Author:
ALEXANDER MAUNE
Department of Business Management, CEMS, University of South Africa (SA) and
Department of Banking and Finance, BUSE, University of Bindura, Zimbabwe

DONATION CROWDFUNDING AS AN ALTERNATIVE MODEL FOR SUSTAINABLE RURAL DEVELOPMENT IN ZIMBABWE

ABSTRACT

Crowdfunding has become synonymous with alternative finance and this study examined donation crowdfunding as an alternative finance model sustainable rural development in Zimbabwe. The major aim of this study was to establish critical paths that determine individual`s donation crowdfunding contribution "intention" and "behaviour" in sustainable rural development in Zimbabwe. The Partial Least Squares-Structural Equation Modeling was used to examine the extended Theory of Planned Behaviour. Primary data was collected from 210 respondents who were randomly selected in Harare's Central Business District. The results show that all the model's variables, that is, attitude, self-efficacy, and subjective norms had positive significant effects on donation crowdfunding contribution intention as predicted by the theory with the exception of social norms and perceived behaviour control variables that had negative insignificant effects on donation crowdfunding contribution intention. The path model shows an R2 of 0.603 (donation contribution intention), and 0.343 (donation contribution behaviour) and a Q2 of 0.433 and 0.212 for donation contribution intention and behaviour respectively. This study is of significance to policy-makers, researchers and the community at large as it provides an alternative financing model for sustainable rural development in Zimbabwe and beyond.

Keywords: Crowdfunding; Alternative Finance; Theory of Planned Behaviour; Attitude; Self-Efficacy; Perceived Behavioural Control; Subjective Norms; Social Norms
JEL Classification: D01; D03; D80; D83; G02

RIASSUNTO

Crowdfunding come modello di finanza alternativa per uno sviluppo rurale sostenibile in Zimbabwe

Il crowdfunding è diventato sinonimo di finanza alternativa e questo studio lo esamina come modello alternativo per uno sviluppo rurale sostenibile in Zimbabwe. Lo scopo principale è quello di stabilire attraverso quali percorsi sorge nelle persone l'intenzione e successivamente la decisione di donare tramite crowdfunding. Il modello ad equazione strutturale Partial Least Squares è stato applicato alla Teoria del Comportamento Pianificato. I dati di base sono stati raccolti su un campione di 210 persone selezionate nel distretto Central Business in Harare. Dai risultati emerge che tutte le variabili del modello, cioè attitudine, fiducia nei propri mezzi e regole personali hanno avuto effetti significativamente positivi sull'intenzione di fare donazioni crowdfunding come previsto dalla teoria, ad eccezione delle variabili di controllo relative a norme sociali e al comportamento percepito, le quali hanno effetti negativi insignificanti sull'intenzione di fare donazioni crowdfunding. Il path model mostra un valore R^2 di 0.603 della variabile intenzione e 0.343 della variabile comportamento, e un valore Q^2 di 0.433 della variabile intenzione e 0.212 della variabile comportamento, rispettivamente.
Questo studio è importante per i governanti, gli studiosi e la comunità in senso esteso in quanto fornisce un modello alternativo di finanziamento per lo sviluppo rurale sostenibile in Zimbabwe e altrove.

1. INTRODUCTION

Crowdfunding stands at the forefront of, and is synonymous with, alternative finance. Crowdfunding is arguably the most visible disruptive technology intermediation. In less than a decade, crowdfunding has gained traction in a number of developed economies that include Australia, United Kingdom, Netherlands, Italy, and United States of America. The World Bank holds that crowdfunding could amass over USD300 billion in cumulative transactions by 2025 (Meyskens and Bird, 2015). Macht and Weatherston (2015) define crowdfunding as a community-enabled financing model based on the principles of crowdsourcing adapted into fundraising context. In this respect, an old fundraising method (synonymous to 'Mukando' in Zimbabwe) receives a new boost from internet technologies towards achieving greater fundraising scale, speed and scope. The fact that it anchors in communities, crowdfunding is associated with

benefits beyond the sums of money raised from backers and funders. Gerber and Hui (2013) and Nucciarelli *et al.* (2017) argue that some of these benefits include access to timely feedback, technology and knowledge of concepts, business partners, media as well as future funders. Through crowdfunding, once marginalized individuals and small companies, who traditionally have had great difficulty obtaining capital, have access to anyone in the world with a computer, internet access, and spare cash to invest (Shneor and Vik, 2020; Zhao *et al.*, 2020; Baber, 2021; Fang, 2022; Vijaya and Mathur, 2022). Since the mobilization of public sector revenues on such ventures or causes is highly unlikely, with many major countries already facing debt sustainability issues, more attention has been focused on other sustainable sources of finance (Thornton, 2025).

There are several types or models of crowdfunding. The most popular crowdfunding models include lending, equity, reward, and donation. These are further classified as investment (lending and equity) and non-investment models (reward and donation). Ziegler *et al.* (2018) in Shneor and Munim (2019) define these models of crowdfunding as follows:

"In *peer-to-peer lending* individuals or institutional funders provide loans to borrowers with the expectation of repayment of the principal and a set interest within a certain timeframe. In *equity crowdfunding* individuals or institutional funders buy an ownership stake in a company or organization. In *reward crowdfunding* backers provide funding to individuals, projects, or organizations in exchange for non-monetary rewards, products, or services. And, finally, in *donation crowdfunding* backers provide funding based on philanthropic or civic motivations with no expectation of monetary or material reward".

This study examined contribution intention and behaviour in donation crowdfunding for sustainable rural development in Zimbabwe under the auspices of the Theory of Planned Behaviour (herein, TPB) (Figure 1.). This theory by Ajzen (1991) was used to examine the nexus between donation intention and donation behaviour of people in Harare's CBD towards rural sustainable development in Zimbabwe. Donation crowdfunding contribution intention and behaviour was considered a planned behaviour. Shneor and Munim (2019) state that prior research has ignored the prospective influence of cognitive antecedents in crowdfunding contribution behavior. A modified TPB framework was used in this analysis as shown in Figure 2.

The Theory of Planned Behaviour (Ajzen, 1991) and the extended Theory of Planned Behaviour (Shneor and Munim, 2019) formulated the basis for this study. Thus, donation crowdfunding contribution behaviour was considered a planned behaviour influenced by cognitive antecedents.

DOI 10.65644/EIIE.079.03.0437

Individual participation in donation crowdfunding contribution is not without preliminary consideration. Therefore, participating in donation crowdfunding is regarded as a deliberate action (Maune, 2023). Preliminary consideration, therefore, affect one's decision to take part in donation crowdfunding contribution. These factors might include identified risks, trust, and commitment (Kang *et al.*, 2016; Daskalakis and Wei, 2017; Zhao *et al.*, 2017). Studies suggest the need for control and intention by participants as antecedents for donation crowdfunding contribution behaviour. The TPB framework provided a deep understanding of donation crowdfunding intention and behaviour and the relationship between the two latent constructs. Ajzen (1991) argues that at the core of the TPB for an individual performing a certain behaviour is the individual's intention to partake in such a behaviour. The intention captures the factors or motivators affecting behaviour. The argument by Ajzen (1991) was later confirmed by meta-analyses linking intention and behaviour together (Armitage and Conner, 2001; Sheeran, 2002, Shneor and Munim, 2019). To Ajzen (1991), this link can only materialize if an individual is free to make a decision whether or not to behave. However, the TPB (Ajzen, 1991) was a modification of the Theory of Reasoned Action (Fishbein and Ajzen, 1975). According to Ajzen (1991), intention to partake certain behaviour is influenced by attitude, perceived behavioural control (PBC) and subjective norms. Normative measures where included in this current study as suggested by Ajzen and Fishbein (2005), that is, subjective and social norms. Literature, however, identified two types of subjective norms, that is, injunctive and descriptive norms. To Manning (2009), injunctive norms relate to social pressure to engage in a behaviour based on the perception of what other people want you to do (subjective norms) whereas descriptive norms is based on the observed or inferred behaviour of others (social norms).

Based on the TPB framework (Figure 2), hypotheses were formulated as shown below.

FIGURE 1 - *Theory of Planned Behaviour (Ajzen, 1991)*

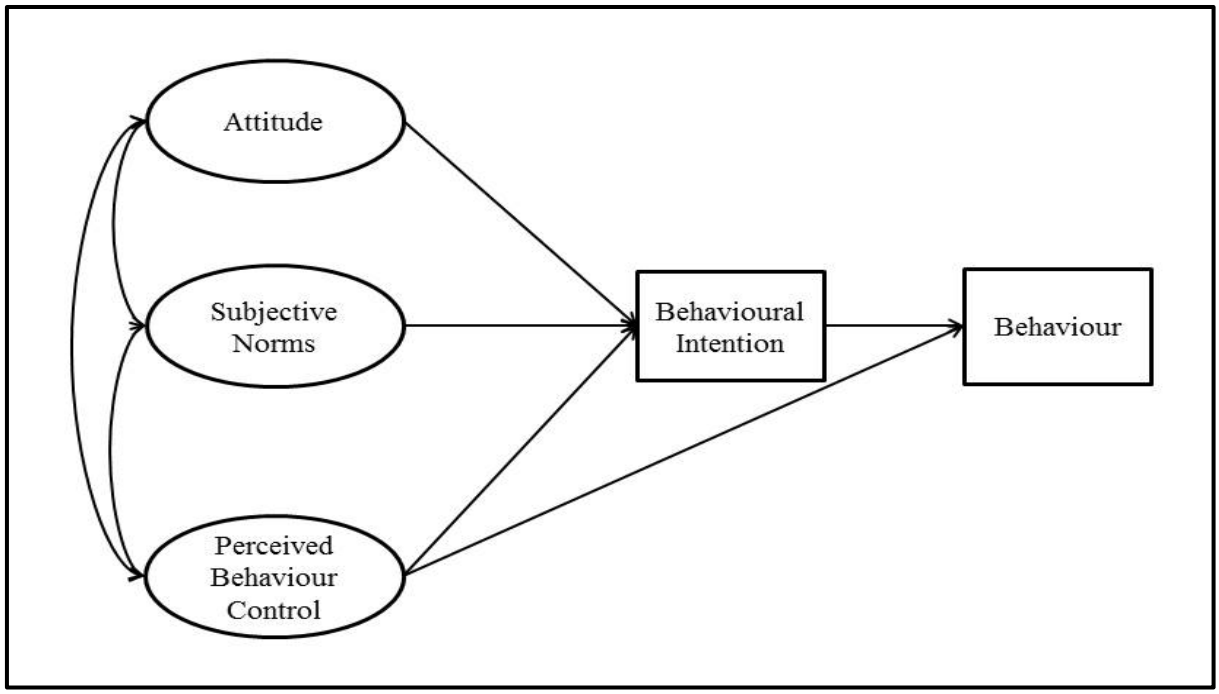
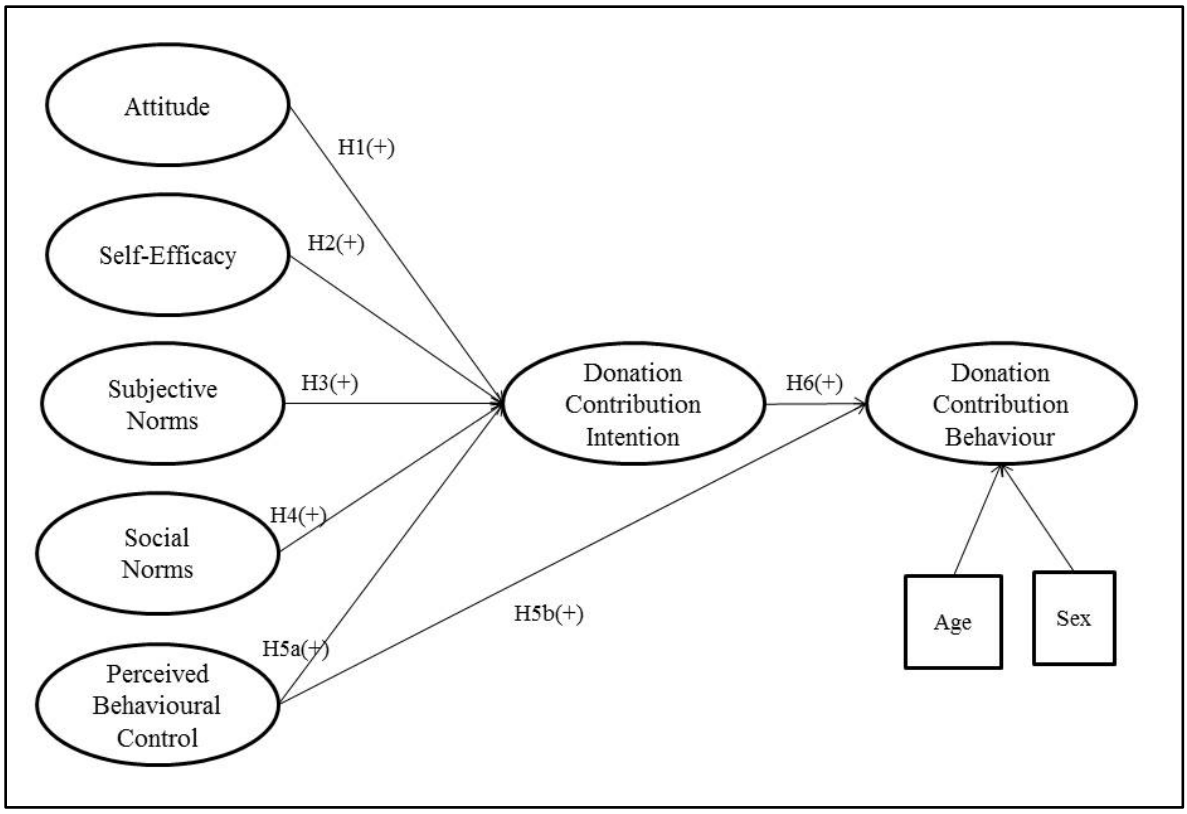


FIGURE 2 - *Research Model*



DOI 10.65644/EIIE.079.03.0437

1.1 Hypothesis Development

The hypotheses in Table 1 were formulated from the research model as shown in Figure 2. These hypotheses validated and tested the proposed path analysis model above.

TABLE 1 - *Proposed Research Hypothesis*

Proposed Hypothesis
H_1 "Attitude will have a direct positive influence on DCI in SRD."
H_2 Self-efficacy will have a direct positive influence on DCI in SRD."
H_3 "Subjective norms will have a direct positive influence on DCI in SRD."
H_4 "Social norms will have a direct positive influence on DCI in SRD."
H_{5a} "Perceived behavioural control will have a direct positive influence on DCI in SRD."
H_{5b} "Perceived behavioural control will have a direct positive influence on DCB in SRD."
H_6 "Donation contribution intention will have a direct positive influence on DCB in SRD."

Note: DCI – Donation contribution intention, SRD – Sustainable rural development, DCB – Donation contribution behaviour.

This study seeks to examine donation crowdfunding intention and behaviour in financing sustainable rural development in Zimbabwe using the PLS-SEM approach. An extended theory of planned behaviour (Ajzen, 1991 and Shneor and Munim, 2019) formed the basis of this study by examining the factors affecting an individual's intention and behaviour to donate or contribute. The article reviewed literature related to donation crowdfunding in relation to the TPB. Thereafter, it looked at the methods used to examine the factors influencing an individual's intention and behaviour to donate or contribute. This included the procedure and measurement that were done. Results were then presented and discussed. Finally, the study concluded by providing practical and theoretical implications as well as direction for further future research over and above the study's limitations.

2. METHODS

This study examined donation crowdfunding as an alternative financing model for sustainable rural development in Zimbabwe using the PLS-SEM approach. The study was premised on the TPB. Primary data for this study was collected from 210 respondents who were randomly selected from Harare's CBD. The survey targeted bank customers drawn from various banks. The

researcher took advantage of bank queues to distribute the questionnaire and the respondents were asked to complete the survey while waiting for their turn to be served. The demographic summary of the respondents is as shown in Table 2. The questionnaire was circulated among the randomly selected individuals. To avoid biases, the participants were promised confidentiality and anonymity of responses. Participation was voluntary and consent was sort first. The questionnaire was first piloted using 10 fourth year university students and lecturers to identify conspicuous characteristics, confusing, difficult, and poorly worded questions. The adjustments were then incorporated into the final questionnaire that was distributed. The uniqueness of the study prompted the sample size used as guided by Hoyle (1995), Marcoulides and Saunders (2006), Wang *et al.* (2010) and Wong (2010).

2.1 Respondents and Procedure

Respondents were given 10 minutes at most to complete the questionnaire with 210 fully completed responses collected. After data cleaning, 206 responses were then transferred into an excel sheet before analysed using SmartPLS. The response rate represented 98%. Data cleaning in this case included deleting observations with missing data and suspected unengaged respondents. This study took unengaged respondents as those that reported the same response for all successive items (for example, a 5 across all observable variables). Marcoulides and Saunders (2006) and Hair *et al.* (2013) guided the sample size utilized in this study. To Marcoulides and Saunders (2006), the minimum sample size necessary must be determined by the maximum number of arrows pointing to the latent variable in the model. Works by scholars such as Hoyle (1995), Hair *et al.* (2013) and Shneor and Munim (2019) also influenced this study. These studies provide that a modest sample size is a good starting point when performing path modeling. Table 2 denotes the descriptive demographic statistics for the study.

DOI 10.65644/EIIE.079.03.0437

TABLE 2 - *Demographic Statistics*

Variable	Category	Frequency	Percentage
Gender	Male	143	69%
	Female	63	31%
Age	<20	0	0%
	21 – 30	93	45%
	31 – 40	76	37%
	41 – 50	14	7%
	>50	23	11%
Marital Status	Single	91	44%
	Married	107	52%
	Divorced	8	4%
Education	Certificate	6	3%
	Diploma	8	4%
	Bachelor's Degree	99	48%
	Master's Degree	64	31%
	PhD	2	1%
	Other	27	13%

Source: Author's compilation.

2.2 Measurement

Multi-item measures were used to measure the model's latent variables as adopted from previous studies and conceptually adjusted and re-specified into donation crowdfunding context. Table 3 presents the measures used in this study. A 5-point Likert scale was utilized, with 1 indicating complete disagreement and 5 indicating complete agreement. Exploratory factor analysis led to the removal of one item (PBC5) that did not load on one of the factors as expected. Table 3 also presents items retained and removed in the analysis. Factor loadings, reliability and validity for all latent constructs in the model are presented in Table 5. All factor loadings were significant ($p < 0.001$) at 95% interval showing that included items for each latent variable reflect a single underlying construct. The reliabilities and variance extracted for each variable indicate the model's reliability and validity. All construct reliabilities exceeded or were close to 0.70 (Hair *et al.,* 2017 and Shneor and Munim, 2019). Variance extracted estimates were all 0.5 and above (Bagozzi and Yi, 1988). Discriminant validity was evident as the AVE within factors were greater

than the squared correlations between the latent variables (Fornell and Larcker, 1981). Table 3 combines measurement items, factor loadings, and their sources.

TABLE 3 - *Survey Items, Measurement Properties, and Sources*

Latent Construct	Measurement Variables		Factor loadings	Sources
ATT (attitude)	ATT1	I think I would like contributing to donation crowdfunding for SRD.	0.926	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	ATT2	I am likely to feel good by contributing to donation crowdfunding for SRD.	0.928	
	ATT3	I think contributing to donation crowdfunding for SRD is good for me.	0.904	
	ATT4	I think contributing to donation crowdfunding for SRD is appropriate for me.	0.931	
	ATT5	I think contributing to donation crowdfunding for SRD is beneficial for me.	0.934	
	ATT6	I have a positive opinion about contributing to donation crowdfunding for SRD.	0.806	
PBC (perceived behaviour control)	PBC1	My engagement in contributing to donation crowdfunding for SRD is within my control.	0.733	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	PBC2	I would be able to contribute to donation crowdfunding for SRD (if I wanted to).	0.917	
	PBC3	The decision to contribute to donation crowdfunding for SRD is entirely mine.	0.909	
	PBC4	Whether or not I contribute to donation crowdfunding for SRD is entirely up to me.	0.852	
	PBC5	I very much feel that whether I contribute or don't contribute to donation crowdfunding for SRD is beyond my control.	*Removed*	
SELE (self-efficacy)	SELE1	I have confidence in my ability to contribute to donation crowdfunding for SRD campaigns.	0.802	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	SELE2	I have the expertise needed to contribute to donation crowdfunding for SRD campaigns.	0.926	
	SELE3	I am confident in my ability to navigate and use crowdfunding platforms and websites.	0.930	
	SELE4	I am confident in my ability to contribute to campaigns for SRD through crowdfunding platforms.	0.879	

DOI 10.65644/EIIE.079.03.0437

TABLE 3 - *continued*

Latent Construct	Measurement Variables		Factor loadings	Sources
SOCN (social norms)	SOCN1	I read/saw news which suggested that contributing to donation crowdfunding for SRD is a good way of financing projects.	0.817	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	SOCN2	The popular press (media) depicted a positive sentiment towards contributing to donation crowdfunding for SRD.	0.836	
	SOCN3	Mass media reports convinced me to contribute to donation crowdfunding for SRD.	0.749	
	SOCN4	Expert opinions depicted positive opinions about contributions to donation crowdfunding for SRD campaigns.	0.799	
SUBN (subjective norms)	SUBN1	People who are important to me think that I should contribute to donation crowdfunding for SRD campaigns.	0.856	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	SUBN2	People who influence my behavior encourage me to contribute to donation crowdfunding for SRD campaigns.	0.899	
	SUBN3	My colleagues think that I should contribute to donation crowdfunding for SRD campaigns.	0.895	
	SUBN4	My friends think that I should contribute to donation crowdfunding for SRD campaigns.	0.928	
DCI (donation contribution intention)	DCI1	Given the chance, I intend to contribute to donation crowdfunding for SRD campaigns.	0.801	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	DCI2	Given the chance, I predict that I would contribute to donation crowdfunding for SRD campaigns in the future.	0.896	
	DCI3	It is likely that I will contribute to donation crowdfunding for SRD campaigns in the near future.	0.885	
	DCI4	I have the intention to contribute to donation crowdfunding for SRD campaigns.	0.906	
	DCI5	I intend to actively contribute to donation crowdfunding for SRD campaigns.	0.913	
DCB (donation contribution behaviour)	DCB1	I frequently contribute to donation crowdfunding for SRD campaigns.	0.912	Adapted and adopted from Shneor and Munim (2019) and Maune (2024).
	DCB2	I spend much effort contributing to donation crowdfunding for SRD campaigns.	0.842	

Note: SRD - Sustainable Rural Development.

3. APPROACH TO SEM

There are several distinct approaches to SEM, and one such approach is the Partial Least Squares (PLS) that was used in this study. This approach focused mainly on the analysis of variance. Data was analysed using the SmartPLS 3 software version. The approach was used in line with Vinzi *et al.* (2010). PLS-SEM was chosen as a good alternative to the covariance-based (CB) SEM because it is suitable for; (i) small sample size, (ii) unique studies and, (iii) its predictive accuracy (Wang *et al.,* 2010; Wong, 2010). Despite its limitations, PLS remains useful for SEM in applied research projects with limited participants and where data distribution is skewed (Wong, 2013). This approach has been applied in various fields as cited by Wong (2013). The data set used in this study was first checked for missing values, invalid observations and outliers before the final analysis in SmartPLS.

3.1 Analysis

The PLS-SEM path modeling estimations for both the theory of planned behaviour and the research model are as shown in Figure 3 and Figure 4. Through the estimation process of the PLS-SEM path model, the following observations were obtained:

3.1.1 Reflective Measurement Model

The study model measurement was reflective. According to Avkiran (2018), each reflective indicator is related to a specific construct or latent variable by a simple regression as follows:

$$x_h = \pi_{h0} + \pi_h \xi + \varepsilon_h$$

where $x_{h=1, \ldots, p}$ is the h_{th} regression where a reflective indicator is the dependent variable and p equals the number of reflective indicators per construct, π_{h0} is the intercept, π_h is the (single) regression parameter (outer loading) to be estimated and ξ is the latent variable. The residual variable ε_h is uncorrelated with the latent variable (Tenenhaus *et al.*, 2005).

As part of the measurement model evaluation, one item, PBC5 was omitted from the analysis due to a lower factor loading (< 0.600) as given by Gefen and Straub (2005). To test the reliability of the constructs, the study used Cronbach's alpha and composite reliability (CR). All the CRs were

DOI 10.65644/EIIE.079.03.0437

above the recommended value of 0.700 (Hair *et al.*, 2017). Cronbach`s alpha of each construct exceeded the 0.700 threshold (see Table 4).

TABLE 4 - *Loadings, Reliability, and Validity*

	Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
ATT1	0.926	0.956	0.956	0.965	0.821
ATT2	0.928				
ATT3	0.904				
ATT4	0.931				
ATT5	0.934				
ATT6	0.806				
DCB1	0.912	0.707	0.731	0.872	0.770
DCB2	0.842				
DCI1	0.801	0.927	0.928	0.945	0.776
DCI2	0.896				
DCI3	0.885				
DCI4	0.906				
DCI5	0.913				
PBC1	0.733	0.878	0.944	0.916	0.732
PBC2	0.917				
PBC3	0.909				
PBC4	0.852				
SELE1	0.802	0.907	0.909	0.936	0.785
SELE2	0.926				
SELE3	0.930				
SELE4	0.879				
SOCN1	0.817	0.816	0.831	0.877	0.641
SOCN2	0.836				
SOCN3	0.749				
SOCN4	0.799				
SUBN1	0.856	0.917	0.923	0.942	0.801
SUBN2	0.899				
SUBN3	0.895				
SUBN4	0.928				

Convergent validity was acceptable as the Average Variance Extracted (AVE) exceeded the 0.500 threshold (Bagozzi and Yi, 1988). The results for reliability and validity along with the factor loadings for all the items are as shown in Table 4. Discriminant validity was first assessed using the Fornell-Larcker criterion. The results showed that the square-root of AVE for the construct was greater than the inter-construct correlation (see Table 5) (Fornell and Larcker, 1981). Discriminant validity was also assessed using the Heterotrait-Monotrait ratio of correlations (Henseler *et al.*, 2015), with values below the threshold of 0.900. Hence, discriminant validity was established (see Table 6).

TABLE 5 - *Fornell-Larcker Criterion*

	ATT	DCB	DCI	PBC	SELE	SOCN	SUBN
ATT	*0.906*						
DCB	0.464	*0.878*					
DCI	0.748	0.530	*0.881*				
PBC	0.136	0.250	0.112	*0.856*			
SELE	0.514	0.420	0.529	0.243	*0.886*		
SOCN	0.442	0.448	0.438	0.257	0.586	*0.801*	
SUBN	0.325	0.343	0.377	0.175	0.284	0.590	*0.895*

Note: Values in italic represent square-roots of AVE.

TABLE 6 - *Heterotrait-Monotrait Ratio (HTMT)*

	ATT	DCB	DCI	PBC	SELE	SOCN	SUBN
ATT							
DCB	0.555						
DCI	0.791	0.652					
PBC	0.156	0.281	0.125				
SELE	0.553	0.511	0.577	0.268			
SOCN	0.496	0.586	0.493	0.317	0.658		
SUBN	0.343	0.429	0.407	0.182	0.315	0.705	

DOI 10.65644/EIIE.079.03.0437

3.1.2 Structural Model

The study examined the path analysis model after establishing the reliability and validity of variables. Tenenhaus *et al.* (2005) and Avkiran (2018) argue that, the theoretical model:

$$\xi_j = \beta_{jo} + \sum_i \beta_{ji}\,\xi_i + v_j$$

is examined to provide empirical evidence of the path model using SmartPLS,
where:
ξ_j is the endogenous construct,
ξ_i represents the exogenous constructs,
β_{jo} is the constant term in this (multiple) regression model,
β_{ij} are the regression coefficients, and
v_j is the error term; the predictor specification condition applies.

The PLS-SEM path analysis model output in Figure 3 shows the hypothesized results of the path analysis model in Figure 1, whilst the PLS-SEM path analysis research model output in Figure 4 denotes the hypothesized outcome of the path analysis in Figure 2. The path analysis of the research model (Figure 2) was examined using the significance of paths, Q^2, and R^2. The strength of each structural path determined (R^2 value for the dependent variable) the mode's goodness of fit. Falk and Miller (1992) argue that the value for R^2 should be equal to or over 0.1. The output in Table 7 shows the R^2 values above 0.1. The study, therefore, established the predictive capability of the model. Wong (2013) argues that predictive relevance of endogenous variables is established by Q^2. Hence, the study established a Q^2 above zero (0) for both DCB and DCI denoting predictive relevance. The study output in Table 7 denotes significance of the prediction by the constructs. Table 7 further shows the results of hypotheses tested and the significance of the relationships between variables.

Results of H_1, H_{5b} and H_6 were positive and significant at 95% confidence interval, with p-values (0.000, 0.042 and 0.000) below 0.05 ($p<0.05$) respectively. However, H_2, H_3, H_4, and H_{5a} showed insignificant ($p>0.05$) though positive relationship with the exception of H_4 and H_{5a} that were negative at 95% confidence interval (Table 7).

TABLE 7 - *Mean, STDEV, T-Values, P-Values, Confidence Intervals, R^2, and Q^2*

Hypothesis	Relationship	β	STDEV	T Statistics	P Values	2.50%	97.50%
H_1	ATT -> DCI	0.608	0.088	6.987	0.000	0.415	0.764
H_2	SELE -> DCI	0.188	0.106	1.825	0.068	-0.026	0.393
H_3	SUBN -> DCI	0.129	0.098	1.430	0.153	-0.067	0.318
H_4	SOCN -> DCI	-0.001	0.096	0.209	0.834	-0.182	0.199
H_{5a}	PBC -> DCI	-0.034	0.072	0.532	0.595	-0.171	0.103
H_{5b}	PBC -> DCB	0.212	0.094	2.034	0.042	0.009	0.383
H_6	DCI -> DCB	0.416	0.095	5.257	0.000	0.300	0.674
		R^2	R^2 Adjusted	Q^2			
	DCB	0.343	0.315	0.212			
	DCI	0.603	0.586	0.433			

FIGURE 3 - *Theory of Planned Behaviour Output*

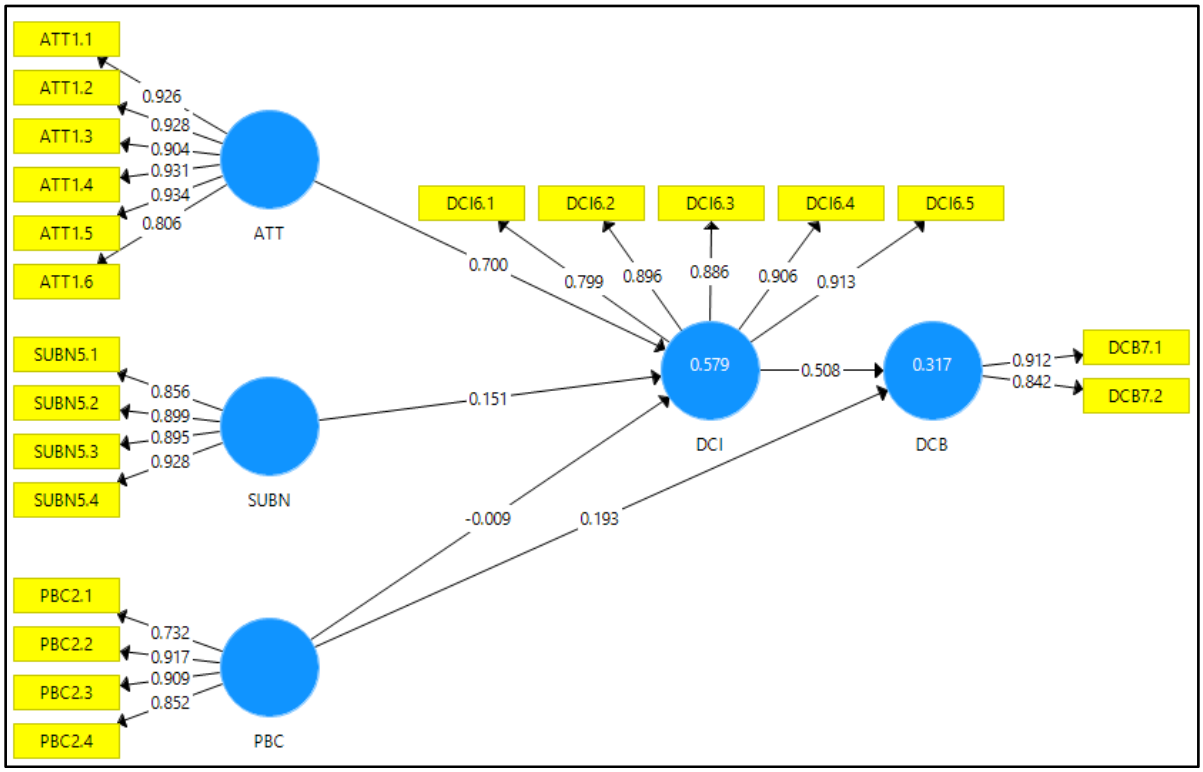
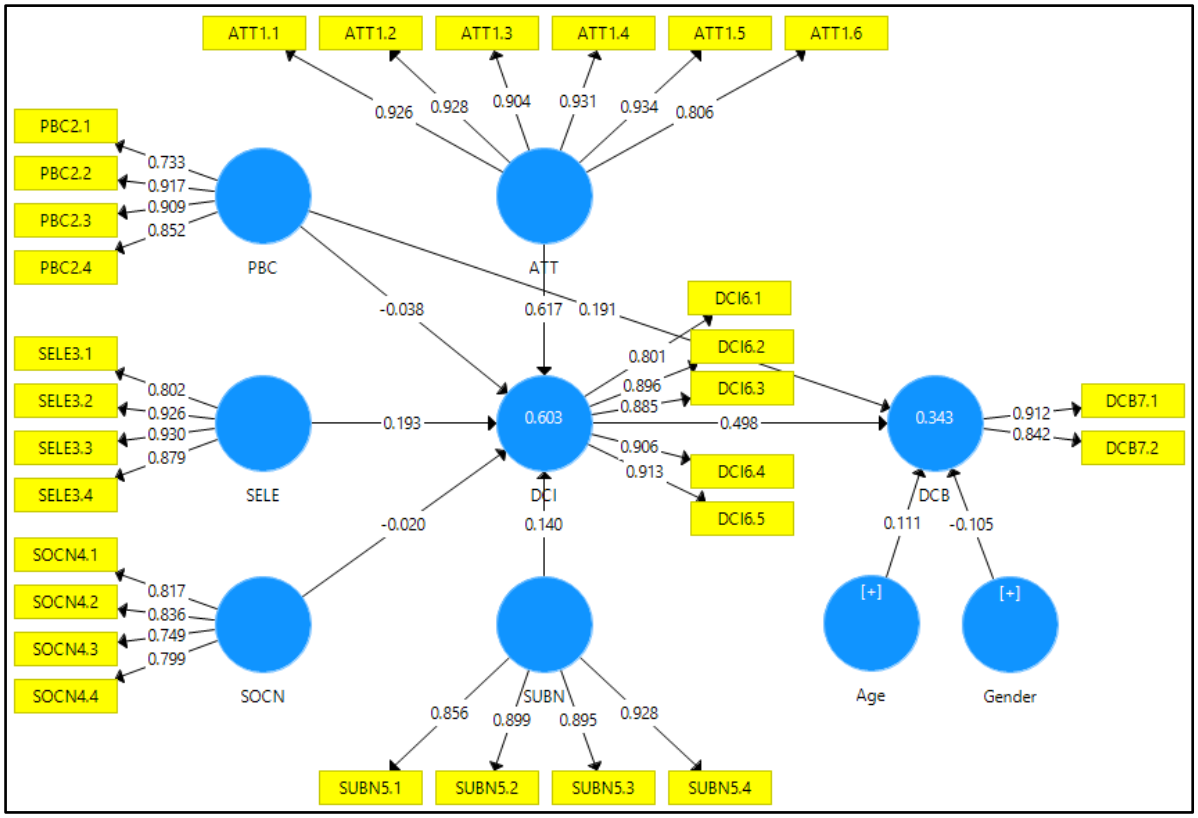


FIGURE 4 - *Research Model Output*



4. DISCUSSION

The results of this study shows that the model properly fits the factors of donation crowdfunding contribution behaviour and supports the TPB in the context of donation crowdfunding as an alternative financing model for sustainable rural development in Zimbabwe. The model also predicts crowdfunding behaviour. The study also provides new insights on the role of cognitive antecedents of donation crowdfunding contribution behaviour in sustainable rural development in Zimbabwe. All the latent variables in the model, that is, attitude, self-efficacy, and subjective norms had positive significant effects on donation crowdfunding contribution intention as predicted by the theory with the exception of social norms and perceived behaviour control that had negative insignificant effects on donation crowdfunding contribution intention. These findings are in line with the results of prior studies (Shneor and Munim, 2019). The results also showed the negative effects of perceived behaviour control on behaviour intention to donate towards sustainable rural development. However, PBC had a positive effect on donation crowdfunding contribution behaviour. Prior studies by Frey and Meier (2004), Gunawan and

Huarng (2015), Meer (2011) and Shneor and Munim (2019) showed the impact of donation contribution intentions on behaviour which was also confirmed by the current study. To Shneor and Munim (2019), the negative impact of perceived behaviour control on behaviour intentions shows the ability of people to resist social pressure in donation crowdfunding contribution. The more the social pressure to resist participation in crowdfunding, the less the intentions to contribute to the cause. Although the impact of social media intensity and pressure on donation crowdfunding contribution has not been adequately researched, prior studies have acknowledged its importance on the success of crowdfunding initiatives and campaigns. These sentiments were echoed by (Borst, Moser, and Ferguson, 2017; Hobbs *et al.,* 2016). Studies by Berliner and Kenworthy (2017), for example, show the importance of social media in donation crowdfunding contribution intentions and behaviour. Self-efficacy, however, shows a positive significant impact of behaviour intention to donation crowdfunding in contrast with findings by Shneor and Munim (2019) who found no effects of self-efficacy on behaviour intentions. This might have been as a result of improved expertise, confidence and ability to use financial platforms. Financial stability and inclusion has had a major role in improving the expertise, confidence and ability in using financial platforms to make transactions the world over. The study also showed that donation crowdfunding contribution intentions affect donation crowdfunding contribution behaviour. These findings are in line with prior studies (Lawton and Marom, 2012; Mollick, 2014; Shneor and Flaten, 2015 and Shneor and Munim, 2019; Baber, 2021; Fang, 2022; Shneor and Vik, 2020; Vijaya and Mathur, 2022; Zhao *et al.,* 2020).

4.1 Limitations

Although the findings and insights presented by this study are of interest, the study has its limitations that should be acknowledged. First, the findings were limited by geographical location in which the data was collected. Data was collected in Harare's CBD though the sample was fairly large, it could have covered other towns like Bulawayo which is an industrial hub of Zimbabwe. Harare was chosen as it represents the financial hub of the country and most of the financial activities of the country are financed from Harare hence, the focal point of the study. A cross-country study could have strengthened the generalizability of the findings of the study. The study's findings were also constrained by its context. The study focused on donation crowdfunding which might limit the generalizability of the findings. Further inquiries are needed

DOI 10.65644/EIIE.079.03.0437

to see if the findings are a reflection of other crowdfunding types. It would be interesting to see how these TPB factors would affect participants' intention and behaviour in other models of crowdfunding such as equity, lending and reward.

This study depended much on the TPB framework and everything revolved around this conceptual framework (Fig. 1). The research problem and research questions were formulated from the TPB framework. The study also examined the effects of the factors added to the original TPB framework, that is, self-efficacy and social norms. Nevertheless, there is more room in extending this framework or use of other models of analyzing behaviour intention and use of technology such as the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh *et al.*, 2003) and the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) (Venkatesh *et al.*, 2012).

Finally, this study was limited to one method of data collection which on its own might lend the results to some methodological bias. A mixed-method approach could have dealt with this bias. Interviews could have also helped authenticate the findings. Further future studies could apply the mixed-methods approach. However, measures were put in place to cater for such bias, for example, a fairly large sample size was used with random sampling method used in selecting the participants. Data was checked for reliability using the Cronbach's alpha and Composite reliability. Convergent validity was assessed using the AVE whilst discriminant validity was tested using the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio. These checks showed non-existence of response bias and common method bias.

5. Conclusions

Donation crowdfunding has attracted the attention of many entrepreneurs and start-ups in the recent past. Countries have seen development projects in both urban and rural areas being financed through donation crowdfunding. It implies donors provide funding to individuals, projects or companies based on philanthropic or civic motivations with no expectation of monetary or material return. It focuses more on charity and philanthropic causes, as well as educational, community and social enterprise. There is no legally binding financial obligation to funders/donors incurred by fundraisers/recipients; no expectation of financial or material returns.

Funders donate to causes that they want to support, with no expected monetary compensation, it is philanthropic. This model of financing is close to micro-financing where the reward often is limited to some token of appreciation. The model provides a good fit for idea/inception and proof of concept/prototyping. It allows the community to decide which ideas are worth funding early on. This study contributes to literature relating to factors affecting donation crowdfunding contribution intention and behaviour using the TPB in sustainable financing of rural developmental projects. The study demonstrates the applicability of the TPB framework in sustainable financing of rural developmental projects in Zimbabwe. Self-efficacy and social norms were added factors to the original TPB framework and these were also examined in donation crowdfunding contribution intention and behaviour with regards to sustainable rural developmental projects in Zimbabwe. The analysis was done using data collected from a survey in Harare's CBD which is the financial hub of Zimbabwe. The findings support the model's application as an alternative financing model for sustainable rural development in Zimbabwe. The findings show that attitude, self-efficacy, subjective norms positively affect donation contribution intention whilst social norms and perceived behavioural control negatively affect donation contribution intention. Although perceived behavioural control affected donation contribution intention negatively, it had a positive effect on donation contribution behaviour. Donation contribution intention showed a positive strong effect on donation contribution behaviour.

In conclusion, this study proffers several contributions. The study fills the gap in knowledge regarding donation crowdfunding behaviour as an alternative financing model for rural sustainable development in Zimbabwe. It becomes the first to validate the use and applicability of the modified TPB framework in rural sustainable development in Zimbabwe. Specifically, the study shows evidence of the positive effect of donation contribution intention on donation contribution behaviour. The modified theory can be used and tested in other different contexts and fields. The applicability and uptake of financial inclusivity platforms may be tested and validated using this modified TPB framework. Finally, this study was based on a fairly large sample size and data that passed a variety of bias tests.

DOI 10.65644/EIIE.079.03.0437

5.1 Implications for Research and Practice

The findings of this study show evidence of applying the TPB model in donation crowdfunding contribution intentions and behaviour as an alternative financing model in sustainable rural development in Zimbabwe. Although the generalizability of the study relies more on the replicability of the study in various scenarios and contexts, such efforts will require different methodologies, sample sizes and also comparative studies. Also longitudinal data sets and their potential effects on the general findings may be examined. The use of a mixed-methodology might also be a good test of the replication of the study.

The current findings shows that organisations or individuals intending to use or promote the use of donation crowdfunding need to take further steps such as providing trainings and campaigns regarding the use of such platforms in raising funds for rural projects. Such trainings and campaigns will increase the needed awareness of the advantages and disadvantages of using such platforms in fundraising. Governments should encourage the use of such platforms through provision of regulations that govern the creation and use of crowdfunding platforms. This is critical because crowdfunding has emerged as an alternative means of funding among projects for non-profit causes, cultural or artistic projects, experimental technologies, and startups that were traditionally marginalized and excluded in the traditional financial sector. Among other organisations, local NGOs operating in rural communities need to adopt donation crowdfunding to fund their community projects in areas they operate in. Governments must promote the establishment of crowdfunding centres, especially at state-owned universities to fund developmental projects and start-ups in the country. University technology hubs must be at the forefront in collaboration with private players to establish such platforms. These platforms can be established in partnership with the private sector as well as other international players.

Disclosure statement

There is no potential or existing conflict of interest in this study.

Data availability statement

The study used data obtained from a survey which can be provided on request from the author, A.M.

Declaration of funding

No funding was received for this study.

Author contribution statement

The author contributed everything in this article, that is, conceptualisation – A.M; Methodology – A.M; Data collection – A.M.; Writing – A.M, Investigation – A.M, Reviewing – A.M.

REFERENCES

Ajzen, I. (1991), "The Theory of Planned Behavior", *Organisational Behavior and Human Decision Processes,* 50(2), 179-211, https://doi.org/10.1016/0749-5978(91)90020-T .

Ajzen, I. and M. Fishbein (2005), *The Influence of Attitudes on Behaviour*, in: D. Albarracin, B. T. Johnson, M.P. Zanna (Eds), "The Handbook of Attitudes", (pp. 173-221), Lawrence Erlbaum Associates Publishers: Mahwah, NJ.

Armitage, C.J. and M. Conner (2001), "Efficacy of the Theory of Planned Behaviour: A Meta-Analytic Review", *British Journal of Social Psychology,* 40(4), 471-499, https://doi.org/10.1348/014466601164939.

Avkiran, N.K. (2018), *Rise of the Partial Least Squares Structural Equation Modeling: An Application in Banking*, in: N.K. Avkiran, C.M. Ringle (Eds), "Partial Least Squares Structural Equation Modeling", (pp. 1-29), *International Series in Operations Research & Management Science,* Springer. https://doi.org/10.1007/978-3-319-71691-6_1.

Baber, H. (2021), "Religiosity and Intention to Participate in Donation Based Crowdfunding", *Journal of Management, Spirituality & Religion*, 18(3), 218-238.

Bagozzi, R.P. and Y. Yi (1988), "On the Evaluation of Structural Equation Models", *Journal of the Academy of Marketing Science,* 16(1), 74-94.

Berliner, L.S. and N.J. Kenworthy (2017), "Producing a Worthy Illness: Personal Crowdfunding amidst Financial Crisis", *Social Science and Medicine,* 187, 233-242, https://doi.org/10.1016/j.socscimed.2017.02.008.

Borst, I., C. Moser and J. Ferguson (2017), "From Friendfunding to Crowdfunding: Relevance of Relationships, Social Media, and Platform Activities to Crowdfunding Performance", *New Media & Society,* 20(4), 1396-1414, https://doi.org/10.1177/1461444817694599.

Daskalakis, N. and Y. Wei (2017), "User's Perceptions of Motivations and Risks in Crowdfunding with Financial Returns", Retrieved from https://ssrn.com/abstract=2968912 or http://dx.doi.org/10.2139/ssrn.2968912 .

Falk, R.F. and N.B. Miller (1992), A Primer for Soft Modeling, University of Akron Press.

Fang, X. (2022), "Why do we Hide Good Deeds? The Selfless and Anonymous Donation Behavior in Crowdfunding", *Technology in Society*, 71, 102144.

Fishbein, M. and I. Ajzen (1975), Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Addison-Wesley: Reading, MA.

Fornell, C. and D.F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error", *Journal of Marketing Research,* 18(1), 39-50.

Frey, B.S. and S. Meier (2004), "Social Comparisons and Pro-Social Behavior: Testing 'Conditional Cooperation' in a Field Experiment", *The American Economic Review,* 94(5), 1717-1722.

Gefen, D. and D. Straub (2005), "A Practical Guide to Factorial Validity Using PLS-Graph: Tutorial and Annotated Example", *Communications of the Association for Information Systems*, 16, 91-109.

Gerber, E.M. and J. Hui (2013), "Crowdfunding: Motivations and Deterrents for Participation", *ACM Transactions on Computer-Human Interaction (TOCHI)*, 20(6), 1-32, https://doi.org/10.1145/2530540.

Gunawan, D.D. and K-H. Huarng (2015), "Viral Effects of Social Network and Media on Consumers' Purchase Intention", *Journal of Business Research,* 68(11), 2237-2241, https://doi.org/10.1016/j.jbusres.2015.06.004.

Hair, J.F., G.T.M. Hult, C.M. Ringle and M. Sarstedt (2013), A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), Sage: Thousand Oaks, CA.

Hair, J.F., G.T.M. Hult, C.M. Ringle and M. Sarstedt (2017), A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (2nd Ed.), Sage: Los Angeles.

Henseler, J., C.M. Ringle and M. Sarstedt (2015), "A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling", *Journal of the Academy of Marketing Science*, 43, 115-135.

Hobbs, J., G. Grigore and M. Molesworth (2016), "Success in the Management of Crowdfunding Projects in the Creative Industries", *Internet Research,* 26(1), 146-166, https://doi.org/10.1108/IntR-08-2014-0202.

Hoyle, R.H. (Ed.) (1995), Structural Equation Modeling, SAGE Publications, Inc.: Thousand Oaks, CA.

Kang, M., Y. Gao, T. Wang and H. Zheng (2016), "Understanding the Determinants of Funders' Investment Intentions on Crowdfunding Platforms: A Trust-Based Perspective", *Industrial Management & Data Systems,* 116(8), 1800-1819, https://doi.org/10.1108/IMDS-07-2015-0312.

Lawton, K. and D. Marom (2012), The Crowdfunding Revolution: How to Raise Venture Capital Using Social Media, McGraw-Hill: New York, NY.

Macht, S.A. and J. Weatherston (2015), "Academic Research on Crowdfunders: What's Been Done and What's to Come?", *Strategic Change,* 24(2), 191-205, https://doi.org/10.1002/jsc.2010 .

Manning, M. (2009), "The Effects of Subjective Norms on Behaviour in the Theory of Planned Behaviour: A Meta-Analysis", *British Journal of Social Psychology,* 48(4), 649-705, https://doi.org/10.1348/014466608X393136.

Marcoulides, G.A. and C. Saunders (2006), "Editor's Comments – PLS: A Silver Bullet?", *MIS Quarterly,* 30(2), iii-ix.

Maune, A. (2023), "Adoption and Use of eLearning Platforms by Universities in Developing Countries: Evidence from Zimbabwe", *Cogent Education, Taylor and Francis,* 10(2), 2287905, https://doi.org/10.1080/2331186X.2023.2287905.

Maune, A. (2024), "Artificial Intelligence Applications Adoption and Use in Universities: A SEM Approach", *AUDOE,* 20(6), 318-342.

Meer, J. (2011), "Brother, can you Spare a Dime? Peer Pressure in Charitable Solicitation", *Journal of Public Economics,* 95(7-8), 926-941, https://doi.org/10.1016/j.jpubeco.2010.11.026.

Meyskens, M. and L. Bird (2015), "Crowdfunding and Value Creation", *Entrepreneurship Research Journal,* 5(2), 155-166.

Mollick, E. (2014), "The Dynamics of Crowdfunding: An Exploratory Study", *Journal of Business Venturing,* 29(1), 1-16, https://doi.org/10.1016/j.jbusvent.2013.06.005 .

Nucciarelli, A., F. Li, K.J. Fernandes, N. Goumagias, I. Cabras, S. Devlin, D. Kudenko and P. Cowling (2017), "From Value Chains to Technological Platforms: The Effects of Crowdfunding in the Digital Game Industry", *Journal of Business Research,* 78, 341-352, https://doi.org/10.1016/j.jbusres.2016.12.030.

Sheeran, P. (2002), "Intention–Behavior Relations: A Conceptual and Empirical Review", *European Review of Social Psychology,* 12(1), 1-36, https://doi.org/10.1080/14792772143000003.

Shneor, R. and Z.H. Munim (2019), "Reward Crowdfunding Contribution as Planned Behaviour: An Extended Framework", *Journal of Business Research,* 103, 56-70.

Shneor, R. and B-T. Flaten (2015), *Opportunities for Entrepreneurial Development and Growth through Online Communities, Collaboration, and Value Creating and Co-Creating Activities*, in: H.R. Kaufmann, S.M.R. Shams (Eds), "Entrepreneurial Challenges in the 21st Century" (pp. 178-199), Palgrave MacMillan: Basingstoke.

Shneor, R. and A.A. Vik (2020), "Crowdfunding Success: A Systematic Literature Review 2010–2017", *Baltic Journal of Management*, 15(2), 149-182.

Tenenhaus, M., V.E. Vinzi, Y-M. Chatelin and C. Lauro (2005), "PLS Path Modeling", *Computational Statistics & Data Analysis,* 48(1), 159-205.

Thornton, J. (2025), "Sustainable Finance and the Banks", *Economia Internazionale/ International Economics*, 78(2), 179-208.

Venkatesh, V., J. Thong and X. Xu (2012), "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology", *MIS Quarterly*, 36(1), 157-178.

Venkatesh, V., M.G. Morris, G.B. Davis and F.D. Davis (2003), "User Acceptance of Information Technology: Toward a Unified View", *MIS Quarterly*, 27(3), 425-478.

Vijaya, N.A. and H.P. Mathur (2022), "Factors Governing Domination and Motivation behind Donation-Based Crowdfunding in India", *International Journal of Indian Culture and Business Management,* 25(3), 301-322.

Vinzi, E.V., L. Trinchera and S. Amato (2010), *PLS Path Modeling: From Foundations to Recent Developments and Open Issues for Model Assessment and Improvement*, in: V.E. Vinzi, W.W. Chin, J. Henseler, H. Wang (Eds), "Handbook of Partial Least Squares: Concepts, Methods and Applications", (pp. 47-82), Springer Handbooks of Computational Statistics Series, Springer: Heidelberg.

Wang, M., W. Ran, J. Liao and S.J.H. Yang (2010), "A Performance-Oriented Approach to E-Learning in the Workplace", *Educational Technology & Society,* 13(4), 167-179. https://www.jstor.org/stable/jeductechsoci.13.4.167.

Wong, K.K. (2010), "Handling Small Survey Sample Size and Skewed Dataset with Partial Least Square Path Modelling", *Vue: The Magazine of the Marketing Research and Intelligence Association*, November, 20-23.

Wong, K.K. (2013), "Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS", *Marketing Bulletin,* 24(1), 1-33.

Zhao, H., B. Jin, Q. Liu, Y. Ge, E. Chen, X. Zhang and T. Xu (2020), "Voice of Charity: Prospecting the Donation Recurrence & Donor Retention in Crowdfunding", *IEEE Transactions on Knowledge and Data Engineering,* 32(8), 1652-1665, 10.1109/TKDE.2019.2906199.

Zhao, Q., C-D. Chen, J-L. Wang and P-C. Chen (2017), "Determinants of Backers' Funding Intention in Crowdfunding: Social Exchange Theory and Regulatory Focus" *Telematics and Informatics,* 34(1), 370-384. https://doi.org/10.1016/j.tele.2016.06.006.

Ziegler, T., R. Shneor, K. Garvey, K. Wenzlaff, N. Yerolemou, R. Hao and B. Zhang (2018), Expanding Horizons: The 3rd European Alternative Finance Industry Report, Cambridge Centre for Alternative Finance: Cambridge, UK.