

DETERMINANTS OF INSURANCE UPTAKE IN RWANDA
A CASE STUDY OF RADIANT INSURANCE COMPANY LIMITED
(2020-2024)

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ABSTRACT

Several factors work for and against the uptake of insurance relationship in Rwanda and hinders the growth of insurance subsector. This study sets out to determine the factors that promote and barriers that hinder insurance uptake in Rwanda Radiant Insurance using a quantitative method and case study design on a population of 16,606 customers, and 375 clients were sampled using simple random sampling technique. The regression model was used in data analysis. The results shows that; insurance knowledge ($\beta = 0.327$ ($p = 0.01$), skills ($\beta = 0.490$, $p = 0.000$) behaviour ($\beta = 0.300$, $p = 0.001$), & accessibility ($\beta = 0.336$, $p = 0.001$) all has significant positive determination on insurance uptake. Although, were able to explain 8.4% of the variability of uptake of insurance. The mean of barriers to uptake was 1.48 suggesting severe (high) and non significant obstacles (low) towards uptake. Based on this outcome, the study concludes that insurance knowledge, skills, behaviour, accessibility positively determines insurance uptake. Additionally, the results concludes that primary barriers to insurance uptake relate to cost and the perceived value of insurance, followed by procedural and trust issues. The study therefore recommends enhancement of insurance literacy, Develop Customer-Centered Products, Strengthen Practical Skills Among Clients, Promote Positive Insurance Behavior, Leverage Technology for Accessibility and Foster Trust and Transparency.

Key words: Determinants, Insurance, Penetration rate, Insurance uptake, barriers to uptake

1.0 Introduction

This section portrays the funnel background, statement of the problem and the objectives of study knitted on the tale of the introduction.

1.1 Background of the Study

Insurance is a major aspect of economic development at the global scene, given that it provides financial safeguard against unexpected risks, household resilience and economic stability. Nevertheless, the world situation with insurance adoption is deeply unequal. The high-income economies are approximately 63 percent of adults with some policy cover like health, life or property as compared to the 13 percent of the low income countries, according to Demirguc-Kunt and others (2022). Swiss Re Institute (2022) also described that, whereas the world had faced more than USD 7 trillion in premiums in 2021, Africa contributed less than 1.5 percent to it. Such world disparities are influenced by socio-economic, institutional and behavioural conditions such as income levels, literacy, access to digital information, trust to policy guidelines and cultures that can accept insurance products.

The insurance business in Africa is underdeveloped even though there is a rising demand of financial inclusion. According to the African Insurance Organization (2023), the insurance penetration in the continent will be 2.7 percent of the GDP, however, leaving out South Africa will bring it under 1 percent. As scholars like Hougaard et al. (2012) as well as Roth et al. (2007) pointed out, the lack of financial awareness, mistrust of insurance organizations and products misalignment with native realities are considerable limitations to uptake. According to Malambo (2023) Africa had a total insurance penetration rate of 2.78% in 2019 and this is far lower than the global average rate of penetration that stands at 7.23%. Specifically, most Africans relate insurance to foreign ways of risk-sharing or even elite, which discourages use in the rural or low income communities. Nevertheless, mobile microinsurance and packaged insurance products related to health, agriculture, or credit services have proven to be promising in increasing reach.

In East Africa, there is an upsurge in insurance development although the penetration levels are not at a high level. Even such countries as Kenya (2.3%), Tanzania (1.5%), Uganda (0.9%), and Rwanda (1.7%) are below the international standards (EAISA, 2023). Empirical evidence as Muiruri and Bosire (2020) in Kenya and Kiiza and Pederson (2021) in Uganda can testify to the fact that financial literacy, affordability, accessibility of services, and a positive experience about the claims are some of the determinants of uptake. In Kenya, digital platforms such as M-TIBA and Kilimo Salama are emerging to facilitate delivery of insurance, particularly in health and agricultural insurance. In case of Rwanda and Tanzania, government-sponsored health programs have managed to raise the national coverage of health but not voluntary insurance across other of them, such as life, property, or SME insurance. Moreover, the insurance penetration rate in East Africa stands at 1.39 in 2022 and Kenya is the leader 2.14 followed by Tanzania 0.62, Uganda 0.74 and Ethiopia 0.3

There is a paradox with regards to the insurance development in Rwanda. Though the health insurance cover is almost universal in the country, linked to schemes like Mutuelle de Santhe, the enrollment into other insurance schemes is very low. According to the National Bank of Rwanda (BNR, 2023), the general insurance penetration rate in Rwanda was 1.7 percent of GDP, and the total amount of premiums amounted to about 36 million dollars and the market is dominated by non-life insurance. Finscope Rwanda (2020) revealed that in Rwanda, only 12 percent of adult families are insured, whether by life insurance or voluntary. Mobile ownership is over 78 percent (GSMA, 2022), yet there is a low consumption of insurance subscription beyond the mandatory schemes. Kabera and Mugisha (2021) and

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Nzeyimana et al. (2022) found cultural beliefs, lack of education, negative claims experiences, and affordability to be big obstacles to broader use. It was observed that the consumption of insurance is better in more developed economies (Allianz Research, 2024; OECD, 2024).

Particularly urgent, is a study like this, when considered through the lenses of the Rwandan Radiant Insurance Company Limited, which is among the most prominent indigenous insurers in the country. Radiant Insurance was founded in 2011 and ever since; it acted as a major player towards increasing general and health insurance products in the country. The company has advanced with motor, fire, health and group life insurance and has also earned significant recognition in the endeavors to reach out to urban as well as semi-urban markets. Nevertheless, in its product diversification and nation wide availability, Radiant Insurance has still struggled with customer acquisition and retention of non-mandatory insurance segments as many players in the Rwanda market.

Internal performance reports and sector statistics indicate that Radiant Insurance is still grappling with the idea of growing in individual life and property insurance particularly on informal sector workers and people in the countryside. Based on anecdotal evidence, as well as preliminary surveys, it is clear that most of the potential clients either do not know about Radiant offerings or they consider insurance undependable or they believe insurance to be too expensive. This is in accordance to the trends at the national level where most consumers tend to be shy of approaching the services of privately owned insurers unless obliged by a law. Also, the hurdle that Radiant faces is the fact that, it does not have a wide channel of distribution, the literacy of the people towards insurance and the strong competition in the market by both local and foreign insurance companies in the similar market.

However, Radiant Insurance will be in a unique situation because it is a home grown Rwandan insurance close to the locals, with knowledge of their culture, and operating flexibility. It has the prospect of leading the way in terms of inclusive models of insurance, but this is unfulfilled. Consequently, the research aims at addressing the determinants of insurance uptake and barriers in Rwanda as a matter of urgency using the case of radiant Insurance Company limited. This research can help to extract more actionable insights not only about Radiant but also about the insurance industry in Rwanda as a whole since it has defined the main factors that affect customer behavior such as the economy capacity and awareness, trust, and services delivery.

With Rwanda executing the National Financial Sector Development Strategic Plan (2021-2025), that places emphasis on the insurance market deepening and financial inclusion, it is only worth noting that companies such as Radiant Insurance urgently need an academic and policy interest to understand their operational obstacles. Unless stringent empirical studies are conducted towards the cause of why Rwandans, particularly in the informal and rural sectors are underinsured, efforts of the nation towards risk protection, wealth preservation and social stability might be thwarted.

2.0 Literature Review

2.1 Conceptual Review

Insurance Uptake

Insurance uptake is described as the acquisition and continuous uptake of insurance products to handle risks in finances. According to the World Bank (2021) and Roth et al. (2007), it is considered to be a financial inclusion metric as well as a protection mechanism against income shocks. Such recent literature (Cole et al., 2013; Ginine & Yang, 2009) points out to the fact that uptake is supported by various drivers like the economic capacity, trust, awareness, accessibility, and product relevance. According to Cole et al. (2013), the world over, the trust and literacy levels are more important than the price whereas Gin in et al. (2010) stressed the role of financial bundling insurance with services such as credit. In Nigeria, reliability, claims satisfaction, and cultural attitudes were among the determinants of life insurance demand as confirmed by Akotey et al. (2022). Researchers in Kenya showed how mobile platforms increased uptake of studies Muiruri and Bosire (2020) and researchers in Uganda and Tanzania showed an increase in adoption on bundling products with health or farming services Leach and Ncube (2021). Rwanda Over 90 percent of the population is covered by health insurance in the form of Mutuelle de Sant (RSSB, 2023), but there is lack of insurance uptake concerning life and property. According to Finscope Rwanda (2020), only 12 percent of adults have other types of insurance. Factors such as affordability, the lack of education, lack of confidence to insurers, and cultural resistance are among the barriers identified (Kabera & Mugisha, 2021). Other important aspects of increasing financial literacy (Lusardi & Mitchell, 2017) however, customer experience (Zhang et al., 2020), product design (Microinsurance Network, 2022), and regulatory support (OECD, 2023; Outreville, 2014) are emphasized in the literature as being essential in the process of increasing uptake. It is vital, yet insufficiently important to be literate about insurance. Although it enhances understanding (Cohen, 2023; Malambo et al., 2024), research in Kenya and India demonstrates that trustability and affordability is also applicable (Kiplagat et al., 2021; Banerjee & Duflo, 2019). Additionally, product mismatch and complicated regulatory phrasing limit uptake (Wasike, 2019). In general, due of the rise in insurance enrolment, issues including low literacy, mistrust, and product accessibility must be addressed. Access obstacles Due to technological advancements, particularly mobile-based insurance, access hurdles are decreasing, particularly in Sub-Saharan Africa (GSMA, 2022) is closing access gaps, especially in Sub-Saharan Africa. Perhaps, the task is to enhance both demand- and supply-side issues to access more insurance by means of education, trust, product development, and regulatory changes. Overall in Rwanda, although the health sector has been successful, insurances are not penetrated widely hence more research and specific interventions have to be done.

Research has indicated that demographics, income, education, trust and awareness are the factors that affect uptake of insurance. As observed by Rainer (2020) and Turyamureba et al. (2022), age, marital status, media access, and wealth do have an influential impact on health insurance enrolment in Tanzania and Uganda. Malambo and Qutieshat (2024) emphasized that lack of awareness and poverty are some of the problems that impede up-take in Botswana. Confidence in the providers had the most significant impact on the insurance inclusion correlated with the awareness role played by agents (Tsai-Jyh, 2021).

2.1.2. Barriers to Insurance Uptake

The barriers to insurance uptake are defined as an economically, behaviorally, institutional and cultural constraints that restrains individuals or even organizations to access or even to maintain insurance products. The most fundamental aspect of these obstacles would be the question of affordability especially in low-income environments where day to day survival necessities have priority over budgeting. The research findings of Cole et al. (2013) and Gin and Yang (2009) indicate that, despite subsidization of insurance products, there is also limited uptake when disposable income in the country is low, particularly among the informal workers as well as when dealing with rural households. At individual level, the obstacles comprise poor awareness of insurance products and advantages, failure to comprehend insurance concepts and terminologies, incorrect estimation or exaggeration of personal hazards, premium prices against one income level, and distrust of the insurance firms or brokers (Zewdneh, et al 2021). A high level of ignorance and illiteracy in finance is another great barrier. The problem is that many people do not know how the insurance works, what it covers, and how one can deal with the claims. According to Lusardi and Mitchell (2017), low understanding of the risk pooling and premiums has a direct relationship to avoiding insurance.

In Sub-Saharan Africa, Finscope (2020) indicated that over half (55.5 percent) of uninsured adults had never been exposed to any information concerning insurance and therefore education is a key access point to reach more participants on uptake. Past experience and trust is also a major role player. The greater the conviction that consumers have that the providers are reliable and responsive the more likely they are to adopt insurance. Akotey et al. (2022) and Zhang et al. (2020) observed that the negative experiences in the form of delayed settlements on claims or policy language mess result in discontinuation and the loss of trust. The situation where regulatory enforcement is weak, no one trusts the private or public insurers. Attitudes also are influenced by culture and religion. The perception of risk in most communities is either spiritual or communal-based and most community members would want to utilize the customary coping styles rather than the business insurance. Kabera and Mugisha (2021) found out that in rural Rwanda, divinity intervention prevailed among many individuals as the pillars of protection instead of monetary agreement therefore laboring on the insurability of insurance products.

On the supply side, uptake is also stunted by the complexity of the products and ineffective distribution channels. It is not uncommon to come by insurance products that do not take into consideration local needs, sensitivity to literacy levels and payment flexibility. According to the Microinsurance Network (2022), most of the low-income clients take policy documents to be too technical and sales procedures to be threatening. Also, coverage is limited by the lack of access to agents or online platforms in rural and peri-urban locations. The obstacles to the use of insurance are closely connected, but they need an integrated approach to overcome them, which conjoins financial literacy, the means of building trust, the easing of product design, the ease of payment methods, and regulation. These matters are especially pressing to tackle in nascent markets such as Rwanda, with the health insurance enrolment rate already very high, other forms of insurance in the country are, however, not being used because of these ongoing limitations.

2.2 Empirical Literature Review

In a panel study carried out over 42 countries in Africa, Bah and Abila (2022) revealed that the institutional quality and mainly regulatory effectiveness and rule of law positively impacted the life and non-life insurance penetration significantly. This observation proves that governance structures are a critical factor in influencing behavior in insurance. Ngambi et al. (2023) examined the Malawi Multiple Indicator Cluster Survey (2019-2020) and demonstrated that age, education, wealth, and geographical location are the key determinants that played a critical role in determining whether people would avail health insurance. The research found that people who had a secondary education or with higher education, as well as people in urban regions, had greater chances to be insured. According to a study conducted by Kiwuluka and Sibindi (2023) in Uganda, perceived trust proved the most effective determinant of insurance inclusion over the other indicators of the likelihood to be included in insurance, such as perceived value and insurance literacy. The results they provide highlight the importance of consumer confidence as a factor in developing insurance markets. Kawuki et al. (2022) also investigated how education status and health insurance are used in Rwanda in relation to the empowerment indicators (such as the decision-making autonomy and media exposure) and found that they had an inverse relationship with health insurance usage. The socio-economic status, the size of the household, and regional disparities were still powerful predictors, however. This analysis can hardly be found nationwide in Rwanda, but Muremyi et al. (2025) highlighted them as some of the contributing factors to the low level of health insurance coverage including lack of awareness, financial constraints, and delivery of poor health services. They were, however, only focused on the public CBHI scheme. Njournemi et al. (2023) conducted a study in Cameroon and concluded that demographic and socioeconomic variables such as income and education had a strong predictive value of health insurance coverage. The availability of the local community structures that enable access was also noted in their study.

The LSHTM systematic review (2021) across sub-Saharan Africa identified that the persistent barriers were the deficit in trust, low perceived value, low service quality, and awareness to community-based insurance health. These also hampered the renewal of schemes and continued policies. A study by Cohen (2023) on the insurance literacy in the Netherlands revealed that those with low literacy proficiency experienced more difficulty in comprehending, choosing, and appreciating the insurance products. The research associated literacy with long run satisfaction and trust. Tsai-Jyh (2021) evaluated the importance of the insurance agents in Taiwan and identified a significant relationship between the activities of agents and the public awareness. Consumers who communicated with insurance agents proved to have much better comprehension and involvement. Turyamureba, Yawe, and Oryema (2022) noted that in Uganda, wealth, education, marital status, and access to information through media were strong factors that affected the demand of the private health insurance. The combination of these variables was predictive especially in the urban dwellers.

Malambo and Qutieshat (2024) listed extreme poverty, low levels of awareness, and the absence of the targeted education campaigns as the primary life insurance uptake limiting factors in Botswana. Their research emphasizes that what works will be specific financial literacy interventions. According to Rukundo et al. (2019), the social capital, household economic status, and male employment in casual labor were related to the enrolment in the community-based health insurance in rural Uganda.

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Knowledge concerning premium structures was also recognized as necessary in the study. As reported by Wasike (2019) and Kiplagat et al. (2021), complicated legal words and cultural understanding do make a considerable dent when it comes to taking up insurance in Kenya. Despite these literacy campaigns which were increasing awareness, this was not necessarily accompanied with follow through in the form of policy implementation. The authors identified the insurance literacy as the factor associated with informed financial choices at the global level (Lusardi and Mitchell, 2017). Assumptions made by them were that the more the consumers know about an insurance, the more they are likely to view it as a worthwhile risk management tool. Gin and Yang in Malawi (2009) showed how differentiated crop and rainfall insurance education could play a great role in boosting the penetration of insurance among peasants in rural areas supporting the aspect of contextual knowledge in insurance utilization.

2.4 Literature Gaps and Justification for the Study

The literature on health insurance and microinsurance in sub-Saharan Africa has an impressive amount of empirical research, some of which covers Rwanda, but there is a striking lack of literature detailing the issue of insurance uptake in the Rwandan context of the private insurance sector. Local research tends to identify one community or government scheme and give details regarding it (Kawuki et al., 2022; Muremyi et al., 2025). No empirical study to the best of our knowledge has analyzed the determinants of voluntary or commercial insurance uptake among individuals and small businesses in Rwanda. Hence, this current study.

3.0 Methodology

The study adopted purely descriptive quantitative method along a case study design, using an appropriated population of 16606 out which 375 was determined using Krejcie and Morgan(1970) formula(Fink, A. (2020;Babbie, E. (2021) maintained that when disaggregated data is inaccessible, sampling frames can be approximated. 375 customers where randomly sampled in Kigali to ensure representativeness. Due to the absence of exact client distribution data at the Kigali headquarters, the study estimated the client population using the proportion of Radiant Insurance branches located in Kigali. With 15 out of 185 branches in the city, the estimated Kigali client base from 204818 is 16,606 (Kumar, R. (2019,; UNESCO Institute for Statistics,2013). This was used to estimate sample size. Though it still lack specific numbers of clients of each branch, it can legitimately be stated that this is methodologically sound according to other studies that have tried to implement similar research. Primary data was collected using a questionnaire while secondary data was collected by reviewing relevant literature. The independent variables (the predictors) in this study are the different factors which affect the uptake of insurance, and the dependent variable is uptake of insurance. The study measured the each variable through the questionnaire in form of Likert's scale of 5–1 in the manner: 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree and 1-Strongly Disagree. Then, the study adopted the regression model in the analytical process. The model was formulated as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where: Y= Insurance uptake, X_1 = Insurance knowledge, X_2 = Insurance skills, X_3 = Insurance Behavior, X_4 = Insurance accessibility, $\beta_1 - \beta_4$ = Regression coefficients and e = Error term

4.0 Results and Discussion

4.1 Descriptive Statistics : Frequency

Table 1: Merged Respondents' Views on Insurance in Rwanda

Category	Item Statement	Mean	Std. Deviation	Perception Level
Insurance Knowledge Grand Mean: 5.61	I am aware of the different types of insurance products available in the markets	5.61	0.489	High
	I understand the basic principles of how insurance works	5.81	0.391	high
	I understand the process of filling an insurance claim	5.79	0.406	high
	I am confident in my ability to choose the right insurance products for my needs	5.75	0.436	high
	I understand common terms in insurance	5.73	0.462	high
	I can easily make decisions on insurance products	5.72	0.465	high
	I always easily put money aside to pay for insurance	5.56	0.511	low
Insurance Skills Grand Mean: 5.69	I know how to select better insurance products	5.72	0.451	high
	I know how to evaluate the terms and conditions of an insurance policy	5.73	0.459	high
	I am skilled in understanding and assessing the risks that need insurance coverage	5.72	0.451	high
	I am capable of calculating the premiums and coverage for various insurance options	5.65	0.507	low
	I can easily compute the insurance premium	5.65	0.518	low
	I know the value of my insurance benefits	5.68	0.482	low
Insurance Behavior Grand Mean: 5.75	I regularly review & update my insurance policies	5.71	0.454	low
	I would recommend having insurance to my friends and family	5.75	0.436	high
	I always pay for insurance	5.81	0.413	high
	I am satisfied with the insurance services	5.78	0.447	high
	I always pay insurance premium	5.75	0.451	high
	I always save with insurance	5.70	0.515	low
	I am always interested in issues of insurance	5.78	0.431	high
	I believe that having insurance is essential for financial security	5.75	0.433	high
	I feel confident in my decisions regarding insurance purchases	5.72	0.507	low
	Investing in insurance is a wise financial decision	5.69	0.477	low
	I'm always interested in the other insurance products	5.63	0.499	low
Insurance Accessibility Grand Mean: 5.75	The process of obtaining insurance from Radiant Insurance Company is straightforward	5.67	0.757	Low
	Insurance products are easily accessible to people in many areas	5.75	0.753	High
	It is easy to access information about Radiant Insurance Company's products	5.72	0.545	Low
	Radiant Insurance Company has sufficient branch locations	5.73	0.527	Low
	The insurance services are user-friendly	5.65	0.555	Low

Authors Computation 2025

The table of frequency depicts the level of perception by respondents on the questions posed. The perceptions are low or high. For each of the construct, the cumulative response score with low suggests that it fall below the mean of the construct as opposed to high.

4.1 Descriptive Statistics**Table 2: Barriers to insurance uptake**

Barrier Statement	Mean	Std. Dev.
The cost of insurance premiums is high for me	2.29	1.358
The benefits of insurance do not justify its cost	1.75	1.024
The process of acquiring insurance takes too much time	1.52	0.925
Renewing my insurance policy is time-consuming	1.41	0.837
Insurance service providers are located far from my residence	1.47	0.917
There are no convenient insurance service locations near me	1.50	0.918
My religious beliefs discourage me from taking insurance	1.36	0.922
The insurance policies are stringent	1.45	0.945
Cultural norms in my community discourage the uptake of insurance	1.43	1.006
Insurance is not considered important in my cultural background	1.25	0.914
I do not trust insurance companies to fulfill their promises	1.39	0.940
I would consider insurance if the process were quicker	1.39	0.933
I'm always discouraged by friends from using insurance	1.33	0.917
The insurance company does not give me enough knowledge about products on offer	1.33	0.857
The geographical location of insurance providers affects my decision	1.43	0.907
Mean	1.48	

Authors computation 2025

The grand mean is 1.48, suggesting that items Above 1.48 are relatively more significant barriers compared to the overall average; lean towards agreeing that these factors discourage them from insurance uptake. However, those blow the average are less perceived as barriers, not significant obstacles and respondents strongly disagree that these issues are reasons for not taking insurance.

4.2 Correlation Matrix

Table 4

		Knowledge	Skills	Behavior	Accessibility
Knowledge	Pearson	1			
	Correlation				
	Sig. (2-tailed)				
Skills	N	375			
	Pearson	.236**	1		
	Correlation				
Behavior	Sig. (2-tailed)	.004			
	N	375	375		
	Pearson	.293**	.324**	1	
Accessibility	Correlation				
	Sig. (2-tailed)	.000	.000		
	N	375	375	375	
	Pearson	.105	.224**	.178*	1
	Correlation				
	Sig. (2-tailed)	.203	.006	.029	
	N	375	375	375	375

Authors' computation 2025

The matrix shows that there are positive relationships of all the variables but the strongest are between skills and behavior and accessibility has a small but significant influence on how insurance behavior and competencies are shaped. This proves the concept of increasing the level of information and viable access to enhance the take up of insurance.

4.3. Model Summary

A model summary gives a brief account of the statistical or theoretical model of analyzing data or explanation of phenomena. It often consists of the main information pertaining to the model structure, the assumptions, parameters of the model, and their performance.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.943 ^a	.089	.084	.22477

A. Predictors: (Constant), Attitude, Behavior, Knowledge, Skills

Source: SPSS Program V22

The correlation between the actual and predicted values of the dependent variable is R (0.943). It shows a very strong relationship between the predictors (Knowledge, Skills, behavior, accessibility) and the

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outcome. Adjusted R^2 was (0.084) meaning that only 8.4% of the variation in the dependent variable of insurance uptake is explained by the four predictors. Standard Error (0.22477): This is the average amount by which the actual values differ from the predicted values. A smaller value means more accurate predictions

4.4 ANOVA

Table 6: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge	Between Groups	1.174	7	.168	.865	.536
	Within Groups	27.538	142	.194		
	Total	28.712	149			
skills	Between Groups	1.696	7	.242	.549	.796
	Within Groups	62.664	142	.441		
	Total	64.360	149			
Behaviour	Between Groups	.955	7	.136	.661	.705
	Within Groups	29.335	142	.207		
	Total	30.290	149			
Suitability	Between Groups	1.084	7	.155	2.431	.022
	Within Groups	9.049	142	.064		
	Total	10.133	149			

Source: SPSS Program V22

The ANOVA output indicates the presence of statistically significant differences in the responses to insurance uptake factors with regard to the various groups . Knowledge ($p = .536$) and skills ($p = .796$) do not make any significant difference in perception but suitability ($p = .022$) does so there is a possibility of increasing the uptake of insurance products by tailoring them to the needs of a certain customer.

4.5. Coefficients analysis

The relationships between variables were statistical measured and quantified the degree and direction of the relationship, to assist in understanding how changes in one variable might impact another.

Table 7: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.715	.369		12.776	.000
Knowledge	.327	.052	.443	.512	.01
Skills	.490	.045	.286	1.968	.000
Behavior	.300	.046	.387	2.184	.001
Accessibility	.336	.048	.400	.001	.001

Source: SPSS Program V22

a. Dependent Variable: Uptakes

4.5 Discussion of Coefficient Results

All the four independent variables of knowledge, skills, behavior and accessibility are found to have a positive and statistically significant effect on insurance uptake at Radiant Insurance Company in Rwanda based on the regression coefficients. Knowledge has been found to have a coefficient of ($\beta = 0.327, P = 0.01$), which implies that the more the knowledge an individual acquires pertaining to insurance-the higher the chances are that he/she will uptake. It implies that clients who know how insurance operates, with its claims and other provisions are more likely to embrace it. This is substantiated by Lusardi and Mitchell (2017), which stressed that financial literacy enhances insurance decisions. Cohen (2023) also associated insurance literacy with duration of enrolment and satisfaction. In a theoretical perceptive, this outcome anchors on the Theory of Planned Behavior (TPB), where held in understanding increases the perceived behavioral control that intensifies intention to act.

The unstandardized effect is the strongest in terms of skills ($\beta = 0.490, P = 0.000$), which indicates that the application of some practical competencies, including the calculation of premiums, the awareness of terms, or policy comparison, greatly favor the adoption of insurance. This is in line with the study conducted by Kiplagat and Ndungu (2021), which revealed that technical ability enhances the uptake of insurance among SMEs in Kenya. It also supports the claim of Gin and Yang (2009) with respect to the finding that does adjust education that boosts insurance adoption in households in rural settings. TPB is a contributing factor too since those who feel they can act competently are likely going to take a step toward enrollment in insurance coverage.

The coefficient of behavior is ($\beta = 0.300, P = 0.001$), meaning that the practice of paying premiums, renewing the insurance policies, and frequently saving money to cover those soon to be paid premiums will have positive effects on the uptake. The relevance of this finding can be aligned with the findings of Rukundo et al. (2019) whose behavioral attributes such as saving differently and interest in insurance were ranked highly when it came to predicting the uptake in Uganda. Also, Zhang et al. (2020)

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mentioned behavior as a mediator of the financial decision-making as well as its contribution to long-lasting insurance engagement. TPB reinforces this once more in that behavior is based on attitudes and intentions formed as part of belief system and prior action.

The Accessibility coefficient is ($\beta = 0.336$, $P = 0.001$) with standard error of 0.048; the standardized Beta is 0.400. It implies that accessibility determines insurance uptake in a positive and statistically significant manner having an average statistical significance of 1 percent. What this implies in practice is that when it becomes easier to access the insurance services or avenues, such as locating branch offices, making it convenient to locate an insurance professional or simplifying online systems, the chances of the client availing insurance becomes very high. The implication of this finding is that accessibility of the insurance services is a key requirement in customer engagement and enrolment of policies. Existence such as distance, weak distribution channel or presence of agents may be a deterrent to those potential clients particularly the under-served neighborhood. The strategies to make services closer to the clients via mobile platform, expansion of the branch facilities or development of agent networks will thus be of benefit to Radiant Insurance Company. The finding is also in line with the Theory of Planned Behavior (TPB) that postulates that perceived behavioral control is strengthened using easier access, which makes an individual feel better able to perform an action (in the instance, take up insurance). Greater accessibility creates fewer barriers to the decision-making process, and thus the adoption of insurance is more probable. It also conforms with the findings of Turyamureba, Yawe & Oryema (2022) in Uganda; Imoseme & Chijuka (2024), Rukundo et al. (2019), as it is opposed to Kiplagat & Ndungu (2021) and Wasike (2019) who stated that accessibility had not increased enrolment even when it was enhanced, reporting that the motivating factors were suspect as it could be tied to a lack of trust in insurance companies and poor literacy,

5.0 Conclusion and Recommendation

5.1 Conclusion

The analysis looked at the major determinants that impact on the adoption of insurance among the clients of radiant insurance company limited in Rwanda. Informed by Theory of Planned Behavior (TPB), it was found that there are significantly positive impacts of the knowledge, skills, behavior, and accessibility towards insurance uptake. Of these, skills had the greatest unstandardized effect, and knowledge had the greatest standardized effect. The above findings point to the importance of informational and behavioral readiness in the decision to subscribe to insurance. It was also corroborated by the study that the perceptions of the clients on issues of affordability, accessibility, reliability and suitability of the source have different roles in determining uptake and that suitability is the most affected on group concerns. In total, the findings set the significance of targeted education, empowerment of skills, and change of attitude towards improving insurance penetration in the formal insurance sector in Rwanda.

5.2 Recommendation

Leaning on the result, it can be suggested that there are needs to be an increased literacy of the population on the issues of insurance by investing into sustained educational campaigns in terms of insurance knowledge and processes within the population to enhance the knowledge-based decision-

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making. The variations in suitability perceptions should be addressed by having insurance packages that are Customer-Centered to cater to unique needs, different life stages and income of various customers, regardless of differences in suitability perceptions. There should be workshops and digital tools in order to give the clients the skills of comparing the policies, computing the premiums and knowledge of the claims processes. Discounts on early renewal or loyal bonuses are some incentive schemes that can enhance the client to follow through insurance behavior therefore enjoying positive Insurance Behavior. Technology should be used to improve accessibility; and a positive attitude towards insurance followed by long term consumer trust can be achieved by having clear communication, simplified policy documents and quick claim settlements by Radiant Insurance.

6.0 Statement of Competing Interests

The authors have no competing interests

7.0 list of Abbreviations

ANOVA- Analysis of variance

BNR - National Bank of Rwanda

CBHI - Community-Based Health Insurance

EAISA - East African Insurance Supervisors Association

GDP -Gross Domestic Product

GSMA - Global System for Mobile Communications Association

OECD - Organisation for Economic Co-operation and Development

RSSB - Rwanda Social Security Board

SME - Small and Medium Enterprises

SPSS - Statistical Package for the Social Sciences

TPB Theory of Planned Behavior

REFERENCES

African Insurance Organization (2023). Annual Insurance Report for Africa. <https://www.africaninsurance.org>

African Reinsurance Corporation (2025). Country Dashboard – Rwanda. <https://www.africa-re.com/dashboards/RW>

Alhassan, A. L., & Biekpe, N. (2023). Determinants of life insurance consumption in Africa. Research in International Business and Finance, 37, 17–27. <https://doi.org/10.1016/j.ribaf.2015.09.005>

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Allianz Research (2024). Allianz Global Insurance Report 2024: Transformative years ahead for the Insurance Sector. Allianz SE, Munich May 23, 2024.

Bank of Rwanda (BNR). (2023). Insurance Sector Annual Report. <https://www.bnr.rw>

Biener, C., & Eling, M. (2012). Insurability in micro insurance markets: An analysis of problems and potential solutions. The Geneva Papers on Risk and Insurance-Issues and Practice, 37(1), 77–107.
<https://doi.org/10.1057/gpp.2011.24>

Cohen, M. (2023). The demand for micro-insurance. Journal of International Development, 17, 397–474.

Deloitte Center for Financial Services (2024). 2025 Global Insurance Outlook: Evolving industry operating models to build the future of Insurance. September 29, 2024.
<https://www2.deloitte.com/us/en/insights/industry/financial-services/financial-services-industry-outlooks/insurance-industry-outlook.html>

Financial Services Deepening (2018). Report on Uptake of Insurance Services in Uganda 2018.
<https://fsduganda.or.ug/uganda-insurance-uptake-report-2018/>

FSDU (2018). FSDU-Thematic Report on Insurance. <https://fsduganda.or.ug/wp-content/uploads/2019/02/FSDU-Thematic-Report-on-Insurance-2018.pdf>

Imoseme, M. I., & Chijuka, I. M. (2024). The determinants of insurance penetration in Africa. African Development Finance Journal, 7(1), 199–221.

Kiplagat, J. K., & Ndung'u, J. M. (2021). Financial literacy and insurance uptake among SMEs in Kenya. International Journal of Economics, Business and Management Research, 3(5), 213–232.

Malambo, M. (2023). Insurance penetration in Africa: A systematic literature review. Journal of Financial Risk Management, 12(1)

Malambo, M., & Qutieshat, A. (2024). Factors affecting the uptake of life insurance in Botswana. International Journal of Business Economics and Social Development, 5(2), 139–151.
<https://doi.org/10.46336/ijbesd.v5i2.481>

Nyandekwe, M., Nzairambaho, M., & Kakoma, J. B. (2020). Universal health insurance in Rwanda: Major challenges and solutions for financial sustainability. Pan African Medical Journal, 37, 55.
<https://doi.org/10.11604/pamj.2020.37.55.20376>

OECD. (2024). Global insurance market trends 2024. OECD Publishing. <https://doi.org/10.1787/5b740371-en>

Rainer, R. L. (2020). Determinants of health insurance uptake in Tanzania [Master's thesis, University of Nairobi].

Rukundo, E., Essa, M., Nshakira, N., Gerber, N., & Braun, J. (2019). Determinants of enrolment and renewing of community based health insurance in households with under-5 children in rural South-Western Uganda. International Journal of Health Policy and Management, 8(10), 593–606.
<https://doi.org/10.15171/ijhpm.2019.49>

Tsai-Jyh, C. (2021). The role of distribution channels in market discipline for the life insurance industry. The Geneva Papers on Risk and Insurance-Issues and Practice, 46(1), 107–129.

"DETERMINANTS OF INSURANCE UPTAKE IN RWANDA A CASE STUDY OF RADIANT INSURANCE COMPANY LIMITED (2020-2024)"

Turyamureba, R., Yawe, B., & Oryema, J. (2022). Determinants of demand for private health insurance in Uganda. *African Journal of Economic Review*, 10(3).

Wasike, M. (2019). Determinants of uptake of healthcare insurance among households in Kibera Informal Settlement, Nairobi County [Master's thesis, Jomo Kenyatta University of Agriculture and Technology].

Yoboua, A. (2023). Determinants of insurance uptake in sub-Saharan developing countries: Evidence from Cote d'Ivoire. HAL Working Paper Series, hal-04456410.

Zewdneh, S., et al. (2021). Barriers to uptake of community-based health insurance in sub-Saharan Africa: A systematic review. *Health Policy and Planning*, 36(10), 1705–1714.
<https://doi.org/10.1093/heapol/czab080>