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The Causal Linkages between Market Power and Cost Efficiency: Testing Quiet Life Hypothesis for the Banking Industry

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Abstract
This study aims to test the quiet life hypothesis considering the impact of market power on cost efficiency in Pakistani banks where managers of the banking industry slacken their efforts to enjoy a 'quiet life' due to market power and are not focused on the cost efficiency of their banks. Thus, banks with high market power are relatively less focused on the efficient allocation of resources, resulting in a loss of consumer surplus and efficiency. We take panel data for a sample of 25 commercial banks throughout 2006-2019. Our findings suggest Uni-directional causality running from cost efficiency towards market power in the case of Pakistan. In addition, to control for endogeneity, we adopt a dynamic two-step system GMM approach to model the relationship between market power and cost efficiency. Our findings suggest significantly negative effects of cost efficiency over market power, disproving the presence of quiet life in the case of Pakistan. This study provides substantial theoretical contributions in the form of the Quiet life hypothesis and welfare performance of banks. However, to the best of our knowledge, the causal linkages and the effects of market power on cost efficiency or vice versa are not documented for the banking industry of Pakistan.
Keywords: Banking industry, Market power, Cost efficiency, Quiet Life hypothesis, GMM Model, Grange Causality

1. Introduction

1.1. Introduction and Background Study

The banking industry has its institutional origins in the period of Babel in 2000 B.C. Since then, this sector has been responsible for intermediary establishments—borrowing and lending activities (Aktan & Masood, 2010). Therefore, for directing savings to efficient and proper investments, the existence of a reliable banking sector is a great need of the hour. The Banking industry plays an essential role in the economic development and growth. Particularly, the bank serves as an intermediary for collecting funds from savers and channels them to borrowers. However, loss in consumer surplus and decreased welfare performance of banks may deteriorate the cost inefficiency, push the banking industry towards the edge of collapse, and thereby impose a cost on society. Thus, addressing the bottom line issues with respect to different dimensions and dynamics of the banking industry is of crucial importance in economic literature (Haghnejad, Samadi et al., 2019).

In 1935, Hicks postulated the quiet life hypothesis states that an increase in market power tends to decrease competition which enables the managers to enjoy a monopoly position hence, ignore cost efficiency. In other words, an increase in market power tend to lower the cost efficiency, such a negative nature of the relationship may persist because with an increase momentum of market power serves bank manager as a "Price cushion", due to which managers might become little careless of not working hard as to keep the cost at its lowest degree possible and loosen their effort in efficient allocation of resources to acquire and maintain market power (Tsionaset al., 2018).

This study is to strengthen our understanding about the cost efficiency with market power by employing QLH hypothesis. First, we estimate the market power through Lerner index. Secondly, we estimate cost efficiency through a stochastic frontier approach. Finally, it investigates the sign and direction of relationship in establishing the causal nexus between the cost efficiency and market power.

1.1.1. Brief historical overview of the Pakistani banking sector

Since independence, the banking industry was the most inefficient sector that stifled economic growth in 1947; Habib bank was the only state-owned bank which was not sufficient to fulfil the financing requirement of the newly established state. Hence, Pakistan established its own State bank in 1948 to achieve a wide range of objectives. With a span of 23, Pakistan possesses only the big five banks such as National Bank Ltd, Muslim Commercial Bank, United Bank, Allied Bank, and Habib Bank. The performances of these banks were not financially sound at that time. In the 1970s, the banking industry's condition worsened when 6 out of 14 banks were involved in the financial crises (Rafay & Farid, 2019). The government took serious precautionary measures to resolve the problem and, thus, was forced to nationalise the private banks functioning in that era. The political interest of the government people creates failures in the nationalisation of banks. In the early 1990s, the situation became so bad that ninety per cent of the total assets were taken over by public financial institutions (Burki & Niazi, 2010)

2. Literature Review

Current theoretical literature addresses the causality pattern of market power and cost efficiency and, thus, conceptualises in line with quite life hypotheses. (QLH) Quite a life hypothesis explains the inverse inter-relationship of market power and cost efficiency (Coccorese & Pellecchia, 2010). Most succinct and one of the pioneering approaches of Hicks (1935) postulated that "the best of all the monopoly is the quiet life"; the banks that are insulated from intense competition possess a greater market power exercise "price cushion "can set prices above marginal cost(Al-Jarrah 2010).In this way, the bank managers may have room to grab a share and choose to enjoy QLH so that they do not minimise the cost but rather raise profits in return. In other words, the argument is central around the idea that the "Pricing Cushion" may permit managers to slacken their effort and choose to enjoy quiet life, resulting in a consequence of reduced cost efficiency of the banks (Tsionas, Malikov et al. 2018).

However, there are ample findings that have been rather revealed mixed results. While employing the Granger causality, a positive result was found pertaining to the causal linkages of market power and cost efficiency in the case of Canada and the USA (Din et al., 2018). Instead, the most recent (Mala, Rodoni et al. 2018) has reported consistent results as Market power has a positive relationship with the cost efficiency of banks in Indonesia by employing a panel regression model.

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Tsionas et al., (2018) lend support to empirical evidence addressing the positive impact of market power on the bank's cost efficiency. Similarly, Dancsik, 2018) revealed that the greater the influence of market power, the more liberty the banks have to earn maximum profit, which allows them to become risk averse, which in turn decreases the monitoring cost, thereby improving the cost efficiency of the banking sector.

2.1. Causal Linkages between Market Power and Cost Efficiency

The empirical summary below shows the implication of Granger causality associated with the Quiet Life hypothesis across countries. In-depth analysis, along with recent literature, brings forth a clear picture of the relationship between market power and cost efficiency and the direction in which causality linkages between market power and cost efficiency are bidirectional or unidirectional.

Table 1: Empirical Summary of Granger Causality

S/No	Authors	Country	Period	Direction of Causality: Market Power----- Cost Efficiency
01	Phann, Anwarand Alexander (2018)	Hong Kong	2005-12	←
02	Boda (2018)	Salovakia	2005-15	←
03	TandFloros (2013)	China	2003-11	←
04	Sharma, Gouder and Xaing (2013)	Fiji	2001-11	←
05	(Mala et al., 2018)	Indonesia	2012-16	→
06	Khan et al (2017)	05Asian Countries	1999-2004	↔
07	Adeabah et al., (2019)	Ghanaian	2009-17	→
08	Apergis and Polemis (2016)	10MENA Countries	1997-2001	→
09	(Ipeghan et al, 2019)	Nigeria	2007-15	→
10	Arrawatia et al., (2015)	India	1996-2004	↔
11	Pardeep (2018)	US	2000-06	→
12	(Chortareas et al., 2011)	America	1997-2005	→
13	Kasman and Carvallo (2014)	15 Latin American Countries	2001-2008	↔
14	Homma, Tsutsui and Uchida (2014)	Japan	1974-2005	↔
15	(Tsionas et al., 2018)	US	1984-2007	←

3. Descriptive Statistics and Correlations

Descriptive statistics are reported in table 5 below. The means of Cost efficiency is higher than Lerner it means that cost efficiency performance is greater than the market power in the context of Pakistan and the skewness of Lerner is negatively skewed but less than 1 (-2.238) and Cost efficiency is negative skewed but less than 1 (-0.0467). As kurtosis explains the peaked ness of a distribution, based on the table which shows that market power is greater than 3 so its kurtosis is leptokurtic, having longer tails more peaked ness greater than normal distribution, but Cost efficiency are less than 3 so its kurtosis is playtykurtic, (shorter tails) flatter than normal distribution. The means of Size is greater than the GDP and ROA. However, as kurtosis explains the peakedness of a distribution, based on the table which shows that Size are greater than 3 so its kurtosis is leptokurtic, having longer tails more peakedness greater than normal distribution, but GDP are less than 3 so its kurtosis is playtykurtic, (shorter tails) flatter than normal distribution whereas, ROA are greater than 3 so its kurtosis is leptokurtic, having longer tails more peakedness greater than normal distribution.

Table 2: Descriptive Statistics

Variables	Means	Standard deviation	Maximum	Minimum	Skewness	Kurtosis	Jarque-Bera	N
Lerner	0.565429	0.233834	0.906229	-0.717643	-2.23889	11.16217	1274.794	353
CE	0.845951	0.070043	0.969881	0.710286	-0.04676	1.886977	18.34960	353
Control Variables								
Size	8.300221	0.596489	9.494765	5.658893	-0.50319	3.358163	16.78350	353
GDP	4.024164	1.683467	5.800000	0.360000	-0.88167	2.795482	46.34840	353
ROA	0.438368	1.682744	3.720000	-10.43000	-2.41148	11.62875	1437.247	353

Notes:

a. Source Author's estimations

b. For variable definitions refer to Table 3.9 in Chapter 3

Table 3: Correlation Matrix

Variables	ROA	Size	GDP	CE	Lerner
ROA	1				
Size	0.4363	1			
GDP	0.2107	0.0066	1		
CE	0.014	0.0389	0.0613	1	
Lerner	0.1236	0.2149	0.033	0.051	1

a. Source Author's estimations

b. *For variable definitions refer to Table 3.9 in Chapter 3*

The correlation matrix represents the association among all variables in the proposed model. The results are presented in Table 6. Although the correlation between Lerner and cost efficiency is weak which is 5%, the Lerner index (the proxy of market power) positively correlates with cost efficiency and the correlation of control variables is also weak but shows positive correlations. In addition, it can also be inferred from the above Table 6 that there is no concern for multicollinearity in our case.

3.1. Estimation of Trans log cost function SFA

In order to estimate the Lerner index for Market power and Cost efficiency and to test the Quiet life hypothesis framework, whether market power leads to cost efficiency in the Pakistani banking sector. For this purpose, we accordingly report our findings in Table 7 coupled with standard errors, corresponding parenthesis, and P values of each of our sampled banks. We estimate the parameters in line with the literature by applying the maximum likelihood technique.

Since many interaction and multiplicative terms are introduced in such models, interpreting individual coefficients is difficult (Xhelili, 2015). However, the main objective of such models is to estimate the marginal costs needed for constructing the Lerner index, and they do not focus on the significance of individual coefficients per se (Afza & Asghar, 2017).

However, a cursory view of the coefficients would be sufficient to reveal a few things. For example, the negative sign of the Coefficient signifies a downward shift in the cost frontier over a period of time, which suggests the improvement of output versus input. With more output and less input, banks are able to cut their costs, which may lead to cost efficiency (Xhelili, 2015).

Table 4: Trans log cost function SFA

Variables	Co-efficient	Stand. Error	t-statistics	P-value
Constant	18.90155	2.582805	7.318224	0.000
Ln Y_1	-0.806925	0.193374	-4.172874	0.000
Ln W1	0.882017	0.355661	2.479936	0.031
LnW2	-0.196363	0.386236	-0.508401	0.611
Ln W3	1.996437	0.572844	3.485134	0.000
$\frac{1}{2}$ *lnW1*lnW2	-0.055448	0.064516	-0.859447	0.390
$\frac{1}{2}$ *lnW1*ln W3	-0.047760	0.089883	-0.531352	0.595
$\frac{1}{2}$ *lnW2*lnW3	-0.081541	0.181894	0.448288	0.654
$\frac{1}{2}$ *(ln Y_1)^2	0.077383	0.002966	26.08958	0.000
Ln Y_1*lnW1	0.064553	0.017847	-3.616965	0.000
Ln Y_1*lnW2	0.013842	0.023577	0.587119	0.557
Ln Y_1*lnW3	-0.102265	0.033209	-3.079477	0.002
Adj. R^2			0.89	

3.2. Behavior of Lerner index over the years

The average annual Lerner index are estimated in Table 8. The great significance of the construction of Lerner over the other measures is that it computed market power of each bank level individually.

Quiet life hypothesis theory, the mean of Lerner index reports the market power conditions of Pakistani banking sector. Overall, Table 5 indicates that little has changed in the market power (from 0.593 in 2006 to 0.639 in 2019). During the entire sample period, the banking industry remained to be relatively monopolistic that could be assume to the higher degree of concentration stringent monitoring of SPB and amalgamation. The evidence of this line is consistent with (Beck, Demirgüç-Kunt, & Levine, 2006). Furthermore, increased concentration can lead to collusion among larger banks as evident by (Gischer, Müller, & Richter, 2015).

Figure 1 also indicates that due to collusion bias, Pakistan's bank profitability spread is higher as compared to other countries. This line of reasoning is in line with (Mirza et al., 2010; Ravner & Shamir, 2020). Barriers to entry bias that would further increase the market power are also consistent with previous empirical literature (Barra & Zotti, 2019; Hassan et al., 2019; Sabbaghi & Sabbaghi, 2018). Even after unprecedented financial prudential regulatory reforms have been introduced, their main aim was to remove barriers to entry by increasing the competition in the Pakistan banking sector.

Table 5: Lerner Index

Year	Lerner
2006	0.593
2007	0.572
2008	0.862
2009	0.527
2010	0.515
2011	0.519
2012	0.526
2013	0.566
2014	0.585
2015	0.548
2016	0.573
2017	0.603
2018	0.582
2019	0.639

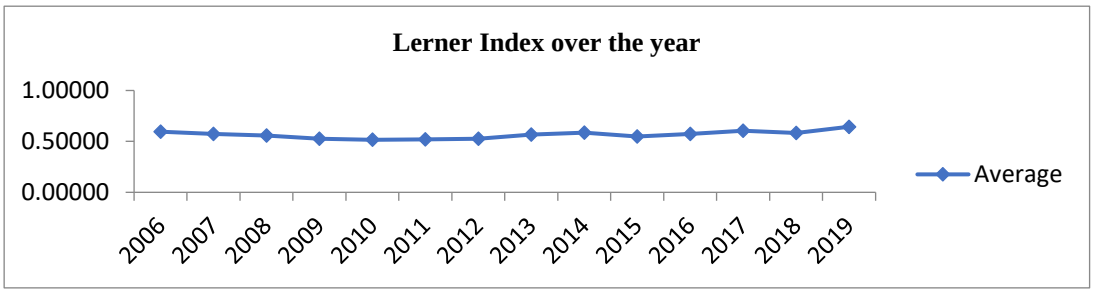

Figure 1: Lerner index over the year

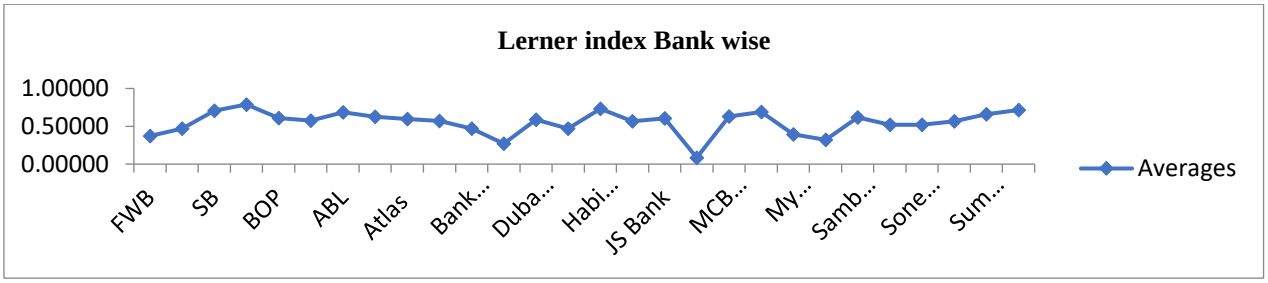

Figure 2: Bank Wise Lerner index estimation

Figure 2 additionally reports the display of market power at the bank level individually over the sample period 2006-2019. The National Bank of Pakistan, bank of Khyber, and Bank of Punjab are leading in terms of market power. BOP and BOK are statutory banks of their provinces Therefore, their position in the figure is understandable. At the same time, Bank Islamic and the defunct KSAB are showing low market power, which may be the cause of SBP's stringent restrictions that brought the banks under the stage of collapse due to their financing, various unproductive schemes, and mismanagement.

3.3. Construction of Cost Efficiency

Results for cost efficiency of Pakistani banks are reported in Table 6. Table 6 indicates a decreasing trend (from 0.861 in 2006 to 0.842 in 2019). During the entire sample period, a decrease in return to scale occurs due to increased costs as input expands (Afza & Asghar, 2017). On average, it has been witnessed that over the period of (2006-2008), the commercial banks' cost efficiency shows a decreasing return to scale (from 0.861 in 2006 to 0.829 in 2008). The major reason for the cost efficiency decreasing trend is the political influence in the banking industry exerted by the government. In (2009-2010) the commercial banks' cost efficiency showed a slight improvement (from 0.831 in 2009 to 0.859 in 2010), indicating the growth of cost efficiency. During the Period (2011-2014), the commercial bank's cost efficiency dropped significantly (from 0.835 in 2011 to 0.543 in 2014). Significantly, Cost efficiency improved in (2015) by (0.853). Again, dropped in 2016 by (0.834). Moreover, Slight improvement in scale (from 0.853 in 2017 to 0.854 in 2018) Later on, cost efficiency declined in 2019 by 0.842 the decreasing trend in the cost efficiency index is a consequence of the effect of the global financial crisis that deteriorated the Cost efficiency performance of the commercial banks (Niţoi & Spulbar, 2015).

Figure 3 displays the Cost efficiency for the period 2006-2019. Overall, Cost efficiency although showing decreasing return to scale because the value is less than One which in turn due to inappropriate allocation of inputs decreases the output that result in loss in Cost efficiency.

Considering bank wise cost efficiency, Faysal Bank, Dubai Islamic and ABL is found to be high in cost efficiency. The MCB and HBL banks are among Pakistan's five largest commercial banks. Moreover, the finding suggests that these banks show diminishing returns to scale economies of scale. The Bank of Punjab is less cost-efficient. Therefore, there is a need to improve cost efficiency to reduce costs. The main reason behind their inefficiency is the high provision for non-performing loans.

Table 6: Cost efficiency

Year	CE
2006	0.861
2007	0.835
2008	0.829
2009	0.831
2010	0.859
2011	0.835
2012	0.841
2013	0.829
2014	0.543
2015	0.855
2016	0.834
2017	0.853
2018	0.854
2019	0.842

Increasing trend

Decreasing trend

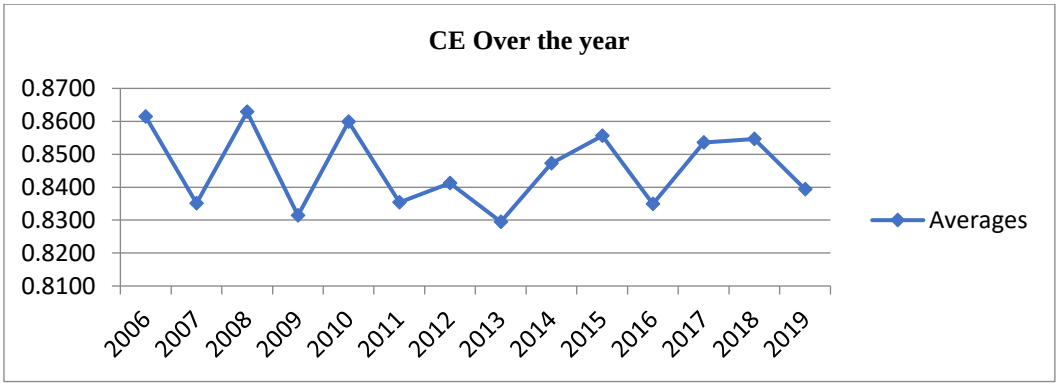

Figure 3: Cost efficiency over the year

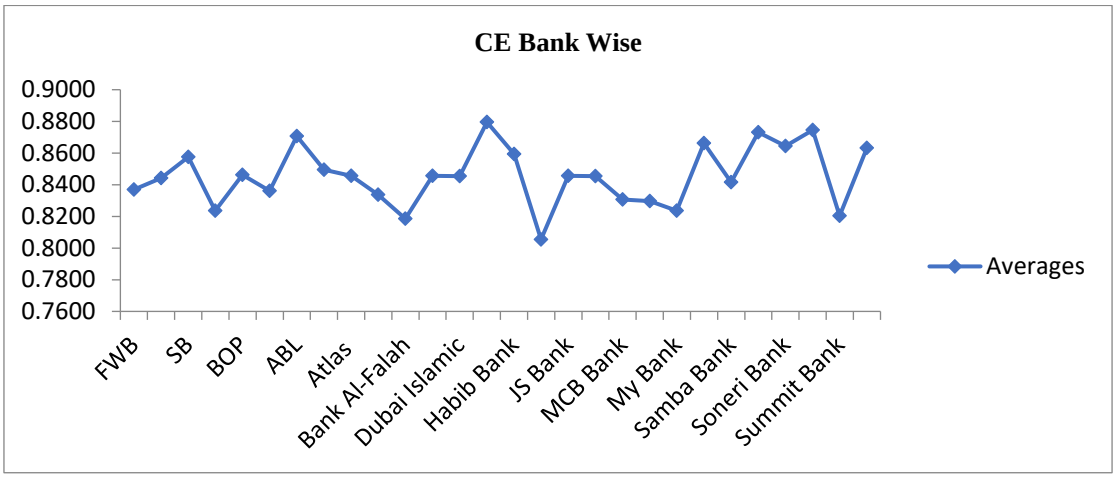

Figure 4: Bank Wise Cost efficiency

3.4. Panel Granger causality tests

To determine the causal linkages between market power and cost efficiency for the banking sector of Pakistan, we employ the Dumitrscu and Hurlin approach for estimating causality in panel data settings. This approach assumes that all the coefficients are treated as different or what is referred to as heterogeneous to all cross sections. This approach is based on two distinct statistics: Wbar statistics, which shows the averages of test statistics, and Statistics depict a normal distribution. These two statistics depict the standardised version of the statistics and are easier to compute.

To test the Granger Causality, the Dumitrescu- Hurlin Panel test is preferred to identify the cause and effect direction between variables in our proposed models. Test predicts a variable on the basis of using past values of another variable. The Granger causality test estimates two regression equations as follows:

$MP_t = \sum_{i=1}^{p} \gamma_i MP_{t-n} + \sum_{i=1}^{q} \delta_i CE_{t-n} + \mu_t$ (13)

$CE_t = \sum_{i=1}^{p} \gamma_i CE_{t-n} + \sum_{i=1}^{q} \delta_i MP_{t-n} + \mu_t$ (14)

Where, MP_t is Market Power and CE is Cost efficiency Table 7 presents null hypotheses of no causation are running from Market Power to cost efficiency in first. In the next equation the Market Power is checked again with Cost efficiency. The null hypothesis

of cost efficiency granger cause market power is ($p > .05$) is rejected. On the other hand, null hypothesis market power does not cause cost efficiency is ($p < .05$) is failed to reject. In brief the data of full sample has significant evidence of causality running from cost efficiency to market power in the banking sector of Pakistan. Consistent with (Demsetz, 1973) who proposed a negative effect and the causality running from cost efficiency to market power (A. Berger, 1995; Goldberg, Rai, & Finance, 1996) are in the support of this hypothesis. Hence, indicates to supports the efficient- structure hypothesis, where higher the cost efficiency leads to higher in market power. This implies that higher the cost efficiency that leads to reduction in bank competition that most efficient banks in Pakistan are able to lower their cost in order to gain higher market share that will lead to increase in their market power. Similarly, (Weill, 2004)on European banks (Pruteanu-Podpiera, Weill, & Schobert, 2007)on Czech banking industry. Moreover, the result is consistent with findings of (Pruteanu-Podpiera et al., 2007).(Koetter, Kolari, Spierdijk, & Statistics, 2012)on US banks and (Joaquin Maudos, De Guevara, & Finance, 2007)European Union banks. In addition, findings of Europe banking industry reject Quite life hypothesis Thus, result led to support of efficient structure hypothesis.

Table 7: Granger causality

Ho	Lag	W-Stat	Zbar-Statistic	Prob.
Market Power does not granger cause CE	02	2.16300	-0.714	0.4751
			1.9931	
CE does not granger cause Market Power		4.57759		0.0462

3.5. GMM Estimation

Now that we have ascertained that the direction of causality is running from Cost efficiency to Market Power in the case of Pakistan. Thus, we investigate the impact of CE over MP in a GMM model as proposed in the previous chapter. The results are reported in Table 8, showing that cost efficiency is negatively and significantly affecting market power at a 5 percent significance level. This means that a 1% increase in CE leads to a 14% decrease in market power. However, the control variables include ROA is negatively significant at a 5 percent level of significance, which means that a 1% increase in ROA negatively impacts Market power, Size is the positive impact of market power, and GDP is negatively insignificant. Finally, if the value of F-statistics is less than .05, it means that it implies the goodness of fit as all the estimated F-statistics are significant. Similarly, the AR2 test signifies that our models do not have second-order correlations among first-differenced errors. Likewise, the Hansen J-statistics is signifying the estimated model is valid.

Table 8: GMM Estimation Results

Dependent Variable	System GMM	P-Value
Market Power	Estimates	
CONSTANT	-0.14534	0.381
CE	-0.14898	0.0000
L_{-1}	0.76626	0.0000
ROA	-0.66126	0.0000
Size	0.482851	0.0000
GDP	-.000743	0.521
F-Statistics (p-value)	324	0.000
Number of instruments	59	
Number of groups	28	
AR(2)	0.3763	-0.8846
Hansen J Test	25.9612	0.9994

4. Discussion

Banks tend to provide unique services to their consumers. So, the accuracy and soundness of the financial activities in the banking system play a significant role in the banking policy debate (Anarfo & Abor, 2020). The aim of prudential banking regulatory and disciplinary authorities is to exercise policies to minimise the impact of market power and achieve cost efficiency (Asongu & Odhiambo, 2019a). In this research, we examined the nexus of market power and cost efficiency in the banking sector of Pakistan from 2006 to 2017, a period of post-regulatory reforms. This period is believed to be a crucial one for the financial development of the country, whereby extensive regulatory and disciplinary governance framework has altered the underlying market structure. And thus it necessitates to explore the underlying competitiveness and efficiency of the banking sector.

Following the literature, we test the quiet life hypothesis for the banking industry of Pakistan by looking into the nexus between market power and cost efficiency. Market power and Cost efficiency has been estimated for each bank year by employing a Stochastic Frontier Approach. A Lerner Index and Cost Efficiency returns to scale were estimated accordingly. Similarly, we compliment the findings of (Fernandez de Guevara et al., 2005) who failed to reject the Quite Life Hypothesis and their findings shows that the welfare costs due to high monopoly prices in the banking industry are relatively larger than the welfare losses due to cost efficiency. However, they adopt banking concentration as a proxy for the measurement of market power, which has been proven to be a weak measurement tool for measuring market power (Fernandez de Guevara et al., 2005; Joaquin et al.,

2007; Shaffer & Thomas, 2007). Thus, for the estimation of market power, we use the Lerner index, which measures the capability of banks to dictate prices above marginal cost (Elzinga & Mills, 2011).

Moving forward, studies have investigated the relationship between bank competition and cost efficiency using a variety of proxies and methods (Berger & Hannan, 1989; Casu & Girardone, 2006). Following the literature, we adopt a multivariate, dynamic and robust two step system GMM approach and found a negative relationship between cost efficiency and market power for the banking industry of Pakistan. Our findings align with those of (Berger and Hannan, 1998) and (Joaquin et al., 2007), who also reported a negative relationship between competition and efficiency and recommended that a competitive banking environment is more cost-efficient. However, (Ataullah & Le, 2006) reported a positive relationship between competition and efficiency. Thus, our findings are in contrast to theirs.

Consistent with our findings, the recent studies (Chirwa & Mlachila, 2004; Moore & Craigwell, 2002; Vera-Gilces et al., 2020) have revealed the causality result between competition and cost efficiency Hence, indicates that Granger causality runs from cost efficiency to market power it means that there is one-way causality or Uni-causality but not vice versa Thus, implies that the cost efficiency improvement is considered as the key to foster the regulatory requirement in order to ensure the competitive environment.

However, the study proposed weak causality running from bank cost efficiency and market power. (Alhassan, Ohene-Asare, & Studies, 2016) report causality between bank competition and bank efficiency by using a sample of 10 Ghanaian banks over the period of 1995-2005. In addition, the authors have applied Generalized least square estimators to estimate the nature of the relationship and then applied Granger causality to check the direction of causality. Hence, their findings revealed unidirectional negative causality from bank cost efficiency to market power, which aligns with our research.

5. Conclusion

Based on the above discussion, a number of conclusions can be derived. First, the Cost efficiency is having a negative and significant impact on Market power in the case of Pakistan. Thus, we do not find supporting evidence in favour of the 'Quiet Life Hypothesis' for the banking industry of Pakistan. Second, the empirical results from the panel granger causality represent that there is a unidirectional causality running from cost efficiency to market power, and the results are again not consistent with the Quiet Life hypothesis, implying that more market power induces banks to incur more slack in the management of the banking industry. However, our results show that the Granger causality runs from cost efficiency to market power but not vice versa. It means that the direction of market power can be predicted through cost efficiency. If the banks are cost-efficient, that will increase the consumer surplus and improve the social welfare performance of banks. Finally, the market power of Pakistan, as indicated by the Lerner index, is from (0.593 in 2006 to 0.639 in 2019). During the entire sample period, the banking industry remained monopolistic, which could be assumed that a higher degree of concentration shows the collusive market power behaviour. In other words, the higher the market power, the higher the financial intermediation cost. This may return on investment simultaneously, adversely impacting the economic growth of Pakistan.

5.1. Policy Implications

Based on our findings, the policy implication has been made by understanding the nature of the causality linkages of market power and cost efficiency operating in the banking industry. This finding brings forth essential policy implications for Pakistan's regulatory authorities, bankers, and policymakers. It implies that pointing out the theoretical viewpoint of the Quiet Life hypothesis that Banks having more market power are less cost-efficient because bank managers slacken their effort to enjoy Quiet Life and ignore the cost-efficiency.

Therefore, there is a need to favour the pro-Competitive policies in the Pakistani banking sector that would eventually improve cost-efficiency and lower market power. This, in turn, can significantly contribute to Pakistan's social welfare performance and increase economic growth, as banks play an essential role in the Pakistani financial sector. Also, adopting cost-efficiency-enhancing policies would be a way forward for a productive and competitive environment. Moreover, market power may lead to a loss in cost efficiency, particularly when large banks are involved because they slacken their effort to enjoy the cushion of a "Quiet life".

5.2. Limitations

This study, like any other, suffers from some limitations. Some are highlighted below:

- Due to unavailability of the data we ignored foreign banks, and specialized banks that could reveal an entirely different story.
- We only considered the banking industry's efficiency in terms of cost efficiency and ignored profit efficiency, which considers revenue inefficiency and can lead to alternative explanations.

5.3. Future Research

The relationship between market power and cost efficiency might be more complex than anticipated usually. We suggest exploring the said nexus in the context of the Structure Conduct Performance (SCP) paradigm and bank specificities for further insights. Price setting and cost behaviors of managers by considering X efficiency and or technical efficiency of the banking industry could be another potential area of research. In addition, we only considered accounting information and publicly available market data, some qualitative assessments may provide contrasting insights

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