East Africa Journal of Social and Applied Sciences (EAJ-SAS)
Vol.5, Issue 1; Publication Date: June 30, 2023
ISSN: (Online) 2714-2051, (Print) 0856-9681
Full articles of this journal are available at: https://journals.mocu.ac.tz/index.php/eaj-sas

Cite this article as: Nzowa, P. G., Nandonde, F. A. and Seimu, S. M. L. (2023). Co-operative members' traits and health insurance participation behaviour in Tanzania. *East Africa Journal of Social and Applied Sciences,* 5(1): 98-114.

CO-OPERATIVE MEMBERS' TRAITS AND HEALTH INSURANCE PARTICIPATION BEHAVIOUR IN TANZANIA

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ABSTRACT
The widespread concern over disparities in health insurance participation among individuals is a global issue. This study delves into the influence of co-operative members' traits on their behaviour regarding health insurance participation. Specifically, utilising the Theory of Planned Behaviour, this study examines the impact of members' attitudes, behavioural control, and characteristics on health insurance participation behaviour. A cross-sectional survey was conducted involving 500 co-operative members, using a five-point Likert scale to collect their opinions on the influence of independent variables on the dependent variable. Partial Least Squares Structural Equation Modeling was employed to analyze the variables affecting co-operative members' participation in health insurance. Supporting the Theory of Planned Behaviour, the findings reveal that all three variables - members' characteristics, attitudes, and behavioural control exert a positive and significant influence on health insurance participation behaviour among co-operative members. Notably, members' personal characteristics exhibit the strongest predictive power ($\beta = 0.629$, $p < 0.000$), followed by members' attitudes ($\beta = 0.171$, $p < 0.004$) and members' behavioural control ($\beta = 0.115$, $p < 0.040$) in shaping health insurance participation behaviour within co-operatives. This study strongly encourages and recommends that insurers, whenever feasible, thoroughly examine and consider the traits of co-operative members that enhance and increase their likelihood of engaging in health insurance.

Keywords: Co-operatives; Health insurance; Participation behaviour; PLS-SEM; Theory of planned behaviour.
Paper type: Research paper
Type of Review: Peer Review

1. Introduction

Health insurance plays a pivotal role in the realisation of Universal Health Coverage (UHC) initiatives. Extending health insurance coverage to entire populations stands as a contemporary global challenge. International organisations, including the United Nations (UN), the World Health Organisation (WHO),

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and the World Bank, have made health insurance and guaranteed health for all individuals a central objective of the 2030 agenda for achieving the Sustainable Development Goals (SDGs) (WHO, 2020; World Bank, 2019; UN, 2015). The right to health insurance is a fundamental entitlement; it should be accessible to every member of the community (Devasoorya & Srinivasa Vallabhan, 2016). Participation in health insurance ensures access to essential, high-quality medical care and diminishes out-of-pocket (OOP) expenditures, contributing to an improved quality of life (WHO, 2020; Wagstaff et al., 2016; Saksena et al., 2014). The absence of health insurance and low participation expose individuals to health risks throughout their lives, resulting in poor health and decreased productivity, ultimately perpetuating poverty (Osabohien et al., 2020; Stavropoulou et al., 2016; Drolet, 2016).

Statistics from 2019 indicate that approximately 46% of the world's population lacks access to essential health services (World Bank, 2019). Moreover, while the global average health exclusion rate is estimated at 56%, reaching 22% in urban areas and a staggering 85% in Sub-Saharan Africa for social insurance programs, including health insurance (ILO, 2021; 2017). Thus, countries are urged to establish stronger connections and improved coordination mechanisms to enhance global access and utilisation of health insurance (ILO, 2021). The goal is to bridge participation gaps, rectify unequal access, and promote the use of health insurance among individuals. In response to this call, many Organisation for Economic Co-operation and Development (OECD) countries have adjusted their macro-fiscal and private health insurance financing systems to align with UHC objectives (Sfakianakis et al., 2020; Bergen et al., 2019; OECD, 2019). Likewise, African nations, including Tanzania, have adopted Community Health Insurance strategies to support national health insurance systems in terms of financing, accessibility, efficiency, and effectiveness in delivering healthcare services to individuals (Kigume & Maluka, 2021; Amani et al., 2020; Kapologwe et al., 2017; Mpambije, 2017; Waelkens et al., 2017). For instance, in 2003, China introduced the New Rural Co-operative Medical Scheme (NRCMS), covering over 97% of farmers and rural residents with basic medical insurance (Chen et al., 2018; Liu, 2016). In the United States of America, the implementation of the Patient Protection and Affordable Care Act (ACA) in 2010 enabled citizens to compare, select, and purchase suitable health insurance, enhancing the affordability of healthcare services to meet immediate health needs (Bauhoff, 2020).

In Tanzania, a health insurance scheme has been designed to accommodate and enable community-based organisations, such as co-operatives, and their members to participate (United Republic of Tanzania [URT], 2001). Participation in the insurance scheme is voluntary, particularly for those in the informal sector or without formal employment (Kigume & Maluka, 2021; Kapologwe et al., 2017). This stands in contrast to individuals in the informal sector or without formal employment, who often face daunting requirements and conditions when attempting to join health insurance schemes. Co-operatives streamline and facilitate the process, making it more accessible and manageable for a majority of individuals within the economy. In contrast to other institutions, co-operatives have a primary mission to protect their members and empower them against socio-economic risks and contingencies, including health insurance (Mchomvu et al., 2002). These institutions also have the capacity to accept memberships from diverse groups of individuals, a feat that other institutions may find challenging. Co-operatives possess unique features that enhance the collective bargaining power of their members in addressing their health insurance needs and challenges (Giaimo, 2013). For individuals with formal employment and existing health insurance, membership in co-operatives provides additional coverage for their households that cannot be obtained through statutory means. Therefore, it is expected that health insurance offered through co-operatives would be preferred by the majority. This preference arises from co-operatives' effective handling of constraints and challenges encountered in other platforms related to health insurance participation.

However, the number of individuals, including co-operative members, who have accessed health insurance schemes in Tanzania remains limited (Borghi et al., 2013). Statistics reveal that 85% of individuals in the country lack access to health insurance services (URT, 2022; Wajanga et al., 2022). Among the 15% with coverage, 8% are enrolled in the National Health Insurance Fund (NHIF), 5.4% in the Community Health Fund (CHF), and the remaining 2% rely on private insurers (URT, 2022). Such low coverage rates expose a significant portion of the population to health-related challenges, including incomplete treatment, delayed

medical care, and overwhelming health expenditures. Therefore, it is imperative to investigate the participation behaviour of individuals, including co-operative members, in health insurance in developing economies like Tanzania. This research contributes to the broader efforts aimed at achieving universal health insurance coverage in the country. The notable lack of participation by a significant percentage of individuals raises questions about the factors hindering their involvement. Existing literature (e.g., Ebrahim et al., 2019; Nsiah-Boateng et al., 2019; Raza et al., 2019; Chomi et al., 2014) suggests that individuals' characteristics, attitudes, and perceived behavioural control influence their participation in health insurance services. However, it remains to be determined whether these factors hold true for co-operative members. Most literature on health insurance participation has predominantly focused on consumer preferences (e.g., Amani et al., 2020; Nsiah-Boateng et al., 2019; Kimani et al., 2012), with limited attention to the influence of group dynamics on individual participation behaviour (e.g., Bauhoff, 2020; Wang et al., 2020; Ebrahim et al., 2019). Furthermore, the existing literature overlooks co-operatives as unique institutions with distinctive operations and diverse member compositions that can influence health insurance participation behaviour.

Moreover, studies examining health insurance participation behaviour within the context of co-operatives, particularly in emerging economies like Tanzania, are scarce. Hence, this study aims to investigate the impact of co-operative members' traits on their health insurance participation behaviour. The study employs structural equation modeling as the analytical framework and the Theory of Planned Behaviour (Ajzen & Fishbein, 1980; Ajzen, 1985) as the theoretical lens to analyze how co-operative members' attitudes and perceived behavioural control predict their health insurance participation behaviour. Additionally, the study explores how co-operative members' characteristics drive participation behaviour in health insurance. The remainder of this paper is organised as follows: the next section encompasses the literature review, theoretical foundations, hypotheses, and the conceptual model of the study. Subsequently, the methodology, findings, and discussions are presented, followed by the study's conclusions and recommendations.

2. Literature Reviews and Hypothesis Development

Previous research has highlighted various factors that hinder people from accessing and participating in health insurance systems. These factors encompass a lack of comprehension regarding insurance principles, concerns about the quality of healthcare services for the insured, health status, and a history of chronic illnesses, as well as socio-demographic factors such as age, income, education level, and household size (e.g., Prakoso et al., 2020; Alhassan, 2018; Fenny et al., 2018; Umeh & Feeley, 2017; Farías, 2016; Kusi et al., 2015; Chauhan, 2019; Minyihun, 2019; Amani et al., 2020; Bauhoff, 2020; Nsiah-Boateng et al., 2019; Ebrahim et al., 2019; Wang et al., 2020). However, these studies have typically examined each factor in isolation when analyzing its impact on health insurance participation. This independent treatment of variables in previous studies may provide a partial understanding of health insurance participation. Therefore, this study aggregates all these factors to create a more comprehensive measure called "members' characteristics" to reduce potential bias when analyzing health insurance participation behaviour among co-operative members.

Additionally, the literature has highlighted the roles of attitude and behavioural control in explaining participation in health insurance. Differences in individuals' actions influenced by attitude and behavioural control can significantly impact health insurance operations. High levels of heterogeneity among members concerning behavioural control and attitude can impede effective participation and the successful functioning of health insurance systems (Ebrahim et al., 2019; Nsiah-Boateng et al., 2019; Chomi et al., 2014; East Africa Community [EAC], 2014; Peterson, 2012; Scheil-Adlung et al., 2010; McCord & Osinde, 2005). It is believed that variations in individuals' intrinsic traits, attitudes, and behavioural control govern their decision-making when comparing the expected utility values of participating in health insurance systems (Fenny et al., 2018; Odeyemi, 2014; Scheil-Adlung et al., 2010; Schneider, 2004; Cheng et al., 2003). However, to the best of the authors' knowledge, the impact of attitude and behavioural control in the context of co-operatives has not yet been studied.

Nevertheless, like other individuals, co-operative members possess traits that influence their participation behaviours in various activities. Traits such as behavioural control, attitude, and other characteristics have been reported to impact individuals' participation in health insurance (Raza et al., 2019; Ellis, 2016; Carapinha et al., 2011; Chemouni, 2018; Panda et al., 2015; Adjabui et al., 2019; Baillon et al., 2019). Previous analyses in most studies have focused on individuals who are not members of co-operatives, examining participation in national health insurance, Islamic insurance among employees from different organisations, and household surveys on willingness to pay for health insurance (Nsiah-Boateng et al., 2019; Raza et al., 2019; Baillon et al., 2019). A few exceptions have studied participation in community-based insurance systems that share similarities with co-operatives (Ebrahim et al., 2019; Minyihun, 2019; Chemouni, 2018; Panda et al., 2015). However, these studies have not explored the extent to which dynamics in co-operative members' characteristics, attitudes, and behavioural control influence decisions to participate in health insurance. Therefore, their findings cannot be generalized to the context of co-operatives when analyzing health insurance participation behaviour among members. This study aims to address this gap in the literature.

2.1 Hypotheses of the Study

The hypotheses of this study were developed based on the Theory of Planned Behaviour (TPB) proposed by Ajzen (1985). The theory posits that attitude, subjective norms, and perceived behavioural control predict behavioural intention and subsequently actual behaviour (Huda et al., 2012; Syed & Nazura, 2011; Fishbein & Ajzen, 2010; Golnaz et al., 2010; Shim et al., 2001; Ajzen, 1991; Beck & Ajzen, 1991; Ajzen, 1985; Ajzen & Fishbein, 1980). However, some proponents argue that behavioural intention does not necessarily precede actual behaviour, raising doubts about any gap between behavioural intention and behaviour performance (Raza et al., 2019; Sherma and Mannan, 2015). Therefore, this study does not consider behavioural intention as a mediating predictor of actual behaviour performance when explaining health insurance participation among co-operative members.

2.1.1 Attitude

Attitude, as defined by one's evaluative judgment, is the best predictor of intentions and behaviours related to participation in a specific behaviour (Fishbein & Ajzen, 2011; Ajzen & Fishbein, 1980). According to the TPB, attitude guides and enables individuals to assess their behaviour towards a particular action (Huda et al., 2012). It plays a critical role in influencing decisions based on contextual factors and specific issues (Sharma & Mannan, 2015). Advocates of the theory argue that individuals' intentions to participate in insurance activities are influenced and predicted by their attitude, whether favorable or unfavorable (Huda et al., 2012; Golnaz et al., 2010). Several studies (e.g., Echchabi et al., 2016; Setyobudi et al., 2015) indicate that attitude positively and significantly influences individuals' behaviour and their decisions to participate in financial products such as insurance. In the context of co-operatives, it is anticipated that co-operative members' attitudes, whether positive or negative, shape and can alter decisions regarding participation in health insurance. Therefore, this study hypothesizes that:

H1: Co-operative members' attitude influences participation behaviour in health insurance.

2.1.2 Behavioural control

Perceived behavioural control involves an individual's established beliefs and perceptions regarding the ease or difficulty of performing a specific action (Sherma and Mannan, 2015; Corner and Norman, 2005; DeBarr, 2004). According to the TPB, individuals with confidence in their planned behaviour are expected to have a stronger likelihood of performing that behaviour (Ajzen, 2002; Ajzen, 1991), in this case, participating in health insurance. Empirical evidence demonstrates a relationship between behavioural control and health insurance participation. One's behavioural control towards participation in health insurance is influenced by two factors: their own individual capability and how others perceive their ability to handle health insurance-related matters (Husin & Rahman, 2016; Sharma & Mannan, 2015). Studies by Raza et al. (2019), Mas'ud (2016), and Kim & Karpova (2010) suggest that behavioural control influences individuals to purchase or participate in various insurance products. In the context of co-operatives, members' behavioural control is expected to play a significant role in deciding whether to participate in health insurance. The higher members' confidence in their ability and the positive perception of their peers

regarding their ability to manage health insurance, the more likely they are to participate. Therefore, this study hypothesizes that:
H2: Co-operative members' behaviour control over insurance influences participation behaviour in health insurance.

2.1.3 Member characteristics

While Fishbein and Ajzen (2011) argue that subjective norms determine individuals' actual behaviour and choices, this study proposes a different approach to validate this relationship. The study assumes that, for subjective norms to hold i.e., other people's perception and influence on an individual's ability and belief concerning the performance of actual behaviour co-operative members' characteristics are crucial. Co-operative member characteristics encompass typical behaviour patterns, reasoning styles, and emotions that guide decision-making (Coaley, 2010; Kassin, 2003). Such characteristics significantly predict unpredictable decisions and actions based on individuals' intelligence, cognitive abilities, motives, values, and attitudes (Carver & Scheier, 2000). Co-operative members' characteristics, including age, income, education level, knowledge, and understanding of insurance, differentiate one person from another in terms of health insurance participation behaviour (Kassin et al., 2021). In other words, effective decisions regarding participation in health insurance are expected to align with co-operative members' characteristics (Nsiah-Boateng et al., 2019; Kusi et al., 2017; Agyepong et al., 2016; Dror et al., 2016; Adebayo et al., 2015; Carrin et al., 2005). Therefore, this study substitutes subjective norms with members' characteristics when explaining and determining their influence on health insurance participation behaviour. Thus, this study hypothesizes that:
H3: Co-operative members' characteristics influence participation behaviour in health insurance.

2.2 Conceptual Model of the Study

This study is grounded in the Theory of Planned Behaviour, incorporating two established elements—co-operative members' attitudes and behavioural control—and an additional element, co-operative members' characteristics. These elements serve as variables to investigate their influence on predicting health insurance participation behaviour among co-operative members, as illustrated in Figure 1 below.

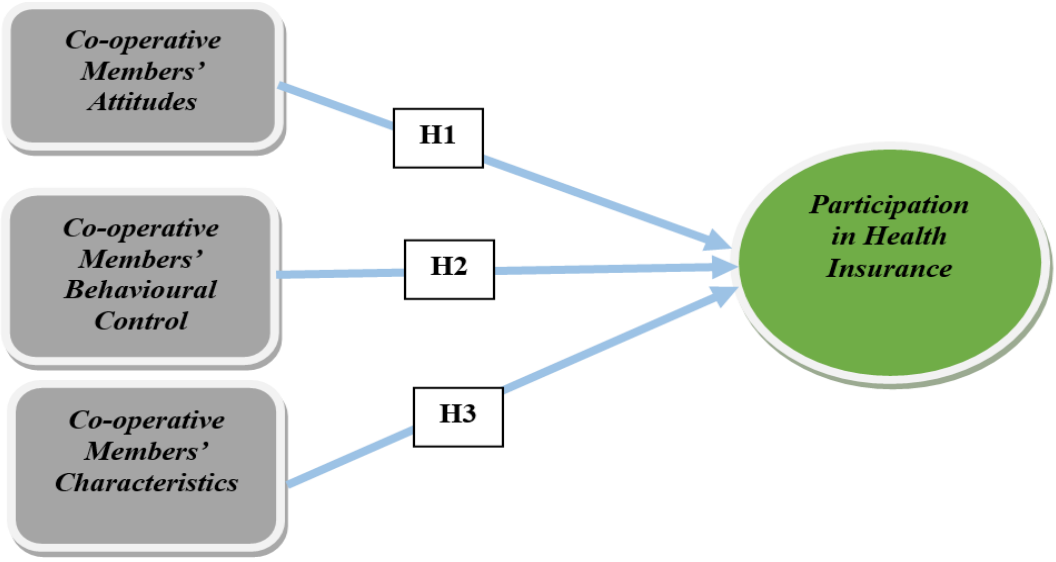

Figure 1: Conceptual model of the study

3. Methodology

This study utilises a quantitative research method, employing a cross-sectional survey design. This approach enables an examination of the prevailing disparities in attitude, behavioural control, and characteristics at a specific point in time, with the aim of comprehending health insurance participation behaviour among co-operative members. To achieve the study's objectives, Kilimanjaro and Arusha were chosen as representative regions of Tanzania where health insurance has been introduced within co-

operatives. These regions were selected due to their significant history of co-operative movements and practices. The chosen areas are home to co-operatives comprising members with diverse characteristics, attitudes, and levels of behavioural control stemming from varied cultural backgrounds, economic statuses, and traits that align with the study's requirements.

The study population consisted of active co-operative members in co-operative societies that offer health insurance products. Additionally, the study's sampling unit comprised members of co-operative societies who have benefited from health insurance schemes integrated into their respective co-operatives. Initially, a purposive sampling technique was employed to identify co-operative institutions and members meeting the criteria for inclusion in this study. Purposive sampling was chosen as it is a pragmatic method for gathering relatively large samples from the targeted respondents, in this case, co-operative members from co-operative institutions (Klar & Leeper, 2019). The sample size for this study encompassed 500 co-operative members. Initially, 550 responses were randomly collected from co-operative members to form the basis for analysis. Following data collection, Hair et al. (2017) recommend addressing missing data and dubious responses before the data analysis stage. Consequently, 50 responses were excluded after screening for missing values and suspicious responses. Ultimately, 500 questionnaires were deemed suitable, sufficient, and of high quality for structural equation model analysis (Wolf et al., 2013; Comrey & Lee, 1992).

A five-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5), was employed to gather opinions on the impact of members' characteristics, attitudes, and behavioural control on participation in health insurance. This choice of a five-point scale was made because it is better suited for individuals who are not accustomed to Likert scale measurements, allowing them to make fine distinctions and providing a higher potential for information gain (Krosnick & Presser, 2010; Paulhus, 1991). The indicator constructs for attitude were derived from the work of Bandura (2006) and Ajzen (2001), while those for behavioural control were based on Ajzen (2002) and Ajzen (2001). Furthermore, the indicators for the member characteristics construct drew inspiration from the research of Nsiah-Boateng et al. (2019), Kusi et al. (2017), and Agyepong et al. (2016). Attitude, behavioural control, and member characteristics comprised 5, 5, and 6 indicators, respectively. Participation behaviour was measured using 6 indicators. The extent of the relationships between variables and the structural model of this study were determined using partial least-squares structural equation modelling (PLS-SEM) with the assistance of SmartPLS 3.3.3-6 software, in line with the recommendations of Hair et al. (2011). PLS-SEM is the preferred method for assessing complex models with constraining effects on both observed and latent indicators, as it allows for a distribution-free variance approach and maximises explained variance (Pahlevan Sharif & Sharif Nia, 2018).

4. Findings and Discussion

4.1 Social-demographic Characteristics of the Co-operative Members

Table 1 provides an overview of the descriptive characteristics of the 500 co-operative members participating in this study. Among the respondents, 81.6% held memberships in specific health insurance schemes, while 18.8% did not. The majority of the respondents were engaged in self-employment (61.52%). Within this group, 35.5% had completed primary education, and 31.62% had attained certificates or diplomas. Additionally, the largest portion of respondents fell within the age range of 38 to 57 (52.9%), with their co-operative memberships spanning from 1 to 10 years (70.34%). Furthermore, 84.31% of the respondents were married, and their family sizes ranged from 0 to 4 households, accounting for 88.97% of the total.

Table 1: Social-demographic Characteristics of the Respondents (n=500)

Variable	Health Insurance Membership Status	
	Yes (n=408; 81.6%)	No (n=92; 18.4%)
Gender		
Male	278 (68.14%)	66 (71.74%)
Female	130 (31.86%)	26 (28.26%)
Marital Status		
Married	344 (84.31%)	79 (85.87%)
Others	64 (15.69%)	13 (14.13%)
Age Categories		
18-37	71 (17.40%)	15 (16.30%)
38-57	216 (52.94%)	49 (53.26%)
58-77	113 (27.70%)	27 (29.35%)
78+	8 (1.96%)	1 (1.09%)
Education Level		
Primary	143 (35.05%)	23 (25.00%)
Secondary	76 (18.63%)	17 (18.48%)
Certificate and Diploma	129 (31.62%)	38 (41.30%)
Degree	60 (14.70%)	14 (15.22%)
Employment/Occupation Status		
Government employee	83 (20.34%)	0
Private sector employee	74 (18.14%)	34 (36.96%)
Self-employed	251 (61.52%)	58 (63.04%)
Household Size		
0-6	320 (78.43%)	69 (75.00%)
7+	88 (21.57%)	23 (25.00%)
Number of Dependants in the Household		
0-4	363 (88.97%)	79 (85.87%)
5+	45 (11.03%)	13 (14.13%)
Co-operative Membership Time		
1-10	287 (70.34%)	62 (67.40%)
11-20	88 (21.57%)	23 (25.00%
21+	33 (8.09%)	7 (7.60%)

The formative measurement approach was employed because each indicator explicitly encapsulated the construct's domain, as advocated by Hair et al. (2017). Consequently, it was imperative to ascertain convergent validity, assess collinearity between indicators, and evaluate the significance and relevance of outer weights. Convergent validity refers to the extent to which a measurement correlates positively with other measurements of a similar construct that employ distinct indicators. This was accomplished through redundancy analysis, where a correlation exceeding 0.70 within the formative indicator construct was considered appropriate (Chin, 1998; Hair et al., 2017). As illustrated in Figures 2, 3, and 4, redundancy analyses conducted on the formatively measured constructs: Characteristics, Attitude, and Behavioural Control yielded correlation scores of 0.736, 0.834, and 0.804, respectively. These outcomes unequivocally affirm the presence of convergent validity for all constructs.

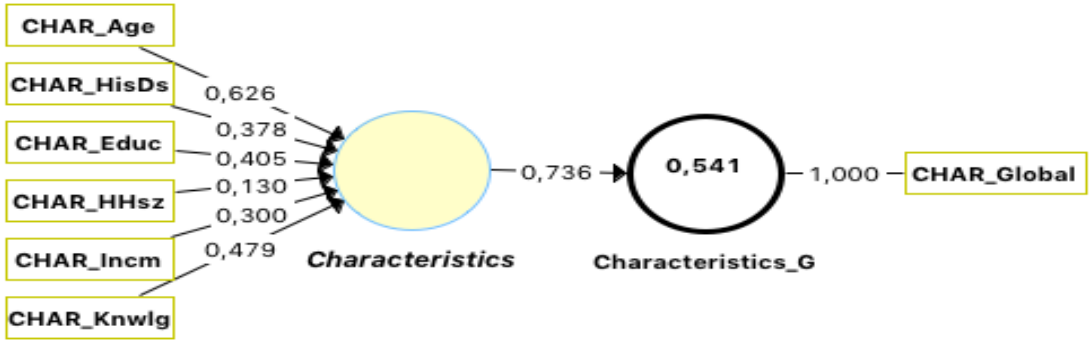

Figure 2: Convergent validity for the construct: Co-operative Members' Characteristics

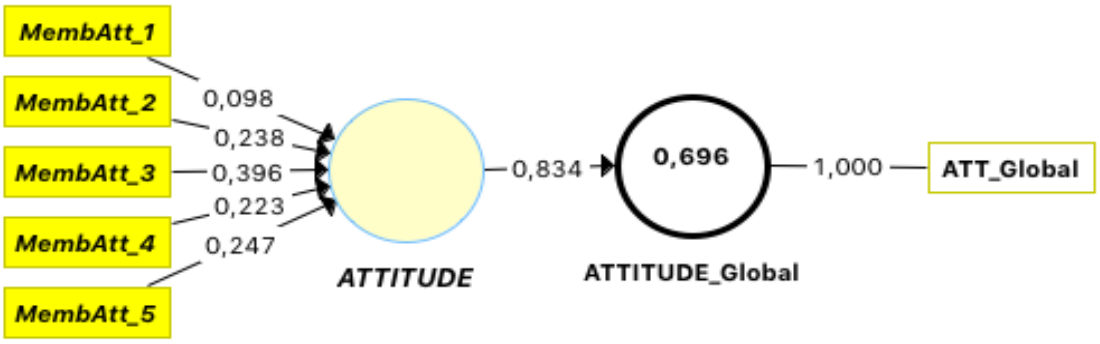

Figure 3: Convergent validity for the construct: Co-operative Members' Attitude

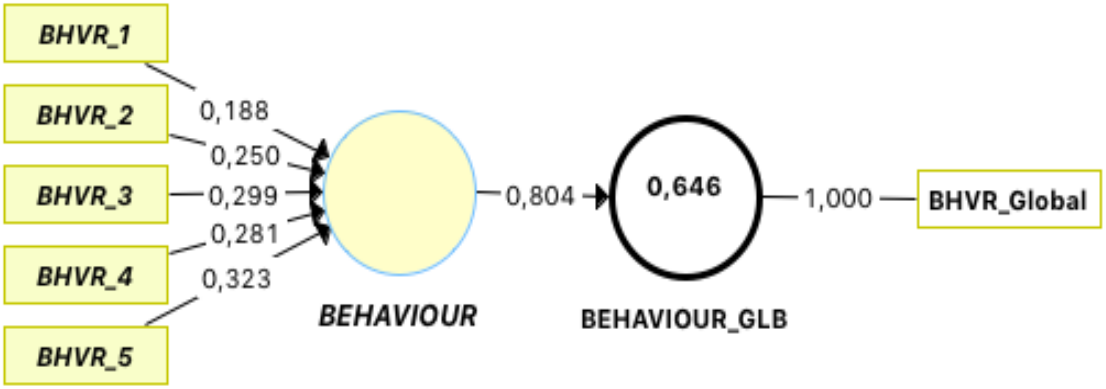

Figure 4: Convergent validity for the construct: Co-operative Members' Behavioural Control

4.2 Assessment of Collinearity among Indicators

The evaluation of collinearity among indicators was undertaken to determine whether indicators sharing similar information were addressing the same formative construct in the model. In accordance with Hair et al. (2017), the Variance Inflation Factor (VIF) was employed as a proxy measure of collinearity. A VIF value less than 5 for an indicator indicates the absence of potential collinearity among indicators, as recommended by Hair et al. (2017). Any indicator with a VIF exceeding 5 was considered for removal, as it could potentially disrupt and influence the estimation of model weights (Hair et al., 2017). The results of the collinearity assessment are presented in Table 2 below:

Table 2: Collinearity Statistics

Formative Construct	***Formative Indicator***	***VIF***
Co-operative Members' Behavioural Control	BHVR_1	2.274
	BHVR_2	2.069
	BHVR_3	1.487
	BHVR_4	2.864
	BHVR_5	1.250
Co-operative Members' Characteristics	CHAR_Age	4.012
	CHAR_Educ	2.455
	CHAR_HHsz	1.364
	CHAR_HisDs	1.305
	CHAR_Incm	2.364
	CHAR_Knwlg	2.773
Co-operative Members' Attitude	MembATT_1	2.487
	MembATT_2	2.208
	MembATT_3	2.061
	MembATT_4	1.992
	MembATT_5	2.307
Participation in Health Insurance	PAT-1	1.021
	PAT-2	1.022
	PAT-3	1.054
	PAT-4	1.055
	PAT-5	1.223
	PAT-6	1.037

The outcomes presented in Table 2 reveal that ***CHAR_Age*** has a VIF value of 4.012, which is the highest among all other indicators. However, it remains lower than the critical threshold of 5. Consequently, there is no discernible risk of collinearity among the formative constructs that could potentially impede the accurate estimation and evaluation of the structural model concerning participation in health insurance.

4.3 Evaluation of Outer Weights and Significance through Bootstrapping

To further validate our formative measurement model, we conducted bootstrapping to assess the significance and relevance of outer weights and outer loadings. The results for the formatively measured constructs, including Behavioural Control, Characteristics, and Attitude, are presented in Table 3. This table provides estimates for outer weights, outer loadings, corresponding t values, p values, and confidence intervals, all derived using the percentile method (BCa).

Table 3: Results of Significance Testing for Outer Weights of Formative Constructs

Formative Constructs	Formative Indicator	Outer Weights	Outer Loadings	T Values	P Values	95% BCa C.I	Significance p<0.05
Behavioural Control	*BHVR_1*	0.733	0.702	5.626	**0.000**	0.475,0.986	Yes
	BHVR_2	0.017	0.535	0.136	**0.892**	-0.232,0.247	No
	BHVR_3	0.296	0.523	3.897	**0.000**	0.150,0.449	Yes
	BHVR_4	-0.589	0.271	4.162	**0.000**	-0.853,-0.296	Yes
	BHVR_5	0.613	0.792	7.506	**0.000**	0.445,0.766	Yes
Characteristics	*CHAR_Age*	0.726	0.856	6.097	**0.000**	0.487,0.956	Yes
	CHAR_Educ	0.381	0.826	5.513	**0.000**	0.246,0.516	Yes
	CHAR_HHsz	0.115	-0.252	2.176	**0.030**	0.003,0.215	Yes
	CHAR_HisDs	0.415	0.562	7.577	**0.000**	0.305,0.518	Yes
	CHAR_Incm	0.183	0.652	1.831	**0.067**	-0.023,0.365	No
	CHAR_Knwlg	0.511	-0.507	5.765	**0.000**	0.346,0.691	Yes
Attitude	*MembATT_1*	0.010	0.587	0.035	**0.972**	-0.642,0.534	No
	MembATT_2	0.639	0.462	3.200	**0.001**	0.262,1.037	Yes
	MembATT_3	0.187	0.650	0.899	**0.369**	-0.234,0.584	No
	MembATT_4	-1.223	-0.316	9.019	**0.000**	-1.438, -1.011	Yes
	MembATT_5	0.669	0.401	3.016	**0.003**	0.220,1.075	Yes
Participation	*PAT-1*	0.005	0.647	0.105	**0.916**	-0.088,0.101	No
	PAT-2	-0.032	0.529	0.735	**0.462**	-0.119,0.058	No
	PAT-3	0.943	0.983	19.109	**0.000**	0.822,0.997	Yes
	PAT-4	0.185	0.691	1.824	**0.068**	0.002,0.401	No
	PAT-5	-0.319	-0.191	2.983	**0.001**	-0.525, -0.306	Yes
	PAT-6	0.470	0.373	2.351	**0.009**	0.005, 0.731	Yes

Table 3 provides the results of significance testing for the outer weights of formative constructs. Notably, with the exception of the outer weight estimates for *BHVR_2, CHAR_Incm, MembATT_1, MembATT_3, PAT-1, PAT-2,* and *PAT-4,* all other formative indicators demonstrate significance, denoted by $\varrho < 0.05$. This signifies their substantial role in shaping the formative constructs. Cenfetelli & Bassellier (2009) and Hair et al. (2017) advocate a criterion where formative indicators with insignificant outer loadings but values exceeding 0.5 are retained for analysis, as they continue to contribute valuable content to the explanation of the formative construct. Conversely, indicators with both insignificant and lower outer loadings are considered irrelevant and thus candidates for removal. In line with this criterion, the outer loadings for *BHVR_2, CHAR_Incm, MembATT_1, MembATT_3, PAT-1, PAT-2,* and *PAT-4* are deemed significant at the 5% significance level. As a result, these indicators are retained in the model, as they provide valuable insights into member characteristics, attitudes, behavioural control, and participation in the context of health insurance.

4.4 Structural Model Measurement

To assess the structural model's quality, we analyzed its R-Square values to gauge the coefficient determination of all exogenous constructs with respect to the endogenous constructs within the model, as recommended by Hair et al. (2017). The outcomes of this analysis are presented in Table 4 below.

Table 4: Coefficient of Determination (R-Square)

	R Square	
	R Square	**R Square Adjusted**
Participation	0.569	0.567

The R-Square statistic serves as a crucial indicator of the model's predictive power, reflecting the extent to which exogenous latent variables collectively account for the variations in the endogenous latent variable. As outlined by Hair et al. (2011) and Henseler et al. (2009), R-Square values falling within the range of 0.50 to 0.75 are indicative of a moderate level of predictability concerning the combined effects of exogenous constructs on endogenous constructs. As indicated in Table 4, the model yields an R-Square value of 0.569. This value falls within the aforementioned range, demonstrating that the constructs of attitude, behavioural control, and characteristics possess a moderate predictive capacity. Hence, these constructs prove to be sufficiently potent in predicting co-operative members' participation in health insurance.

Table 5: *f* Square Estimates

	Attitude	**Behavioural Control**	**Characteristics**	**Participation**
Attitude				**0.063**
Behavioural Control				**0.018**
Characteristics				**0.519**
Participation				

In this analysis, the F-Square value serves as a valuable metric for measuring the specific effect size of individual exogenous constructs in predicting the structural model. Additionally, it aids in estimating the potential influence of omitted constructs on endogenous variables within the model. As stipulated by Hair et al. (2017), F-Square values less than 0.02 indicate no discernible effect, while values falling within the ranges of 0.02 to 0.15, 0.15 to 0.35, and above 0.35 correspond to small, medium, and large effects of the exogenous latent variable, respectively. From the findings presented in Table 5, it is evident that characteristics exhibit a substantial effect with an F-Square value of 0.519. In contrast, attitude and behavioural control demonstrate a medium effect (0.063) and no effect (0.018), respectively, on health insurance participation among co-operative members. Notably, as per the analysis, the omission of behavioural control from the model does not significantly impact its predictive power when assessing co-operative members' participation in health insurance.

Moving forward, the assessment of the structural model delves into the examination of path coefficients and total effects of each exogenous construct, namely attitude, behavioural control, and characteristics. These analyses elucidate the relationships of these constructs with the endogenous formative construct, which is participation. The results of this analysis are presented in Table 6.

Table 6: Structural Model Relationships

Relationship	**Hypotheses**	**β**	**T Statistics**	**ϱ Values**
Attitude -> Participation	H1	0.171	2.899	**0.004**
Behaviour Control -> Participation	H2	0.115	2.056	**0.040**
Characteristics -> Participation	H3	0.629	11.838	**0.000**

The results presented in Table 6 offer valuable insights into the significance and relative influence of members' characteristics, attitudes, and behavioural control on their participation in health insurance. We find that behavioural control among members has limited significance ($\beta = 0.115$, $\varrho < 0.040$) compared to other variables, suggesting that it exerts a comparatively weaker influence on health insurance participation. Members' characteristics ($\beta = 0.629$, $\varrho < 0.000$) emerge as the predominant factor, followed by members' attitude ($\beta = 0.171$, $\varrho < 0.004$), in shaping participation in health insurance. Notably, all three

variables exhibit positive and significant relationships, confirming the support for all formulated hypotheses. Member characteristics stand out as the primary driver, with the highest positive coefficient, thus exerting the most substantial effect on member participation in health insurance, surpassing the influence of member attitude or behavioural control.

Taking a closer look at the characteristics construct, several key indicators surface as influential factors. Age, consistent with findings from Amani et al. (2020) and Bauhoff (2020), plays a significant role. In many co-operative societies, particularly Agricultural and Marketing Co-operative Societies (AMCOS), older members constitute a substantial portion of the membership. These individuals may have encountered challenges related to health insurance participation over time. Health policies that favor older individuals, providing access to some health services at reduced costs, have inadvertently diminished the perceived need for health insurance coverage among this demographic. Insurance providers, in turn, often view older members as higher-risk clients, which can result in stricter conditions for insuring this group. Addressing these issues is paramount to enhance participation among older co-operative members. Similarly, knowledge about insurance operations emerges as another influential factor, consistent with the findings of Prakoso et al. (2020), Alhassan (2018), and Fenny et al. (2018). A comprehensive understanding of insurance operations empowers members to make informed decisions regarding participation in health insurance initiatives through co-operatives. Therefore, efforts to enhance knowledge and awareness among health insurance members can substantially impact their participation choices.

Surprisingly, members with a history of chronic diseases exhibit a stronger inclination towards participating in health insurance. Prolonged illness often results in significant out-of-pocket expenditures related to healthcare services, making insurance a more cost-effective option. However, insurers typically establish strict conditions for individuals with pre-existing health conditions. Therefore, sensitizing members about the conditions and implications of insuring individuals with chronic illnesses is crucial to facilitating informed decisions regarding participation. In contrast to expectations, members' income exhibited a lower impact on shaping member characteristics related to health insurance participation in co-operatives. This finding contrasts with those of Bauhoff (2020) and Nsiah-Boateng et al. (2019), who observed a stronger relationship between income and health insurance uptake. The study suggests that income may not be a limiting factor for participation, as each member has the flexibility to select an insurance coverage option aligned with their income. Collective decisions regarding co-operative participation in health insurance, along with contributions on behalf of members willing to join, can mitigate income-related constraints. Consequently, insurers should focus on tailoring insurance options to individual members and their households rather than solely considering the overall institutional capacity when seeking to boost participation. Additional indicators such as household size and education level contributed minimally to shaping member characteristics and, consequently, participation. This finding contradicts the results of Wang et al. (2020), Minyihun (2019), and Ebrahim et al. (2019), who reported positive influences of educational level and negative impacts of household size on health insurance participation.

Moving on to the construct of co-operative members' attitudes, we observe a positive yet comparatively less significant impact on participation. These findings differ from those of Adjabui et al. (2019) and Baillon et al. (2019), who found no discernible relationship between attitude and health insurance participation. For this study, a positive attitude towards health insurance indicates a higher likelihood of participation and an increased capacity to influence others to join such insurance schemes. This aligns with the findings of Raza et al. (2019), Chemouni (2018), and Panda et al. (2015), emphasizing the investment perspective associated with health insurance. Consequently, a positive attitude positively predicts and influences co-operative members towards health insurance participation. Insurers should consider the timing of members' attitudes favoring health insurance when aiming to increase participation, recognizing the potential for attitudes to shift over time. Similarly, member behavioural control significantly and positively influences health insurance participation, corroborating the findings of Ebrahim et al. (2019), Nsiah-Boateng et al. (2019), and Mas'ud (2016). Members' belief in their capabilities, along with their confidence in leaders and fellow members possessing the necessary traits, increases the likelihood of participation through co-operatives.

This observation aligns with the assertions made by Rezaee et al. (2019) and Ellis (2016), suggesting that participation in health insurance is more likely when it aligns with an individual's pattern of behavioural control. For this study, behavioural control likely developed through daily routines related to managing and perceiving health issues and insurance within the co-operative context. Thus, understanding and investing in an in-depth understanding of co-operative members' behavioural control patterns are essential for promoting health insurance participation.

5. Conclusion and Recommendations

This study delved into the influence of members' attributes on participation behaviour in health insurance within cooperative frameworks. In congruence with the Theory of Planned Behaviour, the findings of this study underscore that cooperative members' characteristics, attitudes, and behavioural control exert a positive influence on health insurance participation. Notably, the results regarding members' characteristics revealed a significantly stronger positive impact on participation compared to attitudes and behavioural control. This highlights the pivotal role of comprehending all facets that influence the decision-making patterns of the insured—a crucial step towards fostering increased and sustainable participation in health insurance. For health insurance providers, a lack of insight or understanding of cooperative members' characteristics, attitudes, and behavioural control may lead to the design of ill-suited insurance packages, potentially resulting in the failure of intended insurance initiatives. Therefore, it is strongly encouraged and recommended that insurers examine and consider members' attributes that bolster and enhance their propensity to participate in health insurance. In particular, insurers should develop health insurance packages that accommodate individuals of varying characteristics, encompassing age, history of chronic diseases, income, and household size, with the aim of augmenting the number of participants in health insurance.

Furthermore, stakeholders such as insurers, government entities, and cooperatives should allocate resources towards the creation of awareness programs aimed at enhancing individuals' knowledge and understanding of health insurance operations. Such efforts will empower individuals to make effective and informed decisions regarding their participation in health insurance schemes. Additionally, cooperative leaders and insurers should prioritize transparency and accountability in all matters related to health insurance. By doing so, they can nurture and sustain the trust and confidence of cooperative members, thereby fostering greater participation in health insurance. However, it is crucial to acknowledge that member attributes, encompassing characteristics, attitude, and behavioural control, are not the sole predictors of cooperative members' participation behaviour in health insurance. These variables, as identified in this study, account for approximately 56.9% of the variation in health insurance participation behaviour among cooperative members (as denoted by the R2 value). The remaining 43.1% remains unexplained by the current model. Consequently, this study advocates for further research that explores various other directly measured variables capable of providing additional insights into health insurance participation behaviour. Such future investigations should also consider the impact of laws, policies, and regulations governing the insurance and cooperative industries in emerging economies, akin to Tanzania. By delving deeper into these aspects, we can gain a more comprehensive understanding of the dynamics surrounding health insurance participation and contribute to the development of more effective strategies and policies in this context.

References

Adebayo, E. F., Uthman, O. A., Wiysonge, C. S., Stern, E. A., Lamont, K. T., & Ataguba, J. E. (2015). A systematic review of factors that affect uptake of community-based health insurance in low-income and middle-income countries. *BMC Health Services Research*, 15(1): 1-13.

Adjabui, J. A., Tozer, P. R., & Gray, D. I. (2019). Willingness to participate and pay for index-based crop insurance in Ghana. *Agricultural Finance Review*, 79(4): 491-507.

Agyepong, I. A., Abankwah, D. N. Y., Abroso, A., Chun, C., Dodoo, J. N. O., Lee, S., & Asenso-Boadi, F. (2016). The Universal in UHC and Ghana's National Health Insurance Scheme: policy and implementation challenges and dilemmas of a lower middle income country. *BMC Health Services Research*, 16(1): 1-14.

Ajzen, I. (1985). From intentions to actions: a theory of planned behaviour. In: Kuhl J., Beckmann J. (eds) *Action Control: SSSP Springer Series in Social Psychology*. Berlin: Springer.

Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes*, 50(2): 179-211.

Ajzen, I. (2001). Attitudes. *Annual Review of Psychology*, 52: 27-58.

Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus of control, and the theory of planned behaviour. *Journal of Applied Social Psychology*, 32(4): 665-683.

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

Alhassan, Y. N. (2018). Effect of informal financial support for health care on health Insurance uptake: Evidence from a mixed-methods study in Tamale metropolis of northern Ghana. The International *Journal of Health Planning and Management,* 33(4): 1-14.

Amani, P. J., Tungu, M., Hurtig, A., Kiwara, A. D., Frumence, G., & Sebastián, M. S. (2020). Responsiveness of health care services towards the elderly in Tanzania: does health insurance make a difference? A cross-sectional study. *International Journal for Equity in Health*, 19(179): 1-9.

Baillon, A., Kraft, A. D., O'Donnell, O., and van Wilgenburg, K. A. (2019). Behavioural Decomposition of Willingness to Pay for Health Insurance. Tinbergen Institute Discussion Paper 2019-077/I. DOI: http://dx.doi.org/10.2139/ssrn.3488634.

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (Vol. 5, pp. 307-337). Greenwich, CT: Information Age Publishing.

Bauhoff, S., Carman, K. G., & Wuppermann, A. (2020). Financial literacy and consumer choice of health insurance: evidence from low-income populations in the United States. *Transforming Health Care: Advances in Health Care Management,* 19: 115-128.

Borghi, J., Maluka, S., Kuwawenaruwa, A., Makawia, S., Tantau, J., Mtei, G., & Macha, J. (2013). Promoting universal financial protection: a case study of new management of community health insurance in Tanzania. *Health Research Policy and Systems*, 11:1-13.

Cenfetelli, R. T., & Bassellier, G. (2009). Interpretation of formative measurement in information systems research. *MIS Quarterly*, 33: 689–708.

Chemouni, B. (2018). The political path to universal health coverage: power, ideas and community-based health insurance in Rwanda. *World Development*, 106: 87-98.

Chen, J., Dong, H., Yu, H., Gu, Y., & Zhang, T. (2018). Impact of new rural co-operative medical scheme on the equity of health services in rural China. *BMC Health Services Research*, 18(1): 1-7.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–358). Mahwah, NJ: Erlbaum.

Chomi, E., Mujinja, P. G. M., Enemark, U., Hansen, K., Kiwara, A. (2014). Health care seeking behaviour and utilisation in a multiple health insurance system: does insurance affiliation matter? *International Journal for Equity in Health*, 13(1): 1-11.

Coaley, K. (2010). *An introduction to psychological assessment and psychometrics*. SAGE Publications Ltd.

Comrey, A., & Lee, H. (1992). *A first course in factor analysis* (2nd Edn.) Lawrence Earlbaum associates. Publishers: Hillsdale, New Jersey.

Conner, M. & Norman, P. (2005). *Predicting Health Behaviour: Research and Practice with Social Cognition Models,* (2nd Edn). Open University Press, Maidenhead.

Devasoorya, R.M & Srinivasa Vallabhan, S. V. (2016). Healthcare Co-Operatives: Possible Third Realm of Healthcare in India. https://ssrn.com/abstract=2860548.

Drolet, J. (Ed.). (2016). *Social development and social work perspectives on social protection*. Abingdon: Routledge.

Dror, D. M., Hossain, S. A. S., Majumdar, A., Pérez Koehlmoos, T.L., John, D., & Panda, P.K. (2016). What factors affect voluntary uptake of community-based health insurance schemes in low- and middle-income countries? A systematic review and meta-analysis. *PLoS One, 11*(8): 1–31.

East African Community (EAC) (2014). *Situational Analysis and Feasibility Study of Options for Harmonization of Social Health Protection Systems towards Universal Health Coverage in the East African Community Partner States.* East African Community (EAC) Secretariat. Arusha.

Ebrahim, K., Yonas, F., & Kaso, M. (2019). Willingness of community to enrol in community based health insurance and associated factors at household Level in Siraro District, West Arsi Zone, Ethiopia. *Journal of Public Health and Epidemiology, 11*(6): 137-144.

Echchabi, A., Azouzi, D. & Aziz, H.A. (2016). The future prospects of Islamic banking in Tunisia: an empirical survey. *EuroMed Journal of Business, 11* (1): 119-131.

Ellis, E. (2016). *Farmers willingness to pay for crop insurance: Evidence from Eastern Ghana*. McGill University (Canada).

Fenny, A.P., Yates, R. & Thompson, R. (2018). Social health insurance schemes in Africa leave out the poor, *International Health, 10*(1): 1-3.

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach.* New York, NY: Psychology Press.

Giaimo, S. (2013). Behind the Scenes of the Patient Protection and Affordable Care Act: The Making of a Health Care Co-op. *Journal of Health Politics, Policy and Law, 38*(3): 599–610.

Golnaz, R., Zainalabidin, M., Mad Nasir, S. & Eddie Chiew, F.C. (2010). Non-Muslims' awareness of halal principles and related food products in Malaysia. *International Food Research Journal, 17*(3): 667-674.

Hair, J.F.J, Ringle, C.M. & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory & Practice,* 19(2): 139-152.

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

Henry, H., & Schimmel, C. (2011). *Co-operatives for people-centred rural development.* International Labour Office Rural Policy Briefs. ILO. Geneva.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing, 20*: 277–320.

Huda, N., Rini, N., Mardoni, Y. & Putra, P. (2012). The analysis of attitudes, subjective norms, and behavioral control on muzakki's intention to pay zakah. *International Journal of Business and Social Science, 3*(22): 271-279.

Husin, M.M. & Rahman, A.A. (2016). Predicting intention to participate in family takaful scheme using decomposed theory of planned behaviour. *International Journal of Social Economics, 43*(12): 1351-1366.

ILO, (2021). *World Social Protection Report 2020–22: Social Protection at the Crossroads – in Pursuit of a Better Future*. ILO. Geneva.

Jamieson, S. (2004). Likert scales: how to (ab) use them. *Medical Education, 38*(12): 1217-1218.

Kapologwe, N. A., Kagaruki, G. B., Kalolo, A., Ally, M., Shao, A., Meshack, M. & Hoffman, A. (2017). Barriers and facilitators to enrollment and re-enrollment into the community health funds/Tiba Kwa Kadi (CHF/TIKA) in Tanzania: a cross-sectional inquiry on the effects of socio-demographic factors and social marketing strategies. *BMC health services research*, *17*: 1-9.

Kassin, S. (2003). *Psychology*. USA: Prentice-Hall, Inc.

Kassin, S., Fein, S., & Markus, H. (2021). *Social psychology* (11th Ed). Belmont, CA: Cengage Learning.

Kigume, R., & Maluka, S. (2021). The failure of community-based health insurance schemes in Tanzania: opening the black box of the implementation process. *BMC Health Services Research*, *21*(1): 1-8.

Krosnick, J. A., & Presser, S. (2010). Questionnaire design In: JD Wright and PV Marsden. *Handbook of survey research*, 263-313.

Kusi, A., Enemark, U., Hansen, K. S., & Asante, F. A. (2015). Refusal to enrol in Ghana's National Health Insurance Scheme: is affordability the problem?. *International journal for equity in health*, *14*(1): 1-14.

Mas'ud, A. (2016, October). Integrating the moderating effect of individuals' risk vulnerability into takaful acceptance model: evidence from a frontier market. In *Paper presentation on 11th International Conference on Islamic Economics and Finance*.

McCord, M.J. & Osinde, S. (2005). Reducing vulnerability: The supply of health insurance in East Africa. *Journal of International Development, 17*: 337–381.

Minyihun, A., Gebregziabher, M. G., & Gelaw, Y. A. (2019). Willingness to pay for community-based health insurance and associated factors among rural households of Bugna District, Northeast Ethiopia. *BMC research notes*, *12*: 1-7.

Mpambije, C.J. (2017). Decentralisation of Health Systems and the Fate of Community Health Fund in Tanzania: Critical Review of High and Low Performing Districts. *Science Journal of Public Health. 5*(2): 136-144.

Nsiah-Boateng, E., Nonvignon, J., Aryeetey, G. C., Salari, P., Tediosi, F., Akweongo, P., & Aikins, M. (2019). Sociodemographic determinants of health insurance enrolment and dropout in urban district of Ghana: a cross-sectional study. *Health economics review*, *9*(1): 1-9.

Odeyemi, I. A. (2014). Community-based health insurance programmes and the national health insurance scheme of Nigeria: challenges to uptake and integration. *International journal for equity in health*, *13*: 1-13.

Organisation for Economic Co-operation and Development (2019). *Health Expenditure and Financing Database*. http://stats.oecd.org/#.

Osabohien, R., Matthew, O., Ohalete, P., & Osabuohien, E. (2020). Population–poverty–inequality nexus and social protection in Africa. *Social Indicators Research*, *151*(2): 575-598.

Pahlevan Sharif, S., & Sharif Nia, H. (2018). *Structural equation modeling with AMOS*. Tehran: Artin Teb.

Panda, P., Dror, I., Koehlmoos, T. P., Hossain, S. S., John, D., Khan, J. A., & Dror, D. M. (2016). *What Factors Affect Uptake of Voluntary and Community-Based Health Insurance Schemes in Low-and Middle-Income Countries? A Systematic Review*. EPPI-Centre. Social Science Research Unit, Institute of Education, University of London.

Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightman (Eds.), *Measures of Personality and Social Psychological Attitudes,* Volume 1 (pp. 17-59). San Diego: Academic Press.

Prakoso, A.D, Sulaeman, E.S., & Suryono, A. (2020). Application of Health Belief Model on Factors Affecting Participation in the National Health Insurance Scheme among Informal Sector Workers in Kudus, Central Java. *J Health Policy Manage. 5*(1): 61-73.

Raza, S.A., Ahmed, R., & Ali, M. (2019). Influential factors of Islamic Insurance Adoption: An Extension of Theory of Planned Behavior. *Journal of Islamic Marketing, 11*(6): 1497-1515.

Rezaee, M.E., Ward, C.E., Pais, V.M., & Dagrosa, L.M., (2019). Influence of Men's Attitudes toward Health and Health Insurance on Prostate Specific Antigen Screening for the Early Detection of Prostate Cancer. *Urology Practice, 6*: 357-363.

Scheil-Adlung, X., Bonnet, F., Wiechers, T., & Ayangbayi, T. (2010). *New approaches to measuring deficits in social health protection coverage in vulnerable countries.* World health report.

Setyobudi, W.T., Wiryono, S.K., Nasution, R.A. & Purwanegara, M.S. (2015). Exploring implicit and explicit attitude toward saving at Islamic bank. *Journal of Islamic Marketing, 6*(3): 314-330.

Sfakianakis, G., Grigorakis, N., Galyfianakis, G., & Katharaki, M. (2020). The impact of macro-fiscal factors and private health insurance financing on public health expenditure: evidence from the OECD countries for the period 2000–2017. *EuroMed Journal of Business*, *16*(1): 1-24.

Sherma, U., & Mannan, H. (2015). Do Attitudes Predict Behaviour – Unsolved Mystery? *Foundations of Inclusive Education Research, 6*: 115-131.

Sundaram-Stukel, R., & Deller, S. (2009). Farmer Health Insurance Cooperatives: an innovative solution for other Americans?. *Choices*, *24*(4):1-7.

United Nations (2015), *Transforming Our World: The 2030 Agenda for Sustainable Development. A/ RES/70/1.* United Nations, New York, NY.

URT. (2001). *The Community Health Fund Act, 2001*. Dar es Salaam: Government Printer.

URT. (2003). *The National Social Security Policy*. Dar es Salaam: Ministry of Labour, Youth Development and Sport.

URT. (2008). *Final Draft: National Social Protection Framework*. Dar es Salaam: Ministry of Finance and Economic Affairs.

URT. (2022). *Explanations on Frequently Asked Questions by Citizens through Media and Social Networks about Universal Health Insurance Bill. For public consumption*. 1st ed. Ministry of Finance. Dodoma. https://www.moh.go.tz/storage/app/uploads/public/ 634/2e5/a84/6342e5a846471581312111.pdf.

Wagstaff, A., Cotlear, D., Eozenou, P.H.V. & Buisman, L.R. (2016). Measuring progress towards universal health coverage: with an application to 24 developing countries. *Oxford Review of Economic Policy, 32*(1): 147-189.

Wajanga, B., Kim, C. Y., Peck, R. N., Bartlett, J., Mabula, D., Juma, A., & Muiruri, C. (2022). Is lack of health insurance a predictor of worsening of heart failure among adult patients attending referral hospitals in Northwestern Tanzania?. *PloS one*, *17*(3), e0264352.

Wang, J., Zhu, H., Liu, H., Wu, K., Zhang, X., Zhao, M. & Shan, L. (2020). Can the reform of integrating health insurance reduce inequity in catastrophic health expenditure? Evidence from China. *International Journal for Equity in Health*, *19*: 1-15.

Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample Size Requirements for Structural Equation Models: An Evaluation of Power, Bias, and Solution Propriety. *Educational and Psychological Measurement*, *73*: 913-934.

World Bank. (2019). *World Bank National Accounts Data, and OECD National Accounts Data Files: Data from Database*. World Development Indicators. http://databank.worldbank.org/data/reports.aspx?source5world-development-indicators.

World Health Organization. (2020). *Health Financing for Universal Coverage: Key Policy Messages*. http://www.who.int/health_financing/topics/financial-protection/key-policy-messages/en/.