UPTAKE OF INSURANCE SERVICES AS A RISK MANAGEMENT TOOL AMONG SMALL AND MEDIUM ENTERPRISES (SMES) IN DODOMA-TANZANIA

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Abstract: *Small and medium enterprises (SMEs) around the globe conduct businesses mainly in a highly uncertain environment, facing a wide range of risks and uncertainties. Despite of the risk still few SMEs have adequate insurance policy cover for the risks exposed to. Thus, this study investigates factors that influence uptake of insurance services among Small and medium enterprises as a risk management tool at Dodoma region in Tanzania. Research framework based on diffusion of innovation (DOI) theory was adapted in this study. Convenient sampling technique was employed to draw primary data from 193 SMEs by using closed-ended survey questionnaire. Partial least squares structural equation modeling (PLS-SEM) was utilized for data analysis and hypotheses testing, with Smart PLS4.0 facilitating the process. The study results confirmed that awareness and insurance product design have positive and significant impact on uptake of insurance services among Small and medium enterprises. However, perceived cost was found to have negative and insignificant impact on Small and medium enterprises to use insurance services. The study recommends that policy makers should design policies and strategies that could enhance product design which are tailored to Small and medium enterprises. In addition, they should implement a variety of awareness campaigns across different media platforms, utilizing simple Tanzanian national language to ensure comprehension by the majority.*

Keywords: *SMEs, Insurance product design, Awareness, Perceived cost, Uptake of insurance services*

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Introduction

Small and Medium Enterprises (SMEs) play a vital role in economic development of various countries in the world. In Tanzania SMEs act as the engine in driving employment and income generation to majority of Tanzanians (URT, 2003). In addition, SMEs are easily established due minimal requirements and they are effective in using local resources that require simple and affordable technology. Large proportion of businesses that operate in Tanzania are small and Medium Enterprises (SMEs) which contribute 35% of Gross Domestic Product (Pasape, 2018). The country has experienced rapid growth in number of SMEs following improvement in business environment for Small and Medium Enterprises (SMEs) that include tax incentives, e-Government services, access to credit and SMEs development policies (Kweka, 2020; Okangi, 2023). Hence, such increase in number of SMEs create more demand for insurance services in Tanzania.

However, these businesses often operate in a highly uncertain environment, facing a wide range of risks and uncertainties. A number of incidents have been experienced in Tanzania that affect Small and Medium Enterprises such as market fires disaster at SIDO Market in Mbeya (AllAfrica, 2011), Jamatin market in Dodoma (AllAfrica, 2014), Kariakoo market Fire accident in 2021 (the citizen, 2021), Karume Fire Outbreak in 2022 (AllAfrica, 2022). Basically, SMEs are vulnerable to unlimited disasters that include floods, droughts, and earthquakes; political instability; theft and burglary; and access to finance. Despite the businesses operating in uncertain environment, while facing a wide range of risks and uncertainties, yet few small and Medium Enterprises in Tanzania have insurance policy against probable risks. This could be due to inadequate understanding of insurance benefits and limited products designed specifically to cater for the needs of SMEs (Thathsarani & Wijayasinghe, 2022; The Citizen, 2021). Most of the insurance products in the less developed countries are designed based on one size fits all approach that tend to overlook unique needs of SMEs. In addition, SMEs perception on the costs associated with the insurance policy that include survey, underwriting and inflexible mode of premium payments could as well lead to low uptake of insurance products among SMEs (Dayour et al., 2020).

Therefore, the use of insurance policy permits SMEs to transfer the risks to the insurance companies. With insurance policy, not only small and Medium Enterprises protected against financial risk, but also protect them from unprecedented disasters (Junid et al., 2015). Insurance mitigate the business associated risks via absorbing the damages and losses as stipulated in the granted policies that include accident, theft, loss or catastrophe. Furthermore, insurance companies bear the risks by funding repairs or replacement of items, up to the limit of the policy, or sometimes by providing a cash settlement to return the business to its previous state prior the occurrence of the event. Therefore, insurance provides security and safety to individuals, communities, and businesses. Moreover, it encourages innovation through allowing individuals and businesses to participate in riskier business operations that stimulate economic growth of the country. Thus, SMEs could opt for life and non-life insurance or general insurance pending on the nature of risks business is exposed to.

Despite the potential benefits of insurance, most of the small and medium enterprises in Tanzania lack adequate insurance coverage (Omary & Bwana, 2020). Traditional insurance products are normally created for larger businesses and individuals with higher incomes which are not friendly to low income individuals or small scale businesses. However, Tanzanian government has played a great role in promoting the use of insurance to different players by providing supportive environment. It includes enactment of insurance act (2009), establishment

of Tanzania Insurance Regulatory Authority (TIRA), SMEs policy (2003) and National Micro Insurance Policy (2019). In addition, the financial sector reforms resulted into liberalization of insurance business in Tanzania and as the result the number of licensed insurance companies in Tanzania increased from four in 1990s to thirty three companies by December 2021 (TIRA, 2021). Furthermore, the insurance sector contribution to country's Gross Domestic Product (GDP) rose from 1.99% in 2022 to 2.01% in 2023 as the result of government commitment to promote the use of insurance services in Tanzania (Dailynews, 2024).

Several studies have been conducted to address various issues that affect usage of insurance among SMEs that include insurance uptake in tourism enterprises, electronic insurance, health insurance adoption and digital insurance adoption (Chishala et al., 2018; Dayour et al., 2020; Mutya & Mathiazhagan, 2024). The common variables examined in previous studies were firm's characteristics, the perceived benefits of insurance, lack of knowledge of insurance, risk concerns and other informal risk coping mechanisms. Moreover, extant studies investigated other factors such as lack of confidence in the insurance companies, insurance costs, regulatory framework, experience and beliefs (Mishra et al., 2023; Thathsarani & Wijayasinghe, 2022). Despite the existence of several studies in the insurance discipline, limited research has been conducted to investigate the factors influencing the uptake of insurance as a risk management tool among small and medium enterprises.

Literature Review and Hypotheses Development

In the insurance industry, diverse studies have been conducted to address issues influencing various types of businesses in their uptake of insurance services (Raza et al., 2019; Yusuf et al., 2023). Such previous studies employed various theoretical models that could address issues of the respective studies appropriately (Abdulkadir et al., 2021). The current study employs diffusion innovation (DOI) theory proposed by Rogers (1962) to address issues of insurance product design, awareness and perceived insurance costs. The theory provides clear explanation of steps involved in adopting new ideas (innovation) in different fields that include Islamic insurance, health insurance, digital insurance, mobile banking, online trading and electronic insurance adoption (Abdulkadir et al., 2021; Mutya & Mathiazhagan, 2024). Likewise, the rate of insurance uptake among SMEs in Tanzania as a risk management tool is still low relative to large enterprises. However, Tanzanian Government aims to increase the rate of insurance adoption in the country to the extent that its contribution reaches 5% of GDP in the year 2030 (UNDP, 2023). Therefore, diffusion innovation theory is appropriate because of its ability in addressing unique challenges related to insurance product design such as the way new insurance products can be introduced to different market segments and how to overcome resistance to change among SMEs (Sahin, 2006).

Furthermore, several studies adapted Diffusion innovation model to address issues of innovation in different contexts (Barre & Mukhtar, 2022). Thus, incorporation of awareness in the model would play an important role in the diffusion process because SMEs need to be informed about innovative insurance solutions that address risks in which they are exposed and their benefits. Furthermore, SMEs uptake of insurances would be influenced by associated costs as enterprises would have to weigh the costs against the benefits prior the adoption. Therefore, the current study employs a modified model that incorporates insurance product design, awareness, and perceived cost as independent variables, with SMEs insurance uptake as a dependent variable as presented in figure 1. Moreover, hypotheses are developed based on the proposed conceptual framework.
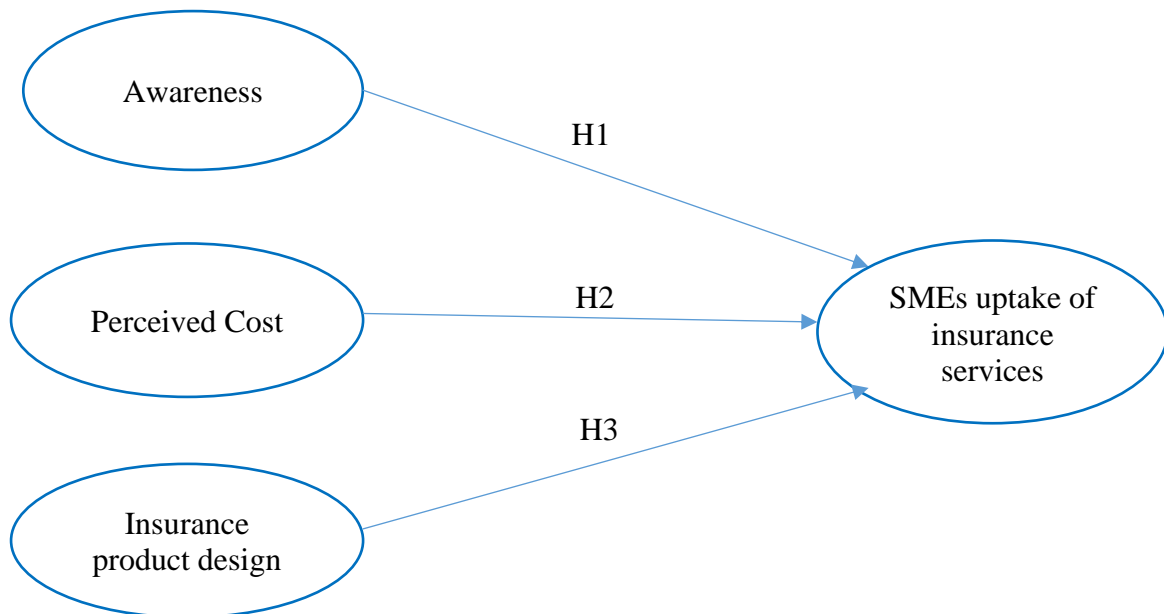
Figure 1: Conceptual Model

Awareness and Uptake of Insurance

In the context of this study, awareness refers to small and medium enterprises familiarity about various insurance policies available for them and their benefits (Dayour et al., 2020). Studies indicate most of the small and medium enterprises have limited knowledge of the available insurance product options. This lack of awareness can lead to use of inappropriate and inadequate coverage that could expose them to substantial financial risks (Mushi & Millanzi, 2019). Inadequate awareness among the small and medium enterprises of the available insurance products and associated benefits contribute to low uptake of insurance services. Therefore, the following hypothesis is proposed;

H1: Awareness has positive impact on Small and medium enterprises towards uptake of insurance services

Perceived Cost and Uptake of Insurance

Small and medium enterprises decision to use insurance services depends on the degree to which they believe the benefits of insuring their business would exceed the cost of acquiring insurance policy. Insurance contracts require the insured to pay premium to insurer in exchange for the insurer's promise to make good the loss, should a specified event occur. Simply, the insurer promises to compensate the insured for losses incurred due to specified events, such as accidents, natural disasters, or theft. Normally, insurers determine insurance premiums by considering the severity of the incidence. Some of the cost elements include product development, sales and marketing, underwriting, claims and overhead costs which are finally transferred to customers as premium (Thathsarani & Wijayasinghe, 2022). In addition, paperwork required to be completed by Small and medium enterprises and high premiums discourage their uptake of insurance services (Dayour et al., 2020). Therefore, Small and medium enterprises perception that costs of engaging in insurance services to mitigate risks associated with their business are higher than expected benefits tend to reduce their uptake of insurance. Hence, the current study suggests that;

H2: Perceived cost has negative impact on Small and medium enterprises towards uptake of insurance services

Insurance Product Design and Uptake of Insurance

Insurance product design reflects the nature of product created and developed by insurance service providers that meet needs and preferences of the insured or potential insurance customers (Ofori et al., 2023). Small and medium enterprises (SMEs) are among the consumers of insurance services with different needs to be met by insurance service providers. Thus, well designed insurance products that take into account SMEs unique risks and their ability to pay could be enticing. One size fits all approach has been common in the insurance industry. However SMEs engage in different businesses such as construction, financial and non-financial services, retailing business and agro-processing that require dissimilar insurance products responsive to their needs. Therefore, this study hypothesize that:

> H3: Insurance product design has positive impact on Small and medium enterprises towards uptake of insurance services

Research Methodology

Sample Plan and Data Collection

The current study examines the factors that influence uptake of insurance services among SMEs operating in Dodoma Tanzania. Dodoma region is the capital city of Tanzania and is one of the fastest growing cities in the country (URT-NBS, 2021). Furthermore, Dodoma City is among the cities that constitute large proportion of Small and Medium Enterprises (SMEs) in the country. The region has witnessed increase in number of SMEs especially subsequent to transfer of ministries and other Government agencies to Dodoma region. In Tanzania SMEs are constituted by enterprises with 1 to 99 employees and capital investment spanning to eight hundred million Tanzanian shillings (URT, 2003). Therefore, this study was necessary in Dodoma to ensure successfully operations of SMEs in the region and enhance their contribution to employment and economic growth through addressing insurable risks that would affect SMEs performance.

Thus, to achieve the objective of this study, primary data with a sample size of 193 SMEs operating in Dodoma city was drawn using closed ended questionnaire. The study used convenient sampling technique because it was difficult to obtain sampling framework that could permit the use of probability sampling. Survey questionnaire was useful in this study because it offers quick response and high possibility of collecting data from large number of SMEs during a particular period (Ali et al., 2014; Sekaran, 2003). The sample size was determined through Yamane's (1967) formula with a 5% margin error and 95% confidence interval.

Questionnaire and Measurement Items

The present study constructs; perceived costs, insurance product design and SMEs uptake of insurance services were measured by four items each. In addition to the three constructs; awareness was measured by five items which were all adapted from previous studies to fit the context of the current study (Nguyen et al., 2021). To ensure adapted items appropriately measured the intended construct, the questionnaire was shared to experts in insurance and finally pre-tested to 18 SMEs in Dodoma City (Rouibah et al., 2011). The survey questionnaire had two parts whereby the first part contained questions about SME's profile and last part measurement items using a 5-point likert scale that ranges from strongly disagree (1) to strongly agree (5). Initial questionnaire was developed in English, however most SMEs owners or managers could face difficulty to complete the questionnaire. Thus, the questionnaire was carefully translated using linguistic expert without loss of initial meaning. Finally, both English and Swahili version questionnaires were administered to SMEs managers and owners who had

knowledge about insurance and risks exposed to their enterprises. Moreover, back translation was involved as well to confirm quality and accuracy of original questionnaire was not impaired (Ullah et al., 2022). In order to ensure high response rate and address difficult issues encountered by respondents; questionnaires were hand delivered and collected.

Data Analysis

The present study employs partial least squares structural equation modeling (PLS-SEM) with SMART PLS 4.0 software for data analysis. PLS-SEM is adopted in this study because it is the second generation statistical techniques that handle multiple observable and latent variables in complex causal models simultaneously (Fauzi, 2022). The analysis was carried out in two stages, whereby the measurement model was analyzed to determine the reliability and validity of the measurement items in respect to study constructs. Finally, the structural model analysis for hypothesis testing and evaluation of the structural model. Furthermore, Statistical Package for Social Sciences (SPSS) version 21 was used to analyze demographic data.

Results and Discussion

SME's Profile

The findings of the study (Table1) demonstrate that majority of the SMEs in Dodoma engage in trade and transport activities (61%). In addition, most of them are micro and small enterprises that employ 1 to 49 individuals (95%) and few are medium enterprises (5%). The results indicate large proportion of SMEs are locally operated (80%) and few have international operations (20%). Moreover, the results confirm majority of the SMEs involved in this study are well established businesses with experience of 2 to 10 years (62%) and 24% of the SMEs have more than 10 years in business operations. Thus, such SMEs have enormous experience regarding diverse risks that affect growth of their businesses which could be addressed via insurance.

Table 1: SMEs Profile

Profile details	Variable	Percent	Number
SMEs Scope	Local	79.8	154
	International	20.2	39
Number of employees in SMEs	1-4	60.6	117
	5-49	34.2	66
	50-99	5.2	10
SMEs Activities	Agriculture	8.3	16
	Trade	27.5	53
	Welding	16.1	31
	Transport	33.2	64
	Others	15.0	29
SMEs operations duration	below 1 year	14.0	27
	2-5 years	32.6	63
	5-10 years	29.5	57
	10-15 years	11.4	22
	above 15 years	12.4	24

Analysis of the Measurement Model

The analysis of measurement model was carried out to ensure the quality of measurement items in measuring the constructs and enhancing the credibility of the study results and their applicability. Therefore, the measurement model quality was established through analyzing factor loading, reliability and validity. Figure 2 results validate individual item loadings are all above the recommended threshold of 0.5 that signifies each item significantly contributes to the construct being measured (Abdennebi, 2023; Zainudin, 2015). In addition, study findings indicates composite reliability score exceeded 0.7 which demonstrates that the constructs are well-measured and that the items within each construct are consistently reflecting the underlying concept.
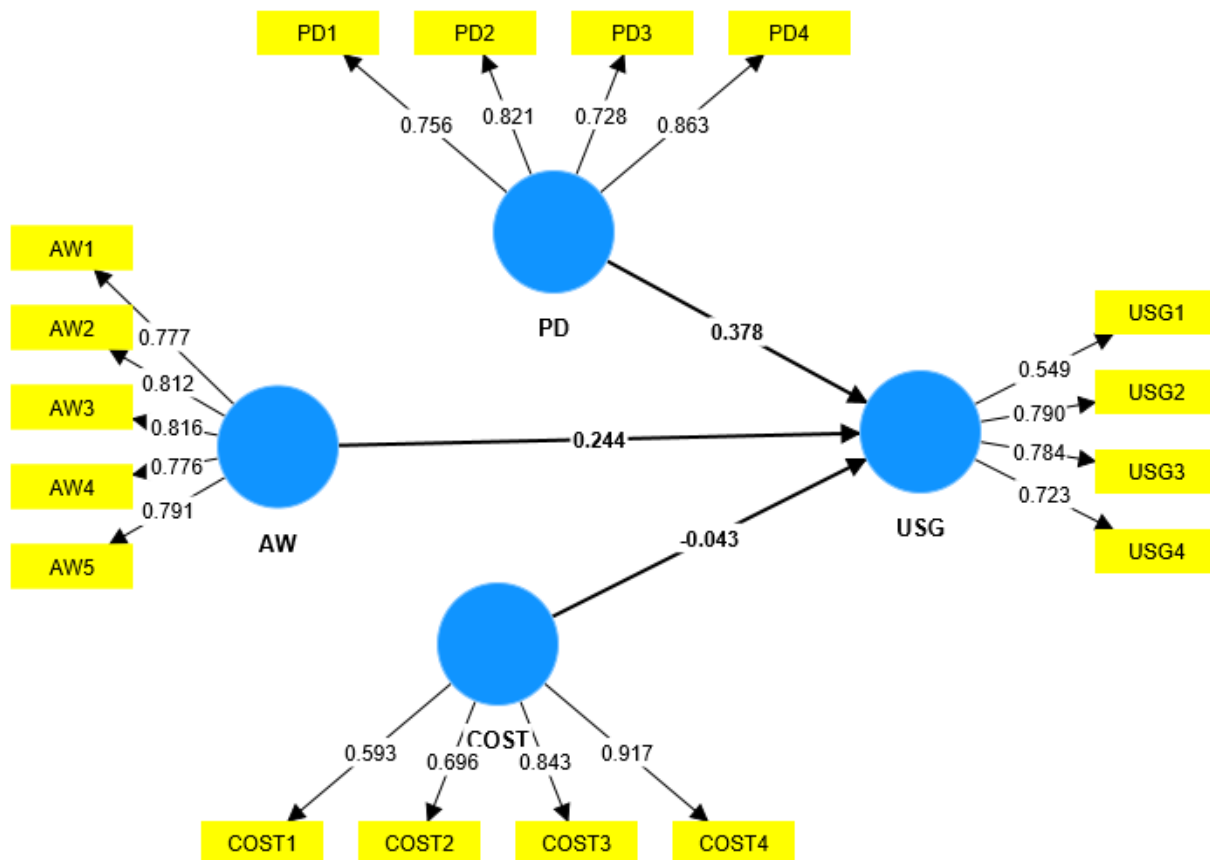

Figure 2: Measurement model results

Construct validity was also analyzed for each construct through average variance extracted (AVE) and scores exceeded 0.5, signifying that the constructs account for a significant amount of the variance in the observed items (Fauzi, 2022; Fornell & Larcker, 1981). Finally, variance inflation factor (VIF) was assessed to ensure study variables are not highly correlated because they would affect the statistical results. Findings in table 2 shows VIF scores are less than recommended threshold of 5 that confirms absence of multicollinearity in this study(Hair Jr et al., 2021). Overall, the results suggest that the measurement model is both reliable and valid, making it appropriate for further analysis in the context of this study.

Table 2: Measurement Model Results

Constructs	Factor Loadings	VIF	Average variance extracted(AVE)	Composite reliability
AW1	0.777	2.008	0.631	0.895
AW2	0.812	2.267		
AW3	0.816	2.381		
AW4	0.776	2.167		
AW5	0.791	1.819		
COST1	0.593	1.839	0.597	0.852
COST2	0.696	2.178		
COST3	0.843	2.271		
COST4	0.917	1.777		
PD1	0.756	1.627	0.63	0.871
PD2	0.821	1.836		
PD3	0.728	1.513		
PD4	0.863	1.889		
USG1	0.549	1.165	0.516	0.807
USG2	0.79	1.432		
USG3	0.784	1.553		
USG4	0.723	1.281		

Note: AW: Awareness, USG: Usage, PD: Product design, VIF: Variance inflation factor

The study employed two approaches as well for discriminant validity analysis to ensure that measures of each construct are distinct from measures of other constructs. Thus, heterotrait-monotrait (HTMT) ratio of correlations and Fornell and larcker (1981) techniques were assessed in this study. Table 3 shows heterotrait-monotrait (HTMT) ratios are below 0.85 which are within the acceptable criteria (Kaulu, 2024). Moreover, the square root of AVE are higher than the correlation between each pair of constructs involved in this study. Therefore, both Fornel and Larker and heterotrait-monotrait (HTMT) ratios confirm discriminant validity is not an issue in this study.

Table 3: Discriminant validity results (HTMT criterion)

	AW	COST	PD	USG
AW	**0.794**			
COST	0.084	**0.773**		
PD	0.103	0.111	**0.794**	
USG	0.323	0.118	0.494	**0.718**

Note: AW: Awareness, USG: Usage, PD: Product design

Structural Model

The analysis of the structural model and path analysis was conducted after successfully validating the reliability and validity of the measurement model. The structural model and hypotheses of the current study were tested using the bootstrap sampling method in SmartPLS-4.The model fit was assessed in this study prior investigating the relationships in the structural model (path coefficients). The findings revealed that the standardized root mean square residual

(SMSR) score was lower than 0.08, and the normed fit index (NFI) values exceeded 0.90, with both metrics falling within acceptable thresholds (Kline, 2011; Mutya & Mathiazhagan, 2024). Hence, the results exhibit satisfactory fit for the suggested model in this study.

Path Analysis and Discussion

Table 4 presents the path analysis results for three hypotheses estimated using partial least squares structural equation modeling (PLS-SEM). The study findings indicate hypothesis (H1) that predict awareness impact on SMEs uptake of insurance services was supported (β= 0.244, p < 0.05). These findings reaffirm other previous studies such as Raza et al., 2019; Thathsarani and Wijayasinghe, 2022. The results implies that enhancing awareness among SMEs regarding available insurance players and benefits of using insurance for risk management would increase uptake of insurance services. Thus, low uptake of insurances services among SMEs is mainly attributed to inadequate understanding of the way insurance could help to protect the business assets, mitigate various risks and support their business continuity.

Furthermore, the results indicate the impact of insurance product design on the SMEs uptake of insurance services was positive and statistically significant (β=0.378, p < 0.05). Thus, hypothesis (H3) was supported. Insurance product design had strong impact on SMEs uptake of insurance services compared to awareness. The findings are consistent with previous studies on product design and insurance service uptake among SMEs (Ofori et al., 2023). The results indicate SMEs uptake of insurance services could be higher provided there is increase in insurance product design. Thus, it implies that the rate of uptake of insurance services among SMEs would depend much on the availability of diverse options which are customized for SMEs to meet their specific demands. In addition, insurance product design would motivate SMEs to use if premiums are conveniently paid and scheduled on installment basis.

Despite of awareness and insurance product being significant, however, the current study results indicate perceived cost had negative and statistically insignificant impact on SMEs uptake of insurance services (β= -0.043, p > 0.05). The results suggest that, while SMEs discern the significance of insurance in their businesses, however perceived cost does not affect significantly their uptake of insurance services.

Table 4: Hypothesis Testing Results

Hypothesis	Path coefficient(β)	Standard deviation	t-statistics	P-values	Remark
AW -> USG (H1)	0.244	0.068	3.604	0.000	Supported
COST -> USG (H2)	-0.043	0.084	-0.512	0.609	Not Supported
PD -> USG (H3)	0.378	0.072	5.291	0.000	Supported

Note: AW: Awareness, USG: Usage, PD: Product design, H: Hypothesi

Contribution and Implications

The study examined factors that affect SMEs uptake of insurance services as a risk management tool at Dodoma region in Tanzania. For most SMEs, the use of insurance services in their business is uncommon, with the exception of the compulsory insurance services such as fire and motor insurance in Tanzania. However, SMEs are exposed to innumerable risks such as

property damage, liability risks, political instability, business interruptions, theft and burglary that require voluntary and proactive actions to manage them. Therefore, in addressing the issues of low uptake of insurance services among SMEs the framework of diffusion of innovation (DOI) theory was adapted in this study because it helps to provide explanation regarding steps for adopting new ideas (innovation) in diverse fields. Thus, to achieve the objective of the current study adapted DOI framework incorporated insurance product design, awareness and perceived insurance costs to determine the impact on SMEs uptake of insurances services. Three hypotheses (H1, H2, and H3) were tested in this study using PLS-SEM with SmartPLS 4 software (See Table 4). The statistical results validated Hypotheses H1 and H3 as positive and statistically significant. However, Hypothesis H2 was found to be negative and statistically insignificant.

The study findings confirm insurance product design has the strongest impact on SMEs uptake of insurance services relative to awareness and perceived cost. It implies that, policy makers and other stakeholders in insurance industry should strive to increase available options for SMEs so as to enhance uptake. Variety of tailor-made products should be developed and introduced that align to SMEs demand. For instance most of the available insurance products are one size fits for all. But because of the SMEs capital and irregular cashflows they might be discouraged to buy insurance policies that require lump payment. However, the availability of policies which are convenient and permit instalment premiums could be attractive to most of the SMEs. In addition, insurance product design should consider nature of common risks in SMEs.

Awareness was found to have the least impact on SMEs uptake of insurance services relative to insurance product design. The results demonstrate low rate of uptake of insurance services among SMEs is contributed by inadequate awareness of insurance policies, types of insurance, insurance benefits and available insurance players. To enhance uptake of insurance services among SMEs, policy makers provide customized education on insurance policies and benefits to SMEs. Moreover, to ensure insurance education reaches majority of SMEs could be done through workshops, informative materials using simple and Tanzanian national language. In addition, direct outreach strategies that involve physical meeting, community meetings, mass media, social network groups (Whatsapp, Instagram, Facebook etc) should be encouraged as they are more effective in disseminating intended insurance policies knowledge.

Conclusion, Limitations and Future Research
Despite the useful findings offered by this study, however there are some restrictions that provide pathways for further studies in the future. This study was conducted at Dodoma region in Tanzania regarding SMEs uptake of insurance as risk management tool. Hence the current findings reflect views of SMEs operating in that region, however the replication of findings to other regions or countries could be limited depending on the risks exposed to and regulatory environment for insurance business and SMEs. Further studies in other regions about SMEs uptake of insurance services are encouraged. This study employed cross sectional research design in which data was drawn from SMEs over a single period. Thus, the study findings are applicable provided certain criteria and exogenous environments remain unaltered. Otherwise, future studies should be conducted such a longitudinal studies that take into account of the prevailing variations. Since the impact of perceived cost on SMEs uptake of insurance was found statistically insignificant, further studies should investigate other factors that could influence SMEs decisions such as trust in insurance providers, availability of tailored insurance

products and risk perception. Furthermore, the use of qualitative research techniques could bring out in-depth knowledge as what motivates SMEs to use insurance services.

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