them.

Hypothesis (H1a). Health benefit has a positive effect on the perceived value of organic vegetable consumers.

Hypothesis (H1b). Health benefit has a positive influence on the buying intention of organic vegetables.

2.2 Environmental Concern

Environmental concern captures the affective and cognitive orientation of consumers toward ecological problems as well as their willingness to act upon them [7]. Because organic vegetables are cultivated without synthetic agrochemicals, environmentally concerned consumers interpret their purchase as a concrete expression of pro-environmental behavior [8]. Environmental attitude has been found to mediate the influence of environmental factors on green purchase behavior, indicating that ecological concern is converted into buying decisions through evaluative judgements [14]. Studies conducted in Asian urban markets demonstrate that concern for the environment increases the perceived worth of green food and strengthens the intention to purchase it [15]. Environmental consciousness may also affect organic purchase intention indirectly through perceived food quality and price sensitivity [16]. Nevertheless, several studies report that ecological motives are

subordinate to personal benefit motives, so their contribution to value formation can be comparatively weak [17]. Considering these arguments, environmental concern is proposed as an antecedent of both perceived value and buying intention in the Indonesian organic vegetable market.

Hypothesis (H2a). Environmental concern has a positive effect on the perceived value of organic vegetables.

Hypothesis (H2b). Environmental concern positively affects consumers' buying intention of organic vegetables.

2.3. Perceived Quality

Perceived quality refers to a consumer's subjective judgement about the overall excellence or superiority of a product relative to the alternatives available in the market [18]. In organic retailing, perceived quality operates as a central antecedent of perceived value and, through it, of the intention to purchase organic private-label food [19]. Consumers commonly infer superior quality from the absence of chemical residues, from freshness, and from visual appearance, cues that are particularly salient in the case of fresh vegetables [20]. Among younger and urban consumers, quality perceptions rank among the strongest predictors of the willingness to select organic alternatives over conventionally produced ones [21]. Recent evidence from an emerging market shows that perceived quality mediates the relationship between consumer attitude and purchase intention together with perceived value and perceived price [22]. Quality assessments are further reinforced when consumers can rely on external cues such as packaging, grading, and origin information [23]. Therefore, the perceived quality of organic vegetables is expected to raise perceived value and, subsequently, buying intention.

Hypothesis (H3a). Perceived quality positively affects the perceived value of organic vegetable consumers.

Hypothesis (H3b). Perceived quality has a positive influence on the buying intention of organic vegetables.

2.4. Trust

Because the organic attribute is a credence characteristic that cannot be verified either before or after consumption, trust constitutes a fundamental precondition for organic food adoption [24]. Trust in producers, retailers, and certification bodies narrows the gap between favorable intention and actual purchasing behavior [25]. Information disclosure interacts with trust in shaping consumer choices, so that credible communication amplifies the effect of trust on the selection of organic products [26]. Green marketing practices, including transparent labelling and verifiable certification, strengthen consumer confidence and consequently the intention to buy organic food in emerging markets [27]. Trust additionally attenuates price sensitivity, rendering consumers less reactive to the premium charged for organically grown produce [28]. Conversely, scepticism toward certification schemes erodes the value consumers attach to organic claims and discourages repeat purchase [29]. Since the Indonesian organic vegetable market is still developing and certification is unevenly enforced, trust is expected to be a critical determinant of both perceived value and buying intention.

Hypothesis (H4a). Trust has a positive effect on the perceived value of organic vegetable consumers.

Hypothesis (H4b). Trust significantly influences the buying intention of organic vegetables.

2.5. Perceived Price

Price represents the monetary sacrifice that consumers must incur to obtain a product and therefore enters value assessment as a negative component [30]. A systematic review of willingness to pay indicates that the organic price premium is the barrier most frequently reported by consumers across national contexts [31]. Price-related resistance is especially pronounced among consumers who doubt whether the additional expenditure is justified by tangible product benefits [32]. In price-sensitive developing markets, perceived affordability directly conditions the intention to buy organically produced food [25]. Consumers also adopt risk-reduction strategies, such as purchasing smaller quantities or relying on familiar sellers, when the perceived price appears excessive [33]. Nonetheless, when superior quality and safety are attributed to organic produce, a moderate premium may be accepted without substantially eroding buying intention [34]. Following this reasoning, the perceived price of organic vegetables is hypothesized to exert a negative influence on perceived value and buying intention.

Hypothesis (H5a). Perceived price has a negative influence on the perceived value of organic vegetables.

Hypothesis (H5b). Perceived price negatively influences the buying intention of organic vegetable consumers.

2.6. Perceived Value and Buying Intention

Perceived value is conceptualized as a multidimensional trade-off between the benefits obtained from a product and the sacrifices made in acquiring it [35]. In organic food research, perceived value functions as a proximal determinant that converts attribute-level evaluations into behavioral intention [36]. Buying intention denotes the strength of an individual's readiness to perform a given purchase behavior and is regarded as the most immediate antecedent of actual buying [37]. Consumers who derive identity-congruent and emotional value from organic consumption exhibit markedly stronger purchase intentions than those motivated solely by functional considerations [38]. Involvement and motive-based value perceptions likewise increase intention, although uncertainty about product authenticity can moderate this relationship [39]. Bibliometric evidence confirms that perceived value, together with health and environmental motives, dominates contemporary scholarship on organic consumption intention [22]. Consistent with these findings, perceived value is positioned as the key mediating construct linking health benefit, environmental concern, perceived quality, trust, and perceived price to the buying intention of Indonesian organic vegetable consumers.

Hypothesis (H6). Perceived value has a significant positive effect on the intention to buy organic vegetables.

3. MATERIALS AND METHODS

2.1 Data Collection

A structured questionnaire was employed as the primary instrument for data collection in this study. The questionnaire consisted of two parts, namely the demographic profile of the respondents and 21 measurement items representing the seven constructs of the proposed model, all of which were rated on a seven-point Likert scale (1 = "strongly disagree", 7 = "strongly agree") and adapted from previously validated instruments on health consciousness and ethical identity [40], consumer attitudes toward organic food [41], and organic food attributes and purchase intention [42]. The questionnaire was distributed online through social media platforms and instant messaging applications, which allowed the researchers to reach organic vegetable consumers across major urban areas in Indonesia efficiently. A screening question was placed at the beginning of the form so that only respondents who met the research criteria, namely being at least 18 years of age, residing in Indonesia, and having purchased organic vegetables, were permitted to proceed. Through this purposive sampling procedure, 657 respondents who fulfilled the predetermined criteria completed the questionnaire and were retained as the final sample of the study.

2.2 Data Analysis

For this study, Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied to analyze the research model because the research is prediction-oriented, the model is relatively complex in combining five exogenous constructs with a mediating mechanism, and the data do not satisfy the assumption of multivariate normality [43]. The analysis was performed with SmartPLS software, following the two-stage procedure in which the measurement model is evaluated before the structural model [44]. In the measurement model, internal consistency reliability was examined through composite reliability, whereas convergent validity was assessed through the standardized factor loadings and the average variance extracted (AVE) [45]. Discriminant validity was evaluated using both the Fornell–Larcker criterion ratio of correlations, the latter being the more conservative test in variance-based structural equation modelling [46].

In the structural model, the significance of the path coefficients was assessed through a bootstrapping procedure with 5,000 resamples, and t-values above the conventional threshold were used to determine hypothesis support [47]. The explanatory power of the model was evaluated using the coefficient of determination (R^2) and the effect size (f^2) [48]. Reporting followed the updated guidelines for PLS path modelling to ensure that the model assessment criteria were applied consistently [49]. This reporting approach is consistent with the methodological conventions that have become established in marketing research over the past decade [50]. A path analysis model was finally used to measure the significance and statistical acceptability of the proposed structural model and to test the mediating role of perceived value.

3. RESULTS AND DISCUSSION

3.1 Demographic Classification

The participants who provided responses regarding the consumption of organic vegetables consisted of 61.9% female and 38.1% male consumers, indicating that women constitute the majority of organic vegetable buyers in the sample. From the analysis of the age distribution, it was found that 38.7% of respondents were aged 24–31 years, 43.7% were aged 32–39 years,

and 17.7% were aged 40-46 years, so that the sample is dominated by consumers of productive age. In terms of household income, 16.0% of participants reported a monthly income of less than IDR 5,000,000, while 34.2% earned between IDR 5,000,000 and IDR 10,000,000 and 25.9% earned between IDR 10,000,001 and IDR 15,000,000. The remaining participants reported comparatively high incomes, since 14.9% earned between IDR 15,000,001 and IDR 20,000,000 and 9.0% earned more than IDR 20,000,000 per month. Taken together, the majority of the respondents (84.0%) came from households earning at least IDR 5,000,000 per month, which places them within the middle- and upper-middle-income segments of the urban Indonesian population.

3.2 Reliability and Validity Test

In the second part of the questionnaire, the responses concerning the adoption pattern of organic vegetables were collected through a seven-point Likert scale. The reliability and validity of the constructs were subsequently assessed in the measurement model. Internal consistency reliability was examined using composite reliability, which in PLS relies on the actual loadings to compute the factor scores and is therefore considered a better indicator of internal consistency reliability than Cronbach's alpha [51]. As shown in Table 1, the composite reliability values of all seven constructs range from 0.857 for trust to 0.901 for buying intention, and are thus consistently above the suggested threshold of 0.70, which supports the reliability of the measurements.

Table 1. Analysis of Measurement Model.

	Standardized Factor Loading	Composite Reliability	Average Variance Extraced
Health Benefit		0.880	0.648
1. I think organic vegetables products are beneficial for health	0.780***		
2. I believe organic vegetables products are produced in a natural way	0.786***		
3. I feel safe because organic vegetables products are free from chemical substances	0.846***		
4. I believe organic vegetables products are produced 100% organically	0.805***		
Environmental Concern		0.888	0.666
1. I believe organic vegetables products are more environmentally friendly	0.829***		
2. I believe organic vegetables products are produced from organic materials	0.828***		
3. I think organic vegetables products are produced using natural materials	0.821***		
4. I think the lower use of additives in organic vegetables product production is less harmful	0.786***		
Perceived Price		0.864	0.679
1. In my opinion, the price of organic vegetables products is affordable	0.808***		
2. The price difference between organic vegetables products and traditional products is not too large	0.832***		
3. Paying more for organic vegetables food is worthwhile for me	0.832***		
Trust		0.857	0.666

	Standardized Factor Loading	Composite Reliability	Average Variance Extraced
1. The label on the packaging of organic vegetables products is easy for me to understand.	0.808***		
2. The certification of organic vegetables products is highly reliable.	0.841***		
3. Promotion about organic vegetables products is trustworthy.	0.799***		
Perceived Quality		0.882	0.714
1. I think the quality of organic vegetables products is superior to that of traditional vegetable.	0.848***		
2. The positive image of organic vegetables food inspires me to buy organic products.	0.858***		
3. Organic vegetables products are a better substitute than conventional vegetable.	0.827***		
Perceived Value		0.872	0.772
1. I find positive value in terms of the benefits and costs of organic vegetables products	0.885***		
2. The high price of organic vegetables products creates great value for me	0.872***		
Buying Intention		0.901	0.820
1. I regularly consumpt organic vegetables products as a healthy beverage.	0.916***		
2. I search various stores to buy organic vegetables products.	0.894***		

Note: ***indicates t-test has reached the significance level ($p < 0.001$ level).

Convergent validity was evaluated through the average variance extracted (AVE), and two tests were used to measure this validity. The first step involved examining all items by their factor loadings on their respective construct, and the second test examined whether the AVE values of all constructs exceeded the recommended minimum. As presented in Table 1, all standardized factor loadings range from 0.780 to 0.916 and are significant at the $p < 0.001$ level, so that every item exceeds the commonly accepted loading criterion of 0.70. The test results further show that the AVE values of all constructs, ranging from 0.648 for health benefit to 0.820 for buying intention, are above the limit of 0.50 [45]. Unlike the findings of previous studies in which perceived price failed to reach the recommended threshold, the perceived price construct in this study attains an AVE of 0.679, indicating that the price-related items are well represented by their underlying construct in the Indonesian organic vegetable context.

Discriminant validity was examined at both the item and the construct level, and this study assessed discriminant validity at the construct level. At the construct level, the square root of the AVE in the diagonal cells of each construct should be larger than any correlation between that construct and any other construct [45]. As shown in Table 2, the square roots of the AVE, ranging from 0.805 to 0.905, are larger than all corresponding off-diagonal correlations, the highest of which is 0.486 between perceived value and buying intention. The results also indicate that no inter-construct correlation approaches a level that would suggest conceptual overlap, since all correlations remain < 0.50 . Thus, the discriminant validity of the measurement model was supported, and the instrument is considered appropriate for the subsequent estimation of the structural model.

Table 2. Discriminant Validity.

	EC	HB	IB	PP	PQ	PV	T
EC	0.816						
HB	0.489	0.805					
IB	0.402	0.294	0.905				
PP	0.168	0.133	0.147	0.824			
PQ	0.299	0.260	0.263	0.282	0.845		
PV	0.483	0.377	0.486	0.275	0.380	0.879	
T	0.258	0.258	0.282	0.231	0.325	0.332	0.816

The **bold** numbers of the diagonal are the square roots of average variance extracted (AVE). Off-diagonal elements are correlations among constructs.

3.3 Path Analysis

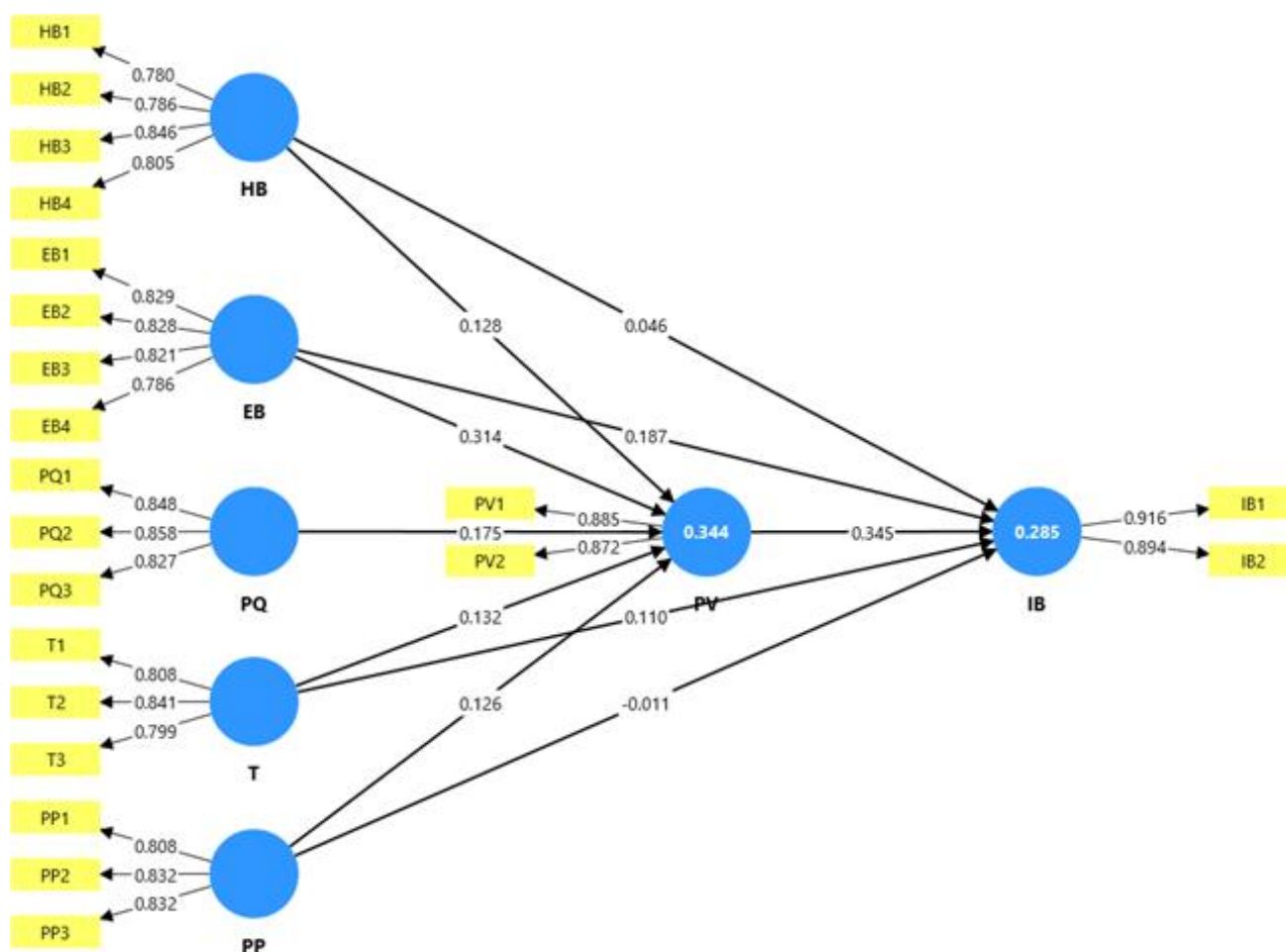


Figure 1. Standardized Total Effect.

In this study, Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied to estimate the standardized path coefficients of the proposed model [51]. The significance of each path was assessed through a bootstrapping procedure, in which t-values exceeding the conventional critical value indicate that the corresponding relationship is statistically meaningful.

[43]. The explanatory power of the model was evaluated through the coefficient of determination, which represents the proportion of variance in the endogenous constructs accounted for by their antecedents [48]. As presented in Table 3, nine of the eleven hypothesized relationships were supported, indicating that the extended means-end framework performs well in explaining the buying intention of organic vegetable consumers in Indonesia [36]. The R^2 value of perceived value reached 0.344 and that of buying intention reached 0.285, both of which exceed the minimum standard commonly applied in behavioral research [46].

With respect to the formation of perceived value, environmental concern emerged as the strongest antecedent ($\beta = 0.314$, $t = 9.065$, $p < 0.001$), suggesting that ecological considerations are central to the way Indonesian consumers evaluate the worth of organic vegetables [15]. Perceived quality also exerted a significant positive effect on perceived value ($\beta = 0.175$, $t = 4.836$, $p < 0.001$), which confirms the classical proposition that quality judgements constitute a primary benefit component in value assessment [8]. Trust contributed significantly as well ($\beta = 0.132$, $t = 3.902$, $p < 0.001$), reflecting the importance of certification and labelling credibility for a product whose organic character cannot be verified through inspection [14]. Health benefit likewise showed a significant, although comparatively modest, influence on perceived value ($\beta = 0.128$, $t = 3.615$, $p < 0.001$), consistent with evidence that health motives operate as a stable but not always dominant driver of organic evaluation [28]. Perceived price exerted a significant positive effect on perceived value ($\beta = 0.126$, $t = 3.731$, $p < 0.001$), indicating that respondents who regard the price of organic vegetables as fair and affordable derive greater value from the product [27].

Turning to the direct determinants of buying intention, perceived value was the strongest predictor in the model ($\beta = 0.345$, $t = 9.809$, $p < 0.001$), which supports its position as the proximal mechanism translating attribute evaluations into behavioral intention [47]. Environmental concern also displayed a significant direct effect on buying intention ($\beta = 0.187$, $t = 4.600$, $p < 0.001$), suggesting that ecological motives influence purchase decisions both directly and through the evaluative route [29]. Trust significantly influenced buying intention as well ($\beta = 0.110$, $t = 2.986$, $p < 0.01$), reinforcing the argument that confidence in producers and certification schemes narrows the gap between favorable attitudes and actual purchase [25]. Perceived quality showed a small but significant direct effect ($\beta = 0.060$, $t = 4.379$, $p < 0.001$), indicating that quality perceptions operate mainly through perceived value rather than as a strong independent driver [28]. By contrast, health benefit did not significantly affect buying intention ($\beta = 0.046$, $t = 1.145$, $p = 0.252$), a result that diverges from studies in which health consciousness is the leading motive of organic purchase [18]. A plausible explanation is that health-related beliefs about organic vegetables have become normative among Indonesian urban consumers, so that they no longer differentiate between those who intend to buy and those who do not [10].

The direct effect of perceived price on buying intention was likewise non-significant ($\beta = -0.011$, $t = 0.321$, $p = 0.748$), indicating that price considerations reach the purchase decision indirectly through the evaluation of value rather than as an immediate barrier [25]. This finding is consistent with research showing that the organic premium constrains consumption primarily by lowering the perceived worth of the product rather than by directly suppressing intention [31]. It should be noted, however, that the perceived price construct in this study was measured through affordability-oriented items, so that a higher score denotes greater price acceptability rather than a heavier monetary sacrifice [30]. Interpreted in this way, the positive coefficient obtained for the path from perceived price to perceived value is theoretically coherent, although it runs counter to the negative direction originally hypothesized in H5a [32]. Overall, the results indicate that perceived value mediates the influence of health benefit, environmental concern, perceived quality, trust, and perceived price on buying intention, which corroborates the mediating role attributed to value in previous organic food research [24]. For marketers, these findings imply that communication strategies emphasizing environmental stewardship, verifiable certification, and fair pricing are likely to be more effective than messages relying exclusively on health claims [21].

Table 3. Path analysis of the Research Model.

Between Facets	Path Coefficients (β)	t-Value	p-Value	Hypothesis	Decision
HB -> PV	0.128	3.615	0.000***	H1a	Supported
HB -> BI	0.046	1.145	0.252	H1b	Not Supported
EC -> PV	0.314	9.065	0.000***	H2a	Supported
EC -> BI	0.187	4.600	0.000***	H2b	Supported

PQ -> PV	0.175	4.836	0.000***	H3a	Supported
PQ -> BI	0.060	4.379	0.000***	H3b	Supported
T -> PV	0.132	3.902	0.000***	H4a	Supported
T -> BI	0.110	2.986	0.003***	H4b	Supported
PP -> PV	0.126	3.731	0.000***	H5a	Supported
PP -> BI	-0.011	0.321	0.748	H5b	Not Supported
PV -> BI	0.345	9.809	0.000***	H6	Supported

*** $p < 0.01$ (one-tailed test).

Beyond the individual coefficients summarized in Table 3, the overall pattern of results in the structural model deserves closer theoretical scrutiny, because the relative ordering of the antecedents of perceived value is itself informative about the value logic that Indonesian organic vegetable consumers appear to apply. Conceptualization of perceived value as a trade-off between what is received and what is given up implies that the benefits obtained from an exchange should, in principle, weigh more heavily than what is sacrificed for it whenever benefit-related attributes are salient and price sensitivity is comparatively low, and the present results are broadly consistent with that expectation: environmental concern, perceived quality, trust, and health benefit collectively exert a stronger pull on perceived value than perceived price does [18]. This pattern is also compatible with the theory of consumption values which holds that functional, conditional, emotional, social, and epistemic values make largely independent contributions to a market choice rather than substituting for one another [52]. The model estimated here suggests that Indonesian consumers do not rely on a single dominant motive when evaluating organic vegetables; instead, several largely distinct motivational logics-ecological, quality-related, trust-related, and health-related converge on the same evaluative construct, perceived value, before being translated into buying intention.

The pre-eminence of environmental concern ($\beta = 0.314$) among the antecedents of perceived value is noteworthy because it departs from a considerable part of the organic food literature, in which health-related motives are frequently reported as the leading purchase driver. A recent cross-cultural narrative review covering studies published after 2018 across both developing and developed markets concluded that health and environmental concerns operate as near-universal drivers of organic food consumption, yet their relative weight differs markedly by region, with cost and availability barriers often constraining the translation of environmental concern into purchase behavior in developing economies [53]. The comparatively strong role of environmental concern observed in the present Indonesian sample may partly reflect how the domestic organic sector itself is framed: because organic vegetables in Indonesia are promoted largely through certification and Participatory Guarantee System initiatives that emphasize soil conservation and reduced agrochemical use [4], ecological stewardship may have become a more distinctive and communicable benefit than health, which, as the later results confirm, functions more as a background expectation than a differentiating purchase motive within this urban, already organic-oriented sample.

The significant contribution of trust to perceived value ($\beta = 0.132$) and, more modestly, to buying intention ($\beta = 0.110$) is consistent with the classification of organic food as a credence good, a category of product whose defining characteristic is that consumers cannot verify the promised production attributes even after consumption [54]. Because certification of organic vegetables in Indonesia relies on a combination of formal third-party logos and the Participatory Guarantee System coordinated by the Indonesian Organic Alliance [4], the credibility of this labelling infrastructure effectively becomes part of the object being evaluated whenever a consumer forms a judgement of value. This interpretation is consistent with evidence that confidence in producers and certification schemes, rather than trust in a retailer or brand alone, helps close the gap between favorable attitudes and actual purchase in emerging organic markets [25]. The comparatively modest size of the trust coefficients relative to environmental concern should therefore not be read as evidence that certification is unimportant; it more plausibly reflects that a baseline level of certification credibility is already assumed by most respondents in this relatively well-informed, urban sample, so that the marginal contribution of additional trust to value formation, while real, is smaller than that of more differentiating attributes such as environmental performance.

Perceived quality significant influence on both perceived value ($\beta = 0.175$) and buying intention ($\beta = 0.060$) reproduces a pattern commonly described as a quality-value chain, in which quality judgements shape purchase intention both directly, by signaling that a product is worth acquiring in its own right, and indirectly, by first being folded into a broader evaluative judgement of

value [55]. The direct path from quality to buying intention is markedly weaker than the corresponding indirect path through perceived value, which corroborates findings from other Asian organic food studies in which perceived quality is reported to operate mainly through mediating evaluative constructs rather than as an independent purchase trigger [16]. From a practical standpoint, this suggests that quality cues alone visible freshness, packaging, or presentation are unlikely to move buying intention very far unless they are also incorporated into a broader value narrative a retailer emphasizing that a vegetable looks fresher is, on the evidence presented here, less persuasive than one that also explains why that freshness translates into greater value for the price paid.

Turning to the two hypothesized relationships that were not supported, the non-significant direct effect of health benefit on buying intention ($\beta = 0.046$) could be misread as evidence that health considerations no longer matter to Indonesian organic vegetable consumers. Because health benefit remains a significant predictor of perceived value, a more defensible reading is that health-related beliefs have become what might be termed a threshold attribute: an expectation so widely shared among urban organic buyers that it distinguishes organic vegetables from conventional produce in general, yet no longer distinguishes stronger from weaker intenders within the organic-consumer population itself. This ceiling-type pattern has precedent elsewhere in the literature; once a group of consumers has already self-selected into being organic buyers, health beliefs have been observed to cease differentiating degrees of purchase intention and to exert their influence further upstream, through attitude or value formation, rather than at the point of behavioral intention itself [53].

A related logic clarifies why perceived price does not directly predict buying intention ($\beta = -0.011$). Comparable non-significant price-to-intention paths have been reported in organic food purchase models estimated with Brazilian consumers, where the perceived cost-benefit ratio of organic food was found to operate through overall value assessment rather than as a direct determinant of purchase intention [56], and in Chinese samples in which price sensitivity was more closely tied to trust and value judgements than to intention itself [28]. Because the perceived price items used in the present study capture affordability rather than sacrifice, the construct is better understood here as one further ingredient folded into consumers' value calculation than as a price barrier that stands apart from it; a consumer who regards organic vegetables as reasonably priced appears to incorporate that judgement into how much value the product offers overall, rather than treating price as a separate, standalone criterion at the moment intention is formed.

Considered jointly, the pattern of direct and indirect effects reported in Table 3 can be classified more formally using the mediation typology introduced by Zhao, Lynch, and Chen [57] and subsequently adapted for variance-based structural equation modelling by Nitzl, Roldán, and Cepeda [58]. Under this typology, a mediating effect is established whenever the indirect path through the mediator is significant; relationships are then further classified according to whether the corresponding direct path also remains significant. Applying this logic here, the paths from health benefit and from perceived price to buying intention correspond to indirect-only mediation, sometimes referred to as full mediation, because both antecedents significantly predict perceived value, which in turn significantly predicts buying intention, while their own direct paths to buying intention remain non-significant. The paths from environmental concern, trust, and perceived quality to buying intention, by contrast, correspond to complementary partial mediation, since both the direct and the indirect routes are significant and point in the same direction. This distinction carries practical weight: campaigns built solely around health messaging or price discounting are unlikely to move buying intention unless they are also translated into a stronger overall sense of value, whereas messaging that reinforces environmental credentials, certification trust, or quality perceptions can influence intention through both the direct and the value-mediated channel at once.

The explanatory power of the structural model, an R^2 of 0.344 for perceived value and 0.285 for buying intention, falls in the range conventionally described as weak to moderate rather than substantial, whether judged against Chin's benchmarks of 0.19, 0.33, and 0.67 for weak, moderate, and substantial explanatory power [47], or against the somewhat more permissive thresholds of 0.25, 0.50, and 0.75 that have been proposed specifically for consumer-behavior applications of PLS-SEM [43]. Environmental concern and perceived value stand out as the more practically meaningful predictors in the model, a reading broadly consistent with Cohen's conventional distinction between small, medium, and large effects [59], although a formal decomposition of effect size through the f^2 statistic was outside the scope of the present analysis and is left for future replications of this model. The comparatively modest R^2 values also reinforce the interpretation already offered in the limitations section: a meaningful share of the variance in how Indonesian consumers evaluate and intend to purchase organic vegetables remains attributable to constructs not included in the present framework, such as subjective norms, product availability, or brand-level

trust, and future work extending this path model to incorporate such constructs would help establish how much of the currently unexplained variance they are able to account for.

3.4 Discussion

From a theoretical standpoint, this pattern of results extends Zeithaml's original means-end value framework [18], developed principally for search and experience goods, to a credence-good context in which none of the antecedent attributes can be verified through direct inspection. In doing so, the study also speaks to the broader theory of consumption values [56] by demonstrating empirically how functional value (embodied here in quality and price), a more conditional or self-oriented value (health benefit), and what might loosely be termed an altruistic or biospheric value (environmental concern) combine through a single mediating judgement perceived value to shape behavioral intention, rather than acting as parallel and independent predictors of intention as they are sometimes modelled in the wider consumption-values literature. For a credence food product transacted in a large, emerging Southeast Asian market, this suggests that consumption values are less likely to influence intention directly and more likely to be first synthesized into an overall evaluative judgement, which is precisely the mediating architecture that perceived value is theorized to perform, and which the present results support empirically rather than merely assume.

The demographic composition of the sample, predominantly female (61.9 %) and concentrated in middle-income, working-age households, offers a further, admittedly more tentative, layer of interpretation for why environmental and quality-related motives outweigh price sensitivity in this study. Prior consumer research has repeatedly associated female respondents with stronger environmental concern and greater responsiveness to ecological framing in food purchase decisions, a pattern broadly consistent with the comparatively large environmental-concern coefficient obtained here. Indonesia's position as a large, culturally collectivist, and predominantly Muslim society may add a further, less directly measured layer to this picture. Research on religiosity and pro-environmental consumption suggests that ecologically conscious attitudes can be strong among Muslim consumers even without an explicit religious frame attached to the purchase decision [60], which is broadly compatible with environmental concern, rather than an overtly moral or religious appeal, emerging as the strongest predictor of value in the present model. Because gender, religiosity, and cultural orientation were not modelled directly in this study, these explanations remain plausible rather than confirmed, and the multigroup or moderation analyses already flagged in the limitations section would be a natural next step for testing them formally.

These path-level findings carry several implications for producers, retailers, and certification bodies operating in Indonesia's organic vegetable sector that extend beyond the general recommendations offered in the concluding section. First, because environmental concern is both the strongest antecedent of perceived value and a significant direct predictor of buying intention, communication built around demonstrable ecological outcomes, such as reduced pesticide runoff, soil regeneration, or biodiversity protection on partner farms, is likely to be more persuasive than generic green claims, and can be deployed through the retail and social media channels most likely to reach the predominantly female, working-age, urban consumers who dominate the present sample. Second, because trust operates through both a value-forming and a purchase-facilitating route, retailers and certification bodies, including the Participatory Guarantee System network coordinated nationally by the Indonesian Organic Alliance [4], have a direct incentive to invest in the visibility and comprehensibility of certification marks at the point of sale, since improving perceived certification credibility should move buying intention along two channels simultaneously rather than one. Third, because perceived quality contributes to buying intention mainly through perceived value, quality-signaling tactics visible freshness, transparent sourcing information, or in-store sampling are best paired with messaging that explicitly connects these cues to value rather than presented as standalone product claims. Finally, the full mediation of health benefit and perceived price through perceived value indicates that neither health claims nor price promotions should be expected to move buying intention on their own; both are likely to be more effective when integrated into a broader narrative of what the consumer receives relative to what is given up, consistent with the value-centered logic that the model as a whole supports.

4. CONCLUSION

From this study, the authors have found that all the constructs and sub-constructs support the reliability and validity of the measures, since every composite reliability value exceeds 0.85 and every average variance extracted value exceeds 0.60. In addition, the study demonstrates that health benefit, environmental concern, perceived quality, trust, and perceived price significantly influence the perceived value of organic vegetable consumers, and that nine of the eleven proposed hypotheses

are empirically supported. Among the antecedents of perceived value, environmental concern exerts the strongest effect, followed by perceived quality, trust, health benefit, and perceived price, indicating that ecological considerations have become the dominant frame through which Indonesian consumers assess the worth of organic vegetables. Perceived value, in turn, is the strongest determinant of buying intention in the model, which confirms its position as the central evaluative mechanism connecting product-related and consumer-related motives to behavioral intention.

Two hypothesized relationships were not supported. Health benefit did not exert a significant direct effect on buying intention, which suggests that health-related beliefs about organic vegetables have become a widely shared expectation among urban Indonesian consumers rather than a factor that differentiates buyers from non-buyers. Similarly, perceived price did not directly influence buying intention, indicating that price considerations reach the purchase decision indirectly by shaping the evaluation of value rather than acting as an immediate barrier at the moment of choice. Taken together, these results imply that both health and price operate through the evaluative route, and that perceived value functions as the key mediating construct in the model.

Through the use of rigorous statistical methods, meaningful and distinct influential factors have been identified among the urban organic vegetable consumers of Indonesia. In this country, organic vegetables are still a comparatively new product category, and consumer awareness remains concentrated on their environmental and health benefits. Proper motivation and engagement with healthy and sustainable food consumption can therefore raise consumers' intention to buy organic vegetables, provided that adequate marketing policies and effective promotional campaigns communicate the nutritional and ecological value of organic produce in a credible manner. Moreover, the packaging, labelling, and certification of organic vegetables confirm product quality and consumer trust, and thus add value to the product, which suggests that marketers can sustain a price premium once trust in certification and labelling has been established.

The present study confirms a model that predicts the willingness to buy organic vegetables among Indonesian consumers. In so doing, this study contributes to Zeithaml's means-end model by incorporating health benefit, environmental concern, and trust into the value-formation process in the context of a credence product. This study also validates the mediating effect of perceived value on the buying intention of consumers in an emerging market that remains underrepresented in the organic food literature. For managerial implications, organic vegetable producers and retailers should focus on generic promotion, particularly through social media, which can be an effective medium for reaching the younger and middle-aged urban consumers who dominate this market. Policy makers and professionals must also step forward in supporting organic farming through certification assistance, training, and financial support for farmers during the conversion period, which may considerably contribute to sustainable agriculture, economic advancement, and resource conservation.

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AUTHOR CONTRIBUTIONS

Hega Bintang Pratama Putra: Conceptualization, Investigation.

Dinda Ayu Sekarnurani: Methodology, Data Curation and Analysis

Muthia Auralia: Supervision, Writing—Review & Editing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest. This study was funded by Universitas Diponegoro through institutional research funding under contract number 306/UN7.D2/PP/V/2026. The authors are solely responsible for the findings and any limitations of the study.

ETHICS STATEMENT

The authors declare that their Institutional Ethics Committee confirmed that no ethical review was required for this study. Written informed consent for participation was not required because all participants' data was anonymized before the statistical analyses were done. The authors used Grammarly for grammar checking and language refinement.

DATA AVAILABILITY STATEMENT

Data supporting the findings of this study are available from the corresponding author upon reasonable request.

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