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Attributes of Prosocial Crowdfunding Innovation and its Adoption in Microfinance Institutions in Tanzania

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Moses Marko
Mzumbe University
Department of Marketing and Entrepreneurship
Email: mbmarko@mzumbe.ac.tz / moses.marko@mu.ac.tz

Hawa Petro
Mzumbe University
Department of Marketing and Entrepreneurship
Email: hpetro@mzumbe.ac.tz/ hawapetro@mu.ac.tz

Davis Meela
Jordan University College
Department of Accounting and Finance
Email: davis.meela@juco.ac.tz

Corresponding author email: moses.marko@mu.ac.tz

Abstract

This study examines the effects of four innovation attributes of prosocial crowdfunding particularly, perceived benefits, compatibility, complexity, and observability on the intention of Microfinance institutions (MFIs) in Tanzania to adopt prosocial crowdfunding. The study employed a cross-sectional survey whereby 228 MFIs from five big cities in Tanzania (Dares Salaam, Arusha, Mwanza, Dodoma, and Mbeya) were surveyed. The study employed partial least square structural equation modeling (PLS-SEM) for data analysis. The study reveals that while three innovation attributes, perceived benefits, perceived

compatibility, and perceived complexity have a significant effect on Microsocial crowdfunding adoption intention, the effect of perceived observability was insignificant. The study concluded that innovation attributes of prosocial crowdfunding influence MFIs' intention to adopt prosocial crowdfunding in Tanzania. The study recommends that to promote the adoption of prosocial crowdfunding among MFIs in Tanzania, prosocial crowdfunding platforms' managers and designers should take into consideration the relevance of innovation attributes of prosocial crowdfunding when they design and launch new prosocial crowdfunding services.

Keywords: *Innovation attributes, Prosocial crowdfunding, Microfinance Institutions, Innovation Diffusion Theory, Adoption intention.*

Paper type*:* Research paper

1. INTRODUCTION

Like in other developing countries, Microfinance institutions (MFIs) in Tanzania emerged as an alternative source of financing for all micro and small entrepreneurs who cannot access financing from traditional sources of financing (Chijoriga, 2015; Marwa, 2014; Mukama et al., 2005). However, the performance of MFIs is negatively affected by several factors including the shortage of capital to lend to their clients(Chijoriga, 2015; Marwa, 2014; Mukama et al., 2005; URT, 2017) which leads to the problem of low supply of MFIs' services compared to its demand (Chijoriga, 2015; Marwa, 2014) and financial exclusion of labor force (FinScope, 2017). Relying mainly on grants and loans from international donors which cannot fulfill MFIs' demand gap is one of the major reasons for the MFIs' funding problems (Sousa-Shields & King, 2005). Technological advancements enabled the existence of several types of financial-enabled services including prosocial crowdfunding (Coffie et al., 2021; Yermack, 2018). Prosocial crowdfunding has several advantages to MFIs including; providing cheap access to finance; a high success rate (Dorfleitner et al., 2017); an opportunity to transfer the credit default risk from the MFIs to investors (Anglin et al., 2020; Dorfleitner et al., 2020) and it is expected to improve both outreach and sustainability of MFIs (Ashta, 2016; Kauffman & Riggins, 2012).

Despite the advantages of prosocial crowdfunding to MFIs, its diffusion in African countries is relatively low (Coffie et al., 2021; Yermack, 2018), and little is known about factors influencing its adoption in an organization setting (Dorfleitner et al., 2020; Sunardi et

al., 2022). Since prosocial crowdfunding is FinTech in nature (Coffie et al., 2021; Yang & Lee, 2019; Yermack, 2018) its adoption at the organizational level may also be influenced by Technological factors. Therefore, this study intends to fill the gap by investigating the influence of innovation attributes of prosocial crowdfunding on its adoption from the perspective of MFIs by employing innovation diffusion theory (IDT). Specifically, this study intends to answer the following research question. "What is the influence of innovation attributes on MFIs' intention to adopt prosocial crowdfunding"?

The remaining part of this article is organized as follows, section two presents a literature review whereby the meaning of prosocial crowdfunding and its adoption status in Tanzania, the theory employed by the study, the conceptual model, and its associated hypotheses are presented. Section three describes methods used for data collection and analysis. Section 4 presents the results of data analysis. Section 5 presents a discussion of the study's findings. Section 6 presents the study's conclusion.

2. LITERATURE REVIEW

2.1 Meaning of crowdfunding and types of crowdfunding models

Crowdfunding is financial innovation under the subcategory called alternative finance (AltFi)(Jenik et al., 2017). It is a promising innovation that has the potential to diminish credit constraints, and an increasing number of institutions employ it (Bruton et al., 2011). It has four major models including; donation-based crowdfunding model (Jenik et al., 2017); Rewards-based crowdfunding model (Belleflamme et al., 2010; Mollick & Kuppuswamy, 2014); equity-based crowdfunding model (Belleflamme et al., 2015; Gabison & LJ, 2014); and debt-based crowdfunding model(Anglin et al., 2020; Dorfleitner & Oswald, 2016; Ly & Mason, 2012; Marakkath & Attuel-mendes, 2015). The debt-based crowdfunding model is further categorized into two major categories; the Commercial lending model; and the prosocial lending Model or prosocial crowdfunding (Dorfleitner et al., 2020; Marakkath & Attuel-mendes, 2015).

The prosocial crowdfunding model is characterized by the existence of individual lenders with social missions and the existence of international crowdfunding platforms in which both individuals and organizations mostly MFIs from developing countries access funds (Ly & Mason, 2012; Marakkath & Attuel-mendes, 2015). In practice,

prosocial crowdfunding is conducted differently in two different contexts, developed countries and developing countries (Anglin et al., 2020; Ly & Mason, 2012). In developed countries, entrepreneurs post their crowdfunding campaigns directly on international crowdfunding platforms such as Kiva and Babyloan for funding (Ly & Mason, 2012; Marakkath & Attuel-mendes, 2015) while the developing countries prosocial crowdfunding is done by MFIs (Allison et al., 2013; Anglin et al., 2020; Dorfleitner et al., 2020; Ly & Mason, 2012; Marakkath & Attuel-mendes, 2015).

In the prosocial crowdfunding ecosystem MFIs are responsible for vetting entrepreneurs, making and managing initial loans, and servicing the prosocial crowdfunding platforms with a supply of crowdfunding campaigns (Allison et al., 2013; Anglin et al., 2020; Kiva, 2020a). When the posted crowdfunding campaigns get funded, the crowdfunding platforms transfer the money to MFIs to backfill the loan made to the entrepreneur in advance (Kiva, 2020a).

2.2 **Prosocial crowdfunding in Tanzania**

Like in other developing countries, prosocial crowdfunding in Tanzania started in 2005 when international crowdfunding platforms such as Kiva decided to partner with MFIs in developing countries to provide cheap access to finance(Kiva, 2020b). Since the establishment of international prosocial crowdfunding platforms including Kiva in the 2000s, only six MFIs in Tanzania including Tujijenge-Tanzania, Anza-Tanzania, African Entrepreneurs Collective (AEC),- Acre fund, Jibu, and Uncharted use prosocial crowdfunding (Kiva, 2020b).

2.3 Theory Underpinning the study

This study is guided by innovation diffusion theory (IDT) to study the influence of innovation attributes on prosocial crowdfunding adoption and its adoption in Microfinance institutions. Innovation Diffusion Theory (IDT) explains the process of innovation diffusion by identifying the five stages involved in the innovation-decision process(knowledge, persuasion, decision, implementation, and confirmation) and their respective channels of communication (Rogers, 2003). According to the theory, before deciding whether to adopt or reject an innovation, decision-makers need to understand the function of the innovation, the understanding which enables them to develop either favorable or

unfavourable attitudes towards the innovation. The theory identifies five innovation attributes including relative advantage; compatibility; complexity; trialability; and observability that influence decisions on whether to adopt the innovation (Rogers, 2003). The theory has been used extensively and successfully to study the adoption of innovations in organizational contexts (Chong et al., 2009; Hsu et al., 2006; Sun et al., 2018; Thong, 1999; Wang et al., 2010).

Four innovation attributes particularly, relative advantage, complexity or ease of use, observability, and compatibility consistently have been found to influence innovation adoption in several previous studies which examined the factors in the process of adopting financial technologies (Alshamaila et al., 2013; Lai et al., 2018; Maroufkhani et al., 2022; Maroufkhani et al., 2020; Ochieng, 2015; Sunardi et al., 2022; Yang & Lee, 2019). Therefore, the four attributes of innovation were selected in this study to determine their effects on MFI's intention to adopt prosocial crowdfunding.

2.4 Conceptual Model and Hypothesis Development

Drawing on the IDT theory and the literature, four attributes of innovations particularly perceived benefits, compatibility, complexity, and observability are proposed to influence intention to adopt prosocial crowdfunding in Microfinance institutions (see Figure 1).

2.4.1 Perceived benefits and MFI's intention to adopt prosocial crowdfunding

Perceived benefits refer to "the degree to which the innovation is perceived as providing the benefits to the organization"(Kuan & Chau, 2001). Perceived benefits of electronic data interchange (EDI) particular, improving data accuracy, security of data, operational efficiency, speeding up application process, and reducing clerical errors were suggested and confirmed to influence its adoption in small business in Hong Kong (Kuan & Chau, 2001)0. As mentioned before, prosocial crowdfunding offers several benefits to MFIs including providing cheap access to finance; a high success rate (Dorfleitner et al., 2017); the opportunity to transfer the credit default risk from the MFIs to investors (Anglin et al., 2020; Dorfleitner et al., 2020). Therefore, this study suggests that prosocial crowdfunding is more likely to be adopted by MFIs if it is

perceived to benefit the MFIs. Hence the following hypothesis is proposed.

H1: The perceived benefits of prosocial crowdfunding have a positive effect on MFI's intention to adopt prosocial crowdfunding.

2.4.2 Perceived Complexity and an intention to adopt prosocial crowdfunding

Complexity represents the degree to which innovation is considered relatively difficult to understand, learn, and use (Rogers, 2003). Different from other technological elements of innovation, complexity affects negatively the adoption of innovation (Ashamila,2013). Complexity is a more critical problem for businesses with lower levels of technical know-how (Cragg & King, 1993). The recent literature on the role of complexity in the adoption of financial technologies such as cloud computing(Oliveira et al., 2014); and big data analytics (Alkhatib et al., 2019; Chen et al., 2015; Maroufkhani et al., 2022) has found that complexity affect negatively adoption of financial technologies. Therefore, if MFIs perceive that the adoption of prosocial crowdfunding involves massive effort, they are less likely to adopt it. Hence the following hypothesis is proposed.

H2: The perceived complexity of prosocial crowdfunding has a negative effect on MFI's intention to adopt prosocial crowdfunding.

2.4.3 Perceived compatibility and MFI's intention to adopt prosocial crowdfunding

Perceived compatibility refers to the extent to which innovation is perceived to match well with the organization's existing values, past experiences, and needs of potential adopter(Rogers, 2010). Also, compatibility is determined by the extent to which the innovation is consistent with organizations' strategies, existing infrastructure, practices, needs, and current corporate systems, data quality, and the life cycle of the technology (Premkumar, 2003). Several studies described the role of compatibility and considered it an essential determinant of IT innovation adoption (Premkumar & Roberts, 1999; Rogers, 2003), and several prior studies on financial technologies reported a significant effect of innovation compatibility adoption decisions (Alshamaila et al., 2013;

Chen et al., 2015; Maroufkhani et al., 2022; Verma & Bhattacharyya, 2017). However, Lian et al., (2014) found no effect of compatibility on innovation adoption. Following these mixed findings, this study suggests that MFIs will be more willing to adopt prosocial crowdfunding if will be recognized to be compatible with their needs and current organizational procedures. Hence the following hypothesis is proposed.

H3: The perceived compatibility of prosocial crowdfunding has a positive influence on MFI's intention to adopt prosocial crowdfunding.

2.3.4 Perceived observability and MFI's intention to adopt prosocial crowdfunding

The degree to which the results of using innovation are clear to the potential users is what is called observability. Observability allows potential adopters to learn and assess innovation (Kim & Srivastava, 1998). Observability like some attributes of innovation found to relate positively with innovation adoption (Abu Bakar et al., 2019; Ochieng, 2015). Although in some studies observability found a positive effect on innovation adoption (Abu Bakar et al., 2019; Maroufkhani et al., 2020; Siew et al., 2020; Yang & Lee, 2019), other studies found no effect of observability on innovation adoption (Hashem & Tann, 2007; Kendall et al., 2001; Ramdani et al., 2009; Sun et al., 2018). Following these mixed findings, this study proposes that if the outcomes of using of prosocial crowdfunding are observable to the MFIs it is more likely to be adopted by MFIs. Hence the following hypothesis is proposed.

H4: The perceived observability of prosocial crowdfunding has a positive influence on MFI's intention to adopt prosocial crowdfunding.

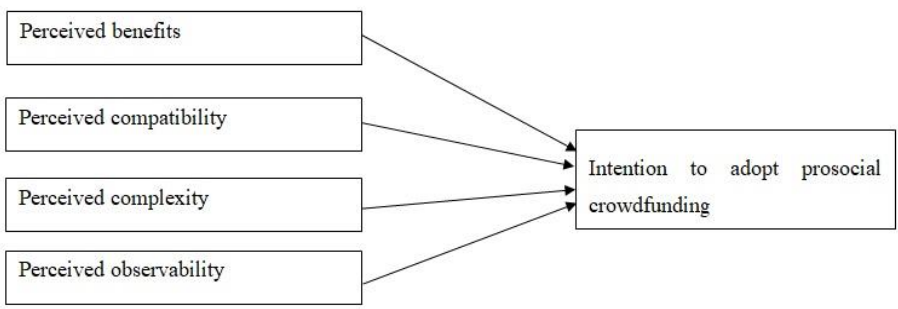

Figure 1. Research model

3.RESARCH METHODS

3.1. Measurements

A survey questionnaire adapted from previous studies with a valid and reliable construct was used to test innovation diffusion theory (IDT) (see Appendix 1). An intention to adopt prosocial crowdfunding was measured by five items adapted from Lai et al. (2018) and Maduku et al. (2016), and slightly modified to fit the context. Five items to measure the perceived benefits of prosocial crowdfunding were adapted from Lai et al. (2018) and Kuan and Chau (2001). Compatibility was measured by three items which were adapted from (Yang & Lee, 2019) with slight modification to fit the context. Four items and three items to measure complexity and observability were adapted from Yang and Lee (2019) Lai et al. (2018), Maroufkhani et al. (2020), and Yang and Lee (2019) respectively, and they were slightly modified to fit the context. The items to measure CEOs' perception of both attributes of innovations and MFIs' intention to adopt prosocial crowdfunding were measured by a seven-point Likert-type scale anchored from 1 ("strongly disagree") to 7 ("strongly agree") because it the best and the most accurate scale to use when assessing perceptions (Diefenbach et al., 1993).

3.2 Sampling and Data Collection

The population of the study consisted of 533 credit companies that were not using prosocial crowdfunding because the rate of prosocial crowdfunding adoption among MFIs in Tanzania was very low as only seven MFIs were using prosocial crowdfunding. The sampling frame was obtained from the website of the Bank of Tanzania (BOT) (BoT, 2020) on August 30, 2021. The Yamane formula was used to determine a sample size of 228 MFIs because it enables the researcher to determine an optimum sample size which is the most crucial aspect of statistical analysis (Singh & Masuku, 2014). Below is the Yamane formula and the way it was used to determine the optimum sample size.

n = N / (1 + N (e) 2

Where n=the required sample

N= Population

e=Level of Precision

Given the population of 533, assuming a 95 percent confidence level and precision of ±5 percent, the sample size for this study will be: -

$$n = \frac{533}{1 + 533(0.05)\ (0.05)}$$

$$= \frac{533}{2.3375}$$

=228 Optimal Sample Size (Microfinance institutions)

Judgmental sampling was used to get an area of the study whereby five big cities (Dares salaam, Arusha, Mwanza, Mbeya, and Dodoma) with relatively high concentrations of MFIs under tier 2 were selected. Proportionate sampling was used to obtain the number of MFIs to be studied from each of the selected cities because some of the selected cities had a larger number of MFIs than others. Fishbowl sampling technique was used to select MFIs to be studied from the five selected cities. Purposeful sampling was used to select CEOs as a respondent of the study because they were both members of the body of directors and involved in decision-making concerning all matters including technology-related matters (URT, 2019). The survey was conducted for three months (January 2022 to March 2022) whereby the structured questionnaires were sent to 236 MFIs. Of 236 MFIs that were sent questionnaires, 208 firms submitted their responses. Five of the collected responses were excluded because they were incomplete. Table 1 shows the profile of respondents. Since the study collected self-reported data, the Harmon one-factor test was performed to check if conceptual variables in our model were affected by the common method bias problem. The results of the Harmon one-factor test showed that all factors explain 30% of the overall variance, indicating that the common method bias problem was in an acceptable range (Lindell & Whitney, 2001).

Table 1. Demographic information of the respondents

Items	Category	Frequency	Percentage
Sex	Male	143	70.4
	Female	60	29.6
CEO's Age	18-25 years	6	3
	26-36 years	61	30
	36-45 years	125	61.6
	Above 45 years	8	3.9
	Missing systems	3	1.5
Education level	Primary level	6	3
	Secondary level	29	14.3
	Diploma level	8	3.9
	Degree level	96	47.3
	Postgraduate	64	31.5
CEO Tenure	1-4 years	141	69.5
	5-8 years	58	28.6
	Above 8 years	4	2.0
MFI's Age	1-4 years	138	68
	4-8 years	58	28.6
	Above 8 years	7	3.4
MFI's Size	1-4 employees	75	36.9
	4-9employees	77	37.9
	10-14 employees	17	8.4
	Above 14 employees	31	15.5
	Missing system	3	1.5

Source: Researcher

3.3 Data Analysis

The partial Least Square-Structural Equation Modeling (PLS-SEM) analysis method was used for data analysis. The study's variables which were latent variables in nature, strong statistical predictive power of PLS-SEM compared to covariance-based structural equation modelling (CB-SEM), insensitivity to sample size (Hair Jr et al., 2021b; Hair et al., 2019) support the uses of SEM-PLS in this study. The analysis processes consisted of two steps, the measurement model evaluation step and the structural model evaluation step. In a measurement model evaluation step, the measurement model was evaluated to assess the reliability and validity of the constructs while in the structural model step, the structural model was evaluated to test the relationship between the dependent variable and independent variables.

4. RESULTS

4.1 Measurement model results

Since the constructs were reflectively measured, the measurement model was evaluated by assessing indicators' reliability, constructs' internal consistency, convergence validity, and discriminant validity as suggested by extant literature (Hair et al., 2019). The results are shown in Tables 2,3 and 4 respectively. Indicators' reliability was assessed by examining the indicators' loadings, and the results showed that the loadings of all indicators except five indicators (ADOI2, ADOI4, PB1, and CP2) were above the recommended threshold of 0.7. To improve the quality of the measurement model, the four indicators with loadings below 0.7 were deleted as suggested by extant literature (Hair Jr et al., 2021a).

Average extracted variance (AVE) was examined to assess the convergence validity. The results showed that the value of AVE of each latent variable was above 0.5, indicating that more than half of the items' variance was explained by their respective constructs, thus the presence of convergent validity. Cronbach's alpha and composite reliability (CR) were examined to assess the internal consistency of the constructs. The results showed that the value of both Cronbach's alpha and composite reliability (CR) was above 0.7, indicating a higher level of reliability.

Table 2: Measurement model evaluation results

Construct	Indicators	Indicator's loadings	Cronbach's Alpha	Composite Reliability	AVE
Adoption intention	ADOI1	0.788			
	ADOI3	0.866			
	ADOI5	0.825	0.769	0.867	0.684
Perceived benefits	PCB2	0.877			
	PCB3	0.740			
	PCB4	0.741			
	PCB5	0.795	0.804	0.869	0.624
Compatibility	CPT1	0.906			
	CPT2	0.912			
	CPT3	0.848	0.869	0.919	0.791
Complexity	CP1	0.816			
	CP2	0.896			
	CP4	0.744	0.757	0.861	0.674
Observability	OBS1	0.921			
	OBS2	0.939			
	OBS3	0.785	0.863	0.915	0.782

Source: Researcher

Likewise, the Discriminant validity was assessed by examining the current and accurate criterion, Hetero-Monotrait Ratio (HTMT) (Henseler et al., 2016), and the results showed that the correlations of all exogenous constructs were below 0.85, confirming the discriminant validity of the studied constructs (Henseler et al., 2015).

Table 3. Discriminant validity assessment results

Construct	CP	CPTBT	PB	VSBT
Complexity (CP)	0.32			
Compatibility (CPT)	0.374	0.141		
Perceived benefits (PCB)	0.474	0.304	0.54	
Observability (OBS)	0.119	0.131	0.331	0.489

Source: Researcher

Further, the standardized root means square residual (SRMR) model fit criterion which is suggested to be the only approximate model fit criteria for PLS path modeling (Hu & Bentler, 1999) was used to test the goodness of fit. The SRMR value of 0.085 which is less than 0.1 was obtained, confirming a good model fit (Hu & Bentler, 1999).

4.2 Structural Model

The three standard assessment criteria, coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure Q^2, and the statistical significance and relevance of the path coefficients were considered to evaluate the structural model as suggested by extant literature (Hair et al., 2019). Before evaluating the structural model, collinearity issues were examined to make sure that they did not bias the regression results. To assess collinearity, the inner VIF of the constructs was examined, and the results showed that the value of VIF was below 2, suggesting that collinearity was not a problem at all (Hair et al., 2019).

The model's explanatory power and predictive accuracy were evaluated by examining the coefficient of determination (R^2) and the blindfolding-based cross-validated redundancy measure Q^2, respectively. Regarding the model's explanatory power, the results of the coefficient of determination showed that the value of the coefficient of determination (R^2), for an endogenous variable, ADO1 was 0.253, establishing the model's explanatory power (Falk & Miller, 1992). In terms of the model's predictive accuracy, the results showed that the value of Q^2 for the

endogenous variable was 0.168, establishing the model's predictive accuracy (Hair et al., 2019).

After establishing the model's explanatory power and predictive capability, the path coefficients(β), P value, and (bias-corrected and accelerated) confidence interval were examined to assess the statistical significance and relevance of the path coefficients. Non-parametric bootstrapping with 5,000 replications was used to analyze the structural model. The findings (see Table 4) illustrate that three relationships were significant ($p<0.05$) and one relationship was insignificant. Therefore, out of four hypotheses, three hypotheses (H1, H2, H3) were supported while one hypothesis (H4) was rejected.

Table 4: Results of the Structural model evaluation

Paths	Coefficients(β)	P Values	5%	95%	Decision
PCB -> ADOI	0.287	0.002	0.106	0.398	Supported
CPT -> ADOI	0.214	0.011	0.057	0.364	Supported
CP -> ADOI	-0.259	0.004	-0.381	-0.162	Supported
OBS-> ADOI	0.035	0.301	-0.103	0.225	Not supported

Source: Researcher.

5. Discussion

As shown in Table 4, perceived benefits were significant in predicting MFI's intention to adopt prosocial crowdfunding. Facing several challenges including high demand for additional funds for their customers, MFIs have to consider the benefits or advantages prosocial crowdfunding can bring about for them before adopting it. Apart from enabling MFIs to access free interest loans from social investors worldwide, prosocial crowdfunding offers several advantages to MFIs such as a high success rate (Dorfleitner et al., 2017), and increasing sustainability and outreach of the MFs (Ashta, 2016). Thus, MFIs' willingness to adopt prosocial crowdfunding may increase if they can see the advantages of doing so. This finding is consistent with Yang and Lee (2019) and Sunardi et al. (2022) findings where relative advantage had a significant effect on intention to adopt crowdfunding in China and Indonesia respectively. The finding is also in line with several previous literature on the adoption of other financial technologies such as mobile banking (Ammar & Ahmed, 2016), cloud computing (Alshamaila et al.,

2013; Gangwar et al., 2015), BDA (Chen et al., 2015; Gangwar, 2018; Lai et al., 2018).

As shown in Table 4, compatibility was significant in predicting the intention of MFIs to adopt prosocial crowdfunding. Innovation is more likely to be adopted when it is perceived to be compatible with existing values, experience, and needs of the firms, and Firms' intention to adopt the innovations increases with an increase of these compatibilities. The nature of the studied MFIs in terms of needs and responsibilities can be the plausible reason for the significant relationship. Concerning the needs of MFIs, due to the shortage of capital to lend to their clients (Chijoriga, 2015; Marwa, 2014; URT, 2017), MFIs need additional funds for their clients and prosocial crowdfunding provides access to additional or emergency funds for MFIs with capital constraints (Anglin et al., 2020; Dorfleitner et al., 2020). In terms of MFIs' responsibilities, in the crowdfunding ecosystem MFIs were responsible for vetting entrepreneurs, making initial loans, and collecting loan repayments from entrepreneurs to the prosocial crowdfunding platforms,(Allison et al., 2013; Anglin et al., 2020), the responsibilities which were MFIs' core activities. In the context of financial technologies, this finding supports the findings of other previous studies on different types of financial technologies such as cloud computing (Alshamaila et al., 2013), BDA (Chen et al., 2015; Maroufkhani et al., 2022), and crowdfunding (Yang & Lee, 2019).

Concerning complexity, the results of the analysis as shown on Table 4 indicate that complexity was a significant predictor of prosocial crowdfunding adoption. This finding is consistent with the findings of previous studies where complexity had a negative significant effect on the adoption of other financial technologies particularly cloud computing (Alshamaila et al., 2013; Gangwar et al., 2015), BDA (Lai et al., 2018; Maroufkhani et al., 2022; Maroufkhani et al., 2020). Innovation is perceived to be too complex when firms lack associated skills and knowledge, and a lack of internal expertise (Asiaei & Ab. Rahim, 2019). Prosocial crowdfunding is an emerging business concept in Tanzania, probably many of the studied MFIs lack the knowledge and skills associated with it.

Unexpectedly, in this study, observability did not significantly impact an intention to adopt prosocial crowdfunding. Although this finding is in line with some studies on adoption of information technologies (Hashem & Tann, 2007; Kendall et al., 2001; Ramdani et al., 2009) , it is contrary to the results of many previous studies where observability found to

impact adoption of financial technologies significantly (Abu Bakar et al., 2019; Maroufkhani et al., 2020; Ochieng, 2015; Yang & Lee, 2019). The low level of prosocial crowdfunding adoption in Tanzania can be a plausible explanation for the insignificant relationship. During the study, only six MFIs in Tanzania were using prosocial crowdfunding (Kiva, 2020b). A low level of adoption of a particular innovation makes its advantages immeasurable and obscure which inhibits innovation adoption (Lin & Chen, 2012).

6. Conclusion, Implications and Limitation of the Study

6.1 Conclusion

The study investigated the influence of innovation attributes of prosocial crowdfunding on the intention of MFIs to adopt it. Specifically, the research determined the influence of four innovation attributes namely, perceived benefits, compatibility, complexity, and observability on the intention of MFIs to adopt prosocial crowdfunding. The findings revealed that three innovation attributes, perceived benefits, compatibility and complexity were the significant predictors of MFIs' intention to adopt prosocial crowdfunding while the effect of observability was insignificant.

6.2 Implications of the Study

Using innovation diffusion theory, the study developed and tested a model of prosocial crowdfunding adoption in MFIs. Three innovation attributes (perceived benefits, compatibility, and complexity) were important determinants of prosocial crowdfunding in MFIs. Therefore, the study extended the application of IDT theory in the context of crowdfunding, and for the researcher's knowledge, this is the first study to show how IDT theory is relevant in the crowdfunding context.

Also, the findings of the study provide clues to how prosocial crowdfunding adoption in MFIs can be effectively encouraged by the prosocial crowdfunding platforms' managers. It is recommended that for successful marketing strategies, crowdfunding platform designers and managers consider relevant factors that impact users. As perceived benefits, compatibility, and ease of use are more critical than observability, these factors should be considered more by prosocial

crowdfunding when designing and launching new prosocial crowdfunding platforms and services.

6.3 Limitation and Future Research Direction

Like other studies, this study is no exception in terms of limitations that should be addressed in future research. The first limitation was in terms of the area of the study whereby the study focus was one country, Tanzania. According to Chopdar et al. (2018) country's culture affects the relevance of the constructs which limits the generalization of the study. Therefore, future research should be conducted in other developing countries and the scale invariance of the used measurement should be tested before applying it to other countries. The second limitation of the study is focusing only on the innovation attributes of prosocial crowdfunding while innovation adoption at the organization level may be affected by other factors (Abdullah et al., 2013; Amin & Hussin, 2014). Therefore, future researches should be conducted to study the influence other factors. The third limitation of the study was on the population of the study, whereby the study focused only on potential adopters of prosocial crowdfunding. Future research should be conducted to include adopters with the expectation that the diffusion of prosocial crowdfunding in developing countries will be relatively high.

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APPENDIX I

Construct and their respective items and sources.

Construct	Items		References
Adoption Intention	ADOI1	Our Institution want to collect more information about that prosocial crowdfunding	Lai et al. (2017);Maduku et al. (2016)
	ADOI2	Our Institution want to try prosocial crowdfunding in our financing strategies	
	ADOI3	Our firm intends to adopt prosocial crowdfunding	
	ADOI4	Our Institution have the clear plan to adopt prosocial crowdfunding in the near future.	
	ADOI5	Our institution would be enthusiastic about adopting prosocial crowdfunding	
Perceived benefits	PCB1	Using prosocial crowdfunding would make easier for our MFI to get funding	Lai et al. (2017); Kuan et al. (2001)
	PCB2	Using prosocial crowdfunding would help our MFI to accomplish fundraising task more quickly	
	PCB3	Using prosocial crowdfunding would add value to our MFI	
	PCB4	Using prosocial crowdfunding would facilitate future funding	
	PCB5	Using crowdfunding would enable our firm to minimize cost of fundraising	
Compatibility	CPT1	Using crowdfunding is not similar to anything we have done before as an MFI	Yang et al. (2019)
	CPT2	Using crowdfunding is different from other experience we have had as an MFI	
	CPT3	Using crowdfunding is a new business experience for our MFI	
Complexity	CP1	Crowdfunding requires a lot of mental effort	Yang et al. (2019); Lai et al., (2017)
	CP2	Crowdfunding requires technical skill	
	CP3	Crowdfunding can be frustrating	
	CP4	The skills needed to use	

		crowdfunding will too complex for our organization	
Observability	OBS1	Many competitors in the industry have started using prosocial crowdfunding	Maroufkhan et al. (2020); Yang et al., (2019)
	OBS2	It is easy for our Microfinance institution to observe other Microfinance institutions using prosocial crowdfunding	
	OBS3	In our environment we see prosocial crowdfunding activities a lot	