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Impact of Gamification on Intention to Donate Using Crowdfunding Platform: Evaluating the Mediating Roles of Affective User Experience and Trust

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Abstract: *Crowdfunding platforms are seen as potential solutions to facilitate disintermediated giving, where people can go directly to the public for help with their difficulties. Although disintermediation is widespread and active in the crowdfunding industry, the fiercely competitive environment, combined with concerns about personal data use and unethical conduct, has resulted in an enormous number of campaigns failing. Therefore, it is crucial to investigate factors that influence contributors' intention to participate in the crowdfunding platform. Using a self-administered survey, this research collected data from 339 individuals with initial knowledge of crowdfunding activities. The results of hypothesis testing indicate that gamification has a direct positive impact on affective user experience and trust in the platform but insignificantly affects donation intention on a crowdfunding platform. Interestingly, the mediating role of affective user experience and trust are established. The results lead to the discussion that gamification alone not directly impact donors' intentions to contribute on crowdfunding platforms, it significantly influences intention when mediated by affective user experience and trust in the platform. The substantial contribution of the relationship between*

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gamification and trust in the platform, emphasizing the importance of user experience as a key precursor to positive behavioural intentions in online and gamified environments.

Keywords: Gamification; Affective user experience and trust; Crowdfunding; Donation; Malaysia
JEL Classification: G29, M15, M31

1. Introduction

In recent years, fundraising activities have surged globally in response to escalating crisis events such as natural disasters, health and financial crises, and the recent humanitarian crisis resulting from the Palestine-Israel conflict. Malaysia, ranked 21st among 142 countries in charitable donations (CAF, 2021), successfully raised approximately RM 100 million through intermediaries, including non-profit organizations. Nevertheless, the nation has recently been thrust into disarray following a scandal, involving the misappropriation of funds by a non-governmental organization (NGO) (The Star in 2023; Hargrave, 2022). The egregious occurrence has eroded public trust, leading to a shift towards disintermediated giving, such as direct donations or aid to people (Bajde, 2013). Even in what appears to be the quintessential disintermediated giving success story, some fundraising initiatives have been marred by claims of poor governance and morals. According to a recent study by MacQuillin et al. (2024), there are numerous types of disintermediated giving that have sparked increased suspicion due to ethical, regulatory, and accountability concerns. In response to the imperative for heightened transparency and accountability in fund management, donation crowdfunding platforms have emerged as promising contenders. These platforms aspire to reinstate confidence in the process by offering a direct and transparent mechanism for individuals to contribute, circumventing the challenges associated with traditional intermediaries.

Since the inception of crowdfunding platforms, these initiatives have successfully garnered over USD 10 billion in funding from various sources, providing critical financial assistance to numerous fundraisers during unforeseen crises. Despite the promising growth, the fiercely competitive landscape of crowdfunding markets has led to a noteworthy number of fundraising campaigns encountering formidable challenges, resulting in high failure rates (de Larrea et al., 2019; Mollick, 2014). For example,

Kickstarter, a prominent platform in this domain, has disclosed a success rate of less than 40%, underscoring that over 60% of campaigns on its platform fail to achieve their intended fundraising objectives (Lu et al., 2023). This pattern is consistent with global contribution trends, reflecting persistent challenges in fundraising effectiveness (Belleflamme et al., 2015; Clauss et al., 2018; Forbes & Schaefer, 2017; Gerber & Hui, 2013; Mollick, 2014; Tomczak & Brem, 2013). Factors such as customer concerns about the use of personal data, regulatory loopholes, and unethical conduct by fundraisers contribute to a disruption in the continuity of funding intentions (Sampat et al., 2023).

Hence, it is imperative to scrutinize the determinants that shape contributors' intentions to engage with crowdfunding platforms. Research dedicated to exploring the inclination to utilize crowdfunding platforms has been underway since the inception of this phenomenon, delving into perspectives from both fund seekers (Ba et al., 2020; Davidson & Poor, 2016; Jaziri & Miralam, 2019; Yang & Lee, 2019) and contributors (Chen et al., 2019; Kang et al., 2016; Liu et al., 2018; Rodriguez-Ricardo et al., 2019; Zhao et al., 2017). Despite the breadth of these investigations, there exists a discernible gap in comprehending how specific platform features wield influence over contributors' intentions. The paramount role played by crowdfunding platforms in attracting prospective contributors has been somewhat overlooked, despite serving as a pivotal intermediary between fund seekers and contributors (Haas et al., 2014).

Previous research has extensively examined various platform features such as perceived ease of use, perceived usefulness (Rahman et al., 2020), website quality (Kuo et al., 2020; Liu et al., 2018), and platform appearance (Kim & Hall, 2020) as factors influencing contributors' intention to participate in crowdfunding projects. While numerous studies have delved into platform features, there remains a paucity of empirical investigations into the role of gamification within crowdfunding platforms. The efficacy of gamification features in enhancing participation on websites has been demonstrated in prior literature, with a predominant focus on domains such as education and learning (Aries et al., 2020), e-banking (Rahi & Abd. Ghani, 2019), tourism (Tan, 2018; Xu et al., 2016), fitness and health (Barratt, 2017; Lee et al., 2017), and e-commerce websites (García-Jurado et al., 2019; Ilham & Fajar, 2020). Recognizing the pivotal role of the platform in shaping contributors' behavioural intentions is essential for a

comprehensive understanding of the crowdfunding ecosystem. Furthermore, due to the heightened vulnerability of online donors to risk and uncertainty compared to traditional donors when soliciting financial assistance from the crowd (Gierczak et al., 2016), it is imperative to explore the influence of trust and affective states in elucidating how specific platform features can elicit a positive response in a crowdfunding context.

While extensive research has been conducted on the effects of platform features in the crowdfunding domain, limited attention has been devoted to the behaviours of donors in investigating the mediating roles of trust in the platform and donor/user affective experiences (Hsu & Chen, 2018; Jeon et al., 2017), as most previous studies have largely focused on the operation of crowdfunding platforms involving platform design (Belavina et al., 2020), funding operations (Aggarwal et al., 2021), transparency (Mejia et al., 2019), and revenue management (Zhang et al., 2023). As a result, the purpose of this study is to close this gap by investigating the influence of gamification, trust, and affective experiences on donor intention to donate, with the goal of deepening our understanding of the psychological mechanisms behind charitable giving behaviour in the setting of crowdfunding platforms. Furthermore, the study investigates the serial mediation effect of user trust and affective experiences within crowdfunding platforms in the relationship between the platform feature (gamification) and charitable donation intention.

Building upon Mehrabian and Russell's (1974) Stimulus – Organism – Response (SOR) model, this research applies the framework to comprehend how features within crowdfunding platforms serve as determinants influencing contributors' intentions. Mehrabian and Russell's (1974) original SOR paradigm posits that attribute of the environment (Stimulus) impact individual internal states (Organism), subsequently leading to approach or avoidance behaviors (Response). In the context of this study, the stimulus component is encapsulated by the presence of gamification. Meanwhile, the affective user experience and trust in the platform collectively constitute the organism. In terms of response, the intention to donate using a crowdfunding platform manifest as a positive outcome.

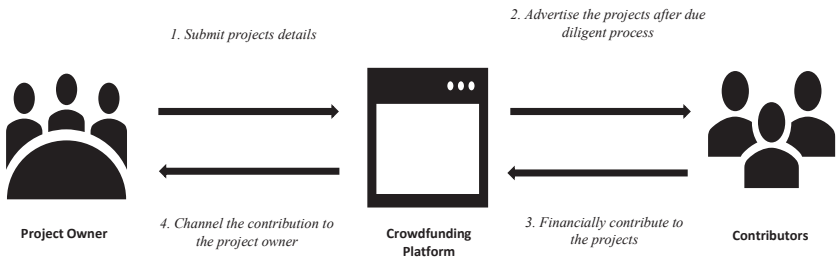
2. Literature Review

2.1. The Concept of Crowdfunding

Researchers have constantly mentioned three elements in defining crowdfunding: the crowd, the project owner, and the crowdfunding platform (Belleflamme et al., 2015; Colombo et al., 2015; Kraus et al., 2016; Mariani et al., 2017; Ordanini et al., 2011; Tomczak & Brem, 2013; Valančienė & Jegelevičiūtė, 2014; Zhang & Chen, 2019). Comprehensively, crowdfunding should include elements such as: (1) crowdfunding is a collective effort from a large crowd, (2) the activities must be performed virtually on the Internet, (3) involve intermediaries who facilitate the platform, (4) the fundraising activities are open to the public and (5) mention the purpose of the money collected.

Furthermore, the crowdfunding platform operates as a two-sided market, as elucidated by Choi and Zennyo (2019). In this dynamic system, individuals are aptly positioned to make a judicious decision regarding their role within the platform, aligning with their distinct objectives. Participants can opt to assume the role of either project owners or contributors. Project owners are tasked with articulating key project details, including objectives, project duration, targeted funding amount, and the proposed utilization of funds. Conversely, contributors, situated on the opposite side of the market, engage with the platform by subscribing and selecting specific projects they wish to support. Figure 1 serves to illustrate the intricate mechanism of crowdfunding, capturing the dual roles and interactive dynamics inherent in this two-sided market.

Figure 1: The Mechanism of Crowdfunding



2.2. The Stimulus – Organism – Response (SOR) Model

The Stimulus – Organism – Response (SOR) model, pioneered by Mehrabian and Russell in 1974, stands as a valuable framework for comprehending the impact of the environment on human behaviour. The original SOR paradigm posits that environmental attributes (Stimulus) influence individual internal states (Organism), subsequently prompting approach or avoidance behaviours (Response). Particularly relevant to the digital landscape, the SOR model has found applicability in explicating human behaviour when engaging with online platforms.

Elements of Stimulus

Stimulus, as defined in the context of environmental cues influencing individual behaviour (Eroglu et al., 2001, 2003), is particularly significant in the online domain where mechanical website features play a pivotal role in shaping customer intention (Mollen & Wilson, 2010). Recent research converges on the understanding that mechanical website features primarily refer to the design aspects of platform features. Common stimuli arising from website design encompass appearances, quality, interactivity, and accessibility (Akram et al., 2020; Nam et al., 2020; Patanasiri & Krairit, 2019; Sohaib et al., 2019; Zhao et al., 2020). In the scope of this research, gamification is positioned as the component under the stimulus category. Despite being a relatively novel construct in previous research, gamification is identified by Gatautis et al. (2016) as a stimulus, encompassing game elements such as avatars, leaderboards, and points that prompt user engagement in online activities.

Elements of Organism

Organism refers to the internal processes and structures that intervene between external stimuli and an individual's final actions, reactions, or responses (Eroglu et al., 2001). Bagozzi (1986) and Sherman et al. (1997) elaborate on the organism as an internal process occurring between the stimulus and an individual's ultimate responsive behaviour. This internal process encompasses perceptual, physiological, emotional, and cognitive activities (Sherman et al., 1997). Affective states, often associated with

emotion (Lee et al., 2011), involve emotional evaluations linked to sensations, feelings, or emotions (Perugini & Bagozzi, 2001). Thus, affective user experience aligns as a pertinent construct representing affective states within the SOR model.

On the other hand, cognitive evaluation entails a more advanced psychological activity, involving the perceptual process by which an individual select, organizes, and interprets stimuli to form a meaningful and coherent understanding of the world (Schiffman & Kanuk, 2010, p.157). In crowdfunding activities, cognitive trust assumes significance due to the financial contributions involved. Moreover, cognitive trust is particularly relevant in situations where the trustor lacks prior experience with the other party, leading to the establishment of trust based on the cognitive evaluation of the initial impression (McKnight et al., 1998; Pengnate & Sarathy, 2017; Senik at al., 2022).

Elements of Response

Response is defined as the ultimate outcome or conclusive action and reaction of consumers, encompassing psychological responses like attitudes and behavioural reactions (Bagozzi, 1986). In the original SOR model, Mehrabian and Russell (1974) introduced the concepts of approach and avoidance behaviours as the conspicuous outcomes or reactions to various environmental stimuli. These behaviours denote either positive actions directed towards a specific setting or negative actions indicating a desire to distance oneself from the environment (Eroglu et al., 2001). Approach behaviours encompass positive actions, such as intentions to stay, explore, and affiliate, while avoidance behaviours represent the opposite. Hence, in the context of crowdfunding platforms, it can be asserted that contributors' intentions to donate embody approach behaviour and, subsequently, form the response component within the SOR model.

3. Hypotheses Development

3.1. Gamification, Affective User Experience, Trust and Intention to Donate

Deterding et al. (2011) defined gamification as the use of game design elements in non-game contexts. It is the most cited definition due to the

generality. The definition helps to distinguish gamification from full-fledged games by stressing the characteristics of using the "element" in a non-game context. Some researchers defined gamification as the use of game elements, mechanics, features, design, and structure in a non-game environment or context (Attali & Arieli-Attali, 2015; Bruder, 2015; Dale, 2014; Hamari et al., 2014; Hanus & Fox, 2015; Powers et al., 2013).

Gamification serves a multifaceted purpose centered on motivational affordances and behavioural change. Huotari & Hamari (2011) highlight its essence in motivational affordances, resulting in behavioural change. Burke (2014) underscores the role of gamification in influencing behaviour by enabling digital engagement in goal attainment. According to Hofacker et al. (2016), gamification in non-game contexts aims to enhance customer value, maximizing consumption, fostering loyalty, and encouraging engagement. Koivisto & Hamari (2019) recent definition refines gamification as a design approach to enrich services and systems, providing experiences akin to those in games. Similarly, the incorporation of gamification aims to strategically motivates individuals, induces behavioural shifts, and enhances overall customer value.

Gamification has gained popularity in marketing as it effectively influences customer behaviours and motivates task performance (Hsu et al., 2017; Huotari, 2012). Major companies like Recycle Bank, McDonald's, Pepsi, Samsung, and Nike have successfully integrated gamification into their websites and applications as effective business tools. Extending the literature, researchers have explored gamification in crowdfunding activities, confirming its ability to enhance contributor participation (Behl & Dutta, 2020; Kontogiannidis et al., 2017). Despite some existing research, the topic remains relatively unexplored, and this study aims to contribute to a deeper understanding of gamification in the context of crowdfunding.

Kontogiannidis et al. (2017) were among the early researchers to validate the positive correlation between gamification and the intention to utilize a crowdfunding platform. Subsequent studies have also demonstrated that integrating gamification enhances engagement on various online platforms, particularly in e-commerce and navigation mobile applications (Hamari et al., 2014; Kim & Ahn, 2017; Thiel & Fröhlich, 2017). For instance, the implementation of a point system, a specific gamification feature, has been identified as a mechanism that can foster civic engagement,

leading to prolonged user interaction on online crowdfunding platforms (Burtch et al., 2018). This research hereby proposed that;

Hypothesis 1: *Gamification has a positive influence on intention to donate using crowdfunding platform.*

The incorporation of gamification in a website is an effective way to improve a monotonous website to become an exciting web experience (Hsu & Chen, 2018). They also concluded that gamified websites that fulfil users' needs are a great marketing tool for improving user experience and participation in various activities. In addition, self-presentation gamification elements such as an avatar have a positive influence towards affective reaction among the users (Triantoro et al., 2019). In addition, Hsieh (2020) also have a similar finding that gamification elements in this case, leader boards have a positive effect on user affective experience. Therefore, this study proposed that,

Hypothesis 2: *Gamification has a positive influence on affective user experience.*

The correlation between gamification and trust has been relatively underexplored. While the integration of game elements is often aimed at providing a more entertaining and enjoyable experience, concerns may arise about the potential for these activities to be perceived as less serious, thereby diminishing trust. However, research suggests that a web interface incorporating game elements has the capacity to instil a sense of trust among users (Behl et al., 2020). According to Fogg (2003), gamification serves as an example of persuasion technology, effectively influencing users towards positive behaviours. Previous studies have indicated that crowdfunding campaigns that are close to achieving their funding goals attract more contributors, as potential contributors perceive the almost-complete progress bar as a signal of trustworthiness (Burtch et al., 2013). Therefore, this study proposed that,

Hypothesis 3: *Gamification has a positive influence on trust in platform.*

3.2. Affective User Experience and Intention to Donate

Schmitt and Zarantonello (2013) outlined two broad categories of experience. The first category describes experience as ongoing perceptions, feelings, and direct observations. This view sees experience to be a result of direct observation and participation, for example, experiences of products and services, or shopping environments, which identifies feelings and cognitions. Alternatively, the second category describes experience as the past and knowledge accumulated over time. Therefore, the current study conceptualises affective user experience as contributors' perception, feeling and direct observation of the crowdfunding platform that could induce their affective experience (Brakus et al., 2009; Schmitt & Zarantonello, 2013).

A profound sense of enjoyment while engaging with the crowdfunding platform, attributing positive experience to its intuitive and user-friendly design such as seamless navigation, well-organized website features, clear calls to action, and visually appealing layouts. The intuitive interface anticipated user needs, making it effortless for users to find information on the fundraising campaign. Furthermore, the inclusion of clear calls to action (donation button) provided a sense of direction, guiding users through their journey with transparency. Additionally, the visually appealing layouts, including the image and video of the fundraising campaign, not only met functional needs but also contributed to a visually stimulating and enjoyable browsing experience, solidifying the positive affective response.

According to the SOR model, an organism mediates the relationship between stimulus and response (Mehrabian & Russell, 1974). Wu et al. (2013) contributed to understanding the logic of this relationship. They discussed how online environmental cues, such as website design (i.e., the stimuli), can influence the store experience of online shoppers (i.e., the internal states of the organism), which subsequently results in purchase intention (i.e., the response). In a recent study, Anaya-Sánchez et al. (2020) stated that the affective states of the organism can be understood by the feelings or sensations that individuals experience because of the stimuli. Specifically, in a gamified website, users gain an aesthetic experience when they can observe the progression of their status in an activity, simultaneously influencing their continuance intention to use that system (Hsu & Chen, 2018). Hence, the following hypotheses are provided,

Hypothesis 4: *Affective user experience has a positive influence on intention to donate using crowdfunding platform.*

Hypothesis 5: *Affective user experience mediates the relationship of gamification and intention to donate using crowdfunding platform.*

3.3. Trust and Intention to Donate

The rapid growth of crowdfunding activities suggests that trust is one of the key determinants to ensure a successful funding project (Zhou & Ye, 2019) Trust is a social concept that refers to "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995 p.712).

Trust towards the platform in important in a two-sided market because it facilitates the interconnection between strangers on the platform (Cheng et al., 2019). The mechanism of the crowdfunding platform allows project owners to provide a brief description of the project including the breakdown cost to attract funders and reduce uncertainty towards their project. As contributors, making a financial contribution to strangers is always a risk. Thus, contributors rely on the crowdfunding platform operator as an intermediary to restrict project owners' opportunistic behaviour.

Based on structural assurances of institutional-based trust, contributors can depend on the crowdfunding platform to ensure that the project owner can be trusted by providing due diligence process for the project owner to raise fund on the platform. Other than that, contributors assume that the crowdfunding platform is bounded to behave in a trustworthy manner in dealing with their provided personal information and the transparency of the financial transaction.

The organism component in the SOR model focuses on the transmission of perceived environmental stimuli into reliable information, resulting in a changed cognitive or emotional state (Mehrabian & Russell, 1974). The cognitive responses consist of thoughts, beliefs and perceptions that are developed in the mind of the consumer while interacting with the website interface (Aggarwal, 2020). In explaining the mediating role of trust between gamification and intention, Rapp (2015) posited that gamification is an

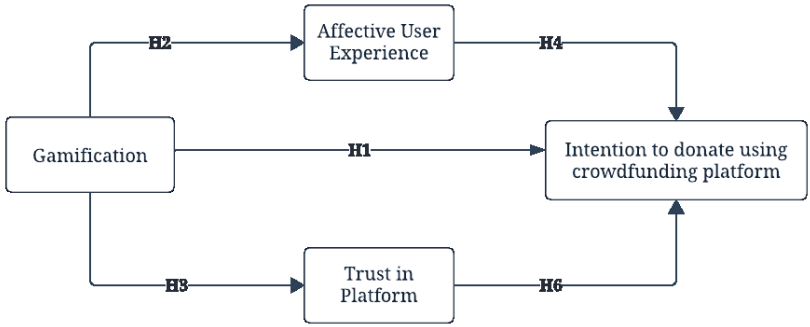
interactive design in a website and Jeon et al. (2017) empirically found that an interactive website positively influences trust and leads to repurchase intention. Other than that, to encourage citizen voluntary participation, trust in the organization is the crucial determinant and gamification is a great mechanism to improve trust (Escobar & Urriago, 2014). Thus, the following hypotheses are provided,

Hypothesis 6: *Trust in platform has a positive influence on intention to donate using crowdfunding platform.*

Hypothesis 7: *Trust in platform mediates the relationship of gamification and intention to donate using crowdfunding platform.*

The research framework in Figure 2 illustrated the relationships discussed in this study.

Figure 2: Research Framework



4. Methodology

This research aimed to gather insights from individuals with a broad understanding of crowdfunding activities and awareness of crowdfunding platforms. To ascertain that respondent met the specified criteria, initial filter questions were included at the start of the questionnaire. In terms of sampling, a virtual snowball approach was utilized to engage respondents. Specifically, individuals with social media accounts that follow or like crowdfunding platforms were reached out to via private messages, inviting them to participate in the survey. Subsequently, participants were encouraged

to recommend contacts within their network who possess knowledge about crowdfunding platforms.

4.1. Questionnaire Development

The survey was structured into three sections. The questionnaire begins with an introduction section comprised filter questions and general information aimed at assessing respondents' eligibility for participation. The second section encompassed variable measurements, specifically focusing on gamification, affective user experience, trust in platform, and the intention to donate through a crowdfunding platform. The final section of the questionnaire was designed to gather demographic information, including details such as age, income, employment status, and other relevant factors.

The questionnaire was designed by adopting items of previous researchers. A seven-point Likert scale, ranging from 1 = strongly agree to 7 = strongly disagree was used for all variables. Gamification's items were adapted from Cózar-Gutiérrez and Sáez-López (2016), Kontogiannidis et al. (2017) and Rodrigues et al. (2017). The mediating variables, affective user experience and trust in platform, were adapted from Brakus et al. (2009) and Oh et al. (2012) Finally, items of intention to donate through a crowdfunding platform were adapted from Wu et al. (2013).

5. Results

5.1. Demographic Analysis

A total of 420 individuals reached through their Twitter and Facebook social media accounts and 362 surveys were completed, resulting in a response rate of approximately 86.2%, deemed as acceptable (Hair et al. 2014). From 362 surveys, individuals who are not aware of crowdfunding activities using crowdfunding platform were excluded. After removing 23 responses, a total of 339 questionnaire was considered valid for further analysis. The profile of respondents in Table 1 describes the frequency and valid percentage of respondents in terms of gender, age, income, employment, and education.

Table 1: Demographic of the Respondents

Demographic	Categories	Frequencies	Percentage (%)
Gender	Male	127	37.5
	Female	212	62.5
Age	18 – 25 years	173	51
	26 – 35 years	123	36.3
	36 - 45 years	26	67.7
	46 – 55 years	10	2.9
	Above 55 years	6	1.8
Income	Less than RM 1,000	139	41.0
	M 1,000 – RM 1,999	30	8.8
	RM 2,000 – RM 3,999	71	20.9
	RM 4,000 – RM 5,999	49	14.5
	RM 6,000 – RM 7,999	19	35.6
	RM 8,000 – RM 9,999	10	2.72.9
	RM 10,000 and above	21	6.2
Employment	Private	127	37.5
	Govern/Semi Government	45	13.3
	Business Owner	17	5.0
	Students	139	41.0
	Not Working	8	2.4
	Self- Employed	3	0.9
Education	SPM/SPMV/MCE	12	3.5
	STPM/HSC	29	8.6
	Certificate/Diploma	81	23.9
	Degree	110	32.4
	Master	47	13.9
	Doctor of Philosophy	1	0.3
	Professional	59	17.4

The data collected were then analyzed using SmartPLS 4, an analysis tools that appropriate to test model that consists mediating variables (Hair et al., 2018). The analysis involves two steps approach, first stage is to determine the measurement model ensuring the reliability and validity of the constructs and second stage is structural measurement via bootstrapping to test the hypotheses.

5.2. Checking of Missing Data

The questionnaire was distributed using Google Forms and set all questions as required. Respondents had to complete all questions before submitting the form. Using SPSS data frequencies command screening process, the data revealed that all variables have no missing values. Hence, all data were used to describe the demographic and characteristics of the respondents.

5.3. Common Method Variance

According to Podsakoff, Mackenzie and Lee (2003), common method bias could potentially influence behavioral research results due to gathering cross-sectional data from a single respondent using the same questionnaire set. Thus, researchers are recommended to run Harman's single factor test to ensure that there is no common method bias problem in this study. The largest factor accounted for 47.160% of the variance, which is less than 50% from the cut off value as suggested by Podsakoff et al. (2003). Based on this result, this study can conclude that there is no common method bias presents in the data.

5.4. Assessment Measurement Model

5.4.1 Reliability and Convergent Validity

The assessment of measurement model determines whether the factor loading, convergent and discriminant validity fall within the recommended threshold. Table 2 shows that all the items have high loadings on their constructs (above 0.7) as suggested by Hair et al. (2017). This indicates that most of the items are well-defined and consistent with their constructs. Next, convergent validity was observed through composite reliability (CR) and average variance extracted (AVE). Table 2 tabulates the value with CR is over than 0.70 and AVE higher than 0.50 which meet the recommended threshold suggested by Hair et al. (2017).

Table 2: Measurement Model

Constructs	Items	Loading	Composite reliability	Average variance extracted (AVE)
Gamification	Gami1	0.830	0.921	0.662
	Gami2	0.824		
	Gami3	0.786		
	Gami6	0.839		
	Gami7	0.740		
	Gami8	0.859		
Affective User Experience	Affect4	0.904	0.947	0.856
	Affect5	0.930		
	Affect6	0.941		
Trust in Platform	TrustPForm1	0.866	0.947	0.749
	TrustPForm2	0.895		
	TrustPForm3	0.860		
	TrustPForm4	0.847		
	TrustPForm5	0.866		
	TrustPForm6	0.859		
Intention	Intent1	0.894	0.927	0.809
	Intent2	0.917		
	Intent3	0.886		

5.4.2. Discriminant Validity

The discriminant validity was assessed using HTMT criterion with recommended threshold below 0.90 (Henseler et al., 2015). Table 3 presents that the discriminant validity exists with all the value are below the recommended thresholds, providing confidence that the construct in this study are effectively capturing different aspects of the phenomena under investigation.

Table 3: Discriminant Validity (HTMT Criterion)

	Gamification	Intention	Trust in Platform
Affective User Experience			
Gamification	0.665		
Intention	0.803	0.610	
Trust in Platform	0.775	0.642	0.816

5.5. Assessment of Structural Model

5.5.1 Assessment of Variance Inflation Factor (VIF), Power of the Model (R^2), and Effect Size (f^2)

The key criteria for assessing the structural model in PLS-SEM include lateral collinearity (VIF), the significance of the path coefficient, the level of R^2 value, and the effect of the f^2 size. Table 4 presents the values for all the assessments involved. As recommended by Hair et al. (2017), the VIF values are below 5, indicating the absence of multicollinearity among the predictor variables.

Table 4: Assessment of Structural Model

Relationship	VIF	R^2	f^2	Effect Size
GAMI → INT	1.711	0.627		
	0.006	No effect		
UX → INT	2.296		0.161	Medium
TIP → INT	2.237		0.231	Medium
GAMI → UX	1.000	0.365	0.575	Large
GAMI → TIP	1.000	0.348	0.534	Large

Next, according to Hair et al. (2017), R^2 values of 0.26, 0.13, and 0.02 are considered substantial, moderate, and weak, respectively. The R^2 values in Table 4 show that all values are substantial. Regarding the effect size f^2, according to Cohen (1988), to assess f^2, values of 0.02, 0.15, and 0.35 represent small, medium, and large effects of the exogenous latent variable, respectively. As shown in Table 4, the effect sizes are medium and large except for the relationship between gamification and the intention to donate using a crowdfunding platform.

5.5.2 Direct Hypothesis Testing

The significant path of the hypotheses proposed was test using bootstrapping method with 5000 sub sample and the result represent in Table 5. The direct hypothesis testing presents that all hypotheses are supported except H1 in regards with the relationship of gamification towards intention. Meanwhile, H2 and H3 are supported explaining the relationship of gamification on user

experience (β = 0.604, t = 14.624, p < 0.000) and gamification of trust in platform (β = 0.590, t = 12.593, p < 0.000).

Table 5: Direct Hypothesis Testing

		Std. Beta	Std. Error	T value	P values	Lower Level (LL)	Upper Level (UP)	Decision
H1	Gamification → Intention	0.061	0.058	1.060	0.145	-0.033	0.160	Not supported
H2	Gamification → Affective User Experience	0.604	0.041	14.624	0.000	0.536	0.672	Supported
H3	Gamification → Trust in Platform	0.590	0.047	12.593	0.000	0.512	0.664	Supported
H4	Affective User Experience → Intention	0.441	0.060	6.228	0.000	0.279	0.474	Supported
H6	Trust in Platform → Intention	0.371	0.060	6.553	0.000	0.326	0.545	Supported

5.5.3 Indirect Hypothesis Testing

With regards the mediation analysis based on Table 6, affective user experience has mediation effect between gamification and intention (H5 (β = 0.259, t = 5.562, p < 0.000). The final hypothesis, H7 reveals that trust in platform also has mediation effect between gamification and intention (β = 0.224, t = 5.394, p < 0.000). Hence, both mediation hypotheses are supported.

Table 6: Indirect Hypothesis Testing

		Std. Beta	Std. Error	T value	P value	Lower Level (LL)	Upper Level (UP)	Decision
H5	Gamification -> Affective User Experience -> Intention	0.259	0.047	5.562	0.000	0.226	0.162	Supported
H7	Gamification -> Affective Trust in Platform -> Intention	0.224	0.042	5.394	0.000	0.259	0.185	Supported

6. Discussions

In recent years, crowdfunding platforms have gained substantial popularity as avenues for supporting diverse projects, causes, and initiatives financially. However, comprehending the factors that drive contributors' intentions to donate on these platforms is crucial for both platform operators and project creators. Thus, this study has investigated the role of gamification in influencing contributors' intentions and tested the mediating role of trust in the platform and affective user experience.

Despite incorporating gamification elements into the crowdfunding platform, the study found that gamification insignificantly influences the intention to donate. The limited impact of gamification on user behavior within a platform may be attributed to the incorporation of a single game element (Gallego-Durán et al., 2019). Although gamification does not have a direct impact on influencing contributors' intentions, this study suggests that a crowdfunding platform should adopt a comprehensive gaming-inspired structure, encompassing multiple elements such as rewards, point systems, achievements, and leaderboards (Hamari et al., 2014; Schell, 2008). This aligns with the concept of crowdsourcing in crowdfunding, where complex game design has proven effective in driving positive user behavioral intentions (Kavaliova et al., 2016; Puritat, 2019).

Interestingly, the study reveals that the insignificant relationship between gamification and the intention to donate on crowdfunding platforms is better explained by the mediating variables. Affective user experience and trust in the platform significantly mediate the relationship between gamification and intention to donate. Gamification features, such as progress bars, leaderboards, and badges, positively enhance affective user experience and trust in the platform, ultimately influencing contributors' intention to donate. The results suggest that the mediating roles of these two constructs significantly play an important role in conveying the stimulus and translating it to achieve the behavioral intention. Furthermore, online activities are easily exposed to the element of risk, thus showing that trust is the most crucial part when the activities take place in a virtual space.

In essence, online activities are improved by game elements serving as stimuli, affecting the cognitive and affective states of individuals, thereby eliciting specific responses from users. Gamification, as argued by Triantoro et al. (2019), establishes a technology-driven trust relationship

and encourages users to achieve their objectives on the platform. External stimuli, such as website features, influence users' affective states and trust, leading to subsequent behavioral responses.

7. Implications of the Study

The findings of this paper contribute significantly to both theoretical and managerial perspectives. First, this study contributes to the theoretical knowledge by discovering the role of platform features and the influence on contributors' intention to donate. Although gamification has no direct impact on contributors' intention, this study provides a meaningful contribution to crowdfunding and online platform domain by suggesting that gamification features need to be fully integrated.

Second, finding regarding the relationship between gamification and trust in the platform contributes to the existing body of knowledge. Limited research has explored the relationship between gamification and trust on the platform. Gamification, known for providing entertaining and interactive features to engage users, might be perceived to interfere with users' trust in the website. However, this research empirically demonstrates that gamification positively influences users' perception of trust in the platform.

Third, affective user experience and trust in the platform also play their mediating role between the platform features and the intention to donate using crowdfunding platform. Empirically, the mediating role of these two constructs significantly plays an important role in transporting the stimulus and translating it to achieve the behavioral intention. These findings deepen the understanding of human behavior when engaging in online activities.

From practical perspectives, first, considering that most crowdfunding platforms currently apply the first layer of game elements, such as progress bars, badges, and leaderboards, which instill trust in the platform among contributors, there is potential to enhance this tactic. By exploring the incorporation of the second layer of gamification, such as point reward systems, crowdfunding platform operators can engage and retain users. Schell (2008) suggests that a game-like design could better influence individuals to perform intended behaviors. Thus, operators can consider improving crowdfunding platforms by embedding more advanced gamification features.

Second, the finding of this study confirms the interconnection of platform features, user experience, and intention. This study suggests that crowdfunding platform operators need to have a comprehensive view of platform design. As suggested by Hsu and Chen (2017), website features could foster the generation of positive user experience. Hence, the successful design enables positive user experience which would thereby simultaneously improve desirable behavioral intentions. In this light, crowdfunding platform operators should focus their attention not only on achieving successful platform features design, but also on continuously monitoring the underlying process and overall user experience.

Third, to increase contributors' trust, the crowdfunding platforms operators should disclose their due diligence process to potential contributors. This could include allowing contributors to review important documents with sensitive information redacted. By being informed about the suitability of projects, contributors can make better decisions about where to invest. This transparency can also help crowdfunding platforms to build credibility and improve their reputation. When investors are more confident, more projects are likely to succeed, attracting even more investors. This creates a balanced ecosystem and strengthens the crowdfunding sector.

This study sheds light on the significant role of platform features, gamification, and user experience in influencing contributors' intention to donate on crowdfunding platforms. The findings suggest that incorporating advanced gamification features can enhance user experience and trust. Furthermore, increasing transparency regarding due diligence processes can improve the credibility of crowdfunding platforms and foster a more robust ecosystem.

8. Conclusion and Limitations of the Study

In essence, this study contributes to the predominantly theoretical literature on the SOR model, encompassing gamification as the stimulus, affective user experience and trust in the platform as the organism, and the intention to donate using a crowdfunding platform as the response. The results extend earlier findings by examining the relationships among all the constructs and emphasizing the mediating roles of affective user experience and trust in the platform. Despite the initial unfamiliarity of gamification in the crowdfunding domain, this research establishes that the incorporation of

game elements positively impacts crowdfunding platforms, offering valuable theoretical and practical implications.

While the study yields significant findings, it is not without limitations. The primary limitation lies in the utilization of basic gamification features, such as progress bars and leaderboards, commonly employed by well-known crowdfunding platforms. As these platforms advance, future research should explore the effects of incorporating the second layer of gamification mechanics, including point rewards and quest systems. Regarding the study's primary focus on understanding factors influencing individuals' willingness to donate through crowdfunding, it is recommended that future research delves into factors impacting actual donation behaviour. Factors such as contributors' familiarity with crowdfunding, their donation history, and commitment levels could strongly predict their actual donation behaviour. Additionally, employing the Extended Theory of Planned Behaviour in future studies could provide a robust framework for examining these aspects.

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