Measurement and Determinants of Financial Performance of Insurance Sector of Pakistan

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Abstract

This study explored the indicators and assessment of the monetary performance of insurance firms of Pakistan. We used age of the insurance firm, breakup value per share, cash & bank balances to total assets, claims incurred to net premium, capital ratio, earning per share, exchange rate, investment to total assets, log of number of ordinary shares, log of total assets were considered as independent variables, exchange rate as macroeconomic variables and efficiency as dependent variable. In efficiency we used pure technical efficiency (PTE), scale efficiency (SE), technical efficiency (TE) which are computed through data envelopment analysis (DEA). Data of fifty-one insurance firms comprising of takaful, life insurance, and non-life insurance firms are selected considering the time of 10 years starting from 2010 to 2019. We evaluated through panel regression, and further, the outcomes indicate that, to enhance monetary as well as operational presentation of the insurance sector, extra concentration should be provided to things that could enhance the level of premium.

Key Words: DEA, and VRS, Financial Performance, Financial Services Assessment, Financial Stability, Insurance, Pakistan, Technical Efficiency Score (TES)

Introduction

The monetary or economical presentation of any industry serves as an important and fundamental part of financial development as well as the industrialization of the region. The insurance industry has its significance because it is liable to offer practiced monetary help, agency funds, and incorporation of assets in a significant way, and investor's treatment or concerns.

Within the framework of the economical sector, the insurance industry plays a crucial or central part in managing funds to several sectors in this way contributing chief inflows mainly towards financial and economical development. Insurance or indemnity is a procedure of risk conveyance that protects the passion and spirit of ordinary people from future uncertain trouble Insurance equally provides some budgetary assistance to minimize the risk of human life as well as their characteristics(Schouteden, 2018). The insurance industry is well structured only if it has the capacity of solving any type of economical issues in the financial system so powering the financial structure of the region.

The concept of assurance is not recent it is truly adopted from the greatest prompt time of human progress, transferring risks to facilitate each other largely at the time of hardship was so simple(McFadden et al., 2019). For the highest section,

vendors and brokers had employed that concept to premier liability. In the present period, the Insurance process is as simple and reachable almost over the globe, and as shown by Federal or Central Insurance Mediator Pakistan (FIOP) that trade is winding up improvingly worldwide. The insurance industry of Pakistan is not as larger as other innovating regions because can largely impact the overall GDP(Elahi et al., 2021). Moreover, the insurance section of Pakistan is divided into two main groups' conventional insurance and Takaful insurance. Also, the two groups were similarly divided into two sub-categories, non-disaster insurance, and life insurance.

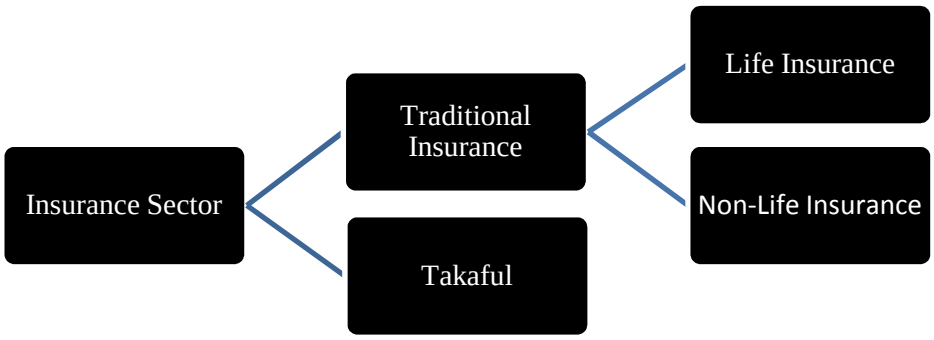

Figure 1

Currently, about 42 firms or agencies are offering insurance provider management, and in which 30 firms are non-life, and 8 firms are life firms largely covering 4-5 family Takaful.

The performance of the insurance industry enlarged by 5.78%, with a comparable rise of 5.70% in indemnity insurance largely during 2018, and this development level was achieved largely due to a rise of 4.40% in the volume of profit and loss statement of life insurance, which according to recent study contributed about 81.02% part of the insurance industry in 2018. Further, the share of Takaful firms was 2.15% in total insurance industry in 2017 and documented a rise of about 8.09% in their network resources. Moreover, the topmost source of the profit insurance industry of Pakistan is premium. The total premium for the period 2018 was Rs 323.12 billion, largely raised by 4.14% to touch Rs 336.51 billion in 2019-2020.

Problem Statement

According to Shawar and Siddiqui (2019), there is an evolving expansion of the insurance sector in Pakistan during the last few decades with a horizon of services. It has been observed that for the last 3 years, the insurance companies in Pakistan have been doubled and this is because of the rapid and growing awareness among people as well as competition. At the same time, for the stability of the financial system in Pakistan, the emergence of the insurance system was very important as well as investors' investment. The insurance system in Pakistan is relatively stable segment in terms of the financial system(Pantielieieva et al., 2020). It was necessary to determine what are the main factors which determine its performance and efficiency level.

Research Questions

The study questions to show the economical presentation of the insurance sector are given as.

i. Does the age of the firms (AoF) have a significant impact on Technical Efficiency Score (CRS), Pure Technical Efficiency Score (VRS), and Scale Efficiency Score (SES)?
ii. Does Log of Breakup value per share (BUVPS) have a direct influence on CRS, VRS, and SES?
iii. Do Cash & bank balances to total assets(CBTA_W) have a significant influence on CRS, VRS, and SES?
iv. Does Claims incurred to net premium (CINP_W) have a direct impact on CRS, VRS, and SES?
v. Does Capital ratio (CR) have a favorable impact on CRS, VRS, and SES?
vi. Does Earning per share (EPS_W) have a significant influence on CRS, VRS, and SES?
vii. Does Exchange Rate (EXC) have a significant impact on CRS, VRS, and SES?
viii. Does Investment to total assets (ITA) have a direct impact on CRS, VRS, and SES?
ix. Does Log of No. of ordinary shares (LNOS) have a significant influence on CRS, VRS, and SES?
x. Does Log of Total Assets (LTA)have a direct influence on CRS, VRS, and SES?

Literature Review

The circulars on this research concept are limited, a study by Yazid et al., (2012) investigates the important drivers of lineage need of Malaysian safeguard industry. The main cause of this examination is to explore the factors of lineage Islamic insurance obligation, need and to make of examination of substitute framework for factors of lineage Islamic insurance safeguard necessity. The overall examination terminates from 20016 to 2010 of Malaysian insurance bodies and firms. The result explains that as age, pay, annuities, cost of Takaful, stocks, volume, urbanization, instruction, reliance proportion, future, budgetary enhancement, and trading condition or status concerning their lineages Islamic safeguard demands has the significant connection. In any condition, on the other end protrusion of a region, funds of each lineage, and inflation rate with lineage Islamic safeguard necessities have the insignificant connection.

A study by Saeed and Khurram (2015) examined the monetary presentation of Pakistani insurance firms by employing the information for this assurance from the duration 2008 to 2011, and the research demonstrated the particular time as extra favorably booming one for the Pakistani firm mainly in terms of their presentation and outlook economically. The positive side of this study is that it has also demonstrated the economical presentation of firms regarding their ROFA, which generally refers to the design functional fixed resources are being employed by the firm and the method it play role in its economical presentation. Also, the study examined the influence of a significant amount of net functional fixed resources, net

assets, and net equity, recommending that these components have zero influence on the enhanced presentation of the insurance firm.Lee and Lee (2012)investigated the insurance firm's implementation and focus the examination of re-insurance of assets obligations of the region and the study also contemplate the relationship between re-insurance and friend's implementation. Also, the study utilized the organization volume, area of operations, leverage, development premium, and UR probability and found that Holdings, re-insurance, and ROI are vital determinants. In analysis, they found that organization size, re-insurance, liquidity, level of profitability, guaranteeing dangers, and capital concerned impacts are essentially influenced on the insurance firm's implementation.

Robin, Salim, and Bloch (2018)completed research to investigate the economical presentation of Kenyan insurance firms. The information was gathered entirely from 2007 to 2011, and employing DEA, it was revealed that private firms are working better than public and international firms.

Kripa and Ajasllari (2016), completed research to examine the economical performance of the Eastern as well as Central European insurance firms, and their study covered the years from 2009 to 2013. In the study, the FPI was designed mainly based on CAMEL percentage and then imparted on the figured index. This study also employed fixed impact panel type of regression and revealed that the volume has an insignificant impact on resource quality, liquidity, earnings of firms, and capital suitability, on the other hand, insurance concentration, as well as financial development, have significant influence.

Selvam and Miencha (2013)arranged a study to investigate the financial performance of Kenyan Insurance companies. They collected data of the financial period from January 2007 to December 2011. In this study Data Envelopment Analysis (DEA) was used to measure performance of insurance companies. It was explored that performance of private insurance companies are higher than public insurance companies and overseas insurance companies.

Keeping in view another study conducted by Naseem and Saleem (2012)investigated the financial performance of Pakistani Insurance companies, data used in this from the year 2007 to 2011. Results of this research include the analysis of five top scheduled Insurance. In this study financial performance was measured through financial ratios such as Return on Capital, Return on Assets, and Return on Equity in contrast with variables such as operational efficiency and its ratios. The strength of this research is that it has also discussed the financial performance of Insurance in regards with the ROFA (Return on Operating Fixed Assets), which refers to the way operating fixed assets are being used by the Insurance and the way it contributes in its financial performance.

Anila (2017)explored the financial performance of Insurance industries in regards with the impact of intellectual capital. The study was conducted on the data and information extracted from the reports of a variety of Insurance Companies. VAIC (Value Added Intellectual Coefficient) approach was used in this research study to analyze the performance of Insurance firms. Structural capital, human capital, return on assets and other financial instruments were used to measure the financial performance of Pakistani Insurance, multiple regressions was applied for

statistical analysis. The findings of the research indicate that the VAIC value is higher in the case of conventional Insurance when they were contrasted with the Islamic Insurance.

Overarching Theories

The conceptual framework is designed under the different set of theories which are given below,

Agency theory is one of the most crucial theories in auditing governance which defines the relationship between principle and relative agent(Bjurstrøm, 2020). According to this theory, the analysis of a company must be carried out in terms of motivation, ownership as well as control. If the mismatch occurs, it affects the profit and loss statement, cash flow activities, and financial performance of the firms in a negative way. At the same time, the agency theory also helpful in defining the relationship between shareholders and company executives or investor and fund manager.

The second important theory for the study is 'Stakeholder theory. This theory is designed to manage the profitability within the organization. The basic purpose of this theory is to create value as much as the management can for stakeholders because these are the stakes of any company. The more executives of the company create value for the stakeholders the more they invest in earning profit for the organization and vice versa(Stahl et al., 2020). Here, in the following study, this theory has been used to determine the performance of the insurance companies by using different variables at the same time.

The other theory is the 'theory of optimal capital resources' which is designed to define the internal and external cost of risk management. This theory also defined that the capital structure of any company is the mixture of debt and equity with a 50:50 ratio(Khan et al., 2021).

Material and Methods

The methodology mirrors the techniques and procedures employed to design a result or conclusion to confirm or reject the hypothesis of the study. In the given study, dependent variables that are CRS, VRS, and SES are computed through the DEA method and productivity scores are analyzed mainly on the grounds of the influence of that are age of the insurance firm, Breakup value per share (BUVPS), Cash & bank balances to total assets (CBTA), Claims incurred to net premium (CINP), Capital ratio (CR), Earning per share (EPS), Exchange Rate (EXC), Investment to total assets (ITA), Log of No. of ordinary shares (LNOS), Log of Total Assets (LTA) were considered as independent items.

Sample Size

Sample volume is contemplated as a puddle of elements that mirror the overall population of the study. In this study, these elements are all insurance firms of Pakistan, so the sample volume of the current study covers a total of 51 insurance organizations mainly comprising 8 life insurance, 5 Takaful organizations, and 38

non-life insurance firms, and the overall information is gathered with the help of their economical final reports that were submitted during the previous decade that was 2010 to 2019. Further, the economical indications of these firms are easily assessable on the internet and accessible from the official website of the firms or database.

Table 1
Population and Sample Size

Insurance Companies Population in Pakistan.	No	As per SBP Data Bank Active Insurance Firms, during SamplePeriod of 10 years (2010-2019)
Life Insurance Corporations	9	8
Non-Life Insurance Corporations	38	38
Takaful Companies	5	5
Total	52	51

Above mentioned Table 1 shows the population of 09 Life Insurance Corporations, 38 Non-Life Insurance Corporations and 05 Takaful Companies serving in Pakistan during financial years 2010-2019, American Life Insurance Company Ltd served independently till financial year 2010 .

After that it merged with IGI Insurance company, so it was dropped from sample size, rest of the 51 firms remain in working during that whole study period from 2010 to 2019.

Econometric model and Variable Description

$TE = \alpha o + \beta 1(AGE\ it) + \beta 2(BUVPS\ it) + \beta 3(CBTA\ it) + \beta 4(CINP\ it) + \beta 5(CR\ it) + \beta 6(EPS\ it) + \beta 7(EXCit) + \beta 8(ITAit) + \beta 9(LNOSit) + \beta 10(LTAit) + \varepsilon\ it$ **Model1**

$PTE = \alpha o + \beta 1(AGE\ it) + \beta 2(BUVPS\ it) + \beta 3(CBTA\ it) + \beta 4(CINP\ it) + \beta 5(CR\ it) + \beta 6(EPS\ it) + \beta 7(EXCit) + \beta 8(ITAit) + \beta 9(LNOSit) + \beta 10(LTAit) + \varepsilon\ it$ **Model 2**

$SE = \alpha o + \beta 1(AGE\ it) + \beta 2(BUVPS\ it) + \beta 3(CBTA\ it) + \beta 4(CINP\ it) + \beta 5(CR\ it) + \beta 6(EPS\ it) + \beta 7(EXCit) + \beta 8(ITAit) + \beta 9(LNOSit) + \beta 10(LTAit) + \varepsilon\ it$ **Model 3**

Table 2
Variables Description and their Calculation

Sr	Type	Variable	Abbr.	Formula
1	DV	Technical Efficiency Score (CRS)	TE	Calculated vie Data Envelopment Analysis
2	DV	Pure Technical Efficiency Score (VRS)	PTE	Calculated vie Data Envelopment Analysis
3	DV	Scale Efficiency Score (SEF)	SE	Calculated vie Data Envelopment Analysis
1	IV- Firm-Specific	Age of the Insurance Firm	AGE	calculated from the date of commencement of Insurance Firm
2	IV- Firm-Specific	Breakup value per share	BUVPS	BUVPS=(Total Shareholders' Equity/Number of Ordinary Shares)

3	IV- Firm Specific	Cash & bank balances to total assets	CBTA	CBTA=(Cash & bank balances/total assets)*100
4	IV- Firm Specific	Net Claims Incurred Ratio	CINP	CINP= (Net Claims/Net Premium)*100
5	IV- Firm Specific	Capital Ratio	CR	CR=(Total Shareholders' Equity/Total assets)*100
6	IV- Firm Specific	Earnings per share	EPS	EPS=Net Profit after Tax/Number of Ordinary Shares
7	IV- Macro-Economic	Exchange Rate (PKR to USD)	EXC	World Bank Macroeconomic Variables of Pakistan (2010-19)
8	IV- Firm Specific	Investment to total assets	ITA	ITA=(Investment / total assets)*100
9	IV- Firm-Specific	Log of No. of ordinary shares	LNOS	Outstanding shares at end of the period from the balance sheet.
10	IV- Firm-Specific	Log of Total Assets	LTA	The amount is taken from the balance sheet

Variables addressed in the study are calculated as per above mentioned financial ratios and key factors related to Insurance sector performance determinants.

Results and Discussion

Graphical presentation andDescriptive Analysis of Variables

Table 3
Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	SD	Skewness	Kurtosis
AGE	33.29	28.00	86.00	1.00	24.23	0.48	1.88
BUVPS	21.53	15.90	99.93	0.00	18.94	2.24	7.92
CBTA	0.14	0.08	0.50	0.01	0.14	1.37	3.86
CINP	0.59	0.49	1.96	0.04	0.47	1.53	4.97
CR	0.38	0.39	0.99	-1.07	0.30	-0.92	6.35
EPS	2.63	1.14	13.96	0.00	3.76	1.92	5.73
EXC	98.42	101.36	121.82	81.71	11.41	0.32	2.58
ITA	0.43	0.41	0.95	0.00	0.26	0.21	2.08
LNOS	10.68	10.82	13.39	6.21	1.08	-1.91	9.60
LTA	14.38	14.29	20.65	7.70	2.18	-0.39	4.69
PTE	0.91	1.00	1.00	0.32	0.15	-1.73	5.05
SE	0.78	0.87	1.00	0.10	0.25	-0.93	2.77
TE	0.72	0.77	1.00	0.09	0.28	-0.53	1.94

The variables CBTA , CINP and EPSwere highly dispersed and having outliers. So, before analysis these variables were winsorised at 5% level of significance. Figure 2 in appendix 1 present the line plot of each variable. The plot shows the trend of each variable for different time and cross-section. Table 3 shows the descriptive statistics of the variables used in this study. It provides details in the form of maximum, minimum, mean, median, standard deviation skewness and kurtosis for the dependent variable and explanatory variables.The results reveal that the minimum efficiency using TE, PTE and SE are 0.32, 0.09 and 0.091 respectively and the maximum value is1 for each efficiency measure. The overall mean efficiency using TE, PTE and SE are 0.91, 0.77 and 0.72 respectively. Insurance specific determinants have an average value of 33.29 for AGE, 21.53 for BUVPS, 0.13 for

CBTA, 0.59 for CINP, 0.37 for CR, 2.63 for EPS, 98.41 for EXC, 0.42 for ITA, 10.68 for LNOS, 14.38 for LTA, 0.914 for PTE, 0.77 for SE, 0.72 for TE.

Correlation and Multi Collinearity Diagnostics

Table 4presents correlation matrix and its significant level in bracket with VIF for each profitability measures of Insurance specific and macroeconomic variables. Concerning insurance specific variables, the results indicate that Age, CR and LNOS have a negative correlation with PTE, SE & TE. Whereas BUVPS has positive correlation with PTE and negative correlation with SE & TE, FurthermoreCBTA and LTA has positive correlation with PTE and TE whereas negative correlation with SE. Moreover, CINP, EPS, EXC and ITA have positive correlation with all three performance measures PTE, SE & TE these results are also aligned with previous studies Yazid et al., (2012), Schouteden., (2018) Stahl et al., (2020).The last column of this table shows the VIF for all dependent variables. All the variables have VIFbelow than 5 and the maximum value of VIF is 2.2 which shows no multicollinearity

Table 4
Correlation and Multicollinearity Diagnostic

	AGE	BUVPS	CBTA_	CINP	CR	EPS	EXC	ITA	LNOS	LTA	PTE	SE
BUV-PS	0.31 (0)											
CBTA_	-0.21 (0)	-0.18 (0)										
CINP	-0.02 (0.71)	-0.03 (0.54)	0.01 (0.79)									
CR	0.03 (0.51)	0.13 (0)	-0.06 (0.15)	0.11 (0.01)								
EPS	0.23 (0)	0.7 (0)	-0.18 (0)	-0.13 (0)	-0.06 (0.15)							
EXC	0.11 (0.01)	0.05 (0.26)	-0.11 (0.02)	-0.18 (0)	-0.05 (0.26)	0.07 (0.14)						
ITA	0.07 (0.09)	0.31 (0)	-0.27 (0)	0.06 (0.17)	0.04 (0.33)	0.4 (0)	0.07 (0.1)					
LNOS	0.13 (0)	0.3 (0)	-0.02 (0.69)	0.08 (0.07)	0.35 (0)	0.13 (0)	0.12 (0)	0.16 (0)				
LTA	0.3 (0)	0.4 (0)	-0.11 (0.01)	0.15 (0)	0.05 (0.27)	0.31 (0)	0.08 (0.08)	0.24 (0)	0.45 (0)			
PTE	-0.04 (0.39)	0.13 (0)	0.1 (0.03)	0.08 (0.06)	-0.08 (0.07)	0.21 (0)	0.06 (0.17)	0.16 (0)	-0.01 (0.81)	0.17 (0)		
SE	-0.16 (0)	-0.14 (0)	-0.04 (0.39)	0.07 (0.12)	-0.1 (0.03)	0.02 (0.67)	0.09 (0.04)	0.11 (0.01)	-0.11 (0.01)	-0.01 (0.82)	0.26 (0)	
TE	-0.17 (0)	-0.08 (0.07)	0.05 (0.29)	0.08 (0.07)	-0.11 (0.01)	0.09 (0.04)	0.08 (0.06)	0.15 (0)	-0.11 (0.01)	0.05 (0.23)	0.6 (0)	0.9 (0)
VIF	**1.196**	**2.318**	**1.144**	**1.123**	**1.236**	**2.290**	**1.086**	**1.305**	**1.522**	**1.541**		

Regression Analysis

Panel data regression modeling have three different model including, Pool regression model, Fixed effect model and random effect model for TE as dependent variable.

Similarly, for PTE and SE, we have used pool, fixed and random effects models. If we check TE then we see likelihood ratio is significant which shows that fixed effect is better than pooled effect, Value of housemen test is 0.04 which is very close to 0.05, from here we can access that on the behalf of fixed effect or random effect can be decided.

Table 5
Regression Modelling

	TE			PTE			SE		
	Pool	**FE**	**RE**	**Pool**	**FE**	**RE**	**Pool**	**FE**	**RE**
Age	0.01*** (0)	0.01*** (0)	0.01** (0)	0.01** (0)	0.01 (0.1)	0.01 (0)	0.01*** (0)	0.01*** (0)	0.01** (0)
Buvps	0.01*** (0)	0.01** (0)	0.01*** (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01*** (0)	0.01* (0)	0.01*** (0)
Cbta	0.14 (0.1)	0.06 (0.1)	0.1 (0.11)	0.2*** (0)	0.14* (0.07)	0.15*** (0.1)	-0.07 (0.08)	-0.2 (0.1)	-0.08 (0.1)
Cinp	0.07*** (0)	0.01 (0)	0.001 (0.02)	0.001** (0)	0.02 (0.01)	0.02 (0)	0.05** (0.02)	-0.001 (0)	0.01 (0)
Cr	-0.03 (0)	-0.1 (0.1)	0.001 (0.06)	-0.001 (0)	0.01 (0.04)	0.001 (0)	-0.02 (0.04)	-0.01 (0.1)	0.01 (0.1)
Eps	0.02*** (0)	0.02*** (0)	0.1*** (0.01)	0.01*** (0)	0.01*** (0)	0.01*** (0)	0.01*** (0)	0.01*** (0)	0.01*** (0)
Exc	0.1*** (0)	0.01*** (0)	0.01*** (0)	0** (0)	0* (0)	0*** (0)	0*** (0)	0.01*** (0)	0*** (0)
Ita	0.14*** (0.1)	0.03 (0.1)	0.1 (0.07)	0.1** (0)	0.07 (0.05)	0.07* (0)	0.11** (0.05)	-0.1 (0.1)	0.01 (0.1)
Lnos	-0.04*** (0)	-0.1***	-0.1 (0.02)	-0** (0)	-0.03 (0.02)	-0.02*	-0.02*** (0.01)	-0.001	-0.03 (0)
Lta	0.02*** (0)	0.01*** (0)	0.001 (0.01)	0*** (0)	0.01* (0.01)	0.01** (0)	0.01*** (0.01)	0.001 (0)	0.01 (0)
C	0.56*** (0.2)	1.12 (0.3)	0.7*** (0.2)	0.8 (0)	0.93** (0.17)	0.79*** (0.1)	0.68*** (0.14)	1.19*** (0.3)	0.84*** (0.2)
R^2	0.14	0.53	0.1	0.1	0.44	0.12	0.11	0.47	0.09
S.E. of reg	0.26	0.21	0.2	0.1	0.12	0.12	0.24	0.2	0.2
SS resid	34.58	19	22	9.9	6.35	6.99	29.4	17.6	20.1
F-statistic	8.05***	8.32***	3.4***	7.1***	5.85***	3.39***	6.11***	6.54***	2.6***
Durbin-W	1.16	2.03	1.9	1.4	2.07	1.9	1.39	2.23	2
LR Test	7.35***			5***			6.02***		
Hausman Test	18.68 **			4.5			22**		

(Pool= Pooled OLS, FE=Fixed Effect, RE=Random Effect)

In the second level OLS is not good, fixed effect is better again. Fixed effect is better than likelihood ratio and value of housemen test is 0.9 which shows that random effect is best suited for this model, as compared to fixed effect. And the last one fixed effect is better where we are using SE. after that there is a comparison of all three models. Among these all three-criterion having minimum vales is called best one (Kripa, & Ajasllari, 2016) & (McFadden et al., (2019).

From here if we estimate for PTE model made for it values are lesser then other two DV models. If we want to suggest overall then we can say PTE is working good and best fit, because its criterion is lesser then all other. Furthermore, the best suited model will be random effect model

The results with PTE as dependent variable have minimum standard error of the regression model and similarly the sum of square (S.S) of residual is also minimum for PTE so wo found the model with PTE as the best selected model. The value of LR test for PTE shows that the FE is better than the Pool estimation. And the p-value of Hausman test shows that the RE model is highly significant then FE model with p value 0.92.

Conclusion

In the current study the financial performance of insurance sector of Pakistan was analyzed in depth by using the determinants of its profitability. The financial performance of insurance sector was measured based on three dependent variables calculated via data envelopment analysis: technical efficiency, pure technical efficiency, and scale efficiency. Using these three variables insurer can confine the key operations of Insurancesector.

The results indicate that age of the firm, capital ratio and number of shares proved negative correlation with efficiency scores, PTE, SE & TE. Whereas breakup value per share has positive correlation with PTE and negative correlation with SE & TE, furthermore cash & bank balances to total assets and total assets has positive correlation with PTE and TE whereas negative correlation with SE. Moreover, claims incurred to net premium , earning per share, exchange rate and investment to total assets have positive correlation with all three performance measures PTE, SE & TE.

Recommendations

In the early modern period, Pakistan's insurance sector has been enthralled to enhancements in design and size with the help of some significant reform procedures and a powerful macroeconomic basis. Pakistan's insurance sector has observed a swift because of the huge transformation of aggregated resources from public to private firms, and this largely resulted in minimized resource concentration in this industry. Denationalization is the chief cause for these huge enhancements and has influenced the presentation of insurance firm design in the future. Regardless of the denationalization of the insurance firm, the intercession wave has not been minimized.

The outcomes of the given research are concentrated on the overall insurance sector including Takaful, life, and non-life insurance. And these outcomes can be helpful for the underwriter and provide an important direction to the administrators to effectively utilize the assets as well as resources in an extra effective manner. Moreover, for the authenticity and reliability of outcome, it is suggested that analysts can enlarge the data gathering and compare the Pakistani sector to other nation’s sector to better understand the link among variables both external and internal. Additionally, the analyst can also lead necessary study comprising contrast conduct elements that may affect the insurer advantage.

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Appendix