

The Triad of Community Participation, Empowerment and Vigilance in Fraud Deterrence Strategy

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ABSTRACT

Fraud deterrence in the context of rural tourism poses specific difficulties and opportunities, particularly in environmentally sensitive places like mangrove tourism sites. This quantitative research investigated the critical relationship between community participation, community empowerment, and community vigilance, collectively forming the triad, in the context of fraud deterrence within four distinct mangrove tourism destinations in Madura, Indonesia. Through an extensive survey conducted among residents of these destinations, this study utilized structural equation modelling. By assessing the data on community participation, empowerment, vigilance, and anti-fraud measures, this research aims to unravel the complex web of relationships among these variables. The findings suggested that community participation and community vigilance contribute significantly to the success of fraud deterrence initiatives. Community empowerment, on the other hand, has no effect on fraud deterrence strategies due to several inherent factors in the community. These findings highlight the importance of engaging communities in decision-making processes and promoting vigilance to enhance transparency and accountability in tourism management. However, the lack of influence from community empowerment suggests that broader structural factors may hinder its effectiveness in fraud prevention. The study concludes that strengthening community participation and vigilance can play a critical role in preventing fraud and ensuring sustainable tourism development. Practical implications for tourism management and policymakers include the need to invest in community-driven fraud detection and reporting mechanisms.

1. INTRODUCTION

Indonesia's Ministry of Tourism and Creative Economy has begun to build tourism villages with the idea of sustainable tourism, which considers the influence on the environment, society, culture, and economy for the present and the future, as well as for both residents and visitors ([The Ministry of Tourism and Creative Economy, 2022](#)). Indonesia's domestic tourism is gradually recovering with an increase in the number of foreign tourist trips in 2022 by 19.82 percent compared to 2021. According to [BPS \(2022\)](#), 5.47 million international tourists visited Indonesia in 2022, a 251.28% increase over the number of foreign tourists that came to the country in 2021. Nevertheless, it is unfortunate that the growth of the tourism sector can be hampered due to fraud that occurs in tourism management.

Deterring fraud in the tourism sector is an intriguing subject to investigate to maximize the benefits of tourism ([Carolina & Wulandari, 2024](#)). The presence of fraudulent activity in tourist management can contribute to the tourism industry's inability to thrive in the long run, resulting in diminished job possibilities and economic advantages ([Mtapuri & Giampiccoli, 2019](#); [Nunkoo & So, 2016](#); [Pulido-Fernández & Pulido-Fernández, 2019](#)). Fraud is becoming more sophisticated, targeting not just business contexts but also vulnerable people and communities. Fraud occurs when one or more persons purposefully act secretly to deprive another person of something of value for their gain ([Albrecht, 2008](#); [Özkul & Pamukçu, 2012](#)). In 2020, fraud cost the global tourism sector \$114,000, ranking 10th in Indonesia compared to other industrial sectors, with the hospitality and tourist industry experiencing the highest losses ([ACFE, 2020](#)). Corruption within Indonesia's tourism industry resulted in the government losing IDR 20.5 billion in 2022 ([Anandya & Easter, 2023](#)). Communities can have a significant impact on fighting fraudulent activities in the tourism sector by overseeing the allocation of public funds and reporting authorities of any wrongdoing. Community

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vigilance can help ensure that these funds are properly allocated for infrastructure and local development initiatives (Arisukwu et al., 2020). Communities may reduce the likelihood of fraud and promote accountability among public authorities by planning and monitoring their expenditures. Legal frameworks, such as Indonesia's Government Regulation No. 43 of 2018, also allow for active reporting by the community on suspicious activities, thereby strengthening their position against corruption. Fraud is a criminal offense that breaches the law. The existence of fraud is an unavoidable phenomenon. As a result, fraud must be prevented to mitigate its incidence and the damages it creates.

Previous research has sought to identify certain aspects that might help misconduct behavior prevention or crime control from the viewpoint of the community (Arisukwu et al., 2020; Domínguez & Montolio, 2021; Kwame, 2019; Matsukawa & Tatsuki, 2018). The role of the community is essential in crime prevention and control, as well as in encouraging community safety community (Arisukwu et al., 2020; Domínguez & Montolio, 2021; Kwame, 2019; Matsukawa & Tatsuki, 2018). According to Oakley (1991), community involvement is the process by which local people (individuals, families, or communities) feel accountable for their well-being and work to advance their community or society. Therefore, community involvement will be able to prevent misconduct behavior or fraudulent activities. Community involvement is a critical component of crime control or fraudulent activities prevention in society.

Community participation, community empowerment and community vigilance are seen as crucial elements in supporting fraud deterrence in the tourist sector. Communities can minimize the negative impacts of tourism and at the same time can maximize the positive impacts of tourism on environmental, sociocultural and economic aspects (Dangi & Petrick, 2021; Nunkoo & So, 2016; Prabhakaran et al., 2014; Yang et al., 2020). Communities can provide support for tourism development because communities around tourist destinations can discover possible resources and engage in decision-making linked to tourist site development (Aleshinloye et al., 2022; Boley et al., 2014). According to Kwame (2019), individuals who are tightly bound and actively involved in a community may be used as a tactic to avoid crime or unacceptable behavior. Community participation, empowerment, and vigilance are crucial in preventing fraud by fostering a sense of shared responsibility and awareness within the community. Communities can interfere in illegal behaviors and prevent fraud either individually or collectively (Arisukwu et al., 2020). In this aspect, community participation, community empowerment and community vigilance may be helpful (Arisukwu et al., 2020; Domínguez & Montolio, 2021; Golub, 2020; Grönlund et al., 2010; Khair et al., 2020; Matsukawa & Tatsuki, 2018; Oduro-Marfo, 2021; Rezaei, 2013; Saegert & Winkel, 2004; Sargeant et al., 2013; Zhao et al., 2002).

According to Oakley (1991) participants in a community include individuals within it who contribute their knowledge, skills, ideas and other valuable resources in decision making processes towards helping them tackle communal challenges and realize jointly determined goals. Additionally, as Pretty (2002) noted, community participation allows individuals or groups to actively take part in and have a voice in the allocation of resources and decision-making procedures. Community participation can encourage a sense of belonging and responsibility (Pretty, 2002) and allow individuals to contribute their knowledge, skills, and resources to achieve common goals and meet issues affecting the community (Oakley, 1991). The importance of meaningful participation in determining the future of one's community is highlighted by Arnstein (1969), who defines community participation as a ladder of citizen involvement, ranging from non-participation to citizen control. This definition emphasizes the power and influence of community members in decision-making processes. Rezaei (2013) emphasizes the importance of social connection in lowering violent and criminal behavior in local communities. The advantages of community participation in misconduct prevention and control are emphasized by Arisukwu et al. (2020), Rezaei (2013), Saegert and Winkel (2004), Zhao et al. (2002). In addition, Manaliyo (2016) points to individualism and a lack of cohesion as obstacles to successful community participation in preventing criminal activity. Furthermore, from an anti-corruption perspective, Sakib (2022) states that one way to prevent corruption is the presence of community participation. Therefore, the people are supposed to act as a guard against fraud for those willing to engage themselves actively in the community.

The definition of community empowerment is inclusive of all those procedures which allow people, organizations as well as communities to have a more meaningful say on the way they live and what really matters to them (Christens et al., 2011). Empowerment is viewed by Christens et al. (2011) as a process of socialization that takes place in the setting of the community and organizations. Community empowerment, according to Perkins and Zimmerman (1995), is the process through which people take charge of their lives, engage with their community, and comprehend their surroundings. This process strengthens individuals and groups, allowing them to exert influence over issues affecting their lives and become more confident (Khair et al., 2020). Research has shown a correlation between empowerment and reduced wrongdoing. Matsukawa and Tatsuki (2018) found that community prevention activities, fueled by community empowerment, can enhance community safety. Aiyer et al. (2015) and Perkins and Zimmerman (1995)

found that community empowerment initiatives significantly enhance self-efficacy and problem-solving abilities among community members, positively impacting crime prevention efforts. Empowered individuals and communities are more likely to mobilize for wrongdoing prevention. Golub (2020) and Grönlund et al. (2010) emphasized the importance of community empowerment in corruption prevention. Sargeant et al. (2013) emphasized the role of collective efficacy in community-based misconduct prevention. Constantino et al. (2012) also highlighted the role of community empowerment in increasing social control and community sense, ultimately leading to misconduct reduction. These findings suggest that community empowerment is a valuable method for crime prevention. However, its effectiveness can be hampered by resource constraints (Sampson & Raudenbush, 2004), social fragmentation (Kelling & Wilson, 1982), and trust issues (Sherman, 2001), especially in communities with a history of mistrust. Systemic factors, such as economic disparities (Morenoff & Harding, 2014), the scale and duration of initiatives (Mazerolle et al., 2013), and cultural and demographic diversity (Weisburd et al., 2015) can further complicate successful crime and fraud prevention through community empowerment.

Constantino et al. (2012) and Khair et al. (2020) discuss vigilance behavior as a form of community social control. Khair et al. (2020) state that vigilance involves continuous oversight activities. Meanwhile, Constantino et al. (2012) explore vigilance definitions, focusing on willingness to detect and respond to specific stimuli. The papers suggest that community vigilance is a form of social control, requiring sensitivity to environmental changes, continuous activity oversight, and readiness to detect and respond to stimuli. The studies by Morales et al. (2014) suggest that effective community vigilance can significantly reduce crime prevalence in local government areas, highlighting the importance of citizen responsibility for crime prevention and social involvement. Davis and Henderson (2003) highlight the visibility of crime prevention efforts like neighborhood watch programs. Community vigilance is the proactive activity of discovering and reporting any unusual behavior that may signal fraudulent activities. Davis and Henderson's (2003) research also reveals that communities with greater levels of informal social control, as seen by active vigilance and reporting of suspicious behavior, have lower crime rates. Additionally, Oduro-Marfo (2021) shows how community members support crime surveillance by sharing information, providing logistical support, and conducting inspections.

This study attempts to explain how participation in the community, community empowerment, and community vigilance and fraud deterrence are related through the lens of social control theory. From a sociological and criminological perspective, social control theory tries to explain the influencing factors that prevent people from engaging defiantly or breaking the law (Hirschi, 2015). In accordance with social control theory, there are four forms of social bonds: attachment, commitment, engagement, and belief. Attachment refers to emotional bonds with family, friends, and the community. People who have strong links to these groups are less likely to breach the rules because they are afraid of harming these relationships through illegal behavior (Hirschi, 2015). The term commitment relates to a person's commitment to traditional standards and objectives, which may lessen their tendency to engage in unconventional behavior. An individual's involvement in acceptable activities and social interactions lowers the likelihood that they will engage in unethical activity (Hirschi, 2015). Meanwhile, belief relates to a person's commitment to society's beliefs and rules. Social control from the community is required to establish fraud-free tourist governance (Hirschi, 2015). Communities that play an active part in tourist management can serve as a layer of fraud prevention since they can control any wrongdoing that takes place. The link between community participation, community empowerment, community vigilance and fraud deterrence may therefore be explained using the social control theory.

Although the search results provide useful information about the role of community support in achieving sustainable tourism development, there exists an insufficient amount of research in understanding the specific role of community in deterring fraud within the triad paradigm of community participation, community empowerment, and community vigilance in tourism management. Thus, the paper will fill this gap by examining how, in the context of mangrove tourism on Madura Island, community participation, which fosters a sense of shared responsibility; empowerment, which provides control over decision-making; and vigilance, which facilitates monitoring, all work together to enable fraud deterrence. The potential role of community involvement to crime prevention has been shown in earlier research, nevertheless the practical application of this concept to the problem of tourism fraud has received less attention. The particular cultural setting of Madura, with strong social ties and cultural norms that both facilitate and complicate collaborating on tourism management, adds to the complexity of fraud management in this industry. Building upon this context, the current work fills important gaps in the theoretical and practical applications of social control theory by extending it to examine how community-level characteristics function as fraud deterrents.

The study contributes to both theoretical knowledge and practical strategies for deterring fraud in tourism management, extending social control theory by demonstrating how the three concepts of

participation, empowerment, and vigilance can be used to deter fraud in rural tourism settings. This study covers a previously overlooked function of community-driven components in fraud prevention, thereby addressing a significant gap in the literature. On the practical side, this study provides tourist management organizations and policymakers with actionable insights into how involving host communities in tourism management to deter fraud and achieve sustainable tourism development.

2. METHODS

This research is a quantitative study. Data were collected from local communities involved in the management and development of tourism in four mangrove tourism sites in different districts of Madura which include: Labuhan Mangrove (Bangkalan), Labuhan Manis Mangrove (Sampang), Lembung Mangrove (Pamekasan), and Kedatim Mangrove (Sumenep). The four mangrove tourism destinations were selected based on three criteria: tourism destinations that involve the community in tourism management, tourism destinations managed by tourism awareness groups (*pokdarwis*), and tourism destinations managed through partnerships with village governments.

Using a survey approach, the link between all these components was examined. A two-part questionnaire was utilized in the survey to gather data from participants. It included respondent characteristics including age, gender, and education in the first section. The second part concentrated on the variables. To ensure the trustworthiness of the measurement tool, A structured Likert scale questionnaire was developed using validated scales from previous studies (Table 1). Several adjustments were made in order to ensure this fitted and was appropriate within the context of the study. Each characteristic is evaluated on a five-point Likert scale of 1 (“strongly disagree”) – 5 (“strongly agree”).

To ensure clarity and relevance, a pilot test was conducted with a small group of community members, leading to minor refinements in wording to align with the local context. Reliability was assessed using Cronbach’s alpha, with values exceeding 0.7, indicating strong internal consistency. Content validity was established by aligning the questionnaire items with theoretical constructs drawn from previous literature.

PLS-SEM using Smart PLS 3 was used to analyze the data since this paper's goals were to investigate the connection between the variables rather than to develop a new theory. Since PLS-SEM permits a more flexible approach to model creation, it is particularly helpful when structural equation modeling is employed to describe the relationship between variables (Hair et al., 2017). In order to address data normalization issues, this study used PLS-SEM, which is also used for small sample sizes (Hair et al., 2017). This approach allowed for the examination of direct and indirect relationships between the variables, ensuring that the model fit the context of community-driven fraud deterrence strategies.

Table 1. Variables’ Indicators

Variable	Indicator
Community participation (Pretty, 2002)	Involvement in decision-making Participation in community meetings Contribution to community initiatives Engagement in neighborhood improvement Willingness to voice concerns
Community empowerment (Perkins & Zimmerman, 1995)	Control over decision-making Access to information Perceived influence Knowledge and skills Self-efficacy
Community vigilance (Skogan & Antunes, 1979)	Awareness of neighborhood activities Reporting suspicious behavior Sharing information with neighbors Awareness of fraud trends
Fraud deterrence (Albrecht, 2008)	Community awareness of fraud risks Ethical community culture Role of traditional leaders Trust in local institutions Reporting mechanism Transparency in resource allocation Community policing or watch programs

3. RESULTS AND DISCUSSIONS

Results

There are a total of 181 respondents in this survey who are involved in tourism management. The following [Table 2](#) displays the characteristics of respondents with various characteristics.

Table 2. Respondents' Demographic

Respondents Demographic		N= 181	
		Freq.	%
Gender	Male	76	42%
	Female	105	58%
Education	Elementary	35	19%
	Junior High School	44	24%
	Senior High School	79	44%
	Diploma	3	2%
	Undergraduate	20	11%
Age	17-25	53	29%
	26-35	36	20%
	36-45	48	27%
	46-60	44	24%
Tenure	< 1 year	23	13%
	1-5 year	129	71%
	5-10 year	22	12%
	> 10 years	7	4%

Source: Primary data processed, (2023)

The SEM findings ([Table 3](#)) show that the latent constructs represented by four different indicators have good internal consistency and convergent validity. Cronbach's alpha values vary from 0.873 to 0.922, suggesting strong reliability, while composite reliability (ρ_a) and composite reliability are consistently more than 0.9, showing robust internal consistency. Furthermore, the Average Variance Extracted (AVE) values are greater than the required threshold of 0.5, indicating strong convergent validity. All of these results support the measurement model's validity and reliability, offering a strong framework for carrying out SEM investigations.

Table 3. Loading Factor, Construct Reliability and Validity

	Loading Factor	Cronbach's alpha	Composite reliability (ρ_a)	Composite reliability (ρ_c)	Average variance extracted (AVE)
CP1	0,893				
CP2	0,927				
CP3	0,872	0,922	0,939	0,941	0,763
CP4	0,798				
CP5	0,872				
CE1	0,801				
CE2	0,904				
CE3	0,879	0,914	0,915	0,936	0,747
CE4	0,914				
CE5	0,818				

	Loading Factor	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CV1	0,865				
CV2	0,860				
CV3	0,845	0,873	0,874	0,913	0,723
CV4	0,831				
FD1	0,824				
FD2	0,810				
FD3	0,784				
FD4	0,787	0,902	0,909	0,922	0,627
FD5	0,810				
FD6	0,807				
FD7	0,717				

The Fornell-Larcker criterion is an important tool for assessing discriminant validity in structural equation models. The diagonal values for average variance extracted (AVE) for each construct always exceed the correlation between the constructs, indicating strong discriminant validity. The results confirm that community participation, community resident empowerment, community vigilance, and fraud prevention are separate and uncorrelated in the structural equation model (Table 4).

Table 4. Fornell-Larcker Criterion

	CP	CE	CV	FD
Community Participation (CP)	0,873			
Community Empowerment (CE)	0,322	0,864		
Community Vigilance (CV)	0,292	0,741	0,850	
Fraud Deterrence (FD)	0,558	0,403	0,427	0,792

The Heterotrait-monotrait (HTMT) ratios (Table 5) show the discriminant validity and specificity of the latent variables (CP, CE, CV, FD), with values less than the required threshold of 0.85, providing validity and specificity of the measurement model.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

	CP	CE	CV	FD
CP				
CE	0,340			
CV	0,314	0,829		
FD	0,577	0,433	0,470	

The findings of the SEM (Table 6) provide an important understanding of the relationships among the latent variables, and reflect the constructs under study. The path from CP to FD has a significant t-statistic of 7.242 and a p-value of 0.000, indicating that there is a strong and significant relationship supporting the hypothesis. On the other hand, the path from CE to FD has a high p-value of 0.377 and an insignificant T-statistic of 0.884, indicating a lack of statistical significance that might result in the rejection of the hypothesis. The path from CV to FD results in a moderately significant T-statistic of 2.812 and a p-value of 0.005, suggesting a moderate but statistically significant association, allowing the hypothesis to be accepted.

A strong and significant path coefficient was found for community participation, showing that increased engagement in decision-making and local tourism activities leads to better prevention of fraud. Likewise, monitoring and reporting of suspicious activities by the community, also demonstrated a strong

correlation with deterring fraud, underscoring the importance of active vigilance in reducing fraudulent behaviors. On the other hand, there was no statistically significant connection between community empowerment and fraud deterrence. The high p-value and low path coefficient indicate that empowerment alone may not be effective in deterring fraud without appropriate structural support or cultural alignment in this specific situation. These findings indicate that involvement and watchfulness of the community are important, but empowerment alone may not be enough to stop dishonest behaviors in tourism management in Madura.

Table 6. Model's path relationship

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Community Participation -> Fraud Deterrence	0,464	0,470	0,064	7,242	0,000
Community Empowerment -> Fraud Deterrence	0,081	0,086	0,092	0,884	0,377
Community Vigilance -> Fraud Deterrence	0,232	0,234	0,082	2,812	0,005

In general, the results of the SEM analysis confirm the hypothesis that community participation, community vigilance, and fraud deterrence are positively correlated in the investigated mangrove tourist sites. Meanwhile, community empowerment is not proven to influence fraud deterrence.

Discussion

The study confirms the positive relationship between community participation and fraud deterrence, highlighting the importance of empowering individuals and groups to influence decision-making processes and resources. Communities with higher levels of community participation reported higher effectiveness in fraud deterrence measures. Communities that actively engaged members in decision-making processes and encouraged their contributions of knowledge, skills, and resources were more successful in deterring fraudulent activities (Oakley, 1991). The importance of meaningful participation in determining the future of one's community, as emphasized by Arnstein (1969). Furthermore, the study showed that community participation is important to improve community safety and reduce violence and illegal activities, which is consistent with the findings of previous research (Arisukwu et al., 2020; Rezaei, 2013; Saegert & Winkel, 2004; Zhao et al., 2002) respectively. Communities whose members were involved were more likely to build social ties and cohesion, which are important factors for successful misbehavior management and prevention strategies (Rezaei, 2013). Furthermore, as research Manaliyo (2016) reveals, community members actively supported research activities by exchanging information, providing policy assistance, and monitoring research. This collaborative approach to this prevention of fraudulent activity is common in places that value and encourage community participation. The findings of the study Pretty (2002) further support the argument that community involvement fosters a sense of belonging and responsibility in the community. This sense of ownership and responsibility extends to the protection of the group's assets and interests, and makes the community more likely to be involved in cases of fraud. It should also be remembered that the findings of the survey build on the basic principles and points mentioned in the above emphasis. The empirical evidence supports the idea that proactive community involvement enhances community well-being by positively impacting decision-making, resource allocation, violence reduction, misconduct prevention, and anti-corruption efforts. These results align with the concepts of the social control theory, which argues that deviant behavior is discouraged by strong social relationships, such as those developed by active community participation (Hirschi, 2015). As a result, the findings support the theories and highlight the importance of community involvement in establishing social control and advancing a more secure and cohesive society.

The second hypothesis suggests that empowered communities are more effective in deterring fraudulent behavior. The outcomes of the study contradict the idea that community empowerment effectively deters fraud. While previous research revealed a correlation between community empowerment and lower levels of misconduct, the new study calls those findings into question. These findings raise questions concerning the relevance of the community empowerment theoretical framework, as articulated by Khair et al. (2020), Perkins & Zimmerman (1995) to the particular field of fraud prevention. As indicated by earlier research, these results contradict the expected beneficial association between crime prevention and community empowerment (Aiyer et al., 2015; Christens et al., 2011; Constantino et al., 2012; Golub,

2020; Grönlund et al., 2010; Matsukawa & Tatsuki, 2018; Sargeant et al., 2013). This study emphasizes the complex relationship that exists between community empowerment, self-efficacy, and improved problem-solving skills, all of which are assumed to benefit attempts to prevent crime. This study suggests that community empowerment may not be as effective as previously thought in the context of fraud deterrence. The influence of contextual factors, such as resource constraints, social fragmentation, and trust issues, particularly in communities with a history of mistrust, appears to hinder the effectiveness of community empowerment in addressing crime and fraud (Kelling & Wilson, 1982.; Sampson & Raudenbush, 2004; Sherman, 2001). Moreover, systemic factors like economic disparities, the scale and duration of empowerment initiatives, and cultural and demographic diversity can further complicate crime and fraud prevention through community empowerment (Mazerolle et al., 2013; Morenoff & Harding, 2014; Weisburd & Green, 1995). These results challenge the straightforward assumptions of social control theory and emphasize the need for a more context-sensitive understanding of the dynamics between community empowerment and crime prevention (Hirschi, 2015). Therefore, this study suggests that while community empowerment can be a valuable tool in reducing misconduct, it must be approached with a consideration of the unique context and challenges of the community in question. This also suggests that, while empowerment increases a person's self-efficacy and decision-making ability, it may not be sufficient in contexts where cultural, societal, or structural constraints prevent empowerment from being translated into action results. For example, the empowerment process may fail to achieve successful fraud prevention in the lack of established formal reporting channels or insufficient trust between communities and tourism authorities. This observation shows that supportive government is required for community empowerment to be effective in fraud deterrence.

This study's findings show a statistically significant positive association between community vigilance and fraud deterrence, which aligns with Constantino et al. (2012) and Khair et al. (2020) theoretical viewpoints on vigilance as a type of community social control. Morales et al. (2014) discovered that vigilant communities were more likely to actively observe and report any unusual behavior that may indicate fraudulent activity. This study discovered that community vigilance was connected to decreased rates of crime and fraudulent activity prevalence, which is in line with previous studies (Davis & Henderson, 2003). As stated by Oduro-Marfo (2013), vigilance entails continual supervisory activities, sensitivity to environmental changes, and readiness to identify and respond to stimuli. As Gillham (1992) points out, the prominence of crime prevention activities such as neighborhood watch programs emphasizes the need of community vigilance (Davis & Henderson, 2003). More vigilant communities are better able to identify and prevent fraudulent activity as soon as it occurs. This proactive strategy is essential for successful fraud deterrence because it enables communities to take action before fraudulent practices worsen. The study reveals that vigilant communities are better equipped to detect and respond to fraudulent activities, thereby enhancing their ability to deter fraudulent activities. This proactive approach fosters a sense of collective responsibility and trust, thereby enhancing social control mechanisms. The results support the principles of social control theory, highlighting the proactive nature of social control within these communities, which creates an environment where dishonest actions are less likely to occur (Hirschi, 2015).

There will be a beneficial effect on the general protection and governance of the community when community members actively participate in crime and fraud prevention activities. More community involvement can result in a stronger feeling of shared responsibility, more community awareness, and better knowledge and abilities for discovering and reporting suspicious activity. As a result, it is anticipated that reduced illegal activities and occurrences of fraud would take place in the community and that this will prevent potential offenders.

4. CONCLUSION

As fraud and its consequences have become a major concern, this study has investigated the relationship between community participation, community empowerment, community vigilance and fraud deterrence to achieve sustainable tourism. Through an in-depth and comprehensive analysis of the relationship between these factors, this research has discovered new insights that demonstrate the multidimensional factors of fraud deterrence. This study found that community engagement and vigilance may serve as deterrents to fraud in mangrove tourism on Madura Island, although community empowerment has no substantial influence, probably caused by the presence of structural and social barriers in the local context. In other words, based on the study's findings, governments should develop initiatives to increase community involvement in governance and vigilance through training and community-based fraud detection systems. These strategies may encourage transparency and accountability, both of which are important principles for ensuring the sustainability of tourism management. This study provides helpful insights, however it was limited to Madura, and the results cannot

be generalized for other places with different cultural and economic settings. Future research should broaden the scope to include additional regions and types of tourism, such as urban or cultural tourism, restaurants or hotels, as well as look into the structural barriers to community empowerment. The use of convenience sampling allows the risk of bias. To reduce the risk of bias, future research is recommended to use longitudinal strategies and other sampling approaches, such as judgemental sampling. Qualitative methodologies may also provide a better understanding of how community-driven policies might be optimized to deter fraud and promote sustainable tourism.

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