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Article

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MANAGEMENT | RESEARCH ARTICLE

Supply-side factors and uptake of insurance products among Ghanaian households

Justice Ofori¹, Frank Boateng^{2*} and Sulaiman Olusegun. Atiku^{3,4}

Abstract: This study examines the influence of supply-side factors on uptake of insurance, as well the moderating effect of sales agent effectiveness on the

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Justice Ofori holds a BA (Hons) Degree from the University of Ghana, Legon and Diploma with honours in Banking and Finance from Toronto School of Business, Canada. He is certified in Management (CIM) by the Canadian Institute of Management and licensed Independent Adjuster, Ontario Canada. Justice Ofori has an International Executive MBA from Paris Graduate School of Management and is a Fellow of the Chartered Insurance Institute of Ghana (CIIG), Fellow West African Insurance Institute (WAI) and Fellow Chartered Insurance Professional (FCIP) of the Insurance Institute of Canada. He obtained a Doctorate in Business Administration from Swiss Business School, Switzerland. Justice's career in Insurance spans two decades having held managerial roles within the insurance space both locally and internationally. Prior to his role as Commissioner of Insurance, he was the first Director of Ghana's Premier Insurance Training Institute (Ghana Insurance College). He has trained over 300 insurance practitioners to attain the ACII status of the Chartered Insurance Institute of the United Kingdom. He is experienced in teaching with remarkable pedagogical and managerial skills. He introduced the Motor Insurance Data Base to check fake motor insurances, the biggest game changer in the insurance industry in Ghana.

Frank Boateng is a Chartered Accountant, Certified in Qualitative Risk Management, a Chartered Manager and Fellow of the Chartered Management Institute in the UK. He is a Chartered Professional Administrator and Chartered Management Consultant with the Chartered Institute of Administrators and Management Consultants of Ghana. He is a Member of the Institute of Directors Ghana. Boateng holds a Ph.D. in Management from Walden University in Minneapolis, Minnesota USA and a Master of Philosophy in Business Consulting and Enterprise Risk Management from Kwame Nkrumah University of Science and Technology in Ghana, an MBA in Finance from the University of Leicester Business School in Leicester, UK and a Bachelor of Science in Business Administration with Accounting option from Central University Business School in Ghana. Boateng has over twenty years' experience in the Extractive Industry and has worked for Goldfields Ghana Ltd, Newmont Goldcorp, Kinross Gold Mines, and Adamus Resources Ltd. Currently, is a Vice Dean of Office of Research Innovation and Consultancy and Head of the Management Studies Department of University of Mines and Technology, Tarkwa. He is a Council Member of Institute of Directors Ghana, Board Chairman and Non-Executive Director of Ankobra West Rural Bank Ltd.

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interactions. A survey research design was adopted following a quantitative approach. The target population of this study comprised Ghanaian households of income earning groups (earning less than US\$190; earning between US\$191 and US\$1,000; as well as earning US\$1,000). Using a cross-sectional survey, a structured questionnaire was administered to 520 households that participated in the survey following a convenience sampling technique in line with the ethical considerations in social science research. The formulated hypotheses were tested using hierarchical regression analyses for the direct and moderating relationships. The results show that three supply-side factors influencing insurance uptake are insurance product design, customer service, and market positioning. The relationships between insurance product design, customer service, market positioning, and insurance uptake become stronger with higher levels of sales agent effectiveness. The implications for practice point to the need for a concerted effort on development of insurance products across the income brackets, offering insurance product cost suitable for each income group and providing adequate awareness to enhance uptake of insurance products.

Subjects: Customer Relationship Management (CRM); Insurance; Product Design

Keywords: Customer education; customer service; insurance product design; market positioning; product cost

1. Introduction

Insurance penetration is very low in Ghana, according to the National Insurance Commission annual report of 2017 and 2018, which shows that insurance penetration was 1.2% and 1%, respectively (Creswell & Hirose, 2019). While KPMG puts the rate of penetration at 2% in 2012, the insurance commission placed the rate at under 1.5% in early 2015 showing a market decline. Insurance penetration refers to the ratio of total market premium to Gross Domestic Product (GDP). Insurance is seen as the contribution of income from insurance towards the overall National Income. Insurance adoption, on the other hand, refers to the uptake of insurance products and services. Insurance adoption in this study refers to customers who use insurance products. In a country where the total population is around 28 million, the insurance penetration rate of 1% and the adoption rate of about 30% (Creswell & Hirose, 2019) is worrisome and worth investigating.

Insurance is important to the life of every individual whether old or young, rich or poor. Uncertainties and risks are unavoidable in this life. In our daily lives, we are exposed to catastrophes, disasters, and other misfortunes and, therefore, the need to protect ourselves with insurance. In Ghanaian society, cultural differences account for the perception of people towards insurance. When a family member dies, we are sure of a successful burial and, therefore, insurance is not needed in such a situation. In some societies, when a farmer loses his farm as a result of bush fires, the community members come to his aid. In the traditional setting, family members are the main source of insurance; but in recent times, the trend is changing. Insurance companies are available to provide services to people to manage their risk (Gockel, 1996).

The role of insurance to the economy cannot be over-emphasized due to its contribution to the financial economy by providing funds for banks and other financial institutions thereby increasing wealth and income. Several determinants or factors are affecting the uptake of insurance. Some researchers (e.g., Adebayo et al., 2015; El-Sayed et al., 2015; House & Road, 2009) opined that in developing countries, one of the major determinants of the low levels of insurance uptake is poverty. It is important to state that in a country where the majority of the population is living

below the poverty line, it is difficult for people to go for insurance. Low-income earners are mostly concerned with how to meet basic life demands like clothing, shelter, and food (Richards & Thomson, 2017). Low-income earners consider basic education as a priority instead of buying insurance.

Insurance premiums are sometimes expensive that low-income earners find it difficult to buy insurance product in Ghana (Agyepong et al., 2016). House and Road (2009) researched the reasons for the low uptake of microinsurance in India. The research provided important insights, which identified that the risk levels of individuals, largely, affect the uptake of insurance. They asserted that households with more sick people are likely to take up an insurance policy, but interestingly, a household with a sick head is less likely to buy insurance. This relates to low-income earners in the sense that they buy insurance when they see likely risk in the occupation of their homes. They use insurance as a risk mitigation strategy by purchasing insurance. This can only be done when there is trust. There is the perception that insurance companies are fast to collect premiums but slow in paying claims (Churchill, 2007). When an insured liability settlement occurs, the processing of claims takes a long time, discouraging potential customers. This act reduces the confidence of people about insurance companies. Insurance in Ghana is regulated by the National Insurance Commission (NIC). The Commission is tasked to regulate insurance premium and other related activities of the insurance companies (Khetrapal, 2016). The currently regulated insurance premiums remain high for some income earners. There is a need to investigate the determinants of insurance uptake for low income since previous studies have already identified low levels of income as the reasons for the low adoption (Atinga et al., 2015).

Insurance penetration in Ghana is very low, around 2% with more than 50 life and non-life insurance companies (Afriyie, 2018). With this number of companies and the level of insurance penetration, there is the need to find out the reasons for the non-adoption of insurance with focus on low-income earner, since the low-income earners comprised a chunk of Ghana's population (Ghana Statistical Service, 2015). In research by LIMRA (2011), two major factors explain the low insurance penetration in most developing countries: first is the negative perception about insurance companies and their agents; and the second is the difficulty in the processing of claims when the insured event occurs. Customers usually go through a lot of hustles just to get their claims paid. Customer service is therefore important in addressing the issue of low insurance penetration. In developing countries like Ghana, insurance is not a necessity to most families (Kaguma, 2011). The annual per capita income in Ghana is about GH¢397 implying that a Ghanaian lives on an average income of less than GH¢1.10 per day, which means that insurance is seen as a luxury product by the poor (Ghana Statistical Service, 2015). Hence, due to the low levels of incomes and the risky nature of the jobs that low-income earners engage in to make a living, it makes them vulnerable and exposes them to shocks. This underscores the need for insurance, but nonetheless, the disposable income of many people is low therefore not making it possible to take out insurance.

There has been little in terms of empirical research on the antecedents of insurance uptake in Africa (e.g., Chummun, 2017; Muthoga et al., 2018; Odemba, 2013; Palas, 2014), and particularly the case of Ghana even though, the number of insurance companies keeps on growing with both local and foreign firms (Kaguma, 2011), which is not commensurate with the extent of uptake of insurance. Although Boateng (2016) investigated the level of insurance uptake in Kumasi metropolis by examining the factors influencing the residents demand for insurance products. Yet, little is known about the influence of supply-side factors on uptake of insurance among Ghanaian Households across the regions. Therefore, the current study seeks to address the literature gap by examining the extent to which sales agent effectiveness moderates the relationship between supply-side factors and uptake of insurance among low-income earners in Ghana.

Furthermore, insurance sales agents account for 60% of all life insurance product selling in Ghana (Creswell & Hirose, 2019). The role of sales agents of insurance has been found to be useful

in the marketing of insurance, but previous studies have overlooked the moderating role of sales agents on the interactions between supply-side factors and uptake of insurance products among Ghanaian households. This study is essential in providing managerial implications to the practitioners in insurance companies by showcasing the need to engage competent sales agents since they serve as the link between the insured and the insurers.

The focus of the current study is on low-income earners and how insurance providers provide insurance product to persons who are seen to be “poor”. The poverty line developed by the World Bank—used in many countries—defines extreme poverty as living on less than \$1.90 a day, which constitutes the lower poverty line. Most countries set their poverty lines taking into consideration national census data and standards of living. Their calculations involve costing a basket of basic food items needed to meet minimum nutritional requirements, and adding to this food poverty line an allowance for non-food items, usually including shelter, medical care, and clothing (Montgomery, 2009). Poverty lines provide a basic definition of poverty and allow a simple means of measurement. In line with the above, we incorporate the lower and upper poverty ranges to depict our definition for low-income earners. In the context of this research, low-income earners are those people who earn less than US\$1.90.

This study looks through two lenses. First is the control effect of individual characteristics that affect insurance uptake. The second is firm factors that could drive insurance uptake. Most research have concentrated on the individual factors affecting uptake of insurance (e.g. Adebayo et al., 2015; Dror et al., 2016; Jin et al., 2016); whereas some have concentrated on the role of insurance providers in the uptake of insurance (Afriyie, 2018; Gitau, 2013). There have not been conclusive results arising from these prior researches. There is a need to incorporate factors emanating from the supply side and come out with empirical evidence concerning clients or potential clients who are Ghanaians. This study also examines the moderating role of sales agent effectiveness on the relationship between supply-side factors and insurance uptake in Ghana.

The study is structured into six main sections. The first section (which is the current section) provides the necessary information about the research gap and objectives of the study. The next section (Section 2) unpacks the relevant literature on supply-side factors, sale agent effectiveness, uptake of insurance products, theoretical framework underpinning the study and hypotheses development. The third section (Section 3) focuses on the research design, participants and sampling procedure, questionnaire design and measures, data collection procedure and ethical considerations, as well as data analyses procedures. The fourth section (Section 4) presents quantitative data analyses, hypotheses testing, and interpretation of results. The fifth section (Section 5) showcases the discussion of findings, which were subdivided into two: (1) theoretical contributions and (2) practical implications of study for insurance practitioners and/or sales agents. The last part of this article (Section 6) offers a brief conclusion drawn from the study

2. Literature review and research hypotheses

2.1. Rogers’ innovation adoption theory

This study is underpinned by Rogers’ innovation adoption theory. Thus, the interplay between supply-side factors (firm’s strategies) and adoption or uptake of insurance products, as well as the moderating role of sales agents can be explicated by Rogers’ innovation adoption theory (Rogers, 1983, 2003). This theory reflects on the diffusion of innovations that are being adopted by firms (insurance companies) and individuals (insured). According to van Gemert-Pijnen et al. (2011), communication (i.e., customer education through sales agents or via a set of channels over a given period) to the end-users after the introduction of an insurance product or innovative service. For the easy adoption of insurance products or services, in this case, the uptake of insurance, the insurance product needs to have some key features or attributes. These features include the relative advantage an insurance product has, “compatibility, complexity, trialability, and

observability” in relation to other products. In the context of this study, the availability of these features on insurance products can influence the uptake of insurance product. Rogers also states the need for producers or manufacturers to understand their products attributes and customers’ expectations to develop innovative products or services for competitive advantage. Despite common understanding in literature, there is a paucity of empirical evidence on the influence of supply-side factors on uptake of insurance among Ghanaian households. Moreover, the moderating role of sales agents’ effectiveness on the relationship between supply-side factors and uptake of insurance among Ghanaian households needs to be investigated to address the research gap. Therefore, this study was conducted to offer some theoretical implications on the role of sales agents’ effectiveness in advancing Rogers’ innovation adoption theory.

2.2. Supply-side factors

Some consumers of insurance products in Ghana base their purchasing decision on how simple or complicated the insurance product features. While others base their purchasing decision on the kind of leadership structure that influence them to take insurance products. Akazili et al. (2018) found that the level of perceived risk in value associated with the use of an insurance product affects the uptake of insurance. As the level of perceived risk in the value of insurance product increases, the level at which the insurance product is adopted for use decreases over time (Kusi et al., 2018). The supply-side factors influencing uptake of insurance products investigated in this article are customer education (Fofie, 2016), insurance product design (Da Silveira et al., 2001), customer service (Lovelock & Patterson, 2015), market positioning (Lovelock & Patterson, 2015), perceived reputation (Zolkepli & Kamarulzaman, 2015), and insurance product cost (House & Road, 2009).

Customer education as a supply-side factor is essential in creating awareness for the insurance products. Fofie (2016) stated that high illiteracy and general lack of knowledge amongst the populace is a factor hindering the patronage of insurance policies. The level of education of end-users on the benefits and risks associated with the use of insurance products influences people’s decision to adopt or reject insurance products that are introduced to them (Mbawuni & Nimako, 2017). Sales agents should be educated enough on the unique characteristics of these insurance products to help in educating consumers on the risk and benefits associated with an insurance product to satisfy their curiosity on the insurance product (Farzaneh et al., 2017). Awareness helps to reduce the risk value of the use of insurance products to enhance adoption from the present to the near future. Conversely, Wang et al. (2017) reveal that giving African consumers too much information on insurance products gives them more grounds to consider the risks and disadvantages associated with the use of such insurance products. Consequently, it reduces their level of adoption of such insurance products. Thus, it is suggested that some delicate information about insurance products should be withheld until customers have made requests or seek more clarification on features of insurance products.

Insurance product design is another supply-side factor influencing insurance product uptakes. Danso-Abbeam et al. (2017) are of the view that when insurance products look complex more information should be made available to its consumers, otherwise they may shy away from adopting such insurance products. Insurance products that have more simplified insurance product features should have their marketers give less information to potential consumers as they may get more information indirectly as they read about insurance product features from brochures presented to them. The same case applies to new insurance products that are being introduced to consumers that were built to include new technological features (Sharma et al., 2017). The usage and anticipated benefits of such unique insurance products need to be explained to consumers to allow them to familiarize themselves with the insurance products first before they can make a personalized decision to accept or reject such products (Richards & Thomson, 2017).

Insurance products launched at the right time and introduced to consumers on time help them access the risks and benefits associated with the release of insurance products (Wairimu et al.,

2016). This also helps in the reduction of perceived risk factors about a particular insurance product. It also increases the number of peer referrals on insurance product use within a social system to affect individuals who often get influenced by social networks in firms. The perceived reputation of insurance products has been found to influence the purchasing and adoption decisions of individuals who are interested in taking on insurance products (Welaga Miah & Awingura Apanga, 2016). This is largely formed from the positive referrals people make from the use of insurance products that have been launched on the market. The same is the case when people have a negative testimony to share with peers in a social system; this can have negative implications on the rate at which new or existing innovative insurance products are developed in a social system. Another factor worth mentioning is the cost of insurance products on the market; this has a direct relationship with the rate of adoption or usage of insurance products that are introduced to clients (Wairimu et al., 2016).

2.3. Customer education and uptake of insurance

Customer education refers to the role of the company in providing timely information, abilities, and skills to customers to make them more informed of the offering of insurance companies (Bettencourt et al., 2002). This aims at educating customers to accrue knowledge, get a better understanding of the insurance product and how they can maximize utility with the adoption of the insurance products. When service providers continually provide customers with information related to insurance product purchases or planned purchases influences their decision to uptake insurance products with firms (De Weerd & Dercon, 2006).

Sukums et al. (2015) argue that the decision of individuals to adopt insurance products is largely dependent on the ability of service providers to deliver sufficient information to customers and their promptness in responding to the requests of clients whenever such requests come up. In the same way, service providers that are sincere to their clients in helping them purchase the right insurance product at their request help influence their decision to adopt insurance products in a short while (Einav et al., 2010; Keeley, 1990; Townsend, 1994). At this point, the researcher posits that:

H₁: *There is a positive relationship between customer education and the uptake of insurance*

2.4. Insurance product design and uptake of insurance

Product design refers to the nature of insurance product offered by insurance companies and how they can meet the needs and preferences of their customers (Da Silveira et al., 2001). The product design focuses on defining the target group and identifying the risk that is insurable and product to suit the customer, as well as the capability to pay as an insurer (Ahmadi et al., 2015). Insurance product designs have a positive influence on an individual's decision to uptake insurance products (Karlan et al., 2014).

H₂: *There is a positive relationship between insurance product design and the uptake of insurance*

2.5. Customer service and uptake of insurance

Customer service is the provision of service to customers before, during and after a purchase. Customer service is the act of taking care of the customer's needs by providing and delivering professional, helpful, high-quality service and assistance before, during, and after the customer's requirements are met (Lovelock & Patterson, 2015). Customer service stands as a key strategy firm can adopt in influencing their client's decision to adopt insurance products. The presence of physical facilities and the appearance of contact personnel can influence people's decision in taking up insurance packages when presented to them (Chetty & Finkelstein, 2013). Reliability as a component of customer service that requires the ability of service providers to perform their

promised services to their clients dependably and accurately has a positive influence on the uptake of insurance packages (Moene & Wallerstein, 2008).

Quartey and Darkwah (2015) argue that empathy has a positive influence on people's decision to adopt insurance products. This considers service providers showing a high level of caring as well as accord its customer's individualized attention. This considers the skills of service personnel and the design of the service system in the delivery of insurance products to clients. Integrative quality as a component of customer service plays a key role in the purchasing decisions of clients (Yiran et al., 2015). This considers the ease with which different portions of the service delivery system work together in meeting the specific needs of clients. Powell (2015) is of the view that functional quality plays a key role in influencing client's decisions to purchase insurance products. Outcome quality as a component of customer service is revealed to influence a firm's decision to purchase insurance and other insurance products when introduced to customers (Kwaning et al., 2015). This considers whether the insurance product meets service standards or specifications and customer expectations. This study hypothesizes that:

H₃: *There is a positive relationship between customer service and uptake of insurance*

2.6. Market positioning and uptake of insurance

The concept of market position refers to arranging for an insurance product to occupy a clear, distinctive, and desirable place relative to competing for insurance products in the minds of target consumers. The way an insurance product is defined by consumers on important attributes has been found to influence individual decisions to adopt insurance products. Another factor worth mentioning is repositioning. This involves service providers identifying a relevant set of competitive insurance products and serving the right group of consumers for specified insurance products at a given time (Kalolo et al., 2015). Examining the fit between the preferences of market segments and the current position of brands has been revealed to influence a firm's decision to adopt insurance products that are introduced to them. Zolkepli and Kamarulzaman (2015) argue that the identification of positions where new brands might be placed is crucial to the success in emerging markets. Insurance products that are developed and placed in lower-priced market segments and the continuous overriding concerns for the lowest cost per unit will have a positive effect on customer's insurance product purchasing decisions over time (Odeyemi, 2014). This study hypothesizes that:

H₄: *There is a positive relationship between market positioning and uptake of insurance*

2.7. Insurance product cost and uptake of insurance

Insurance product cost, also known as the premium, is the amount to be paid for an insurance cover. In an insurance contract between the insurer and the insured, premium is the consideration the insured gives to the insurer in exchange for the insurer's promise to make good the loss, should a specified event occur (Akazili et al., 2018). A strategy firms are adopting in influencing the decisions of customers to take up insurance products is the review of the cost of insurance products. This cost includes the cost involved in developing an insurance product until it gets to the end-users. Another component of insurance product cost that can influence customer's uptake of insurance products includes the cost of marketing the insurance product as well as the cost of selling insurance products, the issue of the insurance product and the cost of servicing the insurance product (House & Road, 2009). Other costs that can influence individuals purchasing decisions are overhead expenses that form part of administrative expenses, as well as one-time expenses for special projects and nonrecurring expenses, which influences an individual's decision to undertake insurance products (Eckles et al., 2014). When the cost of insurance is relatively

higher, people who are not well to do are not able to purchase insurance even though such insurance may meet their needs. This study hypothesizes that:

H₅: *There is a negative relationship between insurance product cost and uptake of insurance*

2.8. The moderating role of sales agent effectiveness

Sales agent effectiveness relates to the continuous supply of information concerning the insurance product and the ability of sales agent to handle high volume inbound calls and cross-sell personal lines insurance products to customers can influence people's decision to take on insurance products (Werther & Chandler, 2005). Efficient management of outbound campaigns as required and general administration related to sales can influence people's decision to take on insurance products when introduced to clients in Ghana (Kwabena et al., 2013). Service providers that deliver sufficient information to clients when they request them together with people working within a team to meet and exceed individual/team performance targets can influence people's decision to take on insurance products when introduced to clients (Asante et al., 2013). When service providers and sales agents perform sincerely in helping customers to purchase the right insurance product based on their needs and income levels, referrals, and perceived reputation of the insurance company is improved (Moene & Wallerstein, 2008). To this point, the researcher states the following hypothesis:

H₆: *Sales agent effectiveness moderates the relationship between supply side factors and uptake of insurance*

3. Research methods

This study adopted a survey research design following a quantitative approach. A cross-sectional survey was adopted using a structured questionnaire to gather information from respondents (Creswell & Hirose, 2019) concerning the effects of supply side factors on uptake of insurance products in Ghana. The target population of this study comprised Ghanaian households of income earning groups (earning less than US\$190; earning between US\$191 and US\$1,000; as well as earning US\$1,000). The participants of this study were these categories of households to examine their perception of supply side factors and uptake of insurance policies in Ghana.

3.1. Research participants and sampling

The population of the study included all clients and potential clients of insurance companies in Ghana. Emphasis was placed on insurance company who provide products to the segment of the population who are perceived to be low-income earners. In this study, insurance refers to all products offered by life insurance companies (such as, group life, whole life, universal coverage, endowment, accidental death and pension term assurance) and non-life companies (home and content insurance, motor vehicle insurance, business insurance, workers compensation, and travel insurance).

A convenience sampling method was adopted in this study. The convenience sampling method is a non-probabilistic sampling technique (Afriyie, 2018) that helps in choosing respondents from households who are willing to participate in the survey. The convenience sampling technique is useful in distributing questionnaires to respondents who were interested in taking part in the survey. Thus, convenience sampling procedure was used in reaching out to the participating households in Ghana. The authors approached the low-income earners in various households who were willing to participate in the study with informed written consent on the cover page of the self-administered questionnaire. The participating households were of specific income earning groups (this includes people who earn less than GH¢1,000/US\$190; people who earn between GH¢1,001/US\$191 and GH¢5000/US\$1000; and people who earn above GH¢5,000/US\$1000). The

respondents in the participating households were persons over 18 years old. Since the population is unknown, the researchers relied on the statistical recommendations by Hair et al. (2010) who asserted that for unknown population, adequate sample is derived using a minimum of 5 and maximum of 10 multiplied by total test items (questions) in the questionnaire. In this study, the total number of items in the questionnaire was 52 and therefore the range for the sample frame was 260 and 520. A total of 499 valid and useable questionnaires were obtained, which summed up to 95.6% response rate. Therefore, the total of 499 low-income earning households participated in the survey following the convenience sampling procedure and in accordance with the ethical considerations in social science research.

The demographic profile of respondents shows that 50.9% were males while the remaining 49.1% were females. The age group of income earners among households, 4.5% were between 18 and 20 years, 36.1% were between 21 and 25 years, 31.6% were between the ages of 26–30 years, 13.8% were between 31 and 35 years, 8% and the remaining 6% were between the ages of 36–40 and above 40 years, respectively. The results showed that the majority of the respondents were between the ages of 21–25 years. In terms of the monthly income, 49.5% of the respondents chose not to disclose their earnings, while 39.6% earned between GHc1,000–GHc5,000 and the remaining 10.9% were earning above GHc5,000 per month.

3.2. Questionnaire design and measures

Customer education was measured using 6 items adapted from the study of Mohajerani and Miremadi (2012). Respondents were asked to indicate the extent to which they agree or disagree with the set of questions. The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1= strongly disagree, 2=disagree, 3= undecided, 4= agree and 5= strongly agree. Items in the questionnaire includes “*I achieve a sense of belonging by purchasing the same brands and from the same company that others purchase*”, “*I will take decision on the type of insurance product based on the level of knowledge of the brand*”, and “*I tend to stick to the same brand and remain loyal to a particular insurance company and its products*”. After the EFA, 3 items were unidimensional and used for the analysis. The Cronbach alpha of the construct was 0.760.

Insurance Product Design was measured using 4 items adapted from the study of Sheth and Sisodia (2012). Respondents were asked to indicate the extent to which they agree or disagree with the set of questions. The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1= strongly disagree, 2=disagree, 3= undecided, 4= agree and 5= strongly agree. Items such as “*products should meet the needs and expectations of the target market*”, “*the service provider should be reliable*”, “*the service provider take time to understand what I need before coming out with a new product*”, “*the ability of the service provider to adjust to the changing needs and preference of customers*” were listed in the questionnaire. After the EFA, 4 items were unidimensional and used for the analysis. The Cronbach alpha of the construct was 0.711 indicating that the construct was reliable.

Customer Service was measured using six items adapted from the study of Gikuhe (2014). Respondents were told to indicate the extent to which they agree or disagree with the items. For example, “*the insurance company must respond to my request in a timely manner, ensure minimal waiting and queuing time at their offices*”, among others. The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1= strongly disagree, 2=disagree, 3= undecided, 4= agree and 5= strongly agree, the extent to which you agree or disagree with the following statement regarding your experience. After the EFA, 5 items were unidimensional and used for the analysis. The Cronbach alpha of the construct was 0.824 indicating that the construct was reliable and could be used for additional analysis.

Market Positioning was measured using four items adapted from the study of Musau (2012). Respondents were asked to indicate the extent to which they agree or disagree with the set of questions. The items were designed on a five-point Likert rating scale, ranging from one (1) to five

(5), where 1= no effect, 2= very low effect, 3= low effect, 4= large effect and 5= a very large effect, select, select how each of them will influence your buying decision. The following items were included in the research instrument, *“benefits and attributes, reliability and high responsiveness, the product and services offered, competition, price offered, promotion strategy, physical evidence, and process of attending to customers”*. After the EFA, 4 items were unidimensional and used for the analysis. The Cronbach alpha of the construct was 0.784 indicating that the construct was reliable.

Insurance Product Cost was measured using 5 items adapted from the study of Eftekhari et al. (2015). Respondents were asked to indicate the extent to which they agree or disagree with the five questions. For example, *“I am sensitive to changes in cost of insurance, I always require quotations from many service providers, I consider cost ahead of service quality”*, among others. The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1= strongly disagree, 2=disagree, 3= undecided, 4= agree and 5= strongly agree. The Cronbach alpha coefficient of the scale measuring insurance product cost was 0.792.

Sales agent effectiveness was measured using seven items adapted from the study of Kwok and Uncles (2005). The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1=very little extent, 2=little extent, 3= some extent, 4= large extent and 5= very large extent. Items such as *“free gift accompanied with the purchase of insurance products such as T-shirts”*; *“reduction of prices on some insurance products during seasonal periods”*, and *“using music and shows to promote insurance products and services”* were listed in the questionnaire. After the EFA, 3 items were unidimensional and used for the analysis. The Cronbach alpha coefficient of the construct was 0.764.

The uptake of Insurance was measured using 8 items adopted from the study of Kaguma (2011). Respondents were asked to indicate the extent to which they agree or disagree with the set of questions. The items were designed on a five-point Likert rating scale, ranging from one (1) to five (5), where; 1= strongly disagree, 2=disagree, 3= undecided, 4= agree and 5= strongly agree, the extent to which you agree or disagree to the following statement relating to uptake of insurance. For example, *“I am increasingly becoming convinced that I need to buy insurance very soon”*, and *“I will adopt insurance from a provider who will give me flexibility in modifying the product to meet my needs”*. After the EFA, 4 items were unidimensional and used for the analysis. The Cronbach alpha of the construct was 0.748 indicating that the construct was reliable.

3.3. Procedure and ethical considerations

The ethical standard for social science research, which demands that no respondent or participant should be compelled to partake in a survey was followed in this study. Furthermore, the confidentiality and anonymity of respondents in various households were guaranteed. The informed written consent of the participants was solicited on the cover page of the survey introduction letter. Households' participation in the survey is voluntary. The sensitivities of households were considered in gathering the required information by asking clear, precise, and unambiguous questions for respondents to answer without any coercion. Respondents have the right to withdraw from the study at any time.

3.4. Data analysis

The required preliminary analyses in this study were conducted using the Statistical Package for Social Sciences (SPSS) version 27. The preliminary analyses conducted using SPSS are exploratory factor analysis, collinearity statistics and normality test (normal P-P and scattered plots of regression standardised residual). Visual observations of normal P-P plots and histogram of the regression analyses indicated that data were normally distributed. Consequently, Analysis of Moment Structure (AMOS) Graphic version 27 was engaged to perform a confirmatory factor analysis of the research instrument measuring the influence of supply side factors on uptake of insurance in Ghana. To examine the hypotheses, the hierarchical regression analyses for the direct and moderating relationships were used. At stage 1, the control variables (gender, location, family size, income, and occupation of the

respondents) were used to predict the outcome variable uptake of insurance. At stage 2, the independent variables (customer service, insurance product cost, customer education, insurance product design and market positioning) together with control variables were used. At stage 3, the control variable, independent, and the moderating variables (sales agent effectiveness) were used to predict the outcome variable. At stage 4, the final stage is where the interaction between the moderator variables and the independent variables were introduced in the regression model. Specifically, the moderating hypothesis was performed by multiplying the standardized composite value of the construct “sales agent effectiveness” with the standardized composite values of the independent variables to form an interaction term (e.g., SAE x Customer Service). The constituent variables were mean-centered before creating the interaction terms to eliminate multicollinearity (Aiken & West, 1991).

4. Analysis and results

In the preliminary analysis, the exploratory factor analysis (EFA) was used as a data reduction strategy and ensuring unidimensionality between the constructs. EFA was conducted to ascertain the structure and underlying relationships between the measured variables. Seven components were extracted using Principal Component Analysis in the rotation mode utilizing Varimax Rotation Method in the factor analysis (Pallant, 2020). The unidimensionality of the factors was achieved by a series of iterations and deletions of some cross-loadings. Loadings less than 0.5 and cross loaded items were deleted during EFA (Hair & Sarstedt, 2021), the final items used for the computation was 32 items. The final analysis, however, showed the extraction of seven factors (listed in Table 1), which cumulatively explained 55.302% of the variance. The Bartlett test of Sphericity (Approx: $\chi^2 = 3779.975$, $df = 496$, Sig. 0.000) and the Kaiser-Meyer-Ohlin (KMO) measure of sampling adequacy value of 0.779 confirmed that there was significant correlation among the variables to warrant the use of the factors for further analysis (Shrestha, 2021).

The psychometric analysis of the research instrument is summarised in Table 1 after exploratory and confirmatory factor analysis of supply side factors and uptake of insurance products in Ghana. The research instrument assessed the influence of customer education, customer service, insurance product cost, insurance product design, market positioning and sales agent effectiveness on uptake of insurance products. The descriptive statistics, reliability (Cronbach's alpha coefficients and composite reliability) and validity (average variance extracted), as well as item-total correlations for the factors are also illustrated in Table 1.

As evident in Table 1, the Cronbach's alpha and composite reliability coefficients for all the constructs investigated are greater than 0.7, which is a confirmation of the internal consistency of the research instrument adapted in this study. In terms of the validity of the instrument used in this study, convergent validity was examined through AVE values, which were above the threshold of 0.5. Discriminant validity of the factors was assessed using Fornell—Larcker criterion (Fornell & Larcker, 1981) by comparing the square roots of AVE values to the items' total correlations. The square roots of AVE were greater than inter-construct correlations, which also validate the research instrument. The results of regression analysis are provided in Table 2.

Table 2 (Model 1) shows that the control variables explained 3.2% of the variance in insurance uptake. The addition of the independent variables, that is, customer service, insurance product cost, customer education, insurance product design, market positioning and perceived reputation in Model 2 increased the variance in insurance uptake to 10.5%, with an increase of 7.3% ($\Delta F = 6.162$, $p < 0.01$). The introduction of the moderator in Model 3 increased the variance in insurance uptake to 10.9% with a corresponding change in R^2 by 0.04% ($\Delta F = 1.584$, $p > .10$). In model 4, the interaction terms were added resulting in a variance explanation of 15.1%, corresponding with a change in R^2 of 4.2% ($\Delta F = 3.726$, $p < .001$).

However, based on the hypothesized Model 4 in Table 2 showed that customer education has no significant positive effect on insurance uptake ($\beta = .044$, $t = .968$, $p > .10$). The hypothesis 1, which examines the relationship between customer education and insurance uptake was not supported

Table 1. Psychometric property of the research instrument

Variables	@	CR	1	2	3	4	5	6	7
(1) Sales Agent Effectiveness	0.764	0.750	0.709						
(2) Customer Service	0.824	0.857	.005	0.709					
(3) Insurance Product Cost	0.792	0.810	-.002	.087	0.720				
(4) Customer Education	0.760	0.750	.143**	-.010	.004	0.709			
(5) Insurance Product Design	0.711	0.786	-.104*	.434**	.119**	-.070	0.708		
(6) Market Positioning	0.784	0.784	.220**	-.011	.004	.200**	.030	0.762	
(7) Insurance Uptake	0.748	0.806	.149**	-.090*	-.050	.109*	.064	.177**	0.715
Mean	-	-	3.7392	4.2355	3.8356	3.7221	4.3419	3.6951	3.5844
Std. Deviation	-	-	.70223	.61698	.65033	.71042	.51535	.73646	.67058
Skewness	-	-	-.762	-1.158	-.370	-1.076	-.714	-.702	-.716
Kurtosis	-	-	.613	3.355	.350	1.607	.765	.501	1.058
AVE	-	-	0.501	0.502	0.519	0.502	0.501	0.581	0.511

* $p < .10$, ** $p < .05$, *** $p < .001$ (two-tailed test). AVE = Average Variance Extracted. The diagonal values in bold are the square of the AVEs ($\sqrt{\text{AVE}}$), @ = Cronbach's Alpha, CR = Composite Reliability.

based on the p value. The findings show that there is no significant relationship between customer education and insurance uptake. Conversely, the results from hypothesis 2 revealed that insurance product design ($\beta = .171$, $t = 3.262$, $p < .001$) has a significant positive influence on insurance uptake in Ghana. This empirical study confirmed that there is a positive relationship between insurance product design and insurance uptake. Therefore, hypothesis 2 was supported.

In addition, the results indicated that customer service ($\beta = .172$, $t = 3.137$, $p < .01$) has a significant positive influence on insurance uptake in Ghana. It was hypothesized that there is a positive relationship between customer service and insurance uptake. Statistically, there is a significant positive relationship between customer service and insurance uptake, supporting hypothesis 3. Judging from the results, market positioning ($\beta = .166$, $t = 3.423$, $p < .001$) has a significant positive effect on insurance uptake in Ghana. The research hypothesis 4, which stated that there is a positive relationship between market positioning and insurance uptake was supported. This study confirmed that there is a significant positive relationship between market positioning and insurance uptake in Ghana. Conversely, insurance product cost ($\beta = -.015$, $t = -.339$, $p > .10$) has no significant negative effect on insurance uptake in Ghana. Hypothesis 5, which states that there is a negative relationship between insurance product cost and insurance uptake was not supported.

4.1. Moderating role of sales agent effectiveness

Model 4 reported in Table 2 showcases the moderating influence of sales agent effectiveness on the interactions between supply side factors and insurance uptake. The analysis of the moderating effects of sales agent effectiveness and specific supply side factors on uptake of insurance among Ghanaian households is subdivided into five (H_{6a-6e}) for detailed analysis. Empirically, it was revealed that the interaction between customer education and sales agent effectiveness ($\beta = .026$, $t = .523$, $p > .10$) exert no insignificant influence on insurance uptake. Hypothesis 6a was not supported in this study. The interaction between insurance product design and sales agent effectiveness ($\beta = .164$, $t = 2.848$, $p < .01$), exert a significant positive contribution to insurance uptake. Therefore, hypothesis 6b was supported. Similarly, the interaction between customer service and sales agent effectiveness made a significant contribution ($\beta = .112$, $t = 1.904$, $p < .10$) to insurance uptake and hypothesis 6c was supported. The interaction effect of market positioning and sales agent effectiveness ($\beta = .102$, $t = 1.873$, $p < .10$) on uptake of insurance was significant, confirming the need to accept hypothesis 6d. Lastly, the interaction of insurance product cost and sales agent effectiveness ($\beta = -.033$, $t = -.0227$, $p > 0.10$), had no significant effect on uptake of insurance, therefore, hypothesis 6e was not supported. The summary of decisions reached on all hypotheses formulated and tested in the current study is summarized in Table 3.

Six out of the ten hypotheses presented in Table 3 were supported in this study. The implication is that supply side factors such as insurance product design, customer service and market positioning exert a significant positive influence on uptake of insurance in Ghana. Similarly, the interactions of sales agent effectiveness and insurance product design, customer service, as well as market positioning made a significant positive contribution to insurance uptake in Ghana.

5. Discussion and implications

The findings of this research clearly show that three supply-side factors have a significant positive influence on uptake of insurance products in Ghana. The three supply-side factors influencing insurance uptake are insurance product design, customer service, and market positioning. Specifically, the findings of the regression analyses showed that all other things being equal, when insurance products design increases by a unit, insurance uptake is likely to increase by 17.1%. This result implies that when insurance products are designed to meet the needs and preferences of potential client they are more likely to buy insurance. This result is important in informing insurance companies about the development of products and how the views of their client's matter in such product development. This finding corroborated previous studies (e.g. Ahmadi et al., 2015; Antwi et al., 2015; Karlan et al., 2014) on the ground that product design

Table 2. Hierarchical regression analysis showing the effect of supply side factors on uptake of insurance

	Model 1 β (t-values)	Model 2 β (t-values)	Model 3 β (t-values)	Model 4 β (t-values)
Control Variables				
Gender	.041 (.881)	.068 (1.477)	.067 (1.460)	.067 (1.470)
Location	.041 (.840)	.031 (.646)	.029 (.592)	.035 (.721)
Family size	-.074 (-1.565)	-.050 (-1.071)	-.046 (-.982)	-.033 (-.717)
Income	-.075 (-1.626)	-.092 (-2.011)*	-.092 (-2.008)*	-.087 (-1.918) ⁺
Occupation	-.106 (-2.205)*	-.142 (-2.999)**	-.137 (-2.878)**	-.143 (-3.058)**
Independent variables				
Customer Education		.069 (1.522)	.063 (1.372)	.044 (.968)
Insurance Product Design		.136 (2.622)**	.145 (2.765)**	.171 (3.262)***
Customer service		.153 (2.865)**	.155 (2.908)**	.172 (3.137)**
Market Positioning		.187 (3.945)***	.173 (3.564)***	.166 (3.423) ***
Insurance Product Cost		-.026 (-.566)	-.027 (-.586)	-.015 (-.339)
Moderator				
Sales Agent Effectiveness (SAE)			.059 (1.259)	.041 (.850)
Interaction Effect				
Customer Education * SAE				.026 (.523)
Insurance Product Design * SAE				.164 (2.848)**
Customer service * SAE				.112 (1.904) ⁺
Market Positioning * SAE				.102 (1.873) ⁺
Insurance Product Cost * SAE				.033 (.706)
R ²	.032	.105	.109	.151
F value	3.054	4.843	4.578	4.404
ΔR ²		.073	.003	.043
Δ F value		6.162**	1.584	3.726***
Degrees of freedom	5/458	11/452	12/451	18/445
Durbin Watson Test	2.026			

⁺p <0.10, *p <0.05, **p <0.01, ***p <0.001. Note: Standardized regression coefficients were reported with t-values for each effect in parentheses.

could potentially affect uptake. For example, insurance products that are capable of giving customers maximum utility would have a positive influence on their purchasing decisions.

5.1. Theoretical contributions

Despite the prominent role of sales agents in enhancing the uptake of insurance products, studies have overlooked the moderating role of sales agent effectiveness in their attempt to establish the relationship between supply-side factors and uptake of insurance products (e.g., Fan et al., 2020; Liu et al., 2021; Owuor, 2016). The paucity of studies that have examined the moderating role of sales agent effectiveness on the relationship between supply-side factors and uptake of insurance

Table 3. Summary of research hypotheses

H₁	There is a positive relationship between customer education and uptake of insurance	Not Supported
H ₂	There is a positive relationship between insurance product design and the uptake of insurance	Supported
H ₃	There is a positive relationship between customer service and uptake of insurance	Supported
H ₄	There is a positive relationship between market positioning and uptake of insurance	Supported
H ₅	There is a negative relationship between insurance product cost and uptake of insurance	Not Supported
H ₆	Sales agent effectiveness moderates the relationship between supply side factors and uptake of insurance	
H _{6a}	The positive relationship between customer education and uptake of insurance is stronger when sales agent effectiveness is high than when it is low	Not Supported
H _{6b}	The positive relationship between insurance product design and the uptake of insurance is stronger when the sales agent effectiveness is high than when it is low	Supported
H _{6c}	The positive relationship between customer service and uptake of insurance is stronger when sales agent effectiveness is higher than when it is low	Supported
H _{6d}	The positive relationship between market positioning and the uptake of insurance is stronger when sales agent effectiveness is higher than when it is low	Supported
H _{6e}	The positive relationship between insurance product cost and the uptake of insurance is stronger when sales agent effectiveness is higher than when it is low	Not Supported

in developing countries. The empirical evidence reported in this study extent the existing knowledge on supply-side factors and the uptake of insurance products in developing countries. The major theoretical contribution of this study is the advancement of Rogers' innovation adoption theory (Rogers, 1983, 2003) by establishing a significance positive interaction between insurance product design (as a supply-side factor) and sales agent effectiveness influencing the uptake of insurance products. The implication for an extension of Rogers' innovation adoption theory is that the relationship between insurance product design and uptake of insurance is stronger when the sales agent effectiveness is higher. Insurance products are likely to perform well in the market with the effectiveness of the sales agents. According to Rashidpour (2013), when an insurance product is attractive and sales agents taking proactive steps in introducing them to clients, the product performs better in the market. This result seemed to be supported by Poku et al. (2013) and Mushtaq Hussain and Tisman Pasha (2011) who asserted that insurance products that can help

customers in establishing a distinctive image together with people working within a team to meet and exceed individual/team performance targets can influence people's decision to take on insurance products.

Regarding the influence of customer service as a supply-side factor on uptake of insurance in Ghana, the finding clearly shows that when customer service increases by a unit, insurance uptake will increase by 17.2% underscoring the importance of customer service. This empirical evidence supports the research conducted by Chetty and Finkelstein (2013), which revealed that customer service stands as a key strategy that firms can adopt in influencing their client's decision to adopt insurance products. The presence of physical facilities and the appearance of contact personnel can influence people's decision in taking up insurance packages. With effective customer service, service providers need to perform their promised services to their clients dependably and accurately. This has a positive influence on people's decision towards accepting insurance packages been offered as corroborated by previous studies (e.g. Einav et al., 2010; Moene & Wallerstein, 2008; Quartey & Darkwah, 2015; Yiran et al., 2015). Similarly, the result of the influence of market positioning on uptake of insurance shows that when market positioning increases by a unit, insurance uptake will increase by 16.6%. This implies that when insurance companies position themselves well in the country with the necessary structures and approach of marketing and sales, they are likely to enhance the level of insurance uptake. Market positioning involves innovation in marketing techniques and methods, the establishment of strong influence over channels of distribution and developing and refining existing insurance products to be able to influence the decisions of consumers to adopt insurance products. When an insurance company establishes a strong market positioning, it can attract more customers to buy insurance products. This result corroborated previous research establishing the relationship between market positioning and uptake of insurance (e.g., Moene & Wallerstein, 2008; Odeyemi, 2014; Rogers, 2015) who saw the importance of market positioning.

Empirically, the relationship between customer service and uptake of insurance is enhanced with sales agent effectiveness. This finding suggests that when firms deliver good customer service coupled with a highly efficient sales agent of a firm, insurance uptake is likely to be increased. Similarly, the relationship between market positioning and insurance uptake is stronger when sales agent effectiveness is high. The current research showed that building brand identification and other responsibilities of a sales agent can influence people's decision to take on insurance products. Innovation in marketing techniques in addition to sales agents ability to handle a high volume of inbound calls can influence uptake of insurance products (Mills, 2012). The moderating role of sales agent effectiveness is corroborated by Lee and Kang (2013) that developing and refining existing insurance products together with people working within a team to meet and exceed individual/team performance targets can influence uptake of insurance products.

Conversely, the study found no significant positive relationship between customer education and uptake of insurance products among low-income earners in Ghana. The literature positions that customers awareness of the usefulness of insurance has a positive influence on their decision to take up insurance products (De Weerd & Dercon, 2006; Sukums et al. (2015). This means that the perceptions of low-income earners (who are to meet basic means of livelihood) in Ghana regarding uptake of insurance is different from the Global North. Aside customer education as a supply-side factor, the demand-side factors such as cultural orientations, religious beliefs, and perceived reputation of insurance companies could be used as yardstick to explain why provision of vital information about insurance products has no significant positive influence on uptake of insurance products among low-income households. Extraneous factors such as cultural orientations, religious beliefs, and lack of trust counteracted the moderating role of sales agent effectiveness. It therefore explained why sales agent effectiveness as a supply-side factor exerts no moderating influence on the relationship between customer education and uptake of insurance products among low-income households in Ghana.

Furthermore, our findings revealed that insurance product cost has no significant positive influence on uptake of insurance among low-income households in Ghana. This result does not corroborate the literature claiming that insurance product cost can influence customer's uptake of insurance products (House & Road, 2009). In the context of low-income households in Ghana, uptake of insurance products will rather increase the household monthly expenditure because they are expected to pay their premiums. Premium is the consideration the insured gives to the insurer in exchange for the insurer's promise to make good the loss, should a specified event occur (Oduro, 2018). Therefore, low-income earners in different households who are struggling to provide food for their families would not prioritize premiums over basic means of livelihoods. Poverty is another factor to put into consideration on the relationship between insurance product cost and uptake of insurance products among low-income households in Ghana. This can be corroborated by previous studies on the ground that poverty is one of the major determinants of low insurance uptake in developing countries. Such households in Ghana would rather rely on their religious beliefs for protection of life and property. Hence, such demand-side factors will neutralize the moderating role of sales agent effectiveness in the relationship between insurance product cost and uptake of insurance. The foregoing explains why sales agent effectiveness as a supply-side factor does not moderate the relationship between insurance product cost and uptake of insurance products among low-income households in Ghana. In social science research, context, and multiple realities matter, which is the case of empirical evidence on supply-side factors and uptake of insurance products among low-income households in Ghana.

5.2. Practical implications

The findings emanating from the study of supply-side factors and uptake of insurance products are valuable in providing plausible recommendations to the management of insurance companies in Ghana. The supply side factors such as insurance product design, customer service, market positioning coupled with the effectiveness of sales agents are fundamental for the uptake of insurance products in Ghana. Insurance companies operating in Ghana need to consolidate efforts on identifying potential customers needs and developing affordable insurance products for client satisfaction and a higher level of return on sales. The customer service experience could be enhanced through training and development of the customer service agents. For example, training and development intervention that focuses on customers directed behaviour will go a long way in enhancing the service delivery of customer agents in insurance companies. Exceptional delivery of customer service and sales agent effectiveness is essential for customers satisfaction, retention, and ability to attract more customers in the industry. Perceived reputation in terms of reliability of the insurance company and its market positioning should not be comprised because of the spillover effects on the demand side factors.

Customer education and insurance product cost do not exert a significant influence on uptake of insurance in Ghana. A considerable effort is required from insurance companies in creating awareness of their products to the public using different platforms. Awareness without putting adequate considerations into the insurance product cost and the purchasing power of potential clients will be a fruitless effort. This issue can be resolved by developing insurance products based on the needs and purchasing power of the intended customers. The income levels of various households GH¢1,000 (US \$190); earning between GH¢1,001 (US\$191) and GH¢5,000 (US\$1,000); as well as earning above GH¢ 5,000 (US\$1,000) could be used as a yardstick in developing insurance products and costs. Therefore, a concerted effort is required on insurance product development, across income bracket, offering insurance product costs suitable for each income group and providing adequate awareness.

6. Conclusion

The main objective of this study was to examine the influence of supply-side factors on uptake of insurance among Ghanaian households. This study identified five explanatory variables as supply-side factors influencing uptake of insurance products. These variables are customer education, insurance product design, customer service, market positioning, and insurance product cost. This study holds that only three of the variables (insurance product design, customer service, market

positioning) and sales agent effectiveness made positive contributions to the uptake of insurance products in Ghana.

Customer education and insurance product cost exert no significant contribution towards uptake of insurance products in Ghana. Hence, a considerable effort is required in developing cost-effective insurance products and creating awareness for such products to the public using different platforms to enhance the uptake of insurance products in Ghana.

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