



Research article

Irrationality and economic morality of SMEs' behavior during the Covid-19 pandemic: lesson from Indonesia

Hari Wahyono^{a,*}, Bagus Shandy Narmaditya^a, Agus Wibowo^b, Januar Kustiandi^a^a Faculty of Economics, Universitas Negeri Malang, Indonesia^b Faculty of Economics, Universitas Negeri Jakarta, Indonesia

ARTICLE INFO

Keywords:

Altruism
Endowment effect
Herd behavior
Morality economic
Small and medium enterprises

ABSTRACT

The Covid-19 pandemic provides severe consequences of economic behavior as an increase of unemployment rates, and providing a new business creation can continue the economic activities. This study explores a functional relationship between irrational behavior, which proxied by loss aversion, the endowment effect, and herd behavior toward the morality of economic among small and medium enterprises (SMEs), as well as the mediating role of altruism in the perspectives of behavioral economics. The research involved a quantitative survey and cross-sectional data with a sample of 288 SMEs in East Java of Indonesia. Using structural equation modeling, the findings reveal that the endowment effect and herd behavior have a robust relationship with economic morality. This study also notes that altruism has a positive link with economic morality, and it has successfully mediated the irrational behavior of SMEs in Indonesia. In addition, the marketing strategy also distinguishes altruism's impact on morality economic.

1. Introduction

The economic morality and irrationality of small and medium enterprises (SMEs) play a crucial role in determining business sustainability (Ferguson and Flynn, 2016; Kijkasiwat et al., 2021). These two components are essential for small and medium enterprises as its directly affecting consumer satisfaction (Lee et al., 2021). The primary rationale is that a pleased consumer tends to repeat the orders and informs their experience to others. In contrast, dissatisfied purchasers complain, stop purchases, and even tell other consumers about their unhappiness (Tiwari and Joshi, 2020). The dissatisfaction can be explained by some situations such as services, product availability, and asymmetric information between promotion and its product (Peterson et al., 2020). Therefore, managing customers' trust by performing honest, uphold business ethics, and economic morality will be crucial for business sustainability (Ferrell et al., 2019; Madhani, 2020).

In the context of Indonesia, the Covid-19 pandemic has hampered the economic sector that impacted work termination. However, those affected by layoffs need to continue their life and force them to start a business which in turn to significant business competition (Putra and Santoso, 2020; Djalante et al., 2020). This condition often leads to irrational behavior that solely focuses on business profit. Therefore, there is a

need for a better understanding of whether or how economic morality and irrational behavior among SMEs are related under this Covid-19 pandemic situation. The conventional economic point of view is no longer sufficient to understand this issue instead of using behavioral economics theory (Minnameier, 2018; Bauer and Capron, 2020). This study is directed at developing a model of the functional relationship of irrationality to economic morality for SMEs. Additionally, this study is expected to be used as a basis for developing SMEs empowerment programs based on enhancing their economic mindset and behavior in running their business.

Since the increase of economic morality and irrationality activities, the study on this theme is also rising. For instance, Ramli and Jamri (2021) incorporated the Covid-19 pandemic and Night market activities which are based on the incentives among sellers in gaining profit. Another example by Ishak et al. (2020) showed that the business involvement' rational sympathy and self-interest motive has benefited the community through offering a wide range of products and services during the normal situation instead of during the Covid-19 pandemic. Additionally, studies have been mostly carried out descriptively with a focus on business ethics studies, while scholars have overlooked research on the economic morality of SMEs actors associated with irrationality factors in the perspective of behavioral economic theory. In such a perspective, morality is placed in the context of

* Corresponding author.

E-mail address: hari.wahyono.fe@um.ac.id (H. Wahyono).

care and concern for others. Therefore, in behavioral economics, the assumption that humans are selfish is considered incompatible with the empirical facts of human life as economic beings (Ogaki and Tanaka, 2017; Cartwright, 2018; Sunstein, 2020). For this matter, the effect of irrationality on moral, economic behavior is thought to be intermediated by an attitude of prioritizing the interests of others or well-known as altruism. In detail, some scholars defined altruism as an attitude and desire to care and help others voluntarily, without considering motive for self-reward and benefit (Xu and Li, 2015; Pee, 2017). In this study, the relationship between functional irrationality and economic morality is studied by mediating altruism in SMEs business actors.

To enrich the research findings based on economic morality that involve the interaction between humans as economic actors, this study also examines the differences in the influence of altruism on economic morality according to the SMEs market products. There is a dichotomous way to market products through online or offline channels. This study is important because this method affects the intensity of the relationship between SMEs actors and their consumers. In the online marketing method, SMEs do not deal directly with consumers, the opposite occurs in offline marketing methods. This difference can be expected to affect the level of influence of altruism on economic morality. Ethics in marketing is influential in SMEs' efforts to nurture and retain customers, so that it greatly determines long-term business sustainability. It is reasonable to suspect that SMEs who market their products online because they do not deal directly with consumers may not consider ethics and concern for consumers, which will keep them loyal as customers. Something different happened to SMEs, which marketed their products offline (Madhani, 2016).

This study provides three main contributions. First, it provides insight into the literature regarding the functional relationship between irrationality and economic morality of SMEs actors, intermediated by altruism, in a behavioral economic perspective. Second, from a practical point of view, this study is expected to be one of the strategies in fostering and empowering SMEs in Indonesia. The unique rationale is that to present the development of SMEs has focused more on improving technical skills in production, marketing and network expansion, and it is not working on aspects of mindset and behavior (Osano, 2019; Chen, 2019). The findings and results of this study will be used as a basis for formulating recommendations for policymakers, non-governmental organizations, and other related parties to develop sustainable SMEs empowerment programs, with the hope of changing the mindset and economic behavior of SMEs actors. Third, this research contributes to the development of non-formal pathway economic education, where the results of this research can be used as a reference to enrich the study of community economic education programs, especially SMEs actors.

2. Literature review

2.1. Economic morality

The topic of morality has a long history since ancient Greek times and remains relevant to post-modern times. The basic rationale is that issues of morality, both in the context of objectivity and relativity, are always close to human life (Bajrami and Demiri, 2019). From the classical perspective, Adam Smith proposes that rational behavior driven by selfish efforts, there is a moral sentiment in human economic behavior (Rosser, 2021). The conventional economist believes that in economic humans' behavior (*homo economicus*), it is assumed that they are always irrational by maximizing satisfaction and profits for their personal interests and ignoring the interests of others. When each individual behaves in this way, harmony and efficiency will not be achieved in the economy's life as a whole (Elakhe, 2014). Such assumptions are empirically difficult to prove because human economic behavior considers morality based on the tendency to prioritize the interests of others (Rehman, 2018; Sunstein, 2020).

Etzioni (2010) states that economic morality can be interpreted as a mental condition that underlies a person to behave economically. It is

reflected in the attitude and actions of obeying the institutions and fulfilling obligations in the economy (imperative); cares about the existence of others and can weigh the impact of actions on others (tolerance); respect equality by considering the conditions of the surrounding community (equality) and respect equal rights as economic actors and upholding honesty, ethics of social life, prosocial and prioritizing cooperation in economic behavior (commitment). The conception that was revealed at the end of the 20th century became the embryo of the birth of a new paradigm of behavioral economics which assumes that humans are always rational by pursuing maximum satisfaction and profit. The meaning of economic morality expressed by Christ et al. (2010) is suitable for studying the problem of economic morality from the perspective of behavioral economics because the measure of morality is not limited to business ethics but is also more broadly linked to considerations of attitudes and actions.

In principle, moral economic behavior refers to ones' attitudes and actions in relation to others (Gotz et al., 2020). Carrier (2018) traces the roots of moral economic action in that collective action will emerge when people transact with each other over time. From this expression, it appears that moral action can be formed from interacting with other people. Communities in both small and large spheres, including a nation, can be a venue for forming economic, moral action. That is why Etzioni (2010) reveals that one aspect of moral economic activity is imperative: obeying the institutions and fulfilling obligations in the economy. In natural phenomena, it turns out that humans consider moral aspects in their economic decision making and behavior, not just afraid of the sanctions that will befall them if they commit immoral acts, but more because of the urge to pay attention and care for others (Taylor, 2014; Perry, 2018).

2.2. Irrationality of economic behavior

The assumption held by conventional economists that economic humans always act rationally and prioritize personal interests to maximize satisfaction and benefits has been largely abandoned (Ogaki and Tanaka, 2017; Cartwright, 2018). According to Barberis (2018), humans tend to be irrational when they are afraid of potential losses, compared to the level of appreciation for the benefits obtained (loss aversion); excessive valuation of goods that have been purchased or owned, so that their value is valued higher than the market price or their objective value (endowment effect); stuck on a favorite choice, so they solely want to confirm the information that supports that choice and ignore other more rational alternatives and objective (confirmation bias); Tendency to follow suit so that the decisions taken tend to be talkative and follow what many other people do (herd behavior); and making conclusions based on invalid data, so that they are more convinced of interesting and specific information, but actually cannot be generalized and does not apply in general (survivor bias).

From five aspects of irrational behavior, Barberis (2018) expressed indicators that related to economic morality as interpreted in this study are loss aversion, endowment effect, and herd behavior. Therefore, these three irrational aspects tend to appear when he considers his or her action decisions in interacting with others (Ogaki and Tanaka, 2017). The aspect of loss aversion is closely related to one's relationship, in this case, the small business enterprises (SMEs) business actor with other parties. An attitude of fear of loss so that they are reluctant to invest in expanding their business will undoubtedly impact employees who have the opportunity to increase their income. This premise is the basis for allegations about the influence of loss aversion attitudes on altruism and the economic morality of SMEs actors.

In addition to loss aversion, the endowment effect means an attitude to value the goods owned or purchased higher than the market price or their objective value that will encourage SMEs to be reluctant to share with others (Ogaki and Tanaka, 2017). This endowment effect also tends to make SMEs players overestimate their products, compared to other similar products and of the same quality. The impact will result in customers having to buy at a higher price than when customers buy from other SMEs.

Thus, the endowment effect can affect the reduction in caring attitudes towards others, as well as affect the economic morality of SMEs players through overvaluation of the products produced (Cartwright, 2018).

Herd behavior follows attitudes and behaviors, so that decisions made by SMEs actors following what many other people decide or do, are aspects of irrational behavior that are most related to other people. In relation to altruism, it can be stated that the higher a person's tendency to behave in herd behavior, the higher the altruism. Altruism is defined as an attitude and desire to care and help others voluntarily, without considering motive for self-reward and benefit (Xu and Li, 2015; Pee, 2017). From the perspective of economic morality, herd behavior and attitudes are thought to have a positive influence through considerations of equality and tolerance (Etzioni, 2010; Perry, 2018). The definition of herd behavior developed by Barberis (2018) is indeed explicitly expressed about the existence of a follow-up or talkative element, but this element can basically occur because of the encouragement within SMEs actors to respect equality and be considerate of other SMEs actors. Therefore, the hypothesis is proposed as below:

- H₁. Loss aversion positively influences altruism
- H₂. Endowment effect positively influences altruism
- H₃. Herd behavior positively influences altruism
- H₄. Loss aversion positively influences economic morality
- H₅. Endowment effect positively influences economic morality
- H₆. Herd behavior positively influences economic morality

2.3. Altruism

The orientation of economic morality has linked with attitudes and behavior towards other people, as well as altruism. Altruism is defined as an attitude and desire to care for and help others, which is done deliberately and voluntarily, without being based on the motive for self-reward and benefit (Xu and Li, 2015; Pee, 2017). Altruism is indicated by the self-perceptions of secondary education teachers of economics regarding their attitudes and desires to (1) cooperate with others, (2) share with others, (3) helping others, (4) donating wealth for others, (5) upholding honesty towards others, and (6) caring for the conditions and problems of others (Tov and Diener, 2009; Santrock, 2009; Frenken and Schor, 2019). Additionally, Daube and Ulph (2016) reveals that altruism refers to behavior that benefits others at personal costs for the individual behaving.

The conception of altruism is not available in the conventional economics. In conventional economics, humans as economic beings are assumed to be rational in selfishness with maximum efforts to achieve satisfaction and profit (Minnameier, 2018). Meanwhile, altruism is an attitude and impulse to care for and prioritize the interests of others, without neglecting one's interests, even in extreme conditions of self-sacrifice (Bauer and Capron, 2020). The concept of altruism is studied in-depth and broadly in behavioral economics, which does not recognize conventional economic assumptions, and is more realistic in studying economic behavior (Ogaki and Tanaka, 2017; Cartwright, 2018).

Referring to the meaning of economic morality in accordance with the concept expressed by Etzioni (2010); Christ et al. (2010) have aspects of imperative, tolerance, equality, and commitment. It can be stated that one's economic morality behavior, in this study what is meant is that the SMEs actors are positively influenced by altruism. This premise is reinforced by Carrier's (2018) statement, which states that the problem of economic morality is closely related to one's process of transacting with others. In this case, the attitude and motivation for a person to prioritize the interests of others or altruism will affect his attitude and moral behavior in economics. Thus, the hypothesis in this study is provided as follows:

- H₇. Altruism positively influences economic morality
- H₈. Altruism mediates the impact of loss aversion and economic morality
- H₉. Altruism mediates the impact of endowment effect and economic morality
- H₁₀. Altruism mediates the impact of herd behavior and economic morality

2.4. Product marketing

There is a growing new business creation in Indonesian during the Covid 19 pandemic, which was triggered by an increase in unemployment. The new unemployment that was shifted their productive activities from as worker to start an opening a business. However, the lack of capital and knowledge of the market share to be targeted, they were busy marketing their products online (Cabrillo and Dahms, 2018; Tolstoy et al., 2021). In addition, for those who have a place to market products and do not have access to the internet, SMEs market their products in the offline schemes. In principle, both online and offline marketing approach has nothing to do with direct and indirect marketing. The fundamental rationale is that SMEs can market their goods directly to consumers or indirectly through retailers (Yazdanifard and Matubako, 2014). The distinction between online and offline marketing methods focuses more on the interaction between SMEs actors and their consumers. In online marketing, the interaction between SMEs actors and their consumers is carried out through cyberspace. Meanwhile, in offline marketing approach, the interaction is conducted by face to face. This difference affects SMEs tendency to develop intrusive attitudes and their effect on economic morality. Therefore, the hypothesis is presented as follows:

- H₁₁. There are differences in the influence of altruism on economic morality based on the way of marketing products online or offline.

3. Method and materials

3.1. Design and data

This research was designed with a deductive approach, the problems studied in the research are found through theoretical studies, then hypotheses were compiled to be tested empirically. Research variables were operationalized in indicators used as references for preparing research

Table 1. The sample distribution.

No	City/Municipalities	Marketing Strategy		Total
		Online	Offline	
1.	Tulungagung	22	24	46
2.	Jember	25	25	50
3.	Magetan	26	22	48
4.	Lamongan	22	24	46
5.	Malang	24	22	46
6.	Surabaya	28	24	52
Total		147	141	288

Table 2. Research instrument.

No	Variable	Indicator	Source	
1.	Loss Aversion (X_1)	1	Sensitivity to risk of loss ($X_{1,1}$)	Ogaki and Tanaka (2017).
		2	Optimism for the future of the business ($X_{1,2}$)	
		3	Trust in co-workers ($X_{1,3}$)	
		4	Careful viewing of business opportunities ($X_{1,4}$)	
2.	Endowment Effect (X_2)	1	Awards for assets and business achievements ($X_{2,1}$)	Ogaki and Tanaka (2017)
		2	Assessment of the product produced ($X_{2,2}$)	
		3	The objectivity of the competitor's product assessment ($X_{2,3}$)	
		4	The drive to change ($X_{2,4}$)	
3.	Herd Behavior (X_4)	1	Tendency to imitate ($X_{4,1}$)	Etzioni (2010); Perry (2018).
		2	The drive to be different ($X_{4,1}$)	
		3	Follow-along trend ($X_{4,1}$)	
		4	Encouragement to follow business trends ($X_{4,1}$)	
4.	Altruism (Y_2)	1	Cooperation ($Y_{2,1}$)	Kerr et al. (2004); Christ et al. (2010)
		2	Sharing ($Y_{2,2}$)	
		3	Help ($Y_{2,3}$)	
		4	Generosity ($Y_{2,4}$)	
		5	Concern ($Y_{2,5}$)	
5.	Economic Morality (Y_3)	1	Imperative ($Y_{3,1}$)	Carrier (2018)
		2	Tolerance ($Y_{3,2}$)	
		3	Equivalence ($Y_{3,3}$)	
		4	Commitment ($Y_{3,4}$)	

instruments and producing quantified data according to predetermined criteria. This research also examines the online and offline marketing strategies of products as moderating variables to understand the differences in self-control and altruism on the economic morality of small and medium scale enterprises (SMEs) actors in East Java of Indonesia. The fundamental reason is that East Java province has the highest number of SMEs compared to other provinces in Indonesia. Additionally, East Java consists of diverse ethnic communities related to culture and moral commitment.

The unit of analysis in this study was an individual, and the data unit analyzed comes from each subject who was the respondent in this study instead of grouped into specific units. Judging from the implementation of the research, it can be classified as survey research with the focus and scope of the sample survey. The data were obtained from a portion of the population selected as the research sample. In terms of the time dimension, this study was designed as a cross-sectional study because the research was limited to a particular time. The study population was all SMEs actors in East Java Province, amounting to 4,569,822 and spread

over 38 cities/regencies. Purposively based on the eastern, western, northern, southern, and central provinces. The eastern area was represented by Jember, with the majority of the population is ethnic Madurese, who tends to be mystical and have loose ethics. The western area was provided by Magetan and Tulungagung, which tends to uphold ethics. In addition, Lamongan represents the northern area with high religiosity, while Malang municipalities cover the southern area with mixed culture and ethnicity. For the central area, Surabaya is represented as the provincial capital. The number of SMEs players in the six areas was approximately 1,094,064 people. From a total population, the number of samples was determined based on the sampling formula for estimating proportions without repetition (sampling without replacement) with an error rate of 5% as stated by Daniel and Terrel (1989), with an estimated proportion (p) of 0.75%, the number of samples obtained was 288.044 (rounded to 288) SMEs actors. In order to ensure the study ethics, the respondents were announced their anonymity. In addition, the ethical issue was approved by the Ethical Committee of Universitas Negeri Malang for all dimensions in this research. Sampling was conducted

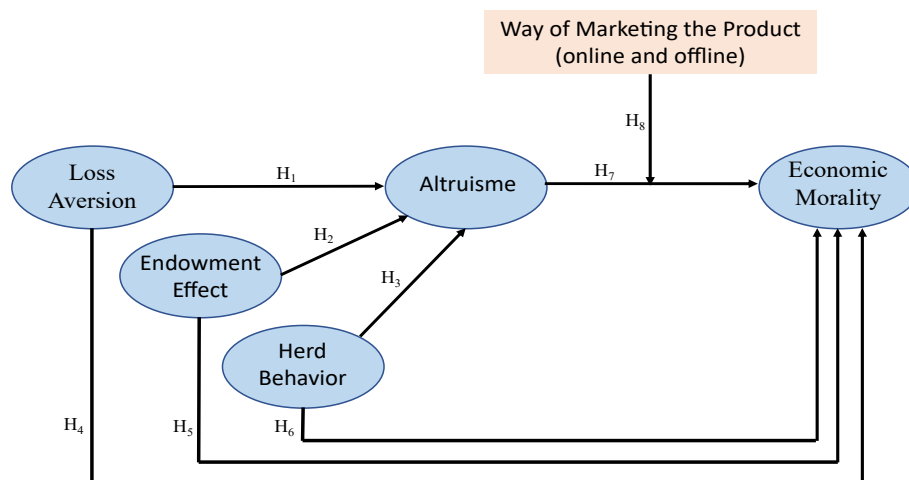
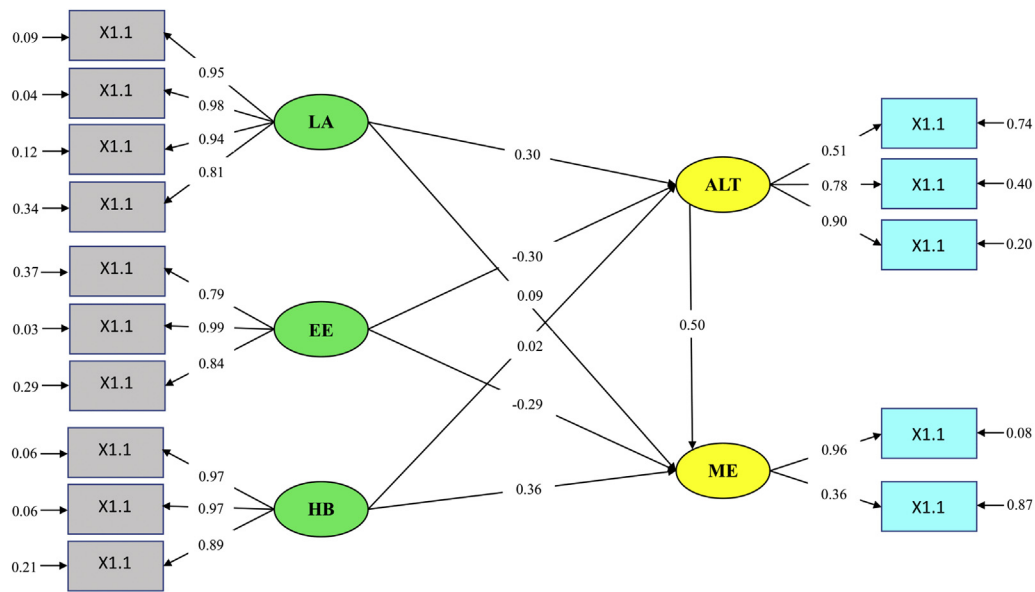


Figure 1. Structural Data Analysis Models and hypotheses.

Source: Ogaki and Tanaka (2017); Etzioni (2010); Perry (2018); Christ et al. (2010); Kerr et al. (2004); Carrier (2018).



Chi-Square=405.32, df=276, P-value=0.14800, RMSEA=0.0623

Figure 2. Structural equation model results of data analysis.

using proportional random sampling based on area and product marketing strategy. The distribution of samples by region and echelon can be tabulated in Table 1.

3.2. Variable measurement

The data were collected by using a questionnaire technique, and the questionnaire as an instrument was distributed online using a google form which can be accessed via email or mobile phone. The development of the instrument is based on the identification of indicators for each variable whose formulation is not only based on existing theories but also considered on the empirical conditions of SMEs actors. To measure Loss Aversion (X₁), we adapted four indicators developed by Ogaki and Tanaka (2017). We adapted four indicator items from Ogaki and Tanaka (2017) to measure the Endowment Effect (X₂). A detailed description of the variables can be provided in Table 2.

3.3. Data analysis

To analyze the data, we employed structural equation modeling (SEM) with Linear Structural Relations (LISREL) for windows ver. 8.6. The framework for the relationship between variables and the main hypotheses compiled can be seen in Figure 1.

4. Results and discussion

4.1. Results

The results of data analysis through twelve rounds of analysis simulations to obtain a structural model that achieves the model alignment test requirements can be illustrated in Figure 2.

The conformity test of the structural equation model results from data analysis as described previously can be seen in Table 3.

Coefficient of lambda (λ), Coefficient determination (R²) and T-value variable the manifest that constructs the latent variable can be informed in Table 4.

Testing convergent validity and composite reliability, in order to determine the level of integrity and consistency of the model, is determined by the formula developed by Hair et al. (2020), is provided in Equation 1.

$$fc = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + (\sum e)} \tag{1}$$

The results of testing the validity and reliability of the structural equation model of the research results can be presented in Table 5.

The hypothesis test results were carried out by looking at the coefficient of influence between endogenous variables on exogenous variables,

Table 3. Test alignment of structural equation model results of data analysis.

Model Harmony	Coefficient	Criteria	Conclusion
Chi-Square (χ ²)	405.32	Small (not significant)	Good, approved
P-value	0.148	≥0.05	Good, approved
Df	276	—	Good, approved
Cmin (χ ² /Df)	1.47	≤2.00	Good, approved
RMR (standardized)	0.075	≤0.08	Good, approved
RMSEA	0.0632	≤0.08	Good, approved
GFI	0.93	≥0.90	Good, approved
AGFI	0.94	≥0.90	Good, approved
CFI	0.96	≥0.94	Good, approved
IFI	0.96	≥0.94	Good, approved
NNFI	0.97	≥0.94	Good, approved
AIC (Model)	135.32	small, relative	Good, approved

Table 4. Manifest of structural equation model forming constructs from data analysis result.

No.	Variable	Manifest	λ	R ²	T-values
1.	LA	X1.1	1.15	0.05	21.84
		X1.2	1.30	0.06	22.92
		X1.3	1.86	0.09	21.26
		X1.4	0.77	0.06	16.69
2.	EE	X2.2	0.96	0.06	16.07
		X2.3	3.48	0.15	22.95
		X2.4	8.97	0.51	17.49
3.	HB	X4.2	1.15	0.05	22.49
		X4.3	1.65	0.07	22.49
		X4.4	1.10	0.06	19.16
4.	ALT	Y2.2	0.59	0.05	8.12
		Y2.3	0.54	0.04	8.16
		Y2.5	0.56	0.07	8.11
5.	ME	Y3.1	0.26	0.04	6.35
		Y3.4	0.11	0.04	3.07

and its significance was determined based on the t-test value of 1.96 as the minimum limit. In addition, the resulting structural equation models can determine the direct and indirect effects. The results referred to can be provided in [Table 6](#).

To test the hypothesis of differences in the effect of altruism on economic morality moderated using product marketing (online and offline), regression analysis is used. The significance of the difference in coefficients was determined by plotting the regression equation of altruism on economic morality for groups of SMEs who do online marketing and the altruism regression equation for economic morality for groups of SMEs actors who do offline marketing. The two regression equations are illustrated in [Equation 2](#).

$$\begin{aligned}
 Y_1 &= 48.336 + 0.112X_1 + e_1 \\
 Y_2 &= 43.879 + 0.083X_2 + e_2
 \end{aligned}
 \tag{2}$$

Where:

- Y₁:The morality economic of online marketing.
- Y₂:The morality economic of offline marketing.
- X₁:Altruism of online marketing.

X₂:Altruism of offline marketing
 e₁ and e₂: Residual.

Plotting for the two regression equations can be seen in [Figure 3](#).

[Figure 3](#) explains the regression equation for SMEs with two different marketing strategies. From the figure, it can be concluded that there are differences in the effect of altruism on economic morality based on the marketing methods of SMEs actors.

4.2. Discussion

This study examined the economic morality, irrational behavior, and altruism among small and medium enterprises (SMEs) in Indonesia. From the eleven hypotheses tested, this study was proven that two hypotheses were rejected: loss aversion on economic morality and the effect of herd behavior on altruism. This explains that excessive fear of facing losses compared to rewards for the benefits obtained among SMEs actors in Indonesia does not influence them to apply the values of economic morality. This finding is contrast with the thinking of [Cartwright \(2018\)](#). Likewise, following irrational behavior is also proven to not affect

Table 5. Convergent validity and reliability of the composite model of research findings.

Latent Variables	Manifest	Loading (λ)	(1-e)	Decision
LA	X ₁₁	1.15	9.38	Valid
	X ₁₂	1.31	8.06	Valid
	X ₁₃	1.85	8.31	Valid
	X ₁₄			
Composite reliability		0.69		Reliable
EE	X ₂₂	0.91	3.82	Valid
	X ₂₃	3.58	9.94	Valid
	X ₂₄	8.84	4.76	Valid
Com		0.85		Reliable
HB	X ₄₂	1.15	1.35	Valid
	X ₄₃	1.65	1.08	Valid
	X ₄₄	1.11	1.12	Valid
Composite reliability		0.72		Reliable
ALT	Y _{2.2}	0.52	8.23	Valid
	Y _{2.3}	0.62	8.35	Valid
	Y _{2.5}	0.56	8.21	Valid
Composite reliability	0.78			Reliable
ME	Y _{3.1}	0.47	6.84	Valid
	Y _{3.4}	0.39	6.52	Valid
Composite reliability	0.73			Reliable

Table 6. The direct and indirect effects.

No	Hypothesis			The Coefficient Impact			T-values	Decision
				Direct	Indirect	Total		
1.	LA	→	ALT	0.30	-	0.30	2.51	Significant
2.	LA	→	ME	0.09	-	0.09	0.88	Not Significant
3.	EE	→	ALT	-0.38	-	-0.38	-2.68	Significant
4.	EE	→	ME	-0.29	-	-0.29	-2.57	Significant
5.	HB	→	ALT	0.03	-	0.03	0.32	Not Significant
6.	HB	→	ME	0.36	-	0.36	4.52	Significant
7.	ALT	→	ME	0.50	-	0.50	6.35	Significant
8.	LA	ALT	ME	0.30	0.50	0.80	8.86	Significant
9.	EE	ALT	ME	-0.38	0.50	0.12	3.67	Significant
10.	HB	ALT	ME	0.03	0.50	0.53	6.67	Significant

altruism. This proves that irrational behavior is not related to caring and encouragement to share with others. The finding is in line with the thoughts of Ogaki and Tanaka (2017); Xu and Li (2015); Pee (2017); Frenken and Schor (2019).

In addition, this study indicates that the loss aversion and endowment effects can explain altruism. This illustrates that excessive fear of loss and too high appreciation for what is produced has proven to influence SMEs actors to care and want to share with others, both to workers in their business environment and to the community who are their consumers. In addition, the endowment effect and herd behavior have also been shown to affect economic morality. This proves that SMEs in Indonesia, who tend to highly value their products and follow what many other people do, affect their economic morality. The result is in line with the rationale of Perry (2018) and more emphatically by Carrier (2018), which states that the problem of economic morality is closely related to one's process of transacting with others.

The findings that prove that altruism affects economic morality can be explained that in this study, economic morality is interpreted as attitudes and behaviors that prioritize imperative aspects, tolerance, equality, and commitment (Christ et al., 2010). Such a conception of morality is oriented towards the interests and considerations of others. Thus, it is natural that altruism affects economic morality (Carrier, 2018). The importance of altruism for SMEs actors so that they have moral, economic attitudes and behaviors is evidenced in the findings of this study, where all irrational attitudes have a positive influence on economic morality after being mediated by altruism. This proves that caring and encouragement to share with others can create irrational loss aversion behavior of SMEs actors in Indonesia to have economic morality in their business activities. The results also prove that the method of marketing

(online and offline) also distinguishes the effect of altruism on the economic morality of SMEs actors. This is in line with the thoughts of Yaz-danifard and Matubako (2014) regarding the importance of business ventures for direct marketing, even though they do not explicitly state the difference in the influence of altruism on economic morality.

5. Theoretical and practical implications

Theoretically, the findings in this study reinforce the evidence that in business activities, small and medium enterprises (SMEs) actors are not fully motivated to maximize profits as assumed by conventional economic thinking. SMEs actors have economic morality that grows on the urge to pay attention to others and consider the existence of others. Two irrational factors in economic behavior that do not directly affect economic morality, through the mediation of altruism, are proven to affect the morality of SMEs actors. The findings of this study have practical implications for economic education, especially in entrepreneurship education, regarding the importance of cultivating altruism towards students so that later when they become entrepreneurs, they can consider morality in their business and economic behavior. For the government, primarily with interest in the development of SMEs, which have so far emphasized training in business skills, it is necessary to develop empowerment programs that prioritize the development of an attitude of altruism and economic morality because this is very important for the sustainability of SMEs.

6. Conclusion

This study tested eleven hypotheses to prove the positive effect of three types of irrational behavior: loss aversion, endowment effect, and herd behavior on economic morality, mediated by altruism in small and medium-scale enterprises (SMEs) actors. It is proven that loss aversion does not affect economic morality. Likewise, herd behavior is also proven to not affect altruism. It also confirmed in this study that the three types of irrational behavior have a significant positive effect on the economic morality of SMEs actors mediated by altruism. It can also be concluded that altruism has a positive effect on the economic morality of SMEs actors. Based on the results of this study, in economic education, especially entrepreneurship education, it needs to develop studies and materials on altruism and economic morality. Not only related to business ethics, but also necessary to develop a broader study and material on economic morality based on the urge to care and share with others. As a consequence, entrepreneurship education not only produces skilled entrepreneurs in controlling business but can also produce complete entrepreneurs who are successful in building businesses and have a great concern for the welfare of the people in their environment. This is in line with the family economic ideology, which is the basis of economic development in Indonesia. The results of this study certainly have several

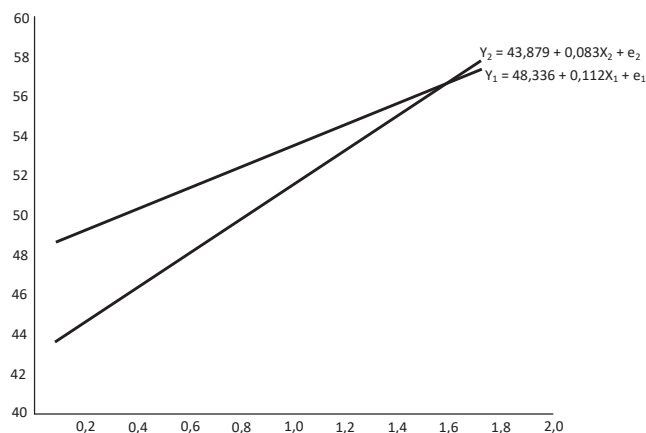


Figure 3. The graph of the regression equation for SMEs' online and offline marketing methods.

limitations. However, it is expected that the results of this study can trigger the development of further studies on a wider scale and include more varied variables related to economic irrationality and morality.

Declarations

Author contribution statement

Hari Wahyono, Bagus Shandy Narmaditya and Agus Wibowo: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Januar Kustiandi: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

Data included in article/supplementary material/referenced in article.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

References

- Bajrami, D., Demiri, B., 2019. Ethical relativism and morality. *ILIRIA Int. Rev.* 9 (1), 221–230.
- Barberis, N., 2018. Richard Thaler and the rise of behavioral economics. *Scand. J. Econ.* 120 (3), 661–684.
- Bauer, B.W., Capron, D.W., 2020. How behavioral economics and nudges could help diminish irrationality in suicide-related decisions. *Perspect. Psychol. Sci.* 15 (1), 44–61.
- Cabrilo, S., Dahms, S., 2018. How strategic knowledge management drives intellectual capital to superior innovation and market performance. *J. Knowl. Manag.* 22 (3), 621–648.
- Carrier, J.G., 2018. Moral economy: what's in a name. *Anthropol. Theor.* 18 (1), 18–35.
- Cartwright, E., 2018. *Behavioral Economics*. Routledge, New York.
- Chen, C.L., 2019. Value creation by SMEs participating in global value chains under industry 4.0 trend: case study of textile industry in Taiwan. *J. Global Inf. Technol. Manag.* 22 (2), 120–145.
- Christ, O., Hewstone, M., Tausch, N., Wagner, U., Voci, A., Hughes, J., Cairns, E., 2010. Direct contact as a moderator of extended contact effects: cross-sectional and longitudinal impact on outgroup attitudes, behavioral intentions, and attitude certainty. *Pers. Soc. Psychol. Bull.* 36 (12), 1662–1674.
- Daniel, W.W., Terrel, J.C., 1989. *Business Statistics for Management*. PT Andi, Yogyakarta.
- Daube, M., Ulph, D., 2016. Moral behaviour, altruism and environmental policy. *Environ. Resour. Econ.* 63 (2), 505–522.
- Djalante, R., Lassa, J., Setiamarga, D., Sudjatma, A., Indrawan, M., Haryanto, B., Warsilah, H., 2020. Review and analysis of current responses to COVID-19 in Indonesia: period of January to March 2020. *Prog. Disaster Sci.* 6, 100091.
- Elakhe, E.O., 2014. The role of morality in economic development. *J. Humanit. Soc. Sci.* 19 (12), 73–76.
- Etzioni, A., 2010. *Moral Dimension: toward a New Economics*. Simon and Schuster.
- Ferguson, E., Flynn, N., 2016. Moral relativism as a disconnect between behavioural and experienced warm glow. *J. Econ. Psychol.* 56, 163–175.
- Ferrell, O.C., Harrison, D.E., Ferrell, L., Hair, J.F., 2019. Business ethics, corporate social responsibility, and brand attitudes: an exploratory study. *J. Bus. Res.* 95, 491–501.
- Frenken, K., Schor, J., 2019. Putting the sharing economy into perspective. In: *A Research Agenda for Sustainable Consumption Governance*. Edward Elgar Publishing.
- Gotz, N., Brewis, G., Werther, S., 2020. *Humanitarianism in the Modern World: the Moral Economy of Famine Relief*. Cambridge University Press.
- Hair Jr., J.F., Howard, M.C., Nitzl, C., 2020. Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *J. Bus. Res.* 109, 101–110.
- Ishak, S., Omar, A.R.C., Osman, L.H., 2020. Sympathy and benevolence of business entities: evidence during the COVID-19 pandemic outbreak. *Int. J. Acad. Res. Bus. Soc. Sci.* 10 (5), 102–113.
- Lee, C.M.J., Che-Ha, N., Alwi, S.F.S., 2021. Service customer orientation and social sustainability: the case of small medium enterprises. *J. Bus. Res.* 122, 751–760.
- Madhani, P.M., 2016. Marketing ethics: enhancing firm valuation and building competitive advantages. *SCMS J. Indian Manag.* 13 (3), 80–99.
- Madhani, P.M., 2020. Customer-focused supply chain strategy: developing 4Rs framework for enhancing competitive advantages. *Int. J. Serv. Oper. Manag.* 36 (4), 505–530.
- Minnameier, G., 2018. Reconciling morality and rationality. In: *Positive Learning in the Age of Information*. Springer VS, Wiesbaden, pp. 347–361.
- Kerr, B., Godfrey-Smith, P., Feldman, M.W., 2004. What is altruism? *Trends Ecol. Evol.* 19 (3), 135–140.
- Kijkasiwat, P., Wellalage, N.H., Locke, S., 2021. The impact of symbiotic relations on the performance of micro, small and medium enterprises in a small-town context: The perspective of risk and return. *Res. Int. Bus. Finan.* 56, 101388.
- Ogaki, M., Tanaka, S.C., 2017. What is behavioral economics?. In: *Behavioral Economics*. Springer, Singapore, pp. 3–22.
- Osano, H.M., 2019. Global expansion of SMEs: role of global market strategy for Kenyan SMEs. *J. Innovat. Enterpren.* 8 (1), 1–31.
- Pee, L.G., 2017, February. Altruistic knowledge sharing in online communities. In: *2017 19th International Conference on Advanced Communication Technology (ICACT)*. IEEE, pp. 844–846.
- Perry, R.B., 2018. Economic value and moral value. *Q. J. Econ.* 342 (3), 443–485.
- Peterson, R.A., Kim, Y., Jeong, J., 2020. Out-of-stock, sold out, or unavailable? Framing a product outage in online retailing. *Psychol. Market.* 37 (3), 428–440.
- Putra, P.O.H., Santoso, H.B., 2020. Contextual factors and performance impact of e-business use in Indonesian small and medium enterprises (SMEs). *Heliyon* 6 (3), e03568.
- Ramli, M.W., Jamri, M.H., 2021. The impact of Covid-19 pandemic: a closer look at the night market traders' experience in Penang, Malaysia. *Int. J. Acad. Res. Bus. Soc. Sci.* 11 (1), 741–760.
- Rehman, T., 2018. *Behavioral Economics: Trends, Perspectives and Challenges*. Nova Science Publishers, New York.
- Rosser, J.B., 2021. Foundations of complex behavioral economics. In: *Foundations and Applications of Complexity Economics*. Springer, Cham, pp. 25–51.
- Santrock, J.W., 2009. *Life Span Development*, 12 th. McGraw-Hill.
- Sunstein, C.R., 2020. "Better off, as judged by themselves": bounded rationality and nudging. In: *Routledge Handbook of Bounded Rationality*. Routledge, pp. 563–569.
- Taylor, T., 2014. Economics and morality. *Finance Dev.* 51 (2), 34–88.
- Tiwari, P., Joshi, H., 2020. Factors influencing online purchase intention towards online shopping of Gen Z. *Int. J. Bus. Compet. Growth* 7 (2), 175–187.
- Tolstoy, D., Nordman, E.R., Hänell, S.M., Özbek, N., 2021. The development of international e-commerce in retail SMEs: an effectuation perspective. *J. World Bus.* 56 (3), 101165.
- Tov, W., Diener, E., 2009. The well-being of nations: linking together trust, cooperation, and democracy. In: *The Science of Well-Being*. Springer, Dordrecht, pp. 155–173.
- Xu, B., Li, D., 2015. An empirical study of the motivations for content contribution and community participation in Wikipedia. *Inf. Manag.* 52 (3), 275–286.
- Yazdanifard, R., Matubako, T., 2014. The review of general comparison between face to face marketing and indirect marketing. *WIT Transactions on Engineering Sciences*.