Acta Universitatis Danubius
ŒCONOMICA

Financial Inclusion as an Intentional Behaviour in Zimbabwe

Alexander Maune[1], **Ephraim Matanda**[2], **Justice Mundonde**[3]

Abstract: Purpose – This article examined financial inclusion as a planned behaviour using partial least squares structural equation modeling (PLS-SEM) algorithm in SmartPLS 3 software. Attention was given to perspective antecedents in behavioural intention and use behaviour of financial services/products. **Approach** – To understand this phenomenon, primary data collected through an online survey were used to empirically test the extended theory of the planned behaviour model. We applied the partial least squares structural equation modeling (PLS-SEM) algorithm using SmartPLS 3 software to analyse relationships between latent and observed variables. Respondents were drawn from academics, banking and non-banking participants in Zimbabwe. **Findings** – Our results show that an extended TPB model holds for financial inclusion. The results also show an acceptable model fit with predictive relevance of endogenous constructs as assessed by R^2, Q^2, the significance of paths and standardized root mean square residual (SRMR). Our findings also confirmed hypothesis H_{1a}, H_{1b}, H_6, and H_7 while the rest were rejected as they were insignificant. **Practical implications** – Financial services product developers, policymakers, financial inclusion practitioners, and regulators will have a better understanding of financial inclusion behavioural intention and use behaviour based on the findings. **Originality/value** – Previous research has largely ignored the influence of perceptive antecedents in financial inclusion. This article covers this gap by drawing attention to the cognitive psychological perspective of financial inclusion.

Keywords: Financial inclusion; Planned behaviour; PLS-SEM; Behavioural Intention; Use behaviour

JEL Classification: DO3; G02, G21; G23,

[1] Research Associate, University of South Africa, Pretoria, South Africa, Address: Preller St, Muckleneuk, Pretoria, 0002, South Africa, Corresponding author: alexandermaune6@gmail.com.
[2] Senior Lecturer, Great Zimbabwe University, Masvingo, Zimbabwe, Address: P.O Box 1235, Masving, Zimbabwe, E-mail: eematanda@gmail.com.
[3] PhD in progress, University of South Africa, Pretoria, South Africa, Address: Preller St, Muckleneuk, Pretoria, 0002, South Africa, E-mail: justice.mundonde@gmail.com.

1. Introduction

Financial inclusion behavioural intention determinants such as attitude, perceived behaviour control, self-efficacy, norms (social and subjective) have been perceived as predictors for the use of financial products/services, that is, financial inclusion participation behaviour. Mindra and Moya (2017) argue that individuals' inability to voluntarily or involuntarily access formal financial services has been identified as a key barrier for socio-economic development especially in developing economies, such as Zimbabwe. Governments, through their central banks, have championed the drive towards financial inclusivity through implementing national strategies to increase the accessibility of financial products/services. However, despite all these efforts and financial innovations, financial exclusion remains a challenge in the marginalized segments of society especially rural areas. Much effort has been placed on the supply side whilst nothing much has been done to address the demand side of financial inclusion. The situation has been seriously impacted by the Coronavirus (Covid-19) pandemic that has challenged the traditional business models as well as causing serious job losses across the globe. This has seen new business models driven by information communication technology (ICT) on the rise, which calls for training and establishing ICT related platforms. This obviously will see a paradigm shift in financial inclusion strategies.

FI has since been identified as critical in financial and economic development. Despite its role, many people remain financially excluded especially in developing economies. Similarly, in Zimbabwe, 23% of the adult population is financially excluded as of 2014 according to the FinScope consumer survey. The Reserve Bank of Zimbabwe estimates the level of FI to be skewed in favour of the urban population (89%) as opposed to the rural population (62%), despite 67% of Zimbabwe's population residing in the rural areas. Nonetheless, even though many scholars have researched on FI, limited attention has been paid to the determinants of behavioural intention and their influence on performing a behaviour, that is, FI participation as given by the Theory of Planned Behaviour as discussed in the literature review. No researcher has addressed the issue of FI as planned behaviour in Zimbabwe. However, many studies have missed the behaviour of individual participants who have a dominant role in FI participation. This is even though behavioural theories have been used by several researchers to examine the financial behaviour of individuals (Jin et al., 2012). Given the importance of FI in socio-economic development, understanding or viewing FI participation as a planned behaviour is worthy of investigating. Failure to appreciate the behavioural intention of individuals has a negative bearing on achieving financial inclusivity. To this, Smith and McSweeney (2007) argue that the advantage of a belief-based model is that it is possible to identify those beliefs that differentiate people who do or do not intend to perform the behaviour, providing avenues for intervention and behaviour change.

The study's contribution is embedded in the development of a behavioural theoretical model that sees FI as planned behaviour in addressing financial exclusivity problems in marginalized segments of society. The study examined the impact of the extended TPB in predicting FI participation behaviour intention and FI behaviour. The study also examined the extent to which the extended TPB predictors impact individual use of financial products/services, which thereby influences FI. An understanding of the needs, behaviours and preferences of individuals ensures a more relevant and responsible delivery and use of financial services/products.

1.1. An Overview of Financial Inclusion in Zimbabwe

Zimbabwe's financial landscape is diverse, characterised by wide-ranging financial institutions with different operational mandates. Currently, a total of 254 financial services providers are licenced to operate in Zimbabwe. Categorically, as depicted under table 1, the composition consists of 13 commercial banks, 5 building societies, 1 savings bank with over 300 branches in total, 225 credit only microfinance institutions (MFIs), 8 deposit-taking MFIs and 2 development finance institutions (DFIs) (Reserve Bank of Zimbabwe (RBZ), 2020). With these as penetration launch-pad, several initiatives have been implemented to reach out to the often financially marginalised groups such as small rural farmers, small scale enterprises, women, and the self-employed among others. At a national level, Zimbabwe ratified membership to the Alliance for Financial Inclusion Network and the Southern African Development Committee's Strategy on Financial Inclusion. More so, through the Reserve Bank of Zimbabwe (RBZ), a national financial inclusion strategy (NFIS) was launched in 2016 (Ngoma, 2019). Guiding policy for the five years ending 2020, the NFIS priorities essentials of financial inclusion such as product diversification, innovation, financial literacy, consumer protection, the opening of low-cost bank accounts, micro-insurance, and access to money and capital markets by lower-income groups (Maune, Matanda, and Mundonde, 2019).

With the year 2020 marking the final phase of implementation and monitoring of the NFIS phase 1, commendable strides have been reported on several financial inclusion indicators. Table 2 provides a summary of the same. From the year 2016, the number of small to medium entrepreneurs operating with formal bank accounts rose significantly from 71,730 to as high as 253, 908 as of June 2020. The same goes with the number of women with bank accounts whose counting went up to 2,536,558 from 769,883 over the same period. This follows the adoption of the simplified risk-based Know Your Customer (KYC) strategy by the RBZ coupled with lobbying from the Bankers Association of Zimbabwe (BAZ) encouraging its members to consider low-cost accounts for SMEs and other low-income groups (Mataruka, 2015).

Given that imperfect credit information regarding the creditworthiness of potential loan clients, the RBZ in 2017 introduced a system of credit registry as a means to monitor credit behaviour on the financial markets (RBZ, 2017). Credit referencing is fundamental to credit risk management and loan pricing functions. With reasonably perfect information, loans can be priced fairly which can lead to strong demand for lines of credit. As such, loan advances to women peaked at ZW$1,183.16m up from ZW$277.30m in 2016. Loans allocated to the youths increased from ZW$58.41m to ZW$964.86m during the same period. Notably, two micro-finance banks namely Empower Bank and Zimbabwe Women's Microfinance Bank have taken a very aggressive approach to advance loans and other financial services to women and the youth. Furthermore, leveraging on advances in information technology, sustained growth in agent banking phenomenon mainly through the use of Point of Sale devices situated in local retail shops and other merchants has worked very well to enhance the financial inclusion drive. The banking public can make a payment off their accounts using debit cards with relative ease as point of sale infrastructures are being made available to a large constituency of merchants, even those in remote areas. Debit cards, mobile phones, POS and the internet are the most preferred methods of transacting in Zimbabwe.

Table 1. Financial Services Sector Architecture in Zimbabwe

Type of institution	**Number**
Commercial Banks	13
Building Societies	5
Savings Bank	1
Total banking institutions	19
Other institutions under central bank supervision	
Development Financial Institutions	2
Deposit-taking Microfinance Institutions	8
Credit-only Microfinance Institutions	225
Total	**235**

Source: RBZ 2020 mid-term monetary policy statement

Table 2. Financial Inclusion indicators in Zimbabwe from December 2016 to March 2019

Indicator	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Jun 2020
Value of loans to MSMEs	ZW$131.69m	ZW$146.22m	ZW$169.96m	ZW$462.98m	ZW$2,899.69b
% of loans to MSMEs/ total loans	3.57%	3.75%	3.94%	3.92%	7.65%
No. of MSMEs bank accounts	71,730	76,524	100,644	116,467	253,908
No. of Women Bank Accounts	769,883	935,994	1,736,285	2,152,185	2,536,558
Value of Loans to Women	ZW$277.30m	ZW$310.78m	ZW$432.36m	ZW$586.74m	ZW$1,183.16m
No. of Loans to Youth	38,400	61,529	69,421	189,658	126,002
Value of Loans to Youth	ZW$58.41m	ZW$138.93m	ZW$104.43m	ZW$188.71m	ZW$964.86m

Source: RBZ 2020 mid-term monetary policy statement

2. Literature Review

The term financial inclusion as used in this study was best defined by the Centre for Financial Inclusion (2013) that refers to it as "a state in which all people who can use financial services have access to a full suite of quality services, provided at affordable prices, conveniently, and with dignity for the clients." To Massara and Mialou (2014), FI can be advanced through three dimensions which are access, usage, and quality of financial services. Aduda and Kalunda (2012), however, see FI as an intervention strategy that can be used to overcome frictions that hinder market operations in favour of the underprivileged and poor. Though FI can be operationalized from a different context, this article is limited to the individual level at which the focus is on intentionality and behaviour influencing financial participation.

Individual sentiments and empirical evidence coming out of previous studies show that despite the positive role of FI in economic development and significant efforts by governments, financial service providers among other stakeholders globally, a sizable number of the global population remains financially excluded with developing countries recording the highest number (Maune, 2018 and Maune et al.,

2020). Therefore, due to the significance of FI in empowering the vulnerable and poor economically and socially, an all-inclusive approach is required to understand the individual participation intentionality and behaviour in financial services.

The TPB forms the theoretical framework of this article as it offers a clearly defined model that allows the investigation of FI participation intentionality and behaviour in Zimbabwe.

2.1. Theory of Planned Behaviour

Theoretically, we wish to make our contributions towards FI by anchoring this study on the Theory of Planned Behaviour (Ajzen, 1991). Therefore, in pursuing this approach, FI participation behaviour is regarded as planned behaviour. This line of thinking is driven by the sophistication and digital innovations surrounding FI. Its impact on individuals, therefore it is not likely that individuals will participate in FI without some preliminary consideration. Engagement in FI is therefore considered a planned decision and behaviour. Research has shown that there are several reasons why individuals are included or do not participate in financial services. Specifically, involuntary or voluntary, socio-economic, trust, cost, information, literacy, documentation, and eligibility are stated as reasons affecting individual willingness to participate in FI (Kempson and Whyley, 1999; Beck et al., 2009; Lusardi et al., 2010 and Ellis et al., 2010). Shneor and Munim (2019) argue that they have to be antecedents to behavioural intentions and behaviour. To them, volitional control and intentionality are precursors to individual behaviour, in this case, FI participation. Hence the adoption of the TPB model helps in predicting FI behavioural intentions and behaviour. This enhances our appreciation of behavioural intentions in the context of FI participation behaviour and its antecedents.

Sethi et al. (2018) and Shneor and Munim (2019) argue that TPB emerged as an extension of the theory of reasoned action (TRA) by Fishbein and Ajzen (1975) on the premise that the TRA had failed to comprehensively explain individual behaviours that were not under volitional control. The TPB belongs to the so-called group of 'rational choice models'. This theory has become perhaps the most influential reasoned action approach developed by Icke Ajzen in collaboration with Martin Fishbein. The TPB has emerged as a major framework for understanding, predicting, and changing human social behaviour (Fishbein and Ajzen, 1975, 1980 and Ajzen, 1985, 1991, 2005, 2012). At its core, the TPB suggests that the likelihood of an individual performing a particular behaviour is affected by that individual's intention to engage in such behaviour (Ajzen, 1991). The main focus of the TPB is that complete perceived or volitional control is rare and that certain behaviours require special resources and skills (Sethi et al., 2018 and Shneor and Munim, 2019). To Ajzen (1991), intentions capture the motivational factors influencing behaviour, indicating how hard one is willing to try and how much effort one plans to exert to

perform a behaviour. According to the theory, the intention is the immediate antecedent of behaviour and is itself a function of attitude toward the behaviour, subjective norms, and perceived behaviour control; and these determinants follow, respectively, from beliefs about the behaviour's likely consequences about normative expectations of important others, and about the presence of factors that control behavioural performance (Smith and McSweeney, 2007 and Ajzen, 2012). To Smith and McSweeney (2007), behavioural intention is seen as the proximal determinant of behaviour: the more one intends to engage in a particular behaviour, the more likely one is to engage in it.

Assuming intention can explain behaviour, how can intention be explained? According to Azjen (1991) and Fishbein and Ajzen (1975), three determinants explain behavioural intention:

1. The attitude (opinions of oneself about the behaviour);

2. The subjective norms (opinions of others about the behaviour);

3. The perceived behavioural control (self-efficacy towards the behaviour).

Perceived behavioural control (PBC) is the individual's perception of how easy or difficult the performance of a behaviour is. The PBC captures the extent to which he or she views themselves as having the capacity to perform the behaviour. It should be noted that PBC is thought to determine both intention and behaviour: one is more likely to perform, or intend to perform, behaviours that are perceived as being relatively easy or within one's control (Smith and McSweeney, 2007). Subjective norms are the individual's beliefs about whether significant others think he or she should engage in the behaviour and are assumed to capture the extent of perceived social pressures exerted on individuals to engage in certain behaviour.

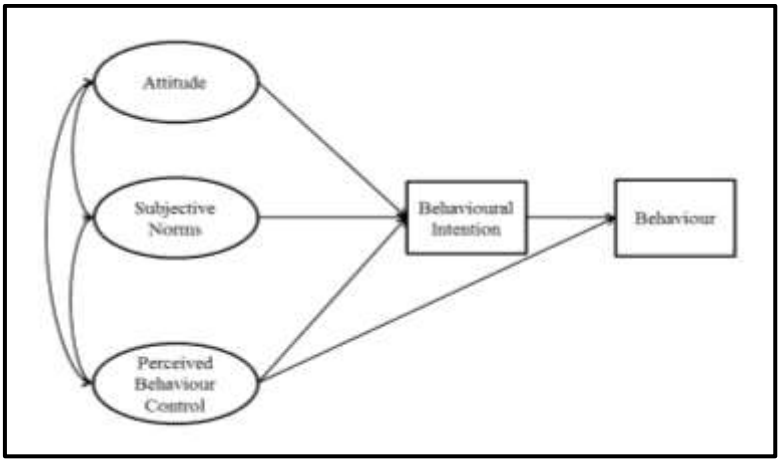

Figure 1. Theory of Planned Behaviour (Ajzen, 1991)

According to this model, attitudes, subjective norms, and perceived behavioural control predict the intention, which in turn predicts the behaviour. Attitudes, subjective norms, and perceived behavioural control explain the behavioural intention before the behaviour takes place.

2.2. Extended Theory of Planned Behaviour (TPB)

Smith and McSweeney (2007) citing Armitage and Conner (2001) argue that in its original formulation, the TPB was a parsimonious account of the attitude–behaviour relationship. However, decades of research have demonstrated the power of the model to predict behavioural performance. Ajzen (1991) gave researchers room to expand the TPB with identified predictors. This study adopted Shneor and Munimb (2019)'s extended TPB framework which implies that attitudes, PBC, self-efficacy, subjective norms, and social norms will all serve as antecedents of intentions to be financially included and share information about financial products/services as shown in figure 2.

Fine-tuning of PBC into *self-efficacy* (internal controls) and *PBC* (external controls) (Terry and O'Leary, 1995 and Manstead and Eekelen, 1998) and subjective norms into *injunctive norms* termed here as subjective norms and *descriptive norms* termed here as social norms (Ajzen and Fishbein, 2005, Smith and McSweeney, 2007 and Manning, 2009) were both taken into consideration and examined in this study. The TPB has been widely embraced and used across several fields to predict and explain individual intentions and behaviour. Ajzen (2012) argues that empirically the theory got support from a host of correlational studies demonstrating its ability to predict intentions and behaviour. The policy interventions that flow from this model are relatively straightforward. The policy should seek to ensure that FI participants have access to sufficient information to make informed choices on whether to be included or excluded.

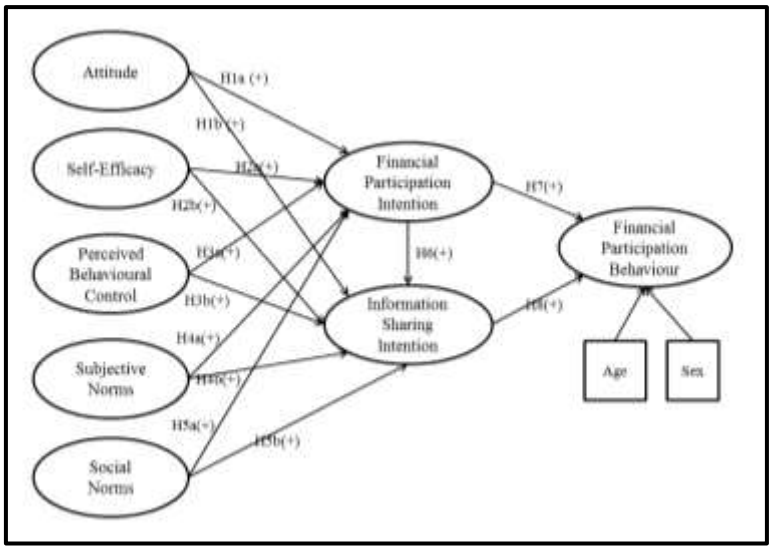

Figure 2. Research Model

2.3. Financial Inclusion Participation Intention

Fishbein and Ajzen (1975) define attitude as the negative and positive feelings of an individual about executing a selected behaviour. According to Ajzen (1991), attitude towards behaviour refers to an individual's evaluative judgment of behaviour in question. To Mindra and Moya (2017) and Shneor and Munim (2019), attitudes are the overall evaluations of the behaviour by the individual, capturing the extent to which he or she views the behaviour favourably. In the TRA it is assumed that these behavioural beliefs and outcome evaluations combine to produce an overall positive or negative attitude toward the behaviour. Armitage and Conner (2001) and Ajzen (2012) argue that following Rosenberg and Hoyland (1960), many researchers consider beliefs (or cognitions) and evaluations (or affect) to be two components of attitude, together with behavioural inclinations (or conation), the third component. Peak (1955) states that the attitude toward any object, "is related to the ends which it serves, and is, to its consequences" and that the attitude, therefore, is "some function of (i) the judged probability that the object leads to good or bad consequences, and (ii) the intensity of the effect expected from those consequences." Individuals generally hold several behavioural beliefs about any given behaviour. Each of these beliefs links the behaviour to an outcome, and each outcome has a certain subjective value.

Fishbein and Ajzen (2011) argue that the most fundamental assumption underlying the attitude concept is that attitudes guide, influence, direct, shape, and predict actual behaviour. Mindra and Moya (2017) conclude, when individuals evaluate behaviour

as favourable for attaining a certain anticipated outcome, it will lead to an individual's engagement in the behaviour that consequently influences their access and use of financial products/services hence financial inclusion. Therefore, FI participation is a deliberation process that involves individual evaluation and judgment as to whether their action will improve their wellbeing or not. Hence, FI participation is attached to the attitude of individuals, and it is difficult to separate the two as purported by Kidwell and Turrisi (2003) and Chau et al. (2004). Several studies (Fishbein and Ajzen, 1975; Bagozzi et al., 2001; Norvilitis et al., 2006; Chen et al., 2012; Lachance, 2012; Norvilitis and Mao, 2013 and Shih and Ke, 2013) have investigated the relationship between attitude and individual behaviour with varying results. However, not much empirical evidence has clearly shown the relationship between individual attitude and FI participation behaviour.

Sheeran and Orbell (1999) and Shneor and Munim (2019) argue that the extent to which an individual may be willing to partake in performing the behaviour, for example, FI depends on the individual's positive or negative evaluation of his/her performing the behaviour. The duo further argues that "positive perspectives can promote both one's own intention to contribute as well as encourage others to contribute by sharing information about the campaign with them." Mindra and Moya (2017) contend that it is difficult to understand FI detached from the individual's attitude hence, to construct an enriched understanding of FI, the influence of attitude is important in terms of critically evaluating the available options regarding the choice and use of financial products/services. Midra and Moya (2017) further argue that it is also anticipated that changes in attitude will influence changes in individual behaviour hence the use of financial products/services to improve the individual welfare and quality of life. Therefore, we hypothesize the following:

H1. The more favourable the attitude towards FI behaviour, the higher the levels of financial participation intentions (H1a), and the higher the FI information-sharing intentions (H1b).

The degree and ability of individuals to engage and use financial products and services can be associated with both internal (self-efficacy) and external controls (PBC). To Bandura (1977), cited by Ajzen (2012) and Shneor and Munim (2019), internal controls *(self-efficacy)* refers to beliefs in one's capabilities and knowledge to organize and execute the courses of action required to produce/perform certain behaviour/attainments. Studies by Bandura (1986), Zimmerman et al. (1992), Zhao et al. (2005), and Bailey and Austin (2006) have identified self-efficacy as a much more consistent predictor of behaviour and behavioural change. Hence, in FI participation, an individual can consider both capabilities to participate in FI directly or indirectly by sharing information regarding financial products or services with other potential participants. In the same context, Ajzen (2012) and Shneor and Munim (2019) define external controls *(PBC)* as the extent to which people believe

that they can perform a given behaviour if they are inclined to do so. The conceptualization of PBC in the TPB owes much to Bandura's (1977, 1986, and 1997) work on self-efficacy. Consequently, in the context of FI participation, individual abilities to make use of financial products and services are considered for a direct financial participation or indirect participation by sharing information regarding financial products or services with others who can participate. Ajzen (2012) argues that one way in which self-efficacy or PBC can influence the performance of difficult behaviours is by its effect or perseverance. The more people believe that they can perform an intended behaviour, the more likely they are to persevere and, therefore, to succeed. PBC can thus influence behavioural performance indirectly by its effects on intentions to engage in the behaviour or directly (Fig. 1). Currently, there is no detailed discussion of self-efficacy and PBC in FI. Therefore, we hypothesize the following:

H2. The greater the individual's self-efficacy regarding FI participation, the higher the individual's levels of financial-participation intentions (H2a), and the higher the FI information-sharing intentions (H2b).

H3. The greater the individual's perceived behaviour control regarding FI participation, the higher the individual's levels of financial participation intentions (H3a), the higher the FI information-sharing intentions (H3b).

Fishbein and Ajzen (1975) declare that subjective norm is the perceived social pressure that encourages one to engage in a specific behaviour. Dulany (1968) refers to the subjective norm to a belief that a particular referent other wants us to perform a given behaviour. According to Sheeran and Orbell (1999), subjective norms refer to people's perceptions of approval or disapproval from significant others for performing the behaviour. Fishbein and Ajzen (1975) proposed that pressure and the social group are the constructs of the subjective norm. Therefore, the extent to which one is willing to participate in FI depends on the extent of social referents (subjective norm) and the extent to which others' participation in FI activities enhances one's own willingness to do so (social norms).

Ajzen (2012) states that normative beliefs regarding different social referents combine to produce an overall perceived social pressure or subjective norm. We can form beliefs based on injunctive norms (by being told or by inferring what important others want us to do) or descriptive norms (observed or inferred actions of those important social referents). Therefore, when applied to FI, the perceived social pressure or subjective norm to participate financially, the more likely one is to participate and to share information about financial products or services as a sign of compliance with social pressure. Also, the impact of social referents behaviour has been found to have an impact on participation behaviour through herding effects (Han et al., 2010 and Shneor and Munim, 2019). One's favourable perception of FI participation leads to his/her behavioural intentions which in turn influence others to

do the same through information sharing. Vermeir and Verbeke (2006); Biel and Thøgersen (2007); Chen (2007); Pearson et al. (2008); Taib et al. (2008); Sidique et al. (2010) and Liu et al. (2014) demonstrate the application and importance of subjective norms to individual behavioural intentions. Sheeran and Orbell (1999) argue that the more positive people's subjective norms are regarding the behaviour and the greater their perceived behavioural control, the more likely it is that people will intend to perform the behaviour. However, Armitage and Conner (2001) argue that studies employing the TPB generally reveal that subjective norm is the weakest predictor of behavioural intentions. To alleviate this problem, the measure of subjective norm should also include items designed to capture descriptive norm. Therefore, we hypothesize the following:

H4. The greater the subjective norms are perceived as favourable to FI participation, the higher the levels of financial participation intentions (H4a), and the higher the FI information-sharing intentions (H4b).

H5. The greater the social norms are perceived as favourable to FI participation, the higher the levels of financial participation intentions (H5a), and the higher the FI information-sharing intentions (H5b).

We also hypothesized the following:

H6. The greater the individual's financial-participation intentions, the greater the individual's information-sharing intention.

The hypothesis follows Shneor and Munim (2019) in which financial contribution intentions and information sharing intentions were hypothesized and found to have a positive effect. This line of thinking follows studies by Hobbs et al. (2016); Bi et al. (2017); Berliner and Kenworthy (2017), and Cho and Kim (2017).

The theoretical assumptions were finally merged with the TPB's core premises of individual intentionality to engage in certain behaviour (Ajzen, 1991). Ajzen (1991) argues that intentions to perform a behaviour are conceptualized as the most immediate and important predictor of behavioural performance and mediate the effects of attitudes, subjective norms and, to a lesser extent, perceived behavioural control. Ajzen (1991) further states that intentions are assumed to capture the motivational factors that influence behaviour, they are indicators of how hard people are willing to try, of how much effort they are planning to exert, to perform the behaviour. Moreso, Sheeran and Orbell (1999) state that behavioural intentions are believed to summarize people's motivation to perform a behaviour. It is proposed that intentionality in FI – financial-participation and information sharing intentions will influence FI participation behaviour. The relationship between intentions and behaviour has been well documented both conceptually and empirically, in a large body of research that includes multiple meta-analyses (Shneor and Munim, 2019). Therefore, we hypothesize the following:

H7. The greater the individual's financial-participation intentions, the greater the likelihood of the individual's financial-participation behaviour.

H8. The greater the individual's FI information-sharing intention, the greater the likelihood of the individual's financial participation behaviour.

3. Method

This study targeted academics, banking and non-banking participants (that is, formal and informal sectors) in Zimbabwe. This study was conducted in Zimbabwe in the context of financial inclusion as a reasoned action or planned behaviour. For this study, the authors adopted the Center for Financial Inclusion's definition and the TPB as the basis for this study as given in Section 2 – literature review. This study is being carried out when technology firms are considering opening offices in Africa with an internet use per population of around 39% against a world average of 59% according to web analytics firm StatCounter (Reuters, 2021) and when the first phase of the National Financial Inclusion Strategy (2016 – 2020) implementation has come to an end when the world is gripped with the COVID-19 pandemic, which is threatening to reverse the financial inclusion gains according to RBZ. Financial inclusion has proven to be a powerful solution in times of health and economic crises.

3.1. Respondents and Procedure

Two hundred and fifty questionnaires were sent via email and WhatsApp platforms to Zimbabweans drawn from academics, banking and non-banking participants (that is, formal and informal sectors) across the board aged between <20 and >50 years in May 2020. The questionnaire was created on the Google forms platform. The link generated was then sent to the respondents. The survey needed approximately 10 to 15 minutes to complete. Before this, a pilot questionnaire was sent to 10 people with and without financial inclusion knowledge to elicit salient features, ambiguous, negatively worded, and difficult questions. These were deleted in the main questionnaire. Completed questionnaires we returned, automatically through the Google forms platform, to the authors by 106 respondents (42.4%). After cleaning the data, that is removing observations with missing data, and suspected unengaged respondents, we remained with complete data from 100 respondents (40% response rate). The sample size used was guided by Marcoulides and Saunders (2006) who argued that the minimum sample size required must be guided by the maximum number of arrows pointing at the latent variable in the model. We were also guided by Hoyle (1995) 's suggestions that a sample size of 100 to 200 is usually a good starting point in carrying out path modeling. In our case, unengaged respondents were defined as those who recorded the same response for all consecutive items (for

example, a 7 throughout all the observed variables). Table 3 denotes the demographic descriptive statistics.

Table 3. Demographic Descriptive Statistics

Variable	Category	Frequency	Percentage
Gender	Male	69	69%
	Female	31	31%
Age	<20	0	0%
	21 – 30	45	45%
	31 – 40	37	37%
	41 – 50	7	7%
	>50	11	11%
Marital Status	Single	44	44%
	Married	52	52%
	Divorced	4	4%
Education	Certificate	3	3%
	Diploma	4	4%
	Bachelor's Degree	48	48%
	Master's Degree	31	31%
	PhD	10	10%
	Other	4	4%

Source: Author's compilation

3.2. Measurement

Research participants were asked to complete an online questionnaire designed to measure latent variables as given by the TPB, that is, attitudes, PBC, subjective norms, social norms, self-efficacy, intentions and behaviour. The wording and scaling of these social-psychological variables, that is, the TPB variables followed Ajzen and Fishbein (1980), Ajzen and Madden (1986), Theodorakis (1994) and Shneor and Munim (2019). All the latent constructs in the model were measured with multi-item measures adopted mainly from a study by Shneor and Munim (2019) with some contextual rephrasing specifically to suit the current study on financial inclusion. Shneor and Munim (2019) argue that self-report measures are the most suitable for capturing individual perceptions. Table 4 denotes the measures used in this study. According to Wong (2013), there are two types of measurement scale in SEM, that is, formative and reflective. In our case the indicators are highly correlated and interchangeable, therefore reflective hence a thorough examination of their reliability and validity was done according to Haenlein and Kaplan (2004), Petter et al. (2007), and Hair et al., 2013). All items were measured on a 7-point Likert scale, ranging from 1 (completely disagree with the statement) to 7 (completely agree with

the statement). All items that were retained or removed, due to different reasons, are shown in Table 4 with their factor loadings as well as the sources.

Table 4. Survey Items, Measurement of Constructs, Factor Loadings, and Sources

Constructs	Measurement Variables	Factor loadings	Sources
ATT (attitude)	ATT1.1 I think I would like to be financially included.	0.929	ATT1.4-1.6 adapted and modified from "attitude" in Shneor and Munim (2019).
	ATT1.2 I am likely to feel good by being financially included.	0.931	
	ATT1.3 I think financial inclusion is good for me.	0.902	
	ATT1.4 I think financial inclusion is appropriate for me.	0.929	
	ATT1.5 I think financial inclusion is beneficial for me.	0.932	
	ATT1.6 I have a positive opinion about financial inclusion.	0.806	
PBC (perceived behaviour control)	PBC2.1 My engagement in financial inclusion is within my control.	0.712	PBC2.1-2.5 adapted and modified from "perceived behaviour control" in Shneor and Munim (2019).
	PBC2.2 I would be financially included (if I wanted to).	0.937	
	PBC2.3 The decision to be financially included is entirely mine.	0.871	
	PBC2.4 Whether or not I participate in financial inclusion is entirely up to me.	0.857	
	PBC2.5 I very much feel that whether I participate or don't participate in financial inclusion is beyond my control.	*Removed*	
SELE (self-efficacy)	SELE3.1 I have confidence in my ability to use formal financial products/services.	0.810	SELE3.1-3.4 adapted and modified from "self-efficacy" in Shneor and Munim (2019).
	SELE3.2 I have the expertise needed to use financial products/services.	0.925	
	SELE3.3 I am confident in my ability to navigate and use financial products/services.	0.928	
	SELE3.4 I am confident in my ability to use financial products/services available through different FinTech platforms.	0.875	
SOCN (social norms)	SOCN4.1 I read/saw news which suggested that being financially included is a good way of financing projects.	0.796	SOCN4.1-4.4 adapted and modified from "social norms" in
	SOCN4.2 The popular press (media) depicted a positive sentiment towards financial inclusion development.	0.822	

	SOCN4.3 Mass media reports convinced me to use financial products/services.	0.764	Shneor and Munim (2019).
	SOCN4.4 Expert opinions depicted positive opinions about the usage of financial products/services.	0.823	
SUBN (subjective norms)	SUBN5.1 People who are important to me think that I should be financially included.	0.858	SUBN5.1-5.4 adapted and modified from "subjective norms" in Shneor and Munim (2019).
	SUBN5.2 People who influence my behaviour encourage me to be financially included.	0.898	
	SUBN5.3 My colleagues think that I should be financially included.	0.895	
	SUBN5.4 My friends think that I should be financially included.	0.928	
FPI (financial participation intention)	FPI6.1 Given the chance, I intend to use financial products/services.	0.802	FPI6.1-6.5 adapted and modified from "financial contribution intention" in Shneor and Munim (2019).
	FPI6.2 Given the chance, I predict that I would use financial products/services in the future.	0.895	
	FPI6.3 It is likely that I will use financial products/services in the near future.	0.884	
	FPI6.4 I have the intention to use financial products/services.	0.906	
	FPI6.5 I intend to actively use financial products/services.	0.913	
ISI (information sharing intention)	ISI7.1 I intend to share information about financial products/services I know of more frequently in the future.	*Removed*	ISI7.1-7.6 adapted and modified from "information sharing intention" in Shneor and Munim (2019).
	ISI7.2 I intend to share information about financial products/services I use more frequently in the future.	0.857	
	ISI7.3 I will always provide information about financial products/services I know of at the request of others.	0.906	
	ISI7.4 I will always provide information about financial products/services I use at the request of others.	0.931	
	ISI7.5 I will try to share information about financial products/services I know of more effectively.	0.935	
	ISI7.6 I will try to share information about financial products/services I support more effectively.	0.925	

FPB (financial participation behaviour)	FPB8.1 I frequently use financial products/services.	0.891	FPB8.1-8.2 adapted and modified from "financial contribution behaviour" in Shneor and Munim (2019).
	FPB8.2 I spend much effort in using financial products/services.	0.866	
	Amount: Roughly estimating please indicate how much money IN TOTAL have you transacted through formal platforms in the past year? (Please indicate AMOUNT in USD).		Adapted and modified from Shneor and Munim (2019).

Source: Authors' compilation

3.3. Approach to SEM

There are several distinct approaches to SEM, and for this study, we used the Partial Least Squares (PLS) by focusing on the analysis of variance. This was carried out using the SmartPLS 3. We used PLS a soft modeling approach to SEM (Vinzi et al., 2010) as a good alternative to covariance-based (CB) SEM because of the small sample size as a result of Covid-19 lockdown restrictions and due to its predictive accuracy (Bacon, 1999; Hwang et al., 2010; Wong, 2010). Despite its limitations, PLS is useful for SEM in applied research projects especially when there are limited participants and that the data distribution is skewed (Wong, 2013). PLS-SEM has been deployed in fields, such as behavioural sciences, marketing, organization, management information system, and business strategy (Wong, 2013). The data set was first checked for any missing values, invalid observations or outliers before imported into SmartPLS.

3.4. Analysis

The PLS path modeling estimation for this study is shown in Fig. 3. By looking at the diagram, the following observations were made:

3.4.1. Reflective Measurement Model

Our 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:

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

where $x_{h=1, \ldots, p}$is the hth regression where a reflective indicator is a dependent variable and p equal 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, two items (PBC2.5 and ISI7.1) were omitted from the analysis due to low factor loadings and cross-loading respectively (<0.600) (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 higher than the recommended value of 0.700 (Wasko and Faraj, 2005 and Hair et al., 2017). Cronbach's alpha of each construct exceeded the 0.700 thresholds (see table 5). Convergent validity was acceptable because the Average Variance Extracted (AVE) was over 0.500 (Bagozzi and Yi, 1988). The results for reliability and validity along with the factor loadings for the items are presented in table 5. Discriminant validity was assessed by the Fornell-Larcker criterion, the table shows that the square root of AVE for the construct was greater than the inter-construct correlation (see table 6) (Fornell and Larcker, 1981). Discriminant validity was also assessed by the Heterotrait-Monotrait ratio of correlations (Henseler et al., 2015), with values below the threshold of 0.900. Hence, discriminant validity is established (see table 7).

Table 5. Loadings, Reliability, and Validity

	Loadings	Cronbach's Alpha	Composite Reliability	AVE
ATT1.1	0.929	0.956	0.965	0.820
ATT1.2	0.931			
ATT1.3	0.902			
ATT1.4	0.929			
ATT1.5	0.932			
ATT1.6	0.806			
FPB8.1	0.892	0.707	0.872	0.770
FPB8.2	0.866			
FPI6.1	0.802	0.927	0.945	0.780
FPI6.2	0.895			
FPI6.3	0.884			
FPI6.4	0.906			
FPI6.5	0.913			
ISI7.2	0.857	0.949	0.961	0.830
ISI7.3	0.906			
ISI7.4	0.931			
ISI7.5	0.935			
ISI7.6	0.925			
PBC2.1	0.712	0.878	0.910	0.720
PBC2.2	0.937			

PBC2.3	0.871			
PBC2.4	0.857			
SELE3.1	0.810	0.907	0.936	0.780
SELE3.2	0.925			
SELE3.3	0.928			
SELE3.4	0.875			
SOCN4.1	0.796	0.816	0.878	0.640
SOCN4.2	0.822			
SOCN4.3	0.764			
SOCN4.4	0.823			
SUBN5.1	0.858	0.917	0.941	0.800
SUBN5.2	0.898			
SUBN5.3	0.895			
SUBN5.4	0.928			

Table 6. Fornell-Larcker Criterion

	ATT	**FPB**	**FPI**	**ISI**	**PBC**	**SELE**	**SOCN**	**SUBN**
ATT	*0.906*							
FPB	0.459	*0.879*						
FPI	0.746	0.529	*0.881*					
ISI	0.700	0.501	0.764	*0.911*				
PBC	0.150	0.241	0.137	0.220	*0.848*			
SELE	0.515	0.413	0.530	0.525	0.256	*0.886*		
SOCN	0.443	0.444	0.436	0.526	0.272	0.579	*0.801*	
SUBN	0.320	0.345	0.377	0.495	0.197	0.286	0.603	*0.895*

Note: Values in Italic Represent Square-roots of AVE.

Table 7. Heterotrait-Monotrait Ratio (HTMT)

	ATT	**FPB**	**FPI**	**ISI**	**PBC**	**SELE**	**SOCN**	**SUBN**
ATT								
FPB	0.555							
FPI	0.791	0.652						
ISI	0.733	0.613	0.813					
PBC	0.156	0.281	0.125	0.191				
SELE	0.553	0.511	0.577	0.562	0.268			
SOCN	0.496	0.586	0.493	0.583	0.317	0.658		
SUBN	0.343	0.429	0.407	0.529	0.182	0.315	0.705	

3.4.2. Structural Model

Once the construct measures were confirmed reliable and valid we moved on to evaluate the results of the structural model. Avkiran (2018) argues that the analysis of the structural model is an attempt to find evidence supporting the theoretical model (that is, the theorized relationships between exogenous constructs and the endogenous construct):

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

where ξ_j is the endogenous construct and ξ_i represents the exogenous constructs, while 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 (Tenenhaus et al., 2005).

The structural model reflects the paths hypothesized in the research framework. The structural model was assessed based on the R^2, Q^2, and significance of paths. The goodness of the model is determined by the strength of each structural path determined by the R^2 value for the dependent variable (Briones Penalver et al., 2018), the value for R^2 should be equal to or over 0.1 (Falk and Miller, 1992). The results in table 8 show that all R^2 values are over 0.1. Hence, the predictive capability is established. Further, Q^2 establishes the predictive relevance of the endogenous constructs. A Q^2 above 0 shows that the model has predictive relevance. The results that there is significance in the prediction of the constructs (see table 8). Furthermore, the model fit was assessed using SRMR. The value of SRMR was 0.071 that is below the required value of 0.100, indicating an acceptable model fit (Hair et al., 2016). We also checked the structural model for collinearity issues by examining the VIF values of all sets of predictor constructs in the structural model. The results in Table 9 show the inner VIF values of all combinations of endogenous constructs (represented by the columns) and corresponding exogenous (that is, predictor) constructs (represented by the rows). As can be seen in table 9, all VIF values are clearly below the threshold of 5. Therefore, collinearity among the predictor constructs is not a critical issue in the structural model, and we can continue examining the results report.

Further assessment of the goodness of fit, hypotheses was tested to ascertain the significance of the relationships, H_{1a} evaluates whether ATT has a significant impact on FPI. The results revealed that ATT has a significant impact on FPI ($_\beta = 0.616$, t = 6.881, p = < 0.001). Hence, H_{1a} was supported. H_{1b} evaluates whether ATT has a significant impact on ISI. The results revealed that ATT has a significant impact on ISI ($_\beta = 0.233$, t = 2.368, p = 0.018). Hence, H_{1b} was supported. H_{2a} evaluates whether SELE has a significant impact on FPI. The results revealed that SELE has an insignificant impact on FPI ($_\beta = 0.195$, t = 1.795, p = 0.073). Hence, H_{2a} was not

supported. H_{2b} evaluates whether SELE has a significant impact on ISI. The results revealed that SELE has an insignificant impact on ISI (β = 0.059, t = 0.563, p = 0.574). Hence, H_{2b} was not supported. H_{3a} evaluates whether PBC has a significant impact on FPI. The results revealed that PBC has an insignificant impact on FPI (β = -0.025, t = 0.305, p = 0.760). Hence, H_{3a} was not supported. H_{3b} evaluates whether PBC has a significant impact on ISI. The results revealed that PBC has an insignificant impact on ISI (β = 0.053, t = 0.632, p = 0.527). Hence, H_{3b} was not supported. H_{4a} evaluates whether SUBN has a significant impact on FPI. The results revealed that SUBN has an insignificant impact on FPI (β = 0.145, t = 1.439, p = 0.150). Hence, H_{4a} was not supported. H_{4b} evaluates whether SUBN has an insignificant impact on ISI. The results revealed that SUBN has an insignificant impact on ISI (β = 0.179, t = 1.598, p = 0.110). Hence, H_{4b} was not supported. H_{5a} evaluates whether SOCN has a significant impact on FPI. The results revealed that SOCN has an insignificant impact on FPI (β = -0.033, t = 0.328, p = 0.743). Hence, H_{5a} was not supported. H_{5b} evaluates whether SOCN has a significant impact on ISI. The results revealed that SOCN has an insignificant impact on ISI (β = 0.068, t = 0.750, p = 0.453). Hence, H_{5b} was not supported. H_6 evaluates whether FPI has a significant impact on ISI. The results revealed that FPI has a significant impact on ISI (β = 0.455, t = 3.386, p = 0.001). Hence, H_6 was supported. H_7 evaluates whether FPI has a significant impact on FPB. The results revealed that FPI has a significant impact on FPB (β = 0.391, t = 2.439, p = 0.015). Hence, H_7 was supported. H_8 evaluates whether ISI has a significant impact on FPB. The results revealed that ISI has an insignificant impact on FPB (β = 0.185, t = 1.040, p = 0.298). Hence, H_8 was not supported.

This study's 5000 resamples also generate 95% confidence intervals as shown in table 8. A confidence interval different from zero indicates a significant relationship. Hypotheses testing results are summarized in Table 8.

Table 8. 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_{1a}	ATT -> FPI	0.616	0.090	6.881	0.000	0.410	0.759
H_{1b}	ATT -> ISI	0.233	0.099	2.368	0.018	0.056	0.439
H_{2a}	SELE -> FPI	0.195	0.109	1.795	0.073	-0.027	0.404
H_{2b}	SELE -> ISI	0.059	0.105	0.563	0.574	-0.149	0.261
H_{3a}	PBC -> FPI	-0.025	0.082	0.305	0.760	-0.195	0.127
H_{3b}	PBC -> ISI	0.053	0.085	0.632	0.527	-0.153	0.191

H_{4a}	SUBN -> FPI	0.145	0.101	1.439	0.150	-0.037	0.350
H_{4b}	SUBN -> ISI	0.179	0.112	1.598	0.110	-0.020	0.416
H_{5a}	SOCN -> FPI	-0.033	0.100	0.328	0.743	-0.232	0.147
H_{5b}	SOCN -> ISI	0.068	0.091	0.750	0.453	-0.114	0.237
H_6	FPI -> ISI	0.455	0.134	3.386	0.001	0.181	0.694
H_7	FPI -> FPB	0.391	0.160	2.439	0.015	0.032	0.646
H_8	ISI -> FPB	0.185	0.178	1.040	0.298	-0.078	0.593
		R^2	R^2 Adjusted	Q^2			
	FPB	0.325	0.289	0.194			
	FPI	0.601	0.580	0.431			
	ISI	0.677	0.656	0.539			

Table 9. Collinearity Assessment – Inner VIF Values

	FPB	**FPI**	**ISI**
ATT		1.445	2.393
FPI	2.637		2.505
ISI	2.584		
PBC		1.101	1.103
SELE		1.780	1.877
SOCN		2.239	2.241
SUBN		1.617	1.669

3.4.3. Mediation Analysis

We performed the mediation analysis to assess the mediating role of FPI and ISI. The results (see table 10) revealed insignificant ($p > 0.05$) mediating roles of FPI and ISI. FPI and ISI did not mediate the relationship between the independent variables (ATT, SELE, PBC, SUBN, and SOCN) and the dependent variable (FPB). The results also revealed that the effect of ATT on FPB was significant ($\beta = 0.269$, $t = 2.395$, $p = 0.017$), however, with the inclusion of the mediating variable (FPI), the impact of ATT on FPB became partially significant ($\beta = 0.220$, $t = 1.920$, $p = 0.055$) and insignificant with the inclusion of ISI ($\beta = 0.001$, $t = 0.028$, $p = 0.978$). On the whole, the roles of the two mediators (FPI and ISI) are insignificant.

Table 10. Mediating Role of FPI and ISI

	Total effect	T	Sig.	Direct effect	Sig.		Indirect effect	T	Sig.
ATT-FPB	0.269	2.395	0.017	0.045	0.703	ATT-FPI-FPB	0.220	1.920	0.055
SELE-FPB	0.110	0.766	0.444	0.039	0.774	ATT-ISI-FPB	0.001	0.028	0.978
PBC-FPB	0.107	0.923	0.356	0.119	0.306	AAT-FPI-ISI-FPB	0.002	0.023	0.981
SUBN-FPB	0.113	0.791	0.429	0.059	0.688	SELE-ISI-FPB	0.000	0.013	0.990
SOCN-FPB	0.165	1.075	0.282	0.176	0.235	SELE-FPI-FPB	0.070	1.398	0.162
						SELE-FPI-ISI-FPB	0.000	0.023	0.982
						PBC-FPI-FPB	-0.012	0.482	0.630
						PBC-ISI-FPB	0.000	0.012	0.991
						PBC-FPI-ISI-FPB	-0.000	0.010	0.992
						SUBN-ISI-FPB	0.001	0.027	0.979
						SUBN-FPI-FPB	0.052	1.370	0.171
						SUBN-FPI-ISI-FPB	0.000	0.020	0.984
						SOCN-FPI-FPB	-0.012	0.362	0.717
						SOCN-ISI-FPB	0.000	0.014	0.989
						SOCN-FPI-ISI-FPB	-0.000	0.008	0.994

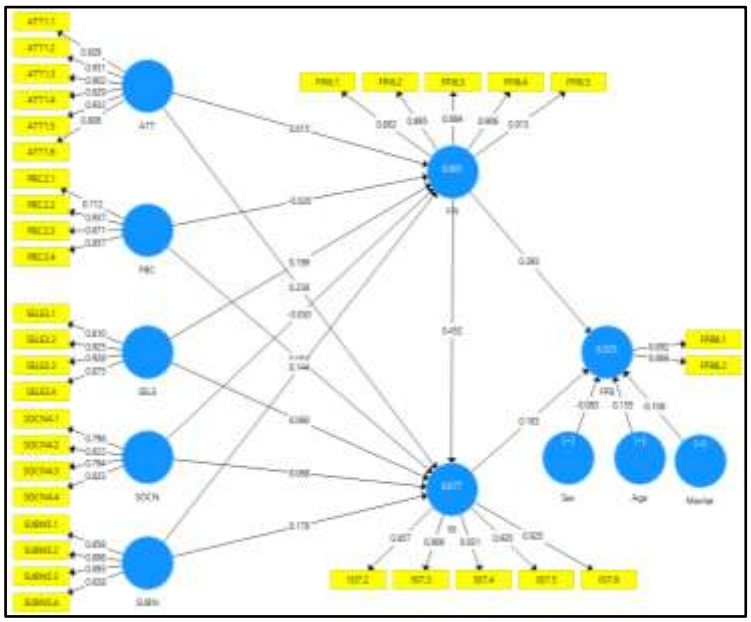

Figure 3. SEM Model and PLS-SEM Results

Model fit: SRMR=0.066 (saturated model), 0.071 (estimated model).

3.4.4. Importance-Performance Map Analysis (IPMA)

Figure 4 shows the results of the construct level IPMA on the model for the endogenous construct FPB. The total effects on the horizontal axis represent *importance* and the vertical axis represents the % performance of the direct and indirect predecessor constructs (ATT, FPI, ISI, PBC, SELE, SOCN, and SUBN) in explaining the target construct (FPB). Information on the importance of constructs is relevant for concluding. The importance-performance map analysis (IPMA) extends the results of PLS-SEM by also taking the performance of each construct into account. As a result, conclusions can be drawn on two dimensions (that is, both importance and performance), which is particularly important to prioritize managerial actions. In this case, ATT, FPI, ISI, and SELE are both important with high performances. Consequently, it is preferable to primarily focus on improving the performance of those constructs that exhibit large importance (FPI, ATT, ISI, and SELE) regarding their explanation of a certain target construct but, at the same time, have a relatively low performance. While the performance of PBC and SOCN are high, they are not important as shown by the negative total effects of -0.002 and -0.003 respectively. In terms of raising performance, it would be better for the management to focus efforts on FPI, ATT, SELE, and ISI, in the knowledge that they have higher importance hence their improvements are likely to improve their effect on the targeted construct (FPB). Ceteris paribus, for example, a one-unit rise

in the performance of FPI would lead to a 0.525 increase in the performance of FPB. To provide more specific guidance for management, an indicator level IPMA can also be separately undertaken (Hair et al., 2018; Ringle and Sarstedt, 2016).

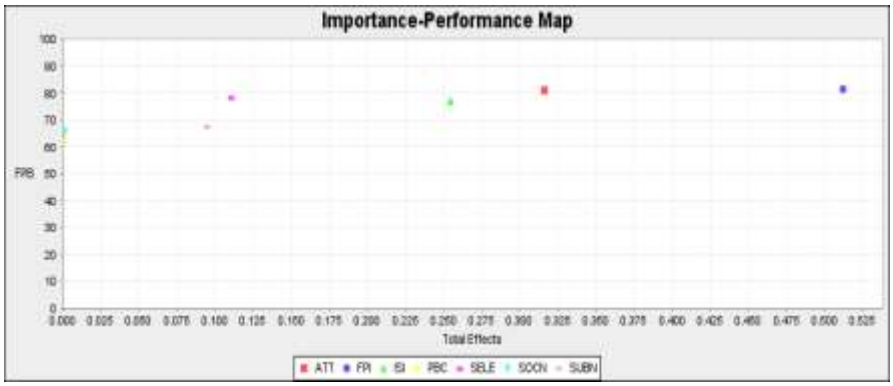

Figure 4. Importance-Performance Map Analysis

4. Discussion

In this study, we examined the impact of the extended TPB in predicting FI behaviour intention and FI behaviour. Financial inclusion has become a critical component for economic development and growth. This has seen many governments, through their central banks, championing the drive towards financial inclusivity through implementing national strategies to increase the accessibility of financial products/services. These efforts have, however, not reached fruition despite financial innovations and developments in fintech. Financial exclusion remains a challenge especially in the marginalized segments of society. The challenge is much effort has been placed on the supply side whilst nothing much has been done to address the demand side of financial inclusion which becomes the objective of this article. This article seeks to close/address this gap by drawing attention to the cognitive psychological perspective of FI. This study proposed a model built on inferences rooted in the TPB. The TPB provides that any behaviour is influenced by intention or is preconceived. Finally, this study demonstrated that FPB is influenced by ATT, PBC, SELE, SOCN, and SUBN through moderators FPI and ISI. As discussed in the following subsections, the study is important for research and practice.

The findings of this study are in line with findings from other studies with minor differences. Constructs ATT, FPI & ISI, and SELE have proved to be important and effective performance enhancers of FPB which management, developers, and regulators must pay much attention to effective FI participation. Table 11 below shows the importance-performance analysis.

Table 11. Importance-Performance Analysis

Construct	Performance	Total effect
ATT	80.776	0.317
FPI	81.535	0.535
ISI	77.121	0.200
PBC	61.672	- 0.002
SELE	78.077	0.112
SOCN	65.321	- 0.003
SUBN	67.458	0.090

Research has shown that FI is a planned decision and behaviour in which governments, developers, and banks need to understand and consider the demand side as well unlike previously when these players only considered the supply side. The results of this study are in line with the TPB which states that attitude, subjective norms, and perceived behavioural control predict behaviour intention which in turn predicts the actual behaviour (Ajzen, 1991). Our study shows that ATT is a strong positive predictor of intention, that is, FPI and ISI which in turn predicts behaviour (FPB) (see table 8 and figure 3). This supports the findings by Peak (1955), Kidwell and Turrisi (2003), Chau et al. (2004), Fishbein and Ajzen (2011), Mindra and Moya (2017), and Shneor and Munim (2019) who found attitude to be a significant predictor of intention and behaviour. SELE was found to be a partial predictor of intention with a path coefficient of 0.200, $p = 0.073$ in line with findings by Zhao et al. (2005) and Bailey and Austin (2006) who found SELE to be a more consistent predictor of intention and behavioural change. Our results are also in line with findings by Armitage and Conner (2001) who argue that subjective norm is the weakest predictor of behavioural intentions. In our case, SUBN was an insignificant predictor of both FPI and ISI with path coefficients below 0.20 at 0.144 and 0.178 respectively (see table 8 and figure 3). Our findings were similar to those found by Hobbs et al. (2016), Bi et al. (2017), Berliner and Kenworthy (2017), Cho and Kim (2017), and Shneor and Munim (2019) in which financial intention had a positive and significant influence on information-sharing intention (see table 8 and figure 3). With regards to H_7 and H_8, our findings show behaviour intention as a good predictor of behaviour in line with a large body of research findings as cited by Shneor and Munim (2019). Our findings show a positive and significant influence of FPI on FPB ($_{\beta} = 0.391$, $t = 2.439$, $p = 0.015$, path coefficient = 0.393) (see table 8 and figure 3), however, the influence of ISI on FPB was insignificant though positive as shown in table 8 and figure 3 in contrast with findings by Shneor and Munim (2019). Our results show that PBC and SOCN were a negative and insignificant predictor of behavioural intention (FPI) as shown in table 8 and figure 3 in line with findings by Ajzen and Madden (1986) and Shih and Fang (2004). This was also in contrast with findings by Ajzen (1991), Madden et al. (1992), Sparks et al. (1992), East (1993),

and Smith and McSweeney (2007) who found PBC to be a significant predictor of behavioural intention and use behaviour.

4.1. Limitations

The Smart-PLS employed by the study is software used in empirical researches with a graphical user interface for variance-based structural equation modeling (SEM) using the partial least squares (PLS) method or approach. Smart-PLS can also be used in computing standard results assessment criteria such as reflective and formative measurement models, the structural model, and the goodness of fit tests. The scope and findings of the study were affected by data collection challenges emanating from Covid-19 pandemic restrictions which changed the way we normally carry out research. There is significant hope that the effects of the pandemic are temporary and hence the need to carry out researches that ensure the safety of the participants and researchers above all else. There is very limited literature on methods, risks, challenges and opportunities faced by researchers during carrying out researches during the Covid-19 pandemic lockdowns. Participatory methods may be planned, to include some marginalised groups, which however may be problematic to use remotely and in the process may potentially remove this vital element from collaborative researches.

Researchers are encouraged to put a lot of research ethics into consideration to overcome some of the challenges associated with the Covid-19 pandemic. A lot of research investment must be premised on the technological and environmental impact of reducing and stopping travel and flights by researchers, especially in this pandemic era. Community research 'mobilisers' who could take technology to the homes of the respondents and training programmes for research participants must be capacity-built on how to use the technology they have are indispensable in this era. The use of secondary data instead of primary data collection, investigating more thoroughly into what already exists and if it can be used to complement or replace the planned primary research are central issues to be put into serious consideration. Maximisation of research ethics can be enhanced through the use of non-physical connectivity, consenting between researchers and respondents online, avoiding direct exposure to the pandemic and voice-call communication platforms such as Zoom and WhatsApp meetings.

The number of target respondents was initially set at 250 comprising academics, banking and non-banking participants as well as those from the formal and informal sectors. However, because of the Covid-19 pandemic lockdowns, the actual number of respondents of least 100 was realized after more than a year of reaching out to them through emailed questionnaires. At a global level, Central banks and other policymakers are increasingly embracing financial inclusion initiatives in the quest

to foster inclusive economic growth and social or economic development. Financial inclusion, therefore, implies that individuals and businesses have direct access to useful and affordable financial products and services that meet their regular needs such as transactions, payments, savings, credit and insurance, that should be delivered in a responsible, integral, prudent and sustainable manner. It should be noted that financial inclusion is a central enabler to countries' achievement of the sustainable development goals (SDGs) which are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by the year 2030. The restriction of the study on financial inclusion to Zimbabwe was reached after noting that the country was characterised by the growth of vibrant informal and black market sectors at the expense of the formal sectors worsened by an unacceptable currency, very high inflation rate and unprecedented interest, unemployment and exchange rates.

The Reserve Bank of Zimbabwe (RBZ) has therefore adopted a developmental approach to drive financial inclusion in Zimbabwe towards redressing the misfortunes bedevilling the growth and development of the country towards independence and sustainability. Some of the benefits the country is likely to draw from financial inclusion are freedom from clutches of informal lenders/loan sharks, financial broadening and deepening, and promotion of inclusive and equitable economic growth and development. The benefits to be enjoyed can also be extended to include price stability, employment creation and formalization of the economy, growth of formal sources of credit, poverty reduction and enhancement of financial stability. We used the theory of planned behaviour (TPB) by Icek Ajzen as our basis because it is a psychological theory that links people's beliefs to behaviours. The theory maintains that three core components, namely, attitude, subjective norms, and perceived behavioural controls put together to shape an individual's behavioural intentions. In turn, a tenet of TPB is that behavioural intention is the most proximal determinant of human social behaviour. TPB has been applied to studies of the relations among beliefs, attitudes, behavioural intentions, and behaviours in various human domains.

5. Conclusions

5.1. Implications for Research

It is pertinent to realise that financial inclusion is influenced by financial innovation, industrialisation, poverty levels, stability of the financial sector, state of the economy, financial literacy and regulatory and supervisory frameworks which are variables across countries of the world. The lack of autonomy and independence in Central Banks in most emerging economies makes researches in financial inclusion, policies and strategies about them will not change the fortunes of these countries

towards growth and development. Several studies have highlighted that financial inclusion could improve income and increase savings thus enabling the underserved individuals, entrepreneurs and SME businesses to invest in necessities such as healthcare, education, food, growing their business, and managing financial risk. Entrepreneurs and SMEs have innovative ideas and considerable energy but need services, markets, and capital to be sustainable. Bringing private and parallel entrepreneurs and their businesses into the formal financial sector is an important first step to building better-connected financial markets, and ultimately global markets. Gaining access to financial services enables entrepreneurs and SME owners to become empowered to make better business decisions, which result in expansions, job creation, and supports economic prosperity.

Banks on one side are looking to grow and serve future markets, which are larger and more inclusive. Banks need to grow their business and markets which means developing products and services for more segments of the economy. This is true now that technology is facilitating competition from new types of players who provide similar services and readily take advantage of the skyrocketing value of consumer data. Creating brand equity for new customer segments and reaching new, previously underserved customers early will help create a valuable, enduring relationship. Governments benefit when all citizens are connected, the velocity of money and economic activity is increased, and transmission mechanisms efficiently execute monetary policy. Decreasing the size of the informal economy also provides greater transparency into financial transactions by increasing security and regulatory oversight. Financial inclusion and account ownership can help reduce corruption, discourage tax evasion, and allow for more effective subsidy payouts. Reverting digital payments for subsidy and pension payments instead of the traditional cash disbursement method has cut down administrative costs and has improved efficiencies.

It has been realized that financial inclusion premised on four products (payments, savings, credit and insurance), and built on sustainable business models with mainstream financial service firms, brings individuals and small businesses into an ecosystem where they can flourish and integrate into the broader formal economy. Extending this industry to the public sector, civil society, and other parties, financial inclusion is important to ensure that the efforts of these segments are additive to one another, coherent and cohesive, and force multipliers in the economy that is by working together these sectors can make a lasting impact. This can be accomplished by developing innovative products and services focused on designing and tailoring solutions to low-income consumer needs.

5.2. Implications for Practice

In almost every country in the African continent, service companies use agent networks to more easily reach underserved customers. Central banks can use agent networks as alternative delivery channels (ADC) to reach out to such customers to make financial inclusion effective. The ADC have a high degree of mobility in the field and are the most effective way to maximize outreach and serve rural areas concerning financial inclusion. It should however be noted that managing large field teams normally involves several challenges which may often result from operational inefficiencies, slow paper-based processes and lack of transparency and accountability. Some of the challenges cited here can be effectively managed through gaining full visibility of inclusion transactions made out there, digitalizing the whole agent life cycle and starting selling products with e-commerce.

All agent networks working with financial, telecommunications and insurance sectors can set up new services simply and quickly for other industries using digital customer onboarding to accelerate sales with effortless processes, avoid risk and ensure full compliance in any type of service and add services on offer and make more money. Furthermore, organisations will be able to keep track of their liquidity and will never leave their agents out there without resources, monitor every activity happening in operations in real-time and lead agent network with high levels of commitment starting from the recruitment process. Top performance levels are ensured by the quality control tools used in evaluating agents' behaviours and skills or expertise.

References

Aduda, J. & Kalunda, E. (2012). Financial Inclusion and Financial Sector Stability With Reference To Kenya: A Review of Literature. *Journal of Applied Finance & Banking*, Vol. 2(6), pp. 95-120.

Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social Behaviour*. Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I. & Fishbein, M. (2005). The influence of attitudes on behaviour. In D. Albarracin, B. T. Johnson, and M. P. Zanna (Eds.). *The handbook of attitudes*, pp. 173–221. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Ajzen, I. & Madden, T. (1986). Prediction of goal-directed behavior: attitude, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, Vol. 22(5), pp. 453-474.

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In J. Kuhl and J. Beckmann (Eds.). *Action-control: From cognition to behavior*, pp. 11-39. Heidelberg: Springer.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process*, Vol. 50(2), pp. 179–211. https://doi.org/10.1080/08870446.2011.613995.

Ajzen, I. (2005). *Attitudes, Personality, and Behavior*, (2nd Ed.). Maidenhead: Open University Press.

Ajzen, I. (2012). The Theory of Planned Behavior. In P.A.M. Lange, A.W. Kruglanski and E.T. Higgins (Eds.). *Handbook of Theories of Social Psychology*, pp. 438-459. London: Sage.

Armitage, C.J. & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British journal of social psychology*, Vol. 40(4), pp. 471-499.

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 267. https://doi.org/10.1007/978-3-319-71691-6_1.

Bacon, L.D. (1999). Using LISREL and PLS to Measure Customer Satisfaction. *Sawtooth Software Conference Proceedings*, La Jolla, California, Feb 2-5, pp. 305-306.

Bagozzi, R.P. & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, Vol. 16(1), pp. 74–94.

Bagozzi, R.P.; Lee, K.-H. & Van Loo, M.F. (2001). Decisions to donate bone marrow: The role of attitudes and subjective norms across cultures. *Psychology and Health*, Vol. 16(1), pp. 29-56.

Bailey, C. & Austin, M. (2006). 360 Degree Feedback and Developmental Outcomes: The Role of Feedback Characteristics, Self-Efficacy and Importance of Feedback Dimensions to Focal Managers' Current Role. *International Journal of Selection and Assessment*, Vol.14, pp. 51-66.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, Vol. 84(2), pp. 191-215.

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs: NJ Prentice-Hall.

Beck, T.; Demirgüç-Kunt, A. & Honohan, P. (2009). Access to financial services: Measurement, impact, and policies. *The World Bank Research Observer*, Vol. 24(1), pp. 119-145.

Berliner, L.S. & Kenworthy, N.J. (2017). Producing a worthy illness: Personal crowdfunding amidst financial crisis. *Social Science and Medicine*, Vol. 187, pp. 233–242. https://doi.org/10.1016/j.socscimed.2017.02.008.

Bi, S.; Liu, Z. & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. *Journal of Business Research*, Vol. 71, pp. 10–18. https://doi.org/10.1016/j.jbusres.2016.10.001.

Biel, A. & Thøgersen, J. (2007). Activation of social norms in social dilemmas: a review of the evidence and reflections on the implications for environmental behavior. *Journal of Economic Psychology*, Vol. 28(1), pp. 93–112.

Briones-Penalver, A.J.; Bernal-Conesa, J.A. & Nieves-Nieto, C. (2018). Analysis of corporate social responsibility in Spanish agribusiness and its influence on innovation and performance. *Corporate Social Responsibility and Environmental Management*, Vol. 25(2), pp. 182-193.

Center for Financial Inclusion (2013). *Seizing the Moment: On the Road to Financial Inclusion*. Financial Inclusion 2020. A Global Forum, Center for Financial Inclusion, ACCION.

Chau, P.Y. & Hu, P.J.H. (2001). Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, Vol. 32(4), pp. 699-719.

Chen, E.; Dowling, N. & Yap, K. (2012). An Examination of Gambling Behaviour in Relation to Financial Management Behaviour, Financial Attitudes, and Money Attitudes. *International Journal of Mental Health & Addiction*, Vol. 10(2), pp. 231-242.

Chen, M.F. (2007). Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: moderating effects of food-related personality traits. *Food Quality and Preference*, Vol. 18(7), pp. 1008–1021.

Cho, M. & Kim, G. (2017). A cross-cultural comparative analysis of crowdfunding projects in the United States and South Korea. *Computers in Human Behavior,* Vol. 72, pp. 312–320. https://doi.org/10.1016/j.chb.2017.03.013.

Dulany, D.E. (1968). Awareness, rules, and propositional control: A confrontation with S-R behavior theory. In D. Horton and T. Dixon (Eds). *Verbal Behavior and S-R Behavior Theory*, pp. 340-387. Englewood Cliffs, NJ: Prentice-Hall.

East, R. (1993). Investment decisions and the theory of planned behaviour. *Journal of Economic Psychology*, Vol. 14, pp. 337-375.

Ellis, K.; Lemma, A. & Rud, J.-P. (2010). *Investigating the impact of access to financial services on household investment*. London: Overseas Development Institute.

Falk, R. F. & Miller, N. B. (1992). *A primer for soft modeling.* University of Akron Press.

Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Fishbein, M. & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. New York: Psychology Press.

Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research,* Vol.18 (1), pp. 39-50.

Gefen, D. & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, Vol. 16(1), pp. 91-109.

Haenlein, M. & Kaplan, A.M. (2004). A beginner's guide to partial least squares analysis. *Understanding Statistics*, Vol. 3(4), pp. 283–297.

Hair, J.F.; Celsi, M.; Money, A.H.; Samouel, P. & Page, M. J. (2016). *Essentials of Business Research Methods (3rd Ed.).* Armonk, NY: Sharpe.

Hair, J.F., Hult, G.T.M., Proksch, D., Sarstedt, M., Pinkwart, A., & Ringle, C. M. (2018). Addressing endogeneity in International Marketing applications of partial least squares structural equation modeling. *Journal of International Marketing,* Vol. 26(3), pp. 1-21.

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

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

Hair, J.F., Sarstedt, M., Ringle, C.M., & Mena, J.A., (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, Vol. 40(3), pp. 414-433.

Han, H.; Hsu, L.T.J. & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management*, Vol. 31(3), pp. 325–334.

Henseler, J.; Ringle, C.M. & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, Vol. 43, pp. 115–135.

Hobbs, J.; Grigore, G. & Molesworth, M. (2016). Success in the management of crowdfunding projects in the creative industries. *Internet Research*, Vol. 26(1), pp. 146–166. https://doi.org/10.1108/IntR-08-2014-0202.

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

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*, Vol. 20(2), pp. 195–204.

Hwang, H.; Malhotra, N. K.; Kim, Y.; Tomiuk, M. A. & Hong, S. (2010). A comparative study on parameter recovery of three approaches to structural equation modeling. *Journal of Marketing Research*, Vol. 47, pp. 699-712.

Jin, D.; Chai, K.H. & Tan, K.C. (2012). Organizational adoption of new service development tools. *Managing Service Quality: An International Journal*, Vol. 22(2), pp. 233-259.

Kempson, E. & Whyley, C. (1999). *Kept out or opted out: Understanding and Combating Financial Inclusion*. Bristol: Policy Press.

Kidwell, B. & Turrisi, R. (2003). An Examination of Money Management Tendencies. *Advances in Consumer Research*, Vol. 30, pp. 112-114.

Lachance, M.J. (2012). Young adults' attitudes towards credit. *International Journal of Consumer Studies*, Vol. 36(5), pp. 539-548.

Liu, Y.; Lu, H. & Veenstra, K. (2014). Is sin always a sin? The interaction effect of social norms and financial incentives on market participants' behavior. *Accounting, Organizations and Society*, Vol. 39(4), pp. 289-307.

Lusardi, A.; Mitchell, O.S. & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, Vol. 44(2), pp. 358-380.

Madden, T.J.; Ellen, P.S. & Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*, Vol. 18(1), pp. 3-9.

Manning, M. (2009). The effects of subjective norms on behaviour in the theory of planned behaviour: A meta-analysis. *British Journal of Social Psychology*, Vol. 48(4), pp. 649–705. https://doi.org/10.1348/014466608X393136.

Manstead, A.S.R. & Eekelen, S.A.M. (1998). Distinguishing between perceived behavioural control and self-efficacy in the domain of academic achievement intentions and behaviors. *Journal of Applied Social Psychology*, Vol. 28(15), pp. 1375–1392. https://doi.org/10.1111/j.1559-1816.1998.tb01682.x.

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

Massara, M.A. & Mialou, A. (2014). *Assessing Countries' Financial Inclusion Standing - A New Composite Index*. International Monetary Fund.

Mataruka, N. (2015). Financial inclusion in Zimbabwe banking & microfinance sector. *Reserve Bank of Zimbabwe, Presented On the Occasion of the Third Zimbabwe SME Banking & Microfinance Summit.*

Maune, A. (2018). Financial Inclusion and the Trade-Growth Nexus: Evidence from the Emerging Zimbabwean Economy. *Journal of Economics and Behavioral Studies*, Vol. 10(6A), pp. 43-55.

Maune, A.; Matanda, E. & Mundonde, J. (2020). Does Financial Inclusion cause Economic Growth in Zimbabwe? An Empirical Investigation. *Acta Universitatis Danubius Oeconomica*, Vol. 16(1), pp. 195-215.

Mindra, R. & Moya, M. (2017). Financial self-efficacy: a mediator in advancing financial inclusion. *Equality, Diversity and Inclusion: An International Journal*, Vol. 36(2).

Norvilitis, J. M. & Mao, Y. (2013). Attitudes towards credit and finances among college students in China and the United States. *International Journal of Psychology*, Vol. 48(3), pp. 389-398.

Norvilitis, J. M.; Merwin, M. M.; Osberg, T. M.; Roehling, P. V.; Young, P. & Kamas, M. M. (2006). Personality Factors, Money Attitudes, Financial Knowledge, and Credit-Card Debt in College Students. *Journal of Applied Social Psychology*, Vol. 36(6), pp. 1395-1413.

Peak, H. (1955). Attitude and motivation. In M. R. Jones (Ed.). *Nebraska Symposium on Motivation,* pp. 149-189. Lincoln, NE: University of Nebraska Press.

Pearson, A.W.; Carr, J. C. & Shaw, J. C. (2008). Toward a theory of familiness: a social capital perspective. *Entrepreneurship Theory and Practice*, Vol. 32(6), pp. 949–969.

Petter, S.; Straub, D. & Rai, A. (2007). Specifying formative constructs in information systems research. *MIS Quarterly*, Vol. 31(4), pp. 623-656.

Reserve Bank of Zimbabwe (2020). *Mid-term monetary policy statement.* Harare, Zimbabwe.

Reserve Bank of Zimbabwe [RBZ] (2017). *Mid-term monetary policy statement.* Harare, Zimbabwe.

Reuters (2021, April 14). Twitter to open first African office in Ghana. *The Herald, p. F4.*

Ringle, C. M. & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results. *Industrial Management and Data Systems*, Vol. 116(9), pp. 1865-1886. DOI 10.1108/IMDS-10-2015-0449.

Rosenberg, M. J. & Hovland, C. I. (1960). Cognitive, affective, and behavioural components of attitudes. In C. I. Hovland and M. J. Rosenberg (Eds.). *Attitude Organisation and Change: An analysis of consistency among attitude components* (pp. 1-14). New Haven, CT: Yale University Press.

Sethi, V., Tandon, M.S., & Dutta, K. (2018). A path model of antecedents of green purchase behavior among Indian consumers. *Int. J. Public Sector Performance Management*, Vol. 4(1), pp. 21–44.

Sheeran, P. & Orbell, S. (1999). Implementation intentions and repeated behaviour: Augmenting the predictive validity of the theory of planned behaviour. *European Journal of Social Psychology*, Vol. 29, pp. 349 – 369.

Shih, T.-Y. & Ke, S.-C. (2013). Determinates of financial behavior: insights into consumer money attitudes and financial literacy. *Service Business*, pp. 1-22.

Shih, Y. Y. & Fang, K. (2004). The use of a decomposed theory of planned behavior to study Internet banking in Taiwan. *Internet Research*, Vol. 14(3), pp. 213–223.

Shneor, R. & Munimb, Z. H. (2019). Reward crowdfunding contribution as planned behaviour: An extended framework. *Journal of Business Research*, Vol. 103, pp. 56–70.

Sidique, S. F.; Lupi, F. & Joshi, S.V. (2010). The effects of behavior and attitudes on drop-off recycling activities. *Resources, Conservation and Recycling*, Vol. 54(3), pp. 163–170.

Smith, J. R. & McSweeney, A. (2007). Charitable Giving: The Effectiveness of a Revised Theory of Planned Behaviour Model in Predicting Donating Intentions and Behaviour. *Journal of Community & Applied Social Psychology,* Vol. 17, pp. 363–386.

Sparks, P.; Hedderly, D. & Shepherd, R. (1992). An investigation into the relationship between perceived control, attitude variability, and the consumption of two common foods. *European Journal of Social Psychology,* Vol. 22, pp. 55-71.

Taib, F. M.; Ramayah, T. & Razak, D. A. (2008). Factors influencing intention to use diminishing partnership home financing. *International Journal of Islamic and Middle Eastern Finance and Management,* Vol. 1(3), pp. 235-248.

Tenenhaus, M.; Vinzi, V. E.; Chatelin, Y.-M. & Lauro, C. (2005). PLS path modeling. *Computational Statistics and Data Analysis,* Vol. 48, pp. 159–205.

Terry, D. J. & O'Leary, J. E. (1995). The theory of planned behaviour: The effects of perceived behavioural control and self-efficacy. *British Journal of Social Psychology,* Vol. 34(2), pp. 199–220. https://doi.org/10.1111/j.2044-8309.1995.tb01058.x.

Theodorakis, Y. (1994). Planned behavior, attitude strength, role identity, and the prediction of exercise behavior. *The Sport Psychologist,* Vol. 8, pp. 149-165.

Vermeir, I. & Verbeke, W. (2006). Sustainable food consumption: exploring the consumer 'attitude-behavioral intention' gap. *Journal of Agricultural and Environmental Ethics,* Vol. 19(2), pp. 169–194.

Vinzi, E. V.; Trinchera, L., & Amato, S. (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* (47-82) Berlin, Germany: Springer Berlin Heidelberg.

Wasko, M. M. & Faraj, S. (2005). Why should I share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly,* Vol. 29(1), pp. 35-57.

Wong, K. K. (2010). Handling small survey sample size and skewed dataset with partial least square path modeling. *Vue: The Magazine of the Marketing Research and Intelligence Association*, November, pp. 20-23.

Wong, K. K. (2011). Review of the book *Handbook of Partial Least Squares: Concepts, Methods and Applications*, by V. E. Vinzi, W.W. Chin, J. Henseler & H. Wang (Eds.). *International Journal of Business Science & Applied Management*. Vol. 6(2), pp. 52-54.

Wong, K. K. (2013). Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS. *Marketing Bulletin*, Vol. 24(1), pp. 1-32.

Zhao, H.; Seibert, S. E. & Hills, G. E. (2005). The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions. *Journal of Applied Psychology,* Vol. 90, pp. 1265-1272.

Zimmerman, B. J.; Bandura, A. & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal,* Vol. 29, pp. 663-676.