Do Size and Age affect Performance of General Insurance Firms in East Africa?

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Abstract

Numerous factors influence insurance companies' performance, including firm size and age. This study examined if size and age have any influence on the performance of firms that deal with General (or Non-Life) insurance in the East African region, specifically, in Uganda, Kenya and Tanzania. The population of study was 82 general insurance firms from whom primary and secondary data were collected. The findings showed a statistically significant and positive relationship between size and age for financial performance but this relationship was statistically insignificant with respect to non-financial performance. The implication of these findings is that larger firms in terms of asset base are able to perform better financially due to economies of scale, operate with less constraints and are more flexible and would offer adequate security to their clients compared to smaller firms. Age was found to be an insignificant factor in influencing firm performance, implying that there may be other relevant factors in play that were not considered in this study. The study recommends that the Insurance Regulators in the region encourage mergers and /or acquisitions and set minimum thresholds for capital base in the sector so that there are fewer stronger insurers who can compete effectively and deliver on quality services as opposed to the many firms currently in the market. This would improve the overall performance of the firms.

Keywords: Size, Age, Firm Characteristics, Firm Performance, General Insurance Firms

1. Introduction

The role of insurers is to bear risks, spread financial losses and provide reassurance to most economic entities and individuals (Williams et al., 2013). Insurance companies use actuarial or statistical techniques to estimate their risk liabilities based on assumptions, past experience and probability theory. (Trowbridge, 1989). If these calculations are incorrect, the consequences for the insurer may be adverse (Actuarial Education Company, 2014). General insurance companies, otherwise known as Property and Casualty (P & C) or Non-life insurers offer a broad category of coverage against loss of or damage to property, or other liabilities. These firms dominate the East African insurance sectors in terms of numbers and premiums written (IRA, 2016). Size and age are part of the internal firm characteristics that may play a major role in influencing the direction of a firm's performance (Duompos et al., 2012; Charumati, 2012). Good performance of these firms is therefore of utmost importance and contributes to the economic well being of any nation.

An assessment of results output against intended output over a specified period of time generally measures a firm's performance. The balanced scored card by Kaplan and Norton (1996) gives multiple indicators of organizational performance and translates a company's vision and strategy into a coherent set of performance measures. The model focuses on four perspectives namely: financial measures (such as return on investments, profit margin, return on Equity, (ROE), return on sales and return on assets (ROA); customer knowledge, internal business processes, and learning and growth. These variables include among others market share, new product introduction and innovation, and product or service quality. These non-financial measures may not be easy to objectively quantify but are equally significant. It is important therefore to consider both qualitative and quantitative measures in considering firm performance (Udaibir, et al., 2003).

2. Literature Review

Firm characteristics are specific internal organizational factors that may play an important role in shaping a firm's operations thus influence its performance (Duompos et al., 2012), These factors include: size, age, ownership structure, and managerial competence, liquidity, and leverage among others. The size of a firm is measured by capital employed, total assets of the firm, or gross premiums written (especially for insurers) among others (Almajali, et al., 2012). With more assets, bigger firms compared to smaller ones would easily achieve economies of scale, transact and write higher volumes of business, give adequate security in form of optimal reinsurance covers, operate with less constraints and be more flexible as they have more capital. Yegon et al. (2014) contend that bigger firms' risk management operational practices would not be the same as those of smaller firms hence would accordingly be reflected in their performance.

A firm's age is measured by the number of years since incorporation of the organization. Age tends to have a substantial effect on firm performance. Shiu (2004) asserts that the older a firm grows, the more it acquires capabilities and skills and the more it may not be exposed to liabilities of being new, thus enabling it enjoy better performance. However, as noted by Demirgüç-Kunt and Maksimovic (1998), older firms may also be inhibited by inertia, bureaucracy and laxity in operations. This may not positively reflect better performance

As argued by Carmeli (2001), firm performance is influenced by the core resources and capabilities that an organization has. Managerial competence is one of these crucial resources and refers to the knowledge, skills and experience of key managers of the organization. Firms including insurers, which have staff with superior managerial competence, would be expected to perform better than

those without such resources. According to Agiobenebo and Ezirim (2002) ownership structure of the firm, especially with respect to concentration of ownership by majority shareholders, and identity of owners in terms of local, foreign or institutional investors also influences various managerial aspects of the company (Lee, 2008). These aspects influence the management of the firm to make decisions with respect to distribution or retention of dividends, surplus or profit and interest, thus impacting on firm performance.

Several relevant studies have been done on the influence of specific firm characteristics on insurance companies' performance. These include a study in the Kenyan market (Mwangi & Iraya, 2014) who found that financial performance was positively related to earning assets and investment yield. Adams and Buckles (2003), in the Bermuda Market found that liquidity and leverage determined corporate financial performance. However, the scope of the firms' activities as well as the size of companies were not found to be important explanatory variables. In the Pakistan Life insurance market (Ahmed et al., 2011) established that firm size and loss ratio significantly and positively influence profitability of the firms but not age or liquidity of the firms. Chen and Wong (2004) also confirmed these findings that firm size is positively related to profitability. Choi (2010) in his study, of the United States property-liability (P-L) firms, found that older firms do not grow as fast as younger firms and also found that economies of scale are positively related to firm growth. Claudio and Waelchli (2010), using database of financial, statistical and market information on global companies, found that as firms grow older, their profitability seems to decline. Kim et.al, (1995) established that age (among other factors) was important for prediction of a failure for non-life insurers. Mwangi and Murigu (2015) established that managerial competence and ownership structure were significant predictors of firm's financial performance.

3. Research Problem

General insurance firm performance is important as they are involved in management of risks and in financial intermediation which contribute to stability of any economy. Their failure would have far reaching consequences to other sectors and to various stake holders such as shareholders, policyholders, agents and policymakers, hence it is imperative that they perform well (Duompos et.al, 2012).

Several studies done in this area reveal that those firm characteristics that have an effect on performance are different and specific to a particular market. Most of these studies have also concentrated on financial performance. There is also no consensus on which factors are significantly related to firm performance and which ones are not. Indeed, very few studies have been done in the context of developing nations to establish the effect of firm characteristics on general insurance firms' performance. This study therefore covers general insurance companies operating in the East African Nations of Uganda, Kenya, and Tanzania and incorporates both financial and non-financial performance and predicts that specific firm characteristics, namely size and age of the firm significantly influence the performance of general insurers in Uganda Kenya and Tanzania. Size and age were considered as they are the most studied in many empirical studies that have been undertaken (Angima & Mwangi, 2015)

4. Methodology and Data

The study employed a descriptive research design that targeted all the 82 general insurance firms in the Uganda, Kenya and Tanzania as at December 31, 2016. Secondary data of a period of 5 years from 2011 to 2015 was obtained from the firms' annual financial reports while Primary data on non-financial performance was collected through use of a questionnaire administered to Underwriting or Operations Managers of the firms. Firm performance (non-financial and financial) was the dependent variable in this study. Non-financial performance comprised of attributes of innovation, service quality, market share and reputation on a 5-point Likert scale denoting very poor to excellent performance respectively. Financial performance was represented by an arithmetic mean of return assets (ROA) and premium growth rate over the period under study.

The following hypotheses were tested:-

H1a.   The relationship between size, age, and financial firm performance is significant
H1b.   The relationship between size, age, and non-financial firm performance is significant

The linear regression models used to test the hypotheses were:

$$FP = \alpha + \beta_1 (SZ) + \beta_2 (A) + e \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. (i)$$
$$NFP = \alpha + \beta_1 (SZ) + \beta_2 (A) + e \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots... (ii)$$

Where

Variable	Description / represented by
Financial Performance (FP)	Return On Assets (ROA) & Premium Growth Rate
Non-Financial Performance (NFP)	Composite score for innovation, service quality, market share and reputation
Size of firm (SZ)	Log of total assets
Age of firm (A)	Number of years since firm was established
α	Regression constant or Intercept
β_1, β_2	coefficient for the respective determinant
e	Error term

The responses for non-financial performance are reflected using descriptive statistics of mean (average score) and standard deviation while regression analysis was used to determine the relationship between size, age and firm performance.

5. Results and Discussion

5.1 Descriptive Statistics

The response rate was 70% and shown below is a summary of the descriptive statistics. Results showed that generally, the non financial performance of firms under study is good in service quality /market share (mean of 4.03) as well as reputation (mean of 4.29) but lower in respect of innovation (mean of 3.47). The overall mean was 3.87 and Table 1 reflects these results. Implying that the sector is customer-focused and keen on ensuring a high level of customer satisfaction. The average performance with respect to innovation implies that there is need for the firms to keep on investing in modern technology in their operations and avoid unethical behaviours which may lead to scandals that would ruin their reputation this affecting their performance.

Table 1: Scores for Non Financial Firm Performance:

Quality of Service by Firms / Market Share	Mean	SD
Customer-centre services emphasized	4.54	.540
High quality services provision as expected by customers.	4.21	.791
Maintained market share for the last few years.	3.69	.921
Process claims within specified period of 14 days	3.81	.968
Satisfactorily resolve complaints by customers	4.12	.589
Quality of service has enhanced referrals from existing clients	4.20	.620
Quality service has contributed to a growing client base	4.35	.789
Competitive advantage enjoyed has improved market share	3.82	.849
Ability to ascertain the revenues attributable to new market segments	3.91	.889
Ahead of others in new and / enhanced product development	3.54	1.012
Recent events are taken into account with respect to new product development such as: - flooding & Terrorism/epidemics; customer feedback, competitor actions, regulatory framework changes:	4.10	.848
Mean Score (N=57)	**4.03**	**.801**

Reputation	Mean	SD
Firms' business practices are transparent, leading to enhanced public trust in	4.45	0.597
Firms' non involvement in scandals has enhanced their performance	4.28	0.921
Firm Take care of all stakeholders' interests through various activities	4.26	0.669
Firm also involved in community issues and CSR activities	3.96	0.608
Firm considers claims issues as crucial to their reputation	4.48	0.659
Mean Score (N=57)	**4.29**	**.691**

	Mean	SD
Innovation		
Firm has automated all critical processes	3.88	.901
Firm has computerized operations /all are almost entirely paperless	2.82	1.093
Firm has relevant programs and processes that help them be more competitive.	3.54	.825
Firm has fully automated claims process from beginning to end	3.00	1.239
Functions related to other service providers like intermediaries, surveyors, motor assessors, claim adjustors and engineers are wholly automated	2.81	1.060
Social marketing programs are in place for enhanced efficiency in their operations	3.29	.890
Firm has computer literate personnel who are fully trained thus enhancing efficiency in performance	4.21	.976
Infrastructure, as well as skills and knowledge are in place for service delivery to clients and other stakeholders.	4.19	.934
Mean Score (N=57)	**3.47**	**.958**
Overall Mean Score (Non-Financial Performance)	**3.87**	**.835**

SD is standard deviation. Source: Research Data

A summary of scores for the variables under study is given in Table 2. They show that there are both very young (3 years) and very old (104 years) firms in the region with average age being 27 years. In terms of financial performance, which comprised premium growth rates and ROA, results overall showed a wide range of average composite returns from a minimum of -12% to a maximum of 114% with the mean being 16%. Company size in terms of natural log of assets averaged 21.4.

Table 2: Summary of Firm Performance

Measure / Indicator	Mean	STD DEV	SKEWNESS	KURT	COEF of VAR.
FP (Premium Growth Rate & ROA) %	16.1	18.731	3.462	15.190	1.16
NFP (Innovation, Service quality, reputation)	3.87	.838	-.773	.936	0.22
Size (Log of Total Assets)	21.4	.099	-.786	1.259	0.05
Age (No. Of Years)	27.5	19.74	1.560	3.595	0.073

Source: Research Data

N =57: COEF of VAR is coefficient of variation; STD DEV is standard deviation, , KURT is kurtosis.

5.2 Regression Analysis

The regression analysis results are shown in Table 3

Table 3- Regression Results: Dependent Variable-Financial Performance; Predictors - Size and Age

a) Model Summary

Model	R	R^2		Adjusted R^2	Standard Error of the Estimate
1	.357[a]	.128		.096	.178

a. Predictors: (Constant), Size, Age,

b) ANOVA (Goodness of Fit)

Model		Sum of squares	df		Mean square	F	sig
1	Regression	0.252	2		0.125	3.9650	.024[b]
	Residual	1.713	54		0.032		
	Total	1.965	56				

a. Dependent Variable: Financial Performance
b. Predictors: (Constant), Size, Age

c) Regression Coefficients[a]

Model		B	Std error	t	Sig.
	Constant	1.559	0.519	3.003	0.004
	Size	0.070	0.025	2.798	0.007
	Age	0.037	0.032	1.161	0.250

a. Dependent Variable: Performance (Financial)

Table 3 (a-c) shows the regression results with financial firm performance being predicted by size and age. The models reveal a significant statistical relationship between size, age and financial firm performance (P>.05) with R^2 = .128, F (2, 54) = .3.965, with a standard error of .178). Size and age explain 12.8% of the variation in financial firm performance. Model coefficients as reflected in Table 3(c) show Size (β = 0.07), p>0.05) is a significant predictor of financial firm performance. Age is not a significant predictor (β = 0.037, p>0.05).

The resultant model is therefore specified as:
FP= 1.559 + 0.07 SZ

Table 4(a-c) reflects the regression results with non-financial performance being predicted by size and age of the firm.

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Table 4: Regression Results: Dependent Variable- Non-Financial Performance; Predictors – Size and age.

a) Model Summary

Model	R	R^2		Adjusted R^2	Standard Error of the Estimate
1	.116[a]	.0135		-.022	.086

a. Predictors: (Constant), Size, Age

b) ANOVA (Goodness of Fit)

Model		Sum of squares	df	Mean square	F	sig
1	Regression	0.005	2	0.002	0.370	.692[b]
	Residual	0.400	54	0.007		
	Total	0.405	56			

a. Dependent Variable: Non-Financial Performance
b. Predictors: (Constant), Size, Age

c) Regression coefficients[a]

Model		B	Std error	t	Sig.
	Constant	0.560	0.250	2.235	0.029
	Size	0.010	0.012	0.825	0.412
	Age	-0.000	0.015	-0.022	0.982

a. Dependent Variable: Performance (Non-Financial)

The results show that the relationship between the independent variables (size and age) and the dependent variable (non-financial performance) is not statistically significant (P>.05), with R^2 = .013, F (2,54) = 0.370, and a standard error of .086. 1.3% of non-financial performance variations are explained by size and age of the firm. Both size and age are not significant predictors of non financial performance (p< 0.05).

6. Conclusions
The study established that the relationship between size and financial firm performance is statistically significant. This means that those firms that are bigger in terms of asset base would perform better than those that are smaller. With more assets, a company is able to use economies of scale in producing more income. It would be harder for smaller firms to transact and write big volumes of business compared to larger ones and firms with a lesser amount of capital would also be less flexible hence operate with more constraints. Smaller firms may also not give adequate security to their clients in the cases of aggregate uncertainty or big catastrophic events. These findings support studies by Ahmed et al. (2011) and Choi (2010) on size as influencing financial firm performance but contradict those of Adams and Buckle (2003) and Akotey (2012).

The implication on age not being a significant predictor of financial performance is that despite the fact that older firms may have developed optimal underwriting and claims management skills and capabilities and, developed reputation over time which should contribute to enhanced performance in terms of improved quality of service, innovation and increased sales, this is not the case. The implication is that older firms may also be inhibited by inertia, bureaucracy and laxity in operations. The findings confirm those of Mwangi and Murigu (2015) that age has no influence on firm financial performance but contradict those of Pervan et al. (2012).

With respect to non-financial performance, the descriptive statistics findings show that the firms have performed well on service quality and reputation, implying that the sector is customer-focused and keen on ensuring a high level of customer satisfaction. With respect to innovation, the performance was average implying that there is need for the firms to keep on investing in modern technology in their operations and avoid unethical behaviours which may lead to scandals that would ruin their reputation this affecting their performance

7. Recommendations

The findings show that size influences overall firm performance positively hence general insurance firms can strive to increase their assets so as to achieve economies of scale and generate more premiums but at the same time ensure high level of service to their customers and remain innovative regardless of their age. The Insurance Regulators in the region can set minimum thresholds for capital base and encourage mergers and acquisitions of insurers so that there are fewer stronger insurers who can compete effectively and deliver on services as opposed to the many firms in the market engaging in unhealthy competition leading to inadequate underwriting, price undercutting and poor service. This is especially in view of the fact that evidence available (IRA, 2016) indicates that there is under capacity in these markets to underwrite and insure large risks, especially in the emerging sectors of oil and gas exploration and mining. However, this does not imply that the setting up of new companies should be restricted.

The study covered three countries, Kenya, Uganda and Tanzania hence the knowledge is useful to the insurance sectors in this region and is also relevant to other African countries. The study has contributed to research interest in this area and, academicians may use the study as a basis for further research. The linear regression model presumed only size and age as the variables that influence the performance of general insurers in East Africa. However, several other factors that may have an influence on firm performance such managerial competence, ownership structure of the firms, insurance risk management practices that are country specific, as well as other macro-economic factors like inflation and GDP growth rate were not considered in this study.

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