What Drives the Profitability of Insurance Companies in Tanzania? An Empirical Analysis Based on Panel Data

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Abstract
This study examined the drivers of the profitability of insurance companies in Tanzania. Subjecting secondary data extracted from the Annual Insurance Performance Report issued by the Tanzania Insurance Regulatory Authority to analysis, the study found the sample to be unbalanced as it did from 2011 to 2020. Nevertheless, it yielded 218 firms' year observations for analysis. Moreover, the study employed panel data regression models to calibrate the influence of the drivers on the profitability of insurance companies. The results indicate that market share and net premium significantly and positively correlated with the profitability of insurance companies in Tanzania. Furthermore, the study found a significant converse relationship between incurred claims and the profitability of insurance companies in Tanzania. Based on the research findings, the study recommends that the executives of insurance companies should expand their market share using marketing penetrating strategies to boost profitability. Likewise, they should strive to manage efficient incurred claims as they affect conversely the profitability of insurance companies.

Keywords: *Profitability, Insurance Companies, Tanzania, Market share, Net premium, and Incurred premium*

INTRODUCTION

Well-performing insurance companies provide financial services and enhance financial stability that stimulates stable economic development, hence playing a vital role in national progress(Kaushal & Ghosh, 2018). Financial services such as the underwriting of risks inherent in economic entities create financial stability for economic growth. Moreover, well-performing insurance companies create favourable economic conditions that can lead to stable and sustainable development.

In Africa, the insurance sector has been growing steadily since 2000, thanks to the acceleration by growth in Gross Domestic Product (GDP) and per capita income(Han et al., 2010). For Tanzania, the growth of the insurance sector in the country has similarly been influenced by GDP growth over the years, according to (Abbas and Li,2016). Moreover, Kahyarara (2022)

contends that economic growth stimulates infrastructure development that, in turn, stimulates the growth of insurance companies in Tanzania. The growthof insurance companies in the country is evidenced by a rise in the number of insurance firms (TIRA, 2022).

The history of the insurance sector in Tanzania has passed into two major eras: pre- and post-liberalisation. Before the liberalisation and reforms of the insurance sector in 1996, there was only one state-owned insurance corporation, the National Insurance Corporation (NIC). This monopoly created a less competitive environment for the insurance sector to grow and compete domestically and globally. The post-erapost-liberalisation, on the other hand, was marked by the enactment of the Insurance Act of 1996.This liberalisation opened doors for the private sector to flourish in Tanzania's insurance market. The liberalisation focused on making the sector competitive in mobilizing savings and stimulating the development and growth of the insurance sector in Tanzania. It also focused on enhancing a competitive sector in fostering customer-driven services to clients to stimulate a stable environment for the growth of business.

The liberation of the insurance sector in Tanzania has stimulated the profitability of insurance companies and made the sector contribute much to the country's financial stability. Insurance companies have already benefited much from the reforms as the increase in gross written premium, which is linked to the profitability of insurance firms (TIRA, 2022). The significant positive link between gross written premium and profitability has empirically been established in prior studies (Guendouz & Ouassaf, 2018; Kumar et al., 2022; Tuffour et al., 2021). Tanzania's insurance companies, for the last decade, have recorded a significant spike in the gross written premium from 550.2 million in 2015 to 1,155 million in 2022 (TIRA, 2022) as Figure 1further illustrates:

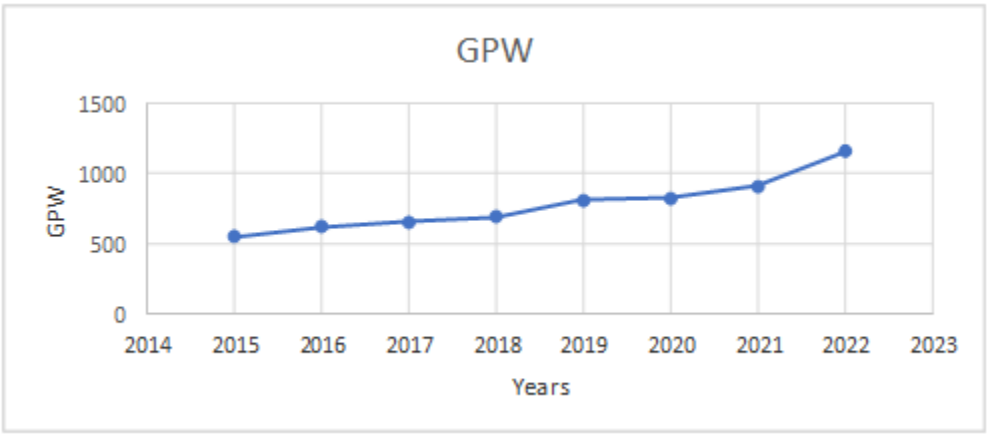

Figure 1: Gross Written Premium from 2015 to 2022
Source: TIRA Annual Reports, YEAR?

This increase in gross written premiums reflects the increase in profitability of insurance companies in Tanzania. Despite the growth in written gross reflecting good prospects in terms of profitability, the adoption of insurance services in Tanzania's insurance sector remained low relative to Kenya and globally, with a penetration ratio of 2.02 percent in 2023 against3.4 percent in Kenya and 7.3 percent globally(TIRA, 2023; Yarumba et al., 2024). Moreover, studies that have examined the drivers of profitability of insurance companies are limited in Tanzania relative to other East African countries (Horera & Maganya, 2020; Mwangi & Murigu, 2015; Opiyo, 2023). This study is, therefore, timely and relevant to understanding the profitability drivers of insurance companies in Tanzania, a country with fewer studies and lower insurance penetration than Kenya and globally.

Prior studies on drivers of profitability of insurance companies in different countries have attracted enormous interest in recent literature (Farhan et al., 2021; Pjanić et al., 2023; Vojinović et al., 2022; Worku et al., 2024). These studies have, however, arrived at different conclusions about the factors that catalyse the profitability of insurance companies. Moreover, these studies have documented the relevance of firm-specific factors and market-based factors in influencing the profitability of insurance companies. Specifically, these studies have identified key drivers of profitability of insurance companies across countries including market share, per capita income, age of the company, net premium, and incurred claims(Ambaw & Lijuan, 2021; Azmi et al., 2020; Kusi et al., 2020; Vojinović et al., 2022; Worku et al., 2024). Thus, this study examined the drivers of the profitability of insurance in the context of Tanzania. Specifically, the study objectives were five-fold: to examine the impact of market share, per capita income, age of insurance company, net premium, and incurred claims on the profitability of insurance companies in Tanzania. Understanding the drivers of the profitability of insurance companies in Tanzania is significant in enhancing the profitability of insurance companies and stimulating economic growth and development.
The rest of the paper is organised as follows. Sections two and three cover a review of the literature and methodology, respectively. Section four discusses the findings and section five sums up the presentation.

REVIEW OF LITERATURE AND HYPOTHESIS DEVELOPMENT

This section reviews the theoretical literature that underpins this study and the empirical studies on profitability drivers in the insurance industry that also informs the hypothesis development.

Theoretical Literature Review

Theoretically, many theories underpin profitability determinants studies. The most employed theories are the structure conduit performance and efficient

structure hypothesis(Ambaw & Lijuan, 2021; Tuffour et al., 2021). The structure conduit performance is one of the earliest theories that account for the profitability of firms(Homma et al., 2014). This theory asserts that market structure influences performance and how a firm behaves in the market in terms of key decisions such as pricing, financing, advertising, and investing. The theory also recognises the impact of market structure on conduit and performance, but it fails to affirm the impact of performance on structure and conduit (Tuffour et al., 2021).

Studies that examine the drivers of profitability have employed the efficient structure hypothesis (Tuffour et al., 2021; Yahaya & Awen, 2020). In this regard, Demsetz 's (2009)study was fundamental for the efficient structure hypothesis that serves as an alternative to the structure conduit performance and expense preference behaviour. Accordingly, Demsetz (2009)asserts that market competition leads to higher efficiency to the extent that it increases companies' profit and market share. Moreover, high efficiency enables insurance companies to lower incurred claims while increasing net premiums earned, thus maximising their profit. Likewise, older operating insurance has developed efficient structures that enable companies to have vast experience thus maximising profit. Likewise, when per capita income is higher and an efficient structure exists in the market, the market creates more demand for insurance thus maximizing the profits of insurance companies. Therefore, this study endorsed the efficient structure hypothesis as the key theory that explains the determinants of the profitability of insurance companies in Tanzania.

Drivers of Profitability

Both firm-specific and macroeconomic often influence the profitability of insurance companies across countries (Azmi et al., 2020; Born et al., 2020). However, the influence of these drivers varies due to the governance and regulatory structuresof different countries (Lament & Bukowski, 2024; Pjanić et al., 2023; Vojinović et al., 2022). As early studies have suggested, this study used both firm-specific and macroeconomic variables to examine the drivers of profitability of insurance companies in Tanzania. Specifically, this study used market, age of the company, incurred claim, net premium, and per capita income as drivers of profitability in line with priors studies (Ben Dhiab, 2021; Kusi et al., 2020; Vojinović et al., 2022; Zainudin et al., 2018).

Per Capita Income

Per capita income indicates the average income of an individual in a given area and reflects the economic well-being of the population of the country. Higher capita income usually correlates with higher demands for insurance services with a positive effect on the profitability of insurance

companies(Pavic Kramaric et al., 2017). Studies have affirmed the profound positive role of per-capita income in influencing the profitability of insurance companies. Vojinović et al. (2022), who examined the drivers of profitability of Serbian insurance companies, found per capita income to have a positive association with the profitability of insurance firms. However, Datu (2015) studied the impact of per capita income on the profitability of insurance companies in the Philippines and uncovered an insignificant positive association between capital income and profitability. Moreover, Kantakji et al. (2020) found that GDP per capita influence positively the profitability of Islamic insurance companies in Saudi Arabia, Pakistan, UAE, Malaysia, and Qatar. Furthermore, Pavic Kramaric et al. (2017) found per capita income to have a positive link with the profitability of insurance companies in central and east Europe. Progressively, when people have higher per capita income, they would adopt more insurance products to hedge risks that enhance the profitability of insurance companies. Thus, this study hypothesizes:

H1: Per capita income has a positive impact on the profitability of insurance companies.

Age of Insurance Company

The age of insurance companies indicates how long the company has been offering insurance services on the market. Older operating insurance companies have developed trust and vast experience over the years relative to newer insurance companies (Horera & Maganya, 2020; Worku et al., 2024). Generally, the age of insurance companies is linked with the profitability of the insurance companies (Samina, 2024). Customers' trust and experience built for years by insurance companies enhance insurance companies to compete and maximise their profitability (Horera & Maganya, 2020; Worku et al., 2024). Many prior studies support that age of insurance companies influence positively profitability of insurance companies. Horera and Maganya (2020) examined the determinants of profitability of insurance companies in Tanzania using a small sample of 10 Tanzanian insurance companies. They found that the age of an insurance firm influences positively their profitability. Moreover, Ambaw and Lijuan (2021)revealed that the age of the insurance company positively correlates with of profitability of Ethiopian insurance companies. However, Mwangi and Murigu (2015) conducted a study in Kenya and revealed that the age of insurance companies does not influence Kenyan insurance company's profitability.

Likewise, Derbali and Jamel (2018)and Guendouz and Ouassaf, (2018)affirmed that the age of insurance companies positively affects the profitability of insurance companies in Tunisia and Saudi Arabia. Worku et al., (2024) found that the insurance company's age and market share of the insurance company impact the positive profitability of Ethiopian insurance

companies. Moreover, Ilyas and Rajasekaran (2019) found that the insurance company's firm influences positively the profitability of Indian insurance companies. Similarly, older operating insurance companies have a large customer base and financial stability, derived from vast experience in serving customers that increases their ability to generate profitability relative to newer insurance companies. Therefore, the study hypothesised that:

H2: The age of the insurance company has a positive impact on the profitability of the insurance company

Incurred Claim

The incurred claim refers to the sum of money paid to settle claims by insurance companies. Normally, the profitability of insurance companies is usually linked with the claims they incur (Hissiyah & Meylianingrum, 2023). Higher incurred claim reduces the cash flow and profitability of the insurance company. Ordinarily, efficient claim management lowers claims incurred thus enhancing cash flows and profitability of insurance companies. Prior research found an inverse relationship between the incurred claim and profitability. For example, Hissiyah and Meylianingrum (2023) documented that claims incurred by insurance companies influence conversely the profitability of insurance companies in Indonesia. Likewise, Farhan et al. (2021) found a significant negative link between incurred claims and the profitability of Saudi insurance firms. Hussanie and Joo (2019) found that incurred claims had a negative impact on the profitability of Indian insurance companies. However, Berhe and Kaur (2017) revealed that incurred claims are not associated with the profitability of insurance companies in Ethiopia. Moreover, Firmansyah et al., (2020) uncovered that claims incurred influence negatively the profitability of insurance companies in Indonesia. Additionally, Azmi et al. (2020)affirmed that claims incurred influence conversely the profitability of Indonesian insurance companies. Based on prior research findings this study advanced the following hypothesis:

H3: The claims incurred have a negative impact on the profitability of insurance companies.

Net Premium

Net premium refers to the premiums the insurance company retains after netting reinsurance expenses. Usually, net premium is often related to profitability, as an increase in net premium, *ceteris paribus*, results in higher profits(Farhan et al., 2021; Hemrit, 2020). Prior studies associated net premium with profitability. Kusi et al. (2020) found out that net premium drives positively the profitability of insurance companies in Ghana. Moreover, Camino-Mogro and Bermúdez-Barrezueta (2019)found that net premium influences positively the profitability of insurance companies in Ecuador. Likewise, Farhan et al. (2021)found that net premium earned

correlates positively with profitability whereas net paid claims conversely relate to profitability in Saudi Arabia. Also, Kumar et al. (2022) found that net premium has a significant positive link with the profitability of insurance companies in Fuji. Thus, the net premium insurance companies earn has a positive profound effect on profitability, which informs the following hypothesis:

H4: Net Premium has a positive impact on the profitability of insurance companies.

Market Share of Insurance Company

The market share of an insurance company refers to the portion of the sum of the insurance market that a company serves. The market share is usually proxied by the ratio of the gross premium written by a company to the gross premium written by the whole market (Kusi et al., 2020; Zainudin et al., 2018). Thus, a higher ratio of gross premium written relative to the market indicates a higher market share. Higher market share is associated with a large customer base and spread of risks that translate into higher revenue and growth. Thus, if the market share increase of an insurance company increases and the company operates with an efficient structure, this leads to an increase in profitability. Most studies that examined the influence of market share on profitability support that market share influence significantly the profitability of insurance companies (Ben Dhiab, 2021; Lament & Bukowski, 2024). Ben Dhiab (2021) affirmed that market share influences significantly positively the profitability of Saudi insurance companies. Likewise, Lament and Bukowski (2024) found that market share profoundly influences positively the profitability of insurance companies in 15 European countries. Moreover, Guendouz and Ouassaf (2018) found that market share, size, age of the company, and loss ratio are linked with the profitability of Takaful insurance companies in Saudi Arabia. Additionally, Tuffour et al. (2021) affirmed that market share influences significantly positively the profitability of insurance companies in Ghana. Likewise, Alshadadi and Deshmukh (2021) found that market share influenced significantly positively the profitability of insurance companies in Saudi Arabia.Azmi et al., (2020) uncovered that the market is positively linked to the profitability of insurance companies in Indonesia. Moreover, Born et al., (2020) revealed that market share is positively linked with profitability for US companies. However, Arintoko et al., (2021) found that market share exhibits an insignificant positive link with the profitability of insurance companies in Indonesia. The results of most of these studies suggest that market share influence positively profitability of insurance companies. Therefore, this study hypothesised that:

H5: Market share has a positive impact on the profitability of insurance companies.

However, studies that examined the drivers of profitability of Tanzania's insurance companies are limited. This study differs from the study conducted by Horera and Maganya (2020) that focused on a small sample of 10 firms, while this study focused on a large sample of 26 insurance companies. Thus, this study is positioned to examine the drivers of profitability of Tanzanian insurance companies and to shed new findings from the emerging economy.

METHODOLOGY

This section detailed data uses variables measurement and the model specification.

Data and Sample

The current study used secondary data extracted from the Annual Insurance Performance report issued by the Tanzania Insurance Regulatory Authority (TIRA). The study used unbalanced panel data extracted from 26 insurance companies with 218 firm-year observations. The unbalanced panel data ranges from 2020 to 2011.These companies are Reliance Insurance Tanzania, Alliance Insurance, AAR, Strategis Insurance, Resolution, Heritage, Britam, Jubilee, Sanlam General, Bumaco, Mgen, NIC, Star General, UAP, ZIC, IGT, Phoenix, Maxinsure, Mayfair, Tanzindia, Metropolitan, ICEA Lion, MO, First, Milembe, and GA5.

Variable Measurement

To estimate the driver of insurance companies' profitability, the study used a quantitative research approach, specifically panel data regression. The dependent variable of the study which proxy profitability is the return on assets (ROA). There are many proxies of profitability. Prior studies have identified these proxies as ROA, return on equity (ROE), net income, operating profit, and others(Derbali & Jamel, 2018; Zainudin et al., 2018). However, these prior studies have documented the superiority of ROA over other proxies (Ben Dhiab, 2021; Zainudin et al., 2018). In line with prior studies, this study uses ROA to proxy the profitability of insurance firms.

The independent variables of the current study are the age of the insurance company, per capita income, incurred claim, net premium earned, and market share. These independent variables originated from studies that were conducted to examine determinants of the profitability of insurance companies(Ben Dhiab, 2021; Camino-Mogro & Bermúdez-Barrezueta, 2019; Zainudin et al., 2018). Table 1 depicts the measurement of the variables of the study:

Table1: Measurement of Variables

S/N	Abbreviation	Variable	Proxied by	Expected Sign
1	ROA	Return on asset	Profit after/total asset	N/A
2	PCI	Per capita income	National income/population	+
3	AGE	Age of company	Number of years since the inception of the company	+ / -
4	IC	Incurred claim	Natural log of incurred claim	-
5	NP	Net premium	Natural log of net premium	+
6	MS	Market share	Company gross written premium is scaled by the total gross written premium of all insurance companies.	+

Source: Adapted from Ben Dhiab (2021), Kantakji et al. (2020) and Worku et al. (2024)

Model Specification

To estimate the drivers of the profitability of insurance companies, the current study used the panel data model used by prior studies(Azmi et al., 2020; Worku et al., 2024). Specifically, the study used the company's age, per capita income, claim incurred, net premium, and market share as independent variables in estimating drivers of profitability of insurance companies like prior studies conducted byBen Dhiab (2021), Kantakji et al. (2020) and Worku et al. (2024).In line with these studies, the following equation depicts the model that facilitates the estimate of the drivers of profitability of insurance companies in Tanzania:

$$ROA_{i,t} = \varphi_0 + \lambda_1 PCI_{i,t} + \lambda_2 AGE_{i,t} + \lambda_3 ln(IC_{i,t}) + \lambda_4 ln(NP_{i,t}) + \lambda_5 MS_{i,t} + +\alpha_{i,t} \quad (1)$$

where; ROA stands for returns on assets PCI stands for per capita income, AGE stands for the number of years since the inception of the company IC stands for incurred claims, NP stands for net premium, MS stands for market share,$\alpha_{i,t}$ stands for error term and φ_0 stands for the constant.

The nature of the study data favours the use of panel data regression to control for unobserved heterogeneity that is firm-specific characteristics and provides best estimations(Kniesner & Viscusi, 2016). Thus, the study employed both random and fixed effect models andto decide the best estimator Hausman test was conducted(Datu, 2015; Pavic Kramaric et al., 2017; Worku et al., 2024). Moreover, for the robust check panel-corrected standard error estimator (PCSE) was used in line with prior studies' methods that examined the same(Ben Dhiab, 2021; Worku et al., 2024).

RESULTS

This section discusses the results of tests employed and panel data regression in estimating drivers for the profitability of insurance companies in Tanzania.

Descriptive Statistics

Table 2 reports the descriptive statistics for the key variables of the study:

Table 2: Descriptive Statistics

Variable	Observation	Mean	Std. Dev.	Min	Max
ROA	218	0.080088	0.257478	-0.2699	0.3406
AGE	218	13.2844	10.99819	1	55
PCI	218	991.6881	82.95983	781.4	1085.9
IC	218	0.533008	0.650297	0.0006	3.8613
NP	218	0.979807	0.897369	0.00389	4.6259
MS	218	4.301193	3.617397	0.05	16.25

Source: Author's Computation (2024)

The mean value of ROA is 8% and the maximum and minimum values of 34.06% and -26.99%respectively. Likewise, Ben Dhiab (2021) reported a mean value of 7.9% for Saudi Arabian insurance companies when examining the profitability of Saudi insurance companies. Moreover, the average age of insurance companies is 13.28 and the maximum and minimum age since inception of insurance companies is 55 and 1, respectively. The mean value is larger compared to the mean of 1.3 reported by Worku et al. (2024) in Ethiopia indicating that few companies were entering the market.

Similarly, the mean value of per capita income is Tshs 991.688 and the maximum and minimum values are Tshs 781.4 and Tshs 1,085.9, respectively. Moreover, the average value of the incurred claim was 0.533 and the maximum and minimum values were 0.0006 and 3.8613, respectively. In addition, the average value of the net premium was 0.979, and the maximum and minimum values were 0.00389 and 4.6259, respectively.

Finally, the mean value of the market share proxied natural log of gross written premium was 4.301193 and the maximum and minimum values were 0.05% and 16.25%, respectively. The results further indicate that the market comprised large companies that own up to 16.25% of the market share and small companies that own 0.05% of the market share.

Multi-collinearity Test

To check for multi-collinearity, the study employed both pairwise correlation and variance inflation factor (VIF). The tests were employed stepwise, starting with pairwise and then VIF,which is a superior test. Table 3 reports the results of both tests:

Table 3: Pairwise Correlation and Variance Inflation Factor Results

	Pairwise correlation						VIF
	PR	**AG**	**PCI**	**IC**	**NP**	**MS**	
ROA	1						N/A
AGE	0.2684	1					1.25
PCI	-0.0247	0.0689	1				1.31
IC	0.1405	0.2864	0.1628	1			7.66
NP	0.3006	0.3929	0.2055	0.7269	1		7.85
MS	0.4039	0.3219	-0.1464	0.6437	0.721	1	2.62

Source: Author's Computation (2024)

The result of pairwise indicates that the highest pairwise correlation was between incurred claim and net premium with a coefficient of 0.7269. However, the reported highest pairwise correlation of 0.7269 was slightly below the cut-off of 0.8 propounded by Wooldridge (2015), hence signalling no problem of multi-collinearity. Moreover, VIF was employed and indicated that VIF for age was 1.25 and VIF per capita income was 1.31. Likewise, the VIF for incurred claim and net premium were 7.66 and 7.85 respectively. Finally, the VIF for market share was 2.62. The results of VIFs reported were away from the cut of 10 implying that the variables are away from the multi-collinearity problem.

Heteroskedasticity Test

The study employed the Breusch-Pagan and Cook-Weisberg test for heteroskedasticity to check for the potential problem of heteroskedasticity, which makes OLS furnish a biased estimator. Table 4 depicts the results of heteroskedasticity:

Table 4: Heteroskedasticity Results

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 21.02
Prob > chi2 = 0.0000

Source: Author's Computation (2024)

The depicted p-value of 0.00 is less than 5% thus the null hypothesis of constant variance is rejected indicating that OLS will furnish a biased result. The study employed a panel data model that overcame the problem of heteroskedasticity. Moreover, PCSE which overcame the heteroskedasticity problem was used for the robustness of the results.

Estimation Results for Drivers of Profitability of Insurance Companies

In this study panel regression was used to estimate the drivers of profitability of insurance companies in Tanzania using data from 2011 to 2020. Specifically, the fixed and random effects models were employed. To enhance the robustness of the estimation, thePCSE was used to overcome the heteroskedasticity and serial correlation. The results of the random effect model, fixed effect model, and Hausman test are depicted in Table 5.

Table 5: Results of Regressions Models and Hausman Test

	RE		FE		PCSE	
Variable	Coef.	P>z	Coef.	P>t	Coef.	P>|z|
PCI	-0.687	0.738	0.176	0.6	-0.407	0.856
AG	0.253	0.225	-0.145	0.2	0.191	0.206
IC	-0.319***	0	-0.299***	0	-0.349***	0
NP	0.244***	0	0.306***	0	0.244***	0
MS	0.017**	0.042	-0.017	0.266	0.024 ***	0
Constant	0.031	0.879	0.029	0.909	0.059	0.795
R-sq	0.513		0.141		0.287	
N	218		218		218	

Hausman Results

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)

2.07

Prob>chi2 = 0.8396

Note; ***, **, and * reflect statistical significance at 1%, 5%, and 10% respectively.
Source: Author's Computation (2024)

To decide which of the two models of which results hold over the other, a Hausman test was conducted. The result of the Hausman test is reported in Table 5. Based on the result, the random effect model is selected over the fixed effect since the probability value attached is 0.8396 which is greater than 0.05. Thus, the random effect model is an approximate estimator for determining the drivers for the profitability of the insurance companies in Tanzania.

The result of the random effect found an insignificant negative effect of per capita income on profitability (λ =-0.687, p=0.738), implying that H1 has been rejected. Similarly, the results are consistent with the results of a robust check using PCSE that uncovered that per capita income had an insignificant negative influence on profitability (λ =-0.407, p=0.856). Moreover, the regression results based on a random model revealed an insignificant positive link between the age of the insurance company and profitability (λ =0.253, p=0.225), hence invalidating H2. The results are alike with PCSE results

documenting insignificant positive between the age of the insurance company and profitability (λ =0.253, p=0.225).

Furthermore, the random effect model result indicates that the incurred claim is conversely and significantly linked with profitability (λ=-0.319, p=0), implying that H3 is accepted. Moreover, the PCSE outcome that affirmed a significant negative link between profitability and incurred claim (λ =-0.349, p=0) validated the results. Furthermore, the results of the random effect revealed net premiums had a significant positive effect on the profitability of insurance companies (λ =0.244, p=0), which confirms H4. Similarly, the results of panel regression affirmed that net premium significantly correlates with the profitability of insurance companies (λ =0.306, p=0). Also, the results of PCSE revealed that net premium influence significantly positively profitability (λ =0.244, p=0). Moreover, the results of the random model indicated that market share had a significant positive bearing on the profitability of insurance companies (λ =0.017, p=0.042), thus validating H5. The PCSE results uncovered that market share was significantly linked with profitability (λ =0.024, p=0) further support the outcome.

DISCUSSION

The current study used panel data regression to estimate the drivers of profitability of insurance companies in Tanzania. In particular, a random effect model was used after conducting the Hausman test. The results revealed that incurred claims influence significantly inversely the profitability of insurance companies. Impliedly, as the incurred claim increases, the profitability of insurance companies decreases. The results of the current study are in line with the efficient structure hypothesis, this implies that when an insurance company is efficiently managed with results in lower incurred claims, thus enhancing profitability. Therefore, insurance companies should strive to manage efficiently the claims incurred as they affect negatively the profitability of insurance companies. The results are in line with prior studies that documented the same. Hissiyah and Meylianingrum (2023) affirmed that incurred claim is significantly conversely linked with the profitability of Indonesian insurance companies. Moreover, Hussanie and Joo (2019) documented that claims incurred influence conversely the profitability of Indian insurance companies. Farhan et al., (2021)revealed a significant inverse association between incurred claims and profitability of insurance companies in Saudi Arabia. Moreover, Berhe and Kaur, (2017) uncovered that incurred claims significantly impact negatively the profitability of Ethiopian insurance companies.

Furthermore, the results uncovered that net premiums had a significant positive effect on the profitability of insurance companies. This result implies

that as net premium increases also profitability increases consistently with an efficient market hypothesis. Thus, insurance companies should strive to increase net premiums to enhance profitability. The result of this study is consistent with the results of several prior studies(Camino-Mogro & Bermúdez-Barrezueta, 2019; Kumar et al., 2022; Kusi et al., 2020). For instance, Kusi et al., (2020)documented a significant positive link between net premiums and the profitability of Ghanaian insurance companies. Moreover, Camino-Mogro and Bermúdez-Barrezueta (2019) documented that underwritten premium is linked with the profitability of Ecuadorian insurance companies. Likewise, Azmi et al., (2020) uncovered a significant link between net premiums and the profitability of Indonesian insurance companies. Moreover, Kumar et al., (2022) found that net premiums significantly influence significant positive profitability of Fiji insurance firms.

Additionally, the results found out that market share and profitability are significantly and positively linked. The results of this study imply that as market share increases similarly profitability increases. Therefore, insurance companies should embark on various marketing strategies like market penetration, and product differentiation to expand market share to enhance profitability. Prior studies that examined the same have reported similar results (Ben Dhiab, 2021; Guendouz & Ouassaf, 2018; Lament & Bukowski, 2024; Tuffour et al., 2021). Guendouz and Ouassaf (2018) found that market share influenced significantly the positive profitability of Saudi insurance companies. Likewise, Ben Dhiab (2021) reported a significant positive link between market share and profitability of insurance companies in Saudi Arabia. Moreover, Worku et al. (2024) revealed the significant positive of market share in influencing the profitability of Ethiopian insurance companies. Likewise, Lament and Bukowski (2024)documented the relevance of market share to influence positively profitability in 15 European countries.

CONCLUSION

The purpose of this study was to examine the drivers of the profitability of insurance companies in Tanzania. The study used secondary data extracted from TIRA annual reports. Specifically, the study used 26 insurance companies with 218 firm-year observations to examine the drivers of profitability of insurance companies. The sample was unbalanced ranging from 2020 to 2011. The study analysed five key drivers of profitability of insurance companies namely; the age of the insurance company, per capita income, incurred claim, the net premium earned, and market share. The study employed panel data regression models and to ensure robustness of the results PCSE estimator was used. The overall results revealed that market

share and net premium were significantly positively linked with the profitability of insurance companies in Tanzania. Moreover, the result uncovered a significant converse relationship between incurred claims and the profitability of insurance companies in Tanzania. Based on the study findings, profitability significantly correlates with both market share and net premium. Therefore, Tanzania's insurance companies should strive to increase the net premium and market share. Moreover, insurance firms must expand their market share through a market penetration strategy, and product differentiation strategy to reach more clients. Doing so could enable firms to attain higher market share that can lead to higher net premiums, thus enhanced profitability. Also, insurance companies in Tanzania should scrutinise incurred claims as it affects significantly conversely the profitability of insurance firms. Efficient management of incurred claims could enable companies to reduce incurred claims and boost their profitability.

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