HERD BEHAVIOR AND HEALTH INSURANCE DEMAND IN UGANDA

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Abstract

This study explores the impact of herd behavior on health insurance purchasing decisions in Uganda. Using a convergent parallel mixed-methods design, the study integrates qualitative and quantitative data to examine the relationship between herd behavior and insurance demand, as well as its key determinants. A sample of 399 policyholders, drawn from Uganda's eight licensed life insurance companies, was analyzed using surveys and interviews. Findings reveal that policyholders heavily rely on peers, family, and personal doctors when selecting health insurance, driven by social validation and a lack of confidence in independent decision-making. While herding can boost insurance uptake, it may lead to suboptimal choices affecting financial planning and satisfaction. The findings highlight the need for behaviorally informed insurance products and contribute to theoretical discussions on social influence in insurance markets.

Section One: Description of the Proposal, Problem statement, the Central Research Question and its Significance

1.1 Description of the Proposal

Investment in health care provides significant returns to global economies. Since early 2000 there have been prominent debates agitating for adequate public spending on healthcare to ensure social protection. (European Commission, 2014). Recent research points to a growing unparalleled demand for healthcare services (Martinez et al., 2021). However, unless governments adopt cost-effective policies to counter the situation (Dyakovaet al., 2017),it would be hard to avoid a momentous strain on the health sector of most countries (De La Maisonneuve & Martins, 2014).

Several studies have shown that investing in health care leads to improved health well-being and sustainable development (OECD, 2020), economic growth, happy and empowered communities (Dyakova et al., 2017), poverty reduction (Odokonyero et al., 2017), and improved equality hence social cohesion (European Commission, 2014).

In 2011, USAID conducted a comprehensive review of Uganda's healthcare system and cited several weaknesses such as Poor health infrastructure, inequitable access, and staff absenteeism that need both qualitative and quantitative improvements if the country is to construct a social safety net and have healthcare equality (USAID, 2011; Malinga, 2010). The same challenges have been emphasized in studies like Human resources for health, the country profile of Uganda members, (Observatory, 2009); the Impact of user fees on health service utilization (Lagarde & Palmer, 2008), Health sector strategic plan (MHU, 2000);Fiscal space for health in Uganda (Bank,2010; WHO, 2012). Uganda health system assessment (Stewart, 2012); Uganda Health System Assessment (USAID,2012), and Exploring country- wide equitable government health care facility access in Uganda (Dowhaniuk, 2021). Further, Kiguli et al., (2009). specifies that health worker shortages, lack of needed treatments, high cost of treatments, long distances, and poor equipment specifically in the rural and semi-urban areas of Uganda continue to define the country's healthcare system. Several of these studies despite the diverse objectives, focus is on operational and institutional challenges of the existing healthcare system, but they ignore the crucial health system question of" who pays the bill", plus highlighting the role played by health sector players such as pharmaceuticals, insurance, and hospitals play in improving the healthcare system (Kiguli et al., 2009).

There's a widespread consensus that the adoption of universal health insurance coverage improves access to acceptable quality healthcare, and reduces the out-of-pocket expenditure that's taken to be catastrophic and unaffordable to most people in developing nations(WHO, 2020; Dowhaniuk, 2021). In recent times, most developing countries have adopted health insurance schemes and these continue to serve as engines propelling quality healthcare consumption (WHO 2000). However, in Uganda failure of the government to implement the National insurance policy and low consumption of health insurance offered by private insurance

companies puts Uganda's out of the pocket health expenditure at 40%, a rate higher than the recommended 15% of the world health organization (Dowhaniuk, 2021). Health insurance coverage remains very low at 1% of the country's population mainly among people living in urban areas. This low enthusiasm for health insurance purchases in Uganda is largely attributed to insurers' lack of knowledge of behaviors that induce consumer purchase decisions. Lack of policy instrument on the regulatory side to guide consumers that follow herd decisions.

The behavior of insurance consumers concerning their choice of health insurance plans is discussed in two aspects of the literature. The first is psychological literature (e.g., theory of reasoned action), which associates the type of health insurance cover and decision to purchase with the consumer's beliefs, attitudes, and Norms (Liu, 2015; Goyal et al., 2021). Second, the literature that uses finance and economic theories (e.g., Expected utility theory) to presume that a decision to purchase insurance is purely monetary and that consumers consider information on premiums, sum assured, and loss probabilities in making buying decisions (Rabihah & Norhafiza, 2018). Similarly, these theories assume that individuals are rational and competent in making purchase decisions (Waweru et al., 2008). However, behavioral studies present findings of irrationality and inconsistence in purchase decisions (Evans, 2006; Thaler,1999; Gao &Schmidt, 2005), by continuously pointing to cognitive processes like herd behavior (Waweru et al., 2008; Luong & Thu Ha, 2011), as key influencers of purchase decisions (Lockton,2012).

Empirical studies in this thread of literature have addressed the specific roles herd behavior plays within the health insurance market (Lulin et al., 2016; Ababio & Mwamba, 2016; Liu, 2015). First as an information aggregator mechanism that influence health insurance purchase. Second as a psychosocial factor that puts the control in individual decision making. Nonetheless, this research focuses on the first thread of literature as we intend to generate knowledge for both the insurers and regulators to develop health insurance products and policy instruments that can increase health insurance demand in the country. Herd behavior knowledge is important in designing health insurance policy guidelines such as Benefit packages; tariffing, premium caps (Lagomarsino et al., 2012), and insurance products details such as service hospitals, wellness care, specialist doctors, medical devices (Hayati et al., 2019, Carrin & James, 2004), which both important in guiding the health insurance market and influencing consumer decision in buying health insurance. However, none of these guidelines and product details are from a developing country context, most are from developed countries with well-established insurance markets, it would be impractical to run them without analyzing their impact on the local health insurance market.

This study, therefore, on the analysis of herd behavior influence on health insurance demand in a developing country whose dominant population is of low-income earners who take insurance to be at the bottom tail of their basic needs is required to guide the development of proper health insurance products and clear guidelines.

Extant literature exists that offers an independent explanation for herd behavior on insurance demand, but most of it is from the developed country context in Europe and East Asia, a solution, therefore, lies in developing a comprehensive model from the Ugandan perspective that integrates theories, to allow a viable verification of the different theory's pitches, relationships and to better explain health insurance demand. Similarly, other studies are on health insurance are supply sided and focus on rational institutional macro-economic and demographic factors like; GDP, incomes levels, market research, awareness activities, market development, regulatory reforms, literacy levels, and marital status among others (Yamada et al., 2014;Hopkins & Micheal,1996; Yellaiah &Ramakrishna, 2012; Asteraye, 2002 2003; Hecht et al., 2010; Sen, 2008). Furthermore, these studies have equivocal results, flaws, and disagreement on variable directions, relationships, and levels of significance (Zietz,2003). Their findings only offer insights into aggregate demand variables, and overall market insights, and do not dive into consumer behavioral determinants of health insurance demand at individual or household levels.

Although several arguments stand to justify studying herd behavior's influence on demand for health insurance in Uganda. But the justification for most insurance studies in Uganda lies in the history of Uganda's insurance sector. Four decades ago, Uganda's insurance sector was badly hit by the 1970's Economic war, currency reform, and a 30% currency devaluation tax. This left most insurance policies and long-term savings valueless, underwriters barely cashless, zero demand for insurance products, and a mass exodus of Non-Ugandan Asians who controlled over 80% of the insurance sector (Sebageni, 2003; Michael et al., 2005). Furthermore, these economic turbulences made insurers reluctant to reinvest in the insurance business, since there was low public trust in insurance policies and little knowledge about health products by the majority of the population (Michaelet al., 2005). This conundrum left many Ugandans stuck with traditional, risky, and inefficient methods of coping with social protection risks such as; asset selling in times of crisis, reliance on government, and trust from extended family members (Michael et al., 2005; World Bank, 2019; Fin scope, 2018). For a while now, deliberate efforts and interventions from the Insurance Commission, and later Insurance Regulatory Authority to revive the insurance sector in Uganda have been ongoing (Webb, 2000; IRA, 2017). Among the sanctioned interventions was conducting studies on what needs to be done for health insurance to regain trust and eventual demand from the public (Insurance Regulatory Authority, 2017).

Most studies have highlighted several determinant factors of health insurance demand in Uganda, but an extensive literature review has found no prior study addressing herd behavior influence on health insurance purchase in Uganda. This study, therefore, examined the relationship between herd behavior and demand for health insurance factoring in the demographic attributes of Uganda's population.

1.2 Statement of the problem

Health insurance is one of the most important aspects for the development of a healthy and productive workforce (Pfefferet al., 2020). In Uganda, the National Health Policy (NHP 11) was drafted and one of its pillars is the implementation of the Uganda National Minimum Health Care Package (UNMHCP), with the main deliverable being the reduction of health catastrophic spending and ensuring equal access to healthcare (Odokonyero et al., 2017).Though some aspects of the package have been achieved, facts on the ground continue to manifest weaknesses in the health services delivery mechanism (Kaija & Okwi 2014), Inequitable access (Global Health Initiative 2011), and very high out of the pocket health expenditure (Dowhaniuk, 2021). To accelerate universal health care and fixation on health inequalities in Uganda calls for the adoption of several health insurance schemes ranging from National health insurance, community health insurance, and private health insurance (Mpuuga et al., 2020; Odokonyero et al., 2017). Several of these schemes like the community schemes and private health schemes have been rolled out, but there's still low demand and acceptance of health insurance covers which has kept the overall uptake at only1.4% of the GDP (FinScope, 2018; IRA, 2017).

An extant literature review has highlighted that health insurance purchase decision is informed by uncertainty (Bernheim 1995), People desire to imitate social norms to keep their social status unimpaired (Bernhardt et al. 2009), and recommendations or imitating (Herd) others deemed superior; (Lulin et al., 2016; Liu, 2015). To most Ugandans, despite depicting heterogeneous standards of behavior in several aspects of life, they have failed to imitate(herd) others in buying health insurance. Many consumers face an information asymmetry problem (Lulin et al., 2016), and a dilemma on whether to own a health insurance cover or stay uninsured and meet the health bill out of pocket when they fall sick (Dowhaniuk, 2021). Further, there's a multitude of empirical literature linking herd behavior to insurance purchase decisions (Lulin et al., 2016; Gori, 2018; Liu, 2015). The challenge, however, is herd results need a cautious approach, it's impractical to infer data from other areas to justify herd impact in your market due to behavioral differences and country-specific factors (Cipriani &Guarino,2014). Therefore, the generalization of herd behavior findings from other parts of the world to the Ugandan context is contextually inappropriate.

1.1Central Research Questions

The central question below has been noted to guide the study in covering the realized gap after reviewing literature related to herd behavior aspects relating to health insurance demand.

1. What is the relationship between herd behavior and health insurance demand?
2. What are the determinants of herd behavior in health insurance customers?

1.2Significance/Purpose of the Research Project

The significant details are in Impact Pathway. Specifically, this research:

- Generate, knowledge and influence debate amongst the academia and insurance practitioners about herd behavior and health insurance demand.
- Extend a theoretical body of knowledge on health insurance, propose explanations for the underlying determinants of choice, and overall demand for health insurance products
- Bridge the gap left by earlier insurance studies, in explaining determinants of health insurance demand in sub–Saharan African context.
- Bring out the appropriateness of behavioral finance to health insurance purchase decisions, hence furthering its applications in many insurances' product.

Section Two: Summary of the relevant literature, description of research to existing literature

2.1 The Concept of Insurance

The concept of insurance operates on the notion of pooling resources together to protect each other against insurable risks (Sethi and Bhatia, 2009). It involves risk transfer from the insured to the insurer in consideration for a fee(premium) given to the insurer to assume a given extent of the risk in case the insured suffers the specified loss (Sharma, 2013).

Traditionally, individuals at risk tended to downplay the need for risk financing or procuring insurance by relying on expected goodwill and charity from members, government, and the community in cases of any calamity (Browne &Hoyt, 1999). However, of recent relying on family and community as security has weakened due to urbanization, this shift has increased demand for insurance products both in terms of risk mitigation, protection, saving and investment products (Ghosh, 2013).

2.2 Concept of Health Insurance

Health insurance, is a component of insurance that covers against risk of incurring medical expenses and other related health financial costs. It is means of covering against risks of medical costs (Ho, 2015). Health insurance offers coverage for the medical expenses of the insured. It reduces the risks related to inherent unpredictable costs from health care services (Jütting, 2001) Consumers receive a health insurance cover for a defined period usually one year and pay a lump sum or monthly premium in return the insurer caters for the health care costs by allowing the insured access to health care providers (Rapaport, 2015).

2.3 Herd behavior

Herd behavior is an act of decision-making based on the influence of others without prior rational thinking (Banerjee, 1992). Individuals use, moods, feelings, and fantasies for those they admire to take similar decisions (Stateman, et al., 2008).Herd behavior has often impacted purchase decisions, market movements, and easily influences market stability. In insurance evidence of herd behavior is still scanty, but usually manifested in product choice-making, and the use of herd cues to infer the quality of insurance products by consumers (Liu, 2015).

2.4 Herd Behavior and Health Insurance

The mutual and perhaps most widely agreeable view is that sequential consumer interactions usually convey herding behavior (Decamps &Lovo, 2003). Herding is a behavior characterized by arriving at decision choices withoutprior rational thinkingor choice evaluations.

People simply imitate and follow the choices of others considered to be superior (Banerjee, 1992), even when they own information that may recommend a different decision option (Braga, 2016). Imitation is a key aspect of human behavior, often considered normal, and a basis for overall learning (Braga, 2016). People observe the actions of others, admire them, but have no access to their private information and the motivations behind such actions, so they resort to herd behavior (Bikhchandani & Sharma, 2001).

Herd behavior studies and insurance decisions are coming up of recent, the few existing ones depict a substantial correlation, and no conflicting conclusions between herd behavior and insurance purchase decision (Masema, 2019; Liu, 2015).Fore stance in a survey on 97 university students, at Shippensburg University, Liu (2015), opined that insurance-buying decisions are influenced by herd behaviors, consumers often use herd cues in insurance purchase decisions, and such consumers are more inclined to recommendations from other customers than assumed experts. Relatedly, Lulin et al., (2016), studied herd behavior in health care investors on the Chinese stock exchange, and study results revealed evidence of endemic herd behavior in all the surveyed healthcare subsectors. Findings further revealed that herding had consistently caused fluctuation in healthcare stocks, keep posing a potential crash for the entire Chinese healthcare system, with potential spill over effects around the world. Lobao &Serra (2002), also conducted a study on 32 mutual funds in Portugal, confirmed the existence of herding behavior, and revealed a positive impact of herding on mutual fund decisions by investors.

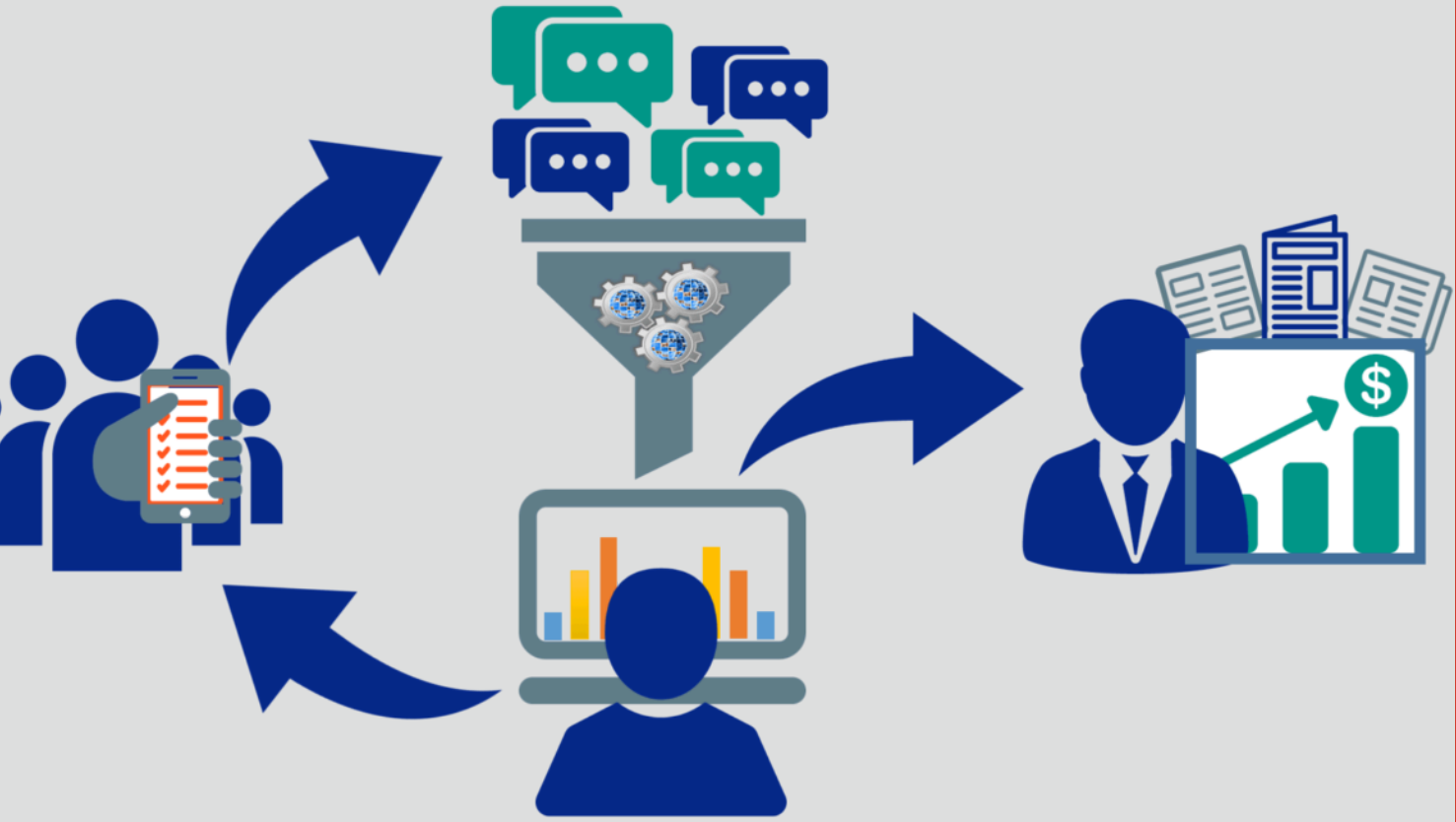
2.5 Theoretical Reinforcement Review

2.5.1 Theory of Reasoned Action (TRA)

The theory of reasoned action (Fishbein & Ajzen, 1975), practically details behavioral influences on rational and planned financial decisions (Nomi &Sabbir, 2020). It explains volitional behavior with the exclusion of non-intentional behaviors like impulsive, habitual, mindless or cravings, on conscious decisions from an individual (Greene et al., 2020). Behavioral intentions predict volitional behaviors, in which intentions are a result of personal influence(attitudes) and normative influence (subjective norm) towards a behavior (Trafimow, 2009). The theory'sapplication in insurance purchase decisions is based

on its explanation of intended behaviorsin financial decisions (Nomi &Sabbir, 2020; Ajzen & Fishbein, 1980; Law, 2010). Insurance-buying decisionsdo not occur in a vacuum, consumerswill always weigh out on the perceived alternative of having and not having an insurance policy (Hwang, 2003).

In this case, attitudes activate an effective response to performing a behavior and subjective norm explains a person's belief about how the significant others will feel towards one's behavior. So both norms and attitudes are summed up to constitute a process that influences the behavioral intentions and eventual action of an individual (Montano and Kasprzyk,2002). Subsequently, individuals tend to follow behaviors and actions(herding) of those they feel are superior in decision making(Waweru et al., 2007). TRA model incorporates specific behavioral factors like herding factors, risk averseness, subjective norms, religious beliefs, and attitude to explain, Health insurance demand (Nomi &Sabbir, 2020). The model conceptualizes that individuals are usually engaged in information processing and deciding the best purchase decisions available to them (Giri,2018). Therefore, this continuous information processing intends to reflect on the decision outcomes and eventual impact of such herd decisions on Health insurance purchase (Liu, 2015; Lulin et al., 2016; Nomi &Sabbir, 2020).However, there are some cautions in applying the TRA model in decision making, for example, it uses intentions to explain actual behavior, but intentions do not outrightly explain actual behavior, intentions only explain actual behavior if there is a time lag and no behavioral control (Giri, 2018).

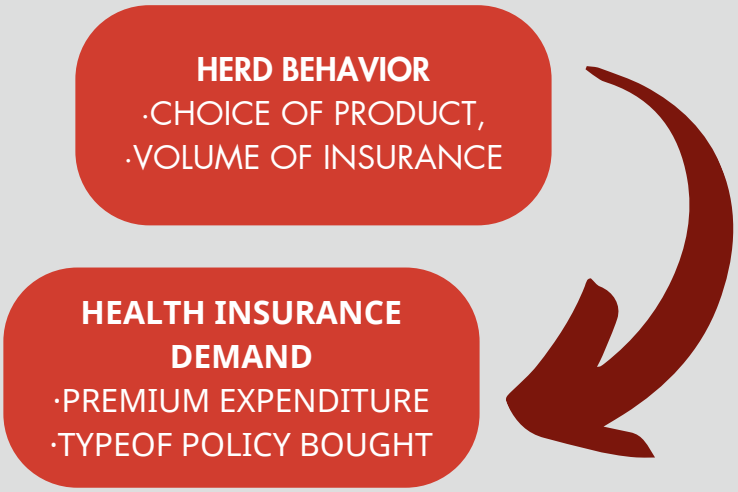


Section Three: Conceptual framework, research methods, data collection instruments, and modes of analysis that was employed

3.1 Conceptualization.

The level of interaction and mind reading of stakeholders has an impact on performance and it often yields formidable success (Battelle, 2001). For many years, the health insurance market in Uganda (together with several sub-Saharan African countries), has been characterized by tremendously limited activity,

mainly due to low trust, limited understanding of health insurance product features, and little effort input in research to aid mend the situation. This study is essentially an analysis describing the situation of health insurance and behavioral relations in the industry, it served as an important reference for industry readiness to adjust, and adapt to behavioral dimensions in health insurance purchase. The study is going to be conducted in four regions that make up Uganda central, northern, western and eastern for there is enough concentration of insurance companies in each of these regions. However, for a broader academic debate, we shall integrate knowledge and experiences from Tanzania, simply because we share similar demographics and they already rolled out a national health insurance policy



3.2 Research Design

This study adopted convergent parallel design; to aid in having a detailed interaction of the variables under study. This process entailed concurrent collection of both quantitative data elements (Morse, 1991), performance of an independent analysis of each of the data set and later conduct a joint interpretation of results (Creswell & Pablo-Clark, 2011).

3.3 Research Approach

The study adopted a deductive research approach, to allow the construction of relationships and general themes about the observation, this approach allows the adoption of multiple measures and lessens measurement errors through validity and reliability assessments. (Creswell & Creswell,2018; Neuman, 2014). The approach was characterized by explaining the relationship between herd behavior and Health insurance demand, Determinants of herd behavior, and development of hypothesis to fit the measurement, analysis, and generalization of findings after data collection.

3.4 Study Population

The study population was be 969045 health insurance policyholders from all the 9 licensed Health insurance operating in Uganda (IRA, 2021). Data was be collected from selected districts in the Eastern, western, northern and Central regions of the country. The selected districts are highly urban and peri- urban and they account for 3% and 32% of both formal and informal insurance uptakes respectively (FinScope, 2018).

3.5 Sampling Design and Procedure

This study adopted a stratified non-proportionate sampling technique, where subgroup samples were selected not based on their proportional size within the overall population. After simple random sample was drawn within each group to aid data collection (Sanders, et. al., 2009). The selection of companies to act as stratums was based on the statistics from the insurance regulatory authority report of 2021, which provides a detailed proportional distribution of health insurance policy sales for each of the 9 registered Health insurance companies in Uganda.

3.6 Sample Size Determination

The Yamane formula(1973) stands out as the most commonly used approach in determining sample size for social science research. It yields a fairly representative sample, especially in cases where Krejcie and Morgan (1970) have no direct sample size for the population under study, and where the population is likely to yield more than 384 items the maximum sample size under Krejcie and Morgan. Therefore, using the Yamane formula, n=N/1+N(e)2. Our population is 969045 from the nine licensed Health insurance companies, the unit of inquiry, and unit of analysis where the study intends to draw scientific inferences from are the 399 individuals owning health insurance.

3.7 Data Sources and collection procedure

The main source of data is primary data that was collected from health insurance customers of the licensed Health insurance in Uganda. Questionnaire items were set up on a 5 point Likert scale with respondents answering in line with the extent to which they strongly agree=5, agree=4, somehow agree=3, disagree=2, and strongly disagree=1 with the statements within the questionnaire The data collection tool was purified to ensure standard face validity through seeking the expertise of experienced researchers to check for the validity and to sort out the ambiguity in the wording a process recommended for most studies (Worthington& Whittaker, 2006).

3.8 Validity and Reliability

Using both theoretical or empirical approaches, this study intends to ascertain the extent to which given dimensions adequately represent the core construct. Therefore, a bundle of views relating to herd behavior and health insurance demand together with opinions of the expert researchers and comments from colleagues helped build a content validity index (CVI) to validate the measurement instrument. In addition to the content validity, we shall conduct a criterion-related validity, covering both convergent and discriminant validity tests to establish how given construct measures relate to the other external criterion (Bhattacherjee, 2012).

For reliability, the intent was to measure the construct's consistency and dependability. There are several reliability tests, but for this study the focus was on internal reliability to ascertain consistency within different items of the same construct. Though we can use average inter-item correlation, but Cronbach's alpha (1951),served as the best measure to generate the scores, and any scores of Cronbach's Alphas ($\alpha \geq 0.7$), is deemed reliable (Nunnally, 1978). Furthermore, our developed questionnaires were taken through a pilot study to ensure reliability and validity of items.

3.9 Data analysis

The descriptive analysis focuses on the statistical description, aggregating and presenting of associations between constructs (Field, 2009), and Inferential analysis that explicitly aims for statistical testing of hypotheses, to reach conclusions relating to correlations between variables (Hair et al., 2010).The study adopted several statistical procedures, and PLS-SEM software was used due to its pleasant user interface and advanced reporting features (Wong, 2013). With Configurations, the software was run to construct analysis to fully understand relations and nature of predictions between study variables.

3.10 Research Team Capacity Building

The team has varying experience in research. We used stakeholder engagement and co-production meetings, ICT and internal trainings especially in research methodologies so as to enhance the needed skills and outputs.

3.11 Ethics and Data Protection of Respondents

We ensured confidentiality of data, participants, and disclose to informants how the data will be used and to whom it will be reported.

Section Four: Findings, Discussion, and Implications from the Study

4.1.1 Respondents Gender

Table 1 below shows that the majority of the respondents were female(51%); this clearly highlights that males are fewer than females in terms of health insurance ownership however, this gender composition did not any way affect our study findings.

4.1 Sample Characteristics

Table 1 Demographic Characteristics of participants

	Demographics	Frequency	Percentage
Gender	Male	157	48.5
	Female	167	51.5
Age	18 - 24 Years	122	37.7
	25 - 34 Years	112	34.6
	35 - 44 Years	57	17.6
	45 - 54 Years	20	6.2
	Above 55 Years	13	4.0
Education	Ordinary level Certificate	18	5.6
	Advance level Certificate	26	8.0
	Professional Certificate	25	7.7
	Diploma	84	25.9
	Bachelor Degree	154	47.5
	Master's Degree & above	17	5.2
Region in the country	Central	40	12.3
	Eastern	133	41.0
	Northern	86	26.5
	Western	65	20.1
Period with insurance	Less than 1 Year	121	37.3
	1-3Years	118	36.4
	4-6 Years	41	12.7
	7-9 Years	34	10.5
	Above 10 Years	10	3.1

4.1.2 Academic Qualifications

Table 1 below portrays the levels of education; most respondents were degree holders (47%) followed by those with diploma qualifications (26%) and then those holding professional qualifications on top of having a bachelor's degree at (7.7%). With this blend of qualifications, the study respondents could easily appreciate the reality of the study and could understand the questions and dimensions in the study hence offering honesty answers.

4.1.3 Age

Table 1 shows that most (72%) of the respondents were below 35 years meaning that health insurance policies are becoming popular amongst the millennial and people with young families.

4.1.4 Period with the Policy

From table 1 majority 37% were first time buyers of insurance, followed by those who were buying for the second and third time at 36%, with the least being those who had held policies for over 7 years at 10%.

Table 2 Measurement Model

Variable	Items	FL	(AlPh ≥ 0.7)	(CR ≥ 0.7)	AVE (≥0.5)
Herd Behavior	Herd1	0.767	0.854	0.915	0.624
	Herd2	0.840			
	Herd3	0.788			
	Herd4	0.765			
	Herd5	0.788			
Health Insurance	HI1	0.700	0.790	0.795	0.538
	HI2	0.716			
	HI3	0.762			
	HI4	0.718			
	HI5	0.768			

CR: Composite reliability; AVE: Average variance extracted; and FL: Factor loading sare significant at the p 0.001 level.

To quantify the measurement model of the two study variables, Hair et al. (2017) used Hair et al. (2017) criteria. As part of this test, the item must pass the convergent validity test, discriminant validity test, and internal consistency test. It must also be eliminated from the test if it has a low factor loading standard.

A threshold of 070 and 0.50 for convergent validity, as determined by the average variance extracted (AVE) and factor loadings (Hair et al., 2017), is maintained by most scholars as a threshold that indicates the loaded items have exhibited higher variance in their constructs and error terms. As far as composite reliability is concerned, the results were 0.915 and 0.795 (Bagozzi and Yi, 2012), which indicates that the measurement scales are internal consistency.

Table 3: Path Coefficients

Variable	Items	FL	(AlPh ≥ 0.7)	(CR ≥ 0.7)	AVE (≥0.5)
Herd Behavior	Herd1	0.767	0.854	0.915	0.624
	Herd2	0.840			
	Herd3	0.788			
	Herd4	0.765			
	Herd5	0.788			
Health Insurance	HI1	0.700	0.790	0.795	0.538
	HI2	0.716			
	HI3	0.762			
	HI4	0.718			
	HI5	0.768			

CR: Composite reliability; AVE: Average variance extracted; and FL: Factor loadings are significant at the p 0.001 level.

Based on bootstrapping procedures with 5000 samples using no sign changes (Streukens &Leroi- Werelds, 2016), we were able to determine the significance and relevance of the path coefficient. According to our proposed model, Ugandan health insurance purchase decisions account for 13% of the variance. According to the study hypotheses, herd behavior significantly impacts health insurance demand decisions (ß = 0.151, p 0.013).

4.2 Discussion of Findings

Based on these findings, the decision to purchase health insurance is significantly influenced by grouping behavior. As reported by Loung et al. (2016),this is consistent with their findings that herd behavior has a significant influence on the decision to invest in several healthcare decisions. This is in the Chinese healthcare system. Health insurance policyholders' decision-making is influenced by herding behavior significantly. As a result of these results, these findings suggest that policyholders display herding behavior by engaging in excessive consultations rather than independent decision-making processes related to health insurance products. Furthermore, these results show that policyholders follow the herd when buying health insurance. This is because insurance is an unusual product where few individuals have knowledge and experience of how it operates, its intrinsic benefits, and the costs associated with buying it.

Furthermore, herding behavior is often accompanied by a lack of confidence in one's own judgment. A lack of overall information on the product and the influence of "noisy" or persuasive friends are the contributing factors. Herding has positive impacts, but it often leads to the development of suboptimal decisions among health insurance policyholders. In the long run, this may have an adverse effect on personal planning.

4.3 Study Conclusion

Health Insurance literacy is an important driver of the likelihood that individuals have positive welfare outcomes after buying insurance. When people herd in most cases they come up with sub optimal decisions that are too costly, and end up making policyholders doubt the importance of having health policies.

Also, it is important for insurers to understand that health insurance is a financial product, and not a must- have like others say third party insurance. Decision making is more complex and purchasing it can be confusing and twisted with emotions. This is why HI must be "sold and not bought".

Finally, Insurers need to know that exploring behaviorism in insurance purchase decisions will help insurance companies adopt and design strategies to match the new normal customer demands, product deliveries, fashions, and refashions in order to deepen coverage. "Ever imagined an insurance product, designed with customer cognitive inferences in mind"

4.4 Study Implication

Decision making is not obvious in the context of buying health insurance, it's based on several aspects. Therefore,

- Insurers should Simplify and widely disseminate product information to allow easy individual evaluation of health insurance products to move the market from intentional to spurious herding.
- "Context is king" insurers need also to learn how individuals in different settings make decisions, evaluate information, their emotional attachment, and how people treasure individuals considered superior in their social circles.
- With Herding, it points to Insurers being active in identifying key actors that can support new health insurance plans and easily convince their peers to buy "Decision support tools"

References

Abreu,M. (2014), Individual Investors' Behavioral Biases, Teaching Economics Working Papers, SSN No. 2182-1356

Asfaw,A. (2003). Costs of Illness, the Demand for Medical Care, and the Prospect of Community Based Health Insurance Schemes in the Rural Areas of Ethiopia. *Development Economics and Policy* No. 34.

Antwi,S. K., & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management*

Arun, T., Bendig, M., &Arun, S. (2012). Bequest motives and determinants of micro-Health insurance in Sri Lanka. *World Development*, 40(8), 1700-1711.

Banerjee, A. (1992), A Simple Model of Herd Behavior, *The Quarterly Journal of Economics*, 107, (3), 797-817

Bank, T. W. (2010). Fiscal Space for Health in Uganda. *Africa Human Development Series, 186.*

Barberis, N. and Thaler, R. (2003). A Survey of Behavioral Finance. Handbook of the economics of finance. Volume 1B. Financial markets and asset pricing, 1053-1123

Bhattacherjee, A. (2012). Social science research: Principles, methods, and practices.

Burnett, J., & Palmer, B. (1984). Examining Health insurance Ownership through Demographic and Psychographic Characteristics. *The Journal of Risk and Insurance*, 51(3), 453-467.

Carrin G, & James C. (2004)., Organization WH. Reaching universal coverage via social health insurance: key design features in the transition period. Geneva: *World Health Organization*

Chen, R. & Wong, K. & Lee, H. (2001). Age, Period, and Cohort Effects on Health insurance Purchases in the U.S. *The Journal of Risk and Insurance*. 68. 303.

Chui, A.C.W. & Kwok, C.C.Y. (2008). National culture and Health insurance consumption. *Journal of International Business Studies*, 39(1), 88–101.

Cenfri. (2017). Developing a Regulatory Framework for Inclusive Insurance in Rwanda. South Africa.

Creswell, J. W., (2014). *Research design: Qualitative, quantitative, and mixed methods* approaches. Sage publications.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International journal of market research,* 50(1), 61- 104.

Delloitte (2020) Insurance Outlook Report. *Insurers adapt to grow in a volatile economy*.

Decamps, J. & Lovo, S., (2003)."Risk Aversion and Herd Behavior in Financial Markets," IDEI Working Papers 246, *Institut d'Économie Industrielle (IDEI), Toulouse*.

De La Maisonneuve, C., & Martins, J. O. (2014). The future of health and long-term care spending. *OECD Journal: Economic Studies*

Dowhaniuk, N. ((2021). Exploring country-wide equitable government health care facility access in Uganda. *Int J Equity Health* 20, 38

Dyakova, M., Hamelmann, C., Bellis, M. A., Besnier, E., Grey, C. N. B., Ashton, K., Schwappach, A., & Clar, C. (2017). Investment for health and well-being: a review of the social return on investment from public health policies to support implementing the Sustainable Development Goals by building on Health 2020. *Health Evidence Network Synthesis Report* 51,

Ebert, S., B. Koos, & J. C. Schneider (2012). On the optimal type and level of guarantees for prospect theory investors. Paris December 2012 Finance Meeting EUROFIDAIAFFI Paper

European Commission. (2014). *Investments in health. March,* 44. http://ec.europa.eu/health//sites/health/files/health_structural_funds/docs/esif_guide_en.pdf Field, A. (2009)Discovering Statistics Using SPSS. 3rd Edition, Sage Publications Ltd., London.

Filbeck, G., Hatfield, P. and Horvath, P. (2005). Risk aversion and personality type. Journal of Behavioral Finance, 6 (4), 170–180.

FinScope (2018)Uganda Survey. https://fsduganda.or.ug/finscope-2018-survey-report/

Fogel, S.O., & Berry, T. (2006).The Disposition Effect and Individual Investor Decisions: The Roles of Regret and Counterfactual Alternatives. *Journal of Behavioral Finance*, *7*, 107 -116.

Hair, J. F. J., Black,W. C., Babin, B. J., & Anderson, R. E. (2010).Multivariate Data Analysis: A global perspective. Upper Saddle River, NJ: *Pearson Prentice-Hall*.

Hammond, J.D., Houston, D.B. & Melander, E.R. (1967) 'Determinants of household Health insurance premium expenditure: An empirical investigation', The Journal of Risk and Insurance 34 (3): 397–408.

Hau, A. (2000) 'Liquidity, estate liquidation, charitable motives, and Health insurance demand by retired singles', *The Journal of Risk and Insurance* 67 (1): 123–141.

Hayati, R., Kabir, M.J., Kavosi, Z. Bastani, P., Sobhani, G., Javadinasab, H., (2019). Legal and policy requirements of basic health insurance package to achieve universal health coverage in a developing country. *BMC Res Notes* 12, 575

Hoorens, V. (1994). Unrealistic Optimism in social comparison of health and safety risks. In D. Rutter (Ed.), The Social Psychology of Health and Safety. Aversbury: Aldershot.

Hsee, C. K., & H. C. Kunreuther (2000).The affection effect in insurance decisions. Journal of Risk and Uncertainty, 20, 141–159.

Hu, W. Y., &J. S. Scott (2007). Behavioral obstacles in the annuity market. Financial Analysts Journal, 63(6), 71–82.

Huysentruyt, M., and Read, D. (2010), How Do People Value Extended Warranties? Evidence from Two Field Surveys, Journal of Risk and Uncertainty, 40(3): 197-218.

Hwang, I. (2016),"Prospect Theory and Insurance Demand. (February 3, 2016),"

Gao, L. and Schmidt, L. (2005). Self is never neutral: why economic agents behave irrationally. *Journal of Behavioral Finance*, 6 (1), 27–37.

Gigerenzer, G. and Gaissmaier, W. (2011). Heuristic decision making, *Annual Review of Psychology*. 62:451–82

Giri, M. (2018). A behavioral study of Health insurance purchase decisions (PhD dissertation). Indian Institute of Technology Kanpur

Gottlieb, Daniel. (2012). "Prospect Theory, Life Insurance, and Annuities." *Wharton School Research* Paper 44.

Insurance Regulatory Authority. (2017). *The Uganda Insurance Industry at a Glance Products Profile as At 20th June 2017. June.* https://ira.go.ug/cp/uploads/IRA Product Profiling Report (Final).pdf

IRAU (2021) Annual Insurance Market Report.www.ira.go.ug

IRAU (2019)Annual Insurance Market Report. www.ira.go.ug

Jaspersen, J. G., & V. Aseervatham (2016). The influence of effect on heuristic thinking in insurance demand. *Journal of Risk and Insurance*, 84(1), 239–266.

Kahneman, D. and Tversky,A. (1979). Prospect theory: an analysis of decision-making underrisk', Econometrica, 47 (2), 263–291.

Kahneman, D., & Tversky,A. (Eds.). (2000).*Choices, values, and frames. Cambridge University Press.*

Kakar, P., & Shukla,R. (2010). The determinants of demand for Health insurance in an emerging Economy-India. Margin: The Journal of Applied Economic Research, 4(1), 49-77.

Kim, K. and Nofsinger, J. R., (2008), Behavioral finance in Asia, *Pacific-Basin Finance Journa*l, 16, (1-2), 1-

Kramaric, T.P., & Galetić, F. (2013). The Role of the Overall Economic Development on the Insurance Market Growth: Evidence of the European Union. *Journal of Applied Finance and Banking*, 3, 157-168.

Krejcie,R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educ Psychol Meas.

Lacetera, N. & Pope, D. & Sydnor, J. (2010). Heuristic Thinking and Limited Attention in the Car Market. *American Economic Review*. 102. 10.

Lagarde, M., & Palmer, N. (2008). The impact of user fees on health service utilization in low- and middle-income countries: how strong is the evidence? *Bulletin of the World Health Organization, 86*(11). https://www.who.int/bulletin/volumes/86/11/07-049197/en

Lobão, J.& Serra, A. (2003). Herding Behavior Evidence from Portuguese Mutual Funds. *Electronic Journal.*

Lee, SJ., Kwon, S. & Chung, S. (2010)Determinants of Household Demand for Insurance: The Case of Korea. *Geneva Pap Risk Insurance* 35, 82–91

Liu, F. (2015). *Herd Behavior in the Insurance Market: A Survey*. 7(11), 154–162. https://doi.org/10.5539/ijef.v7n11p154

Lulin,Z., Antwi, H. A., Wang, W., Yiranbon,E., Marfo, E. O., & Acheampong, P. (2016). The effect of herd formation among healthcare investors on health sector growth in China. *International Journal for Equity in Health*, 1–15. https://doi.org/10.1186/s12939-016-0393-x

Lockton, D. (2012). Cognitive Biases, Heuristics and Decision-Making in Design for Behavior Change. *SSRN Electronic Journal*. 10.2139.

Loewenstein, G. and Prelec, D. (1992), Anomalies in Intertemporal Choice: Evidence and an Interpretation, *The Quarterly Journal of Economics*, 107, (2), 573-597

Lulin, Z., Antwi, H., Wang, W., Yiranbon, E., Marfo, E. & Acheampong, P. (2016). The effect of herd formation among healthcare investors on health sector growth in China. *International Journal for Equity in Health*. 15. 10.

Luong, L.P. and Thu Ha, D.T. (2011) Behavioral Factors Influencing Individual Investors' Decision- Making and Performance. A Survey at the Ho Chi Minh Stock Exchange. *Unpublished M.Sc. Thesis,* Umea School of Business.

Masema, E. (2019). Effect of Herding Behavior On Market Performance of Insurance Companies Listed on Nairobi Securities Exchange, Unpublished M.Sc. Thesis, University of Nairobi.

MdSum, R. & Nordin, Norhafiza. (2018). Decision-Making Biases in Insurance Purchasing. 165-179.

MHU. (2000).*Uganda Ministry of Health: Health Sector Strategic Plan 2000/01 – 2004/05*. World Bank Quoting Ministry of Health (Uganda) (MHU). http://siteresources.worldbank.org/INTPRS1/Resources/383606-1201883571938/Uganda_HSSP.pdf

Mindra, R. (2016). Behavioral Determinants of Financial Inclusion in Uganda *(PhD dissertation)*. Wits Business School.

Neuman, W.L. (2014) Social Research Methods: Qualitative and Quantitative Approaches. 7th Edition, Pearson, Boston.

Nunnally, J.C. (1978) Psychometric theory. 2nd Edition, McGraw-Hill, New York.

Nyman, J.A., (2001), "The Demand for Insurance: Expected Utility Theory from a Gain Perspective", *Discussion Paper* No. 313, Center for Economic Research, Department of Economics, University of Minnesota.

Observatory, A. H. W. (2009). *Human Resources for Health Country Profile, Uganda Members Document.* World Health Organization.

Odokonyero, T., Mwesigye, F., Adong, A., & Mbowa,S. (2017). Universal health coverage in Uganda: the critical health infrastructure, healthcare coverage and equity. *Research Series* - Economic Policy Research Centre, 136, 1–31

Omar, O.E. & Owusu-Frimpong, N. (2007). Health insurance in Nigeria: An application of the theory of reasoned action to consumers' attitudes and purchase intention. Service Industries Journal, 27(7), 963–976.

Oswick, C., Fleming, P., & Hanlon, G. (2011). From borrowing to blending: Rethinking the processes of organizational theory building. *Academy of Management Review*, 36(2), 318-337.

Outreville, J.F. (1996). Health insurance markets in developing countries. *The Journal of Risk and Insurance*, 63(2), 263–278.

Panis, C. (2004). Annuities and retirement well-being. In O. S. Mitchell, & S. P. Utkus (Eds.), Pension Design and Structure: New Lessons from Behavioral Finance. New York: Oxford University Press

Penrose, G. (2004). Report of the equitable life inquiry. London, UK: The Stationary Office.

Pfeffer,J., Witters, D., Agrawal, S., & Harter,J. K. (2020). Magnitude and effects of "Sludge" in benefits administration: How health insurance hassles burden workers and cost employers. Academy of Management Discoveries, 6(3), 325-340.

Rabin,M. (2000). Risk aversion and expected utility theory: A calibration theorem. Econometrica, 68(5), 1281-1292.

Rabihah M. & Norhafiza, N. (2018). Decision-Making Biases in Insurance Purchasing. 165-179.

Richter, A. Ruß, J., & Schelling, S. (2019). "Insurance customer behavior: Lessons from behavioral economics," Risk Management and Insurance Review, 22(2),183-205.

Santos, L. (2013). Herding Behavior, no Mercado Acionista Portuguese: Annalise por setores com modelos nao lineares. Unpublished Master Dissertation.

Sarantakos, S. (2005). Social Research. Palgrave Macmillan. 3rd Ed. ISBN 13: 9784039-4320-0 Saunders, M. N., Saunders, M., Lewis, P., & Thornhill, A. (2011). Research methods for business students, 5/e: Pearson Education India.

Shapira, Z. & Venezia I. (2007). On the preference for full-coverage policies: Why do people buy too much insurance? *Journal of Economic Psychology* 29 (2008) 747–761

Shefrin, H. (2002). Behavioral decision making, forecasting, game theory, and role-play. International Journal of Forecasting. 18. 375-382.

Starmer, C. (2000). Developments in Non-Expected Utility Theory: The Hunt for a Descriptive Theory of Choice under Risk, Journal of Economic Literature, 38 332–382

Stewart, S. (2012). Uganda Health System Assessment System Assessment 2011. United States Agency for International Development. http://pdf.usaid.gov/pdf_docs/pnadz297.pdf

Sunstein, C. (2003). Terrorism and Probability Neglect. Journal of Risk and Uncertainty. 26. 10. Sydnor J. (2010). "Over insuring Modest Risks." American Economic Journal: Applied Economics 2(4): 177– 99

SwissRe: (2019). Financial Condition Report, From Risk to Resilience.

Tada, Y. (2003). Introduction to behavioral economics. Tokyo: Nikkei Inc.

Tada, Y. (2003). Introduction to behavioral economics. Tokyo: Nikkei Inc.

Ulbinaite, A., Kucinskiene, M., & Le Moullec, Y. (2013). Determinants of insurance purchase decision making in Lithuania. Inzinerine Ekonomika, 24(2), 144-159.

Unicef (2018) Uganda annual report. https://www.unicef.org/uganda/reports/unicef-uganda-annual- report-2018

Von Neumann, J., & Morgenstern, O. (1947). Theory of games and economic behavior (2nd rev. ed.). Princeton University Press.

Waweru, N., M., Munyoki, E., and Uliana, E. (2008). The effects of behavioral factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. International Journal of Business and Emerging Markets, 1 (1), 24-41.

WHO. (2012). *Voluntary medical male circumcision for HIV prevention.* World Health Organization (WHO). https://www.who.int/hiv/topics/malecircumcision/fact_sheet/en/

Yamada, T., Yamada, T. Chen, C., and Zeng, W., (2014). Determinants of health insurance and hospitalization, *Cogent Economics \& Finance*, Vol 2 1

Yamane, T. (1973). Statistics: An introductory analysis.

Yaari, M.E. (1965). Uncertain lifetime, life insurance, and the theory of the consumer. The Review of Economic Studies, 32(2), 137–150.

Yellaiah, J., and Ramakrishna, G., (2012) Socioeconomic determinants of health insurance in India: the case of Hyderabad city. International Journal of Development and Sustainability, Vol 1 2

Zietz, E. N. (2003). An examination of the demand for life insurance. Risk Management and Insurance Review, 6(2), 159-191.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