THE EFFICIENCY OF MERGER AND ACQUISITION IN TELCOM SECTOR OF PAKISTAN

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ABSTRACT

The researcher has analyzed that how the technical efficiency of total assets, current assets model, expenses model of the telecom industry in Pakistan. For this purpose the researcher has used two stages in which one is the CCR model which has calculated the efficiency by the technology in the time spam of 5008-2012 and multiple regression is being used to analyze second stage factors just like the intensity of acquisition, sequence of acquisition and more important is the efficiency which tells us about the efficiency of the companies. As the results tell that there is negative value between sequence of acquisition and TE in both total asset model and current model asset. Further findings also showed that there is a significant positive relationship between size and TE in total Asset model and the in the total asset model but the former holds a positive relationship while the later showed negative relationship. Based on the regression analysis, none of the mentioned factors can explain the changes in TE model.

In the future research areas, it is recommended the other variables like existence of government lined corporation among the telecommunication companies and the role of regulatory as they might also affect companies which are involved in M&A.

INTRODUCTION

In a highly global and intensive environment the high usage of technology forced most of the companies in telecom sector of Pakistan to get involved in merger and acquisition. M&A is now growing very firstly in all over the world it’s because that involved companies earning very rich and more revenue as compared to those who not involved in it. The merged companies sharing each and every thing for increasing their revenue. In Pakistan after the banking sector M&A the telecom is second largest industry which involve in it. Where most of highly intensive companies merging to grab more and more shares of market.
and to lead it. In Pakistan 6 companies are operating in telecom industry under the umbrella of Pakistan telecommunication authority (PTA).

<table>
<thead>
<tr>
<th>NO.</th>
<th>COMPANIES</th>
<th>Involvement in M&amp;A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobilink</td>
<td>NO</td>
</tr>
<tr>
<td>2</td>
<td>Zong</td>
<td>YES</td>
</tr>
<tr>
<td>3</td>
<td>Telenor</td>
<td>NO</td>
</tr>
<tr>
<td>4</td>
<td>Ufone</td>
<td>NO</td>
</tr>
<tr>
<td>5</td>
<td>Warid (expected)</td>
<td>NO</td>
</tr>
<tr>
<td>6</td>
<td>PTCL</td>
<td>YES</td>
</tr>
</tbody>
</table>

Figure: 1

In the above showed listed companies 2 have done the merger and acquisition, while Warid is going to be merged with China mobile company or not. ZONG is an china based international company which acquires the Pakistan company Paktel in 2008, it is now actively working in Pakistan and having 15million of subscribers in 2012. PTCL is Pakistan based Landline Company and now it has merged with Abu Dhabi Company Etisalat, and after the disastrous decline now it much improved due to foreign investment.

The main objective of the researcher is to focus on the total model of assets, the total expenses model and the current assets of the companies and further know the innovation and how they are technically efficient to work with merged companies. It is generally accepted that every firm having high and intensive technology as compared to their rival will be perform and earn more revenue and generate more output, even though in generating less output compare to other peers, a situation can come and happen to company where it will earn more and improve their performance and to generate more revenue compare to their competitors. If a firm using less input so it will also be high when the focus to use the input in right way and manage the acquisition correctly, merged companies have high intensive technology and efficient management to do so.

In most of cases the technical efficient firms did not achieved and bring out the desired output so if they work in focus mind and plan out good strategies so very soon they can success because they have efficient resources and nets of information but only strong management is required to do it. Singh and Mogla, 2008, studied that most of the companies
which passed from merger and acquisition will suffer in loss and will be decline their revenue for existing years.

Kumar, 2009, agrees also that the revenue of those firm not improving consistently when it compares to the pre-merged companies, such companies like Wolter kluwer have merged with other international firm for the sake to improve profitability and revenue, but instead of that view he failed to achieve his objective because of too many acquisitions and not managed in better way which is required for it. WorldCom, 2002, It have merged and acquired 82 firm in telecommunication sector and it become on of the largest company having efficient and intensive technology but only the reason which make it insolvent is bad management. They cannot manage well as it required doing it.

Dumon 2009, studied if the firms merged or acquired other firms so it will leading to go better management and then it will increase the investment and investor will focus on it and it will synergize the firm in most of its functions and later it will toward success and earn more revenue and profit. Additionally, Kusewitt, 1985 is focused on, when a firm going to merged with other or going to acquire it so before this step they have to analyze their own strengths and weakness compared to the target firm. Fredrickson and Mitchell studies that a firm going to involve itself in this process so firstly they have to make proper strategy and conceptualization sequence of decision for taking any action.

This study resulting that merger and acquisition is very profitable when the firms firstly see the sequence and intensity of synergizing their integration is properly managed and make best strategy for doing it and strictly impose it.

LITERATURE REVIEW

This section shows the study of other scholars and firms which have passed from the process of M&A. our research is focusing on telecom sector merger and acquisition in Pakistan, it does not shows any sort of relationship or touching any other industry or firms for measuring the relative efficiency in competitive environment. The next phase of research based on regression analysis of variables.

- THE MEASUREMENT IN RELATIVE FIRMS BASED ON EFFICIENCY DAE.

The purpose of the M&A is to get high valve through adding extra and additional inputs. Many scholars are agree that a firm having highly efficiency will be performing very well as compared to less stable and low efficiency firms. Gohand and Porter, 1999, made evidence that a firm which have relatively highly efficiency will be perform better than which has less efficiency. Measuring the relatively high efficiency through DAE, This is defined by Charness et.al, 1978.
It’s a type of mathematical program approach which is very well known for measuring the relative efficiency. Veer and Kuntz, 2007, the DAE program is mostly using for analyzing and evaluating the efficiency of public, private and nonprofit organization like NGO’s, hospitals and police. Mustafa, 2007, the DAE application is very famous in Middle East for such Arab banks evaluating efficiency.

Sufian, 2006, DAE program evaluating any efficiency it may be profit or loss in resulting from M&A activity. Zhu, 2004, the DAE have highly usage in telecommunication sector for evaluating and measuring the industry firms compatibility. Majumdar et.al, 2010, the merger and acquisition have a wave in telecom sector which resulting high efficiency and leading the industry in Malaysia, the telecom companies is growing very fast which have taste the merger and acquisition.

Hasbibullah, 2009, efficiency evaluating using in those companies in which some of them have merged and acquired while remaining do not take part in it.

Kwon et.al, 2008, studied that wireless companies who merged in a specific years so the resulting less efficiency in that year, as compared to those wireless companies which were not involved in it. Sufian, 2006, most of scholars rely that technical efficiency is a one of source and way or criteria for measuring among merged and non merged firms in industry.

- **THE SECOND PHASE IS REGRESSION ANALYSIS**

Holf, 2007, says that common least square is a best source and it replaced by tobit estimation. It’s another good source for DAE model. McDonald, 2009, studied that tobit is a suitable measurement for dependent variable but some time due to sensitivity of data it leading to biasness of resulting where as this weakness is removing by CLC. While CLC resulting zero fixed and unbiased results and estimation. CLC is preferred for use and evaluate the intensity and size of acquiring firm.

- **ACQUIRING FIRM SIZE**

Seth, 1990, economies of scale creating synergies and combination of more companies creating efficiencies through the combine work force and size. Wan mahmood and Muhammad, 2007, when more companies combines so they achieve greater efficiency in most of their departments like production, HR, finance and marketing. Therefore this study also focusing on size because it’s a necessary variable for effecting the relative efficiency in industry.

- **THE INTENSITY AND SEQUENCE OF ACQUISITION**

Askenas et.al 1998, says that well managed company of merger will integrate effectively and recover within 100 days. Barkema &schijven, 2008, they stated that higher acquisition intensity required short time to search and impose for an effective action before targeting are
going to involve in next acquisition. This study shows that the sequence of acquisition mean combined number of acquisition in a given year, while intensity of acquisition reflects the specific number of acquisition in a particular year.

Levitt & March, 1988, studied when a firm continuously involved in a process so it become the routine job of that firm which is easy for managing and running it. Cyert & March 1988, M&A is based on strong decision team which point out the symptoms and remedies for any dangerous time and make contingency plan for solving it. The above studies show that intensity and sequence is undergone by recent companies of using year by year.

**RESEARCH METHODOLOGY**

This research is focusing on only three companies mobilink, zong and PTCL. Mobilink is an overseas company which parent company is overcome. This company is not involved in any type of M&A activity. Zong is china based company (CM pak) this company is involved in M&A. ZONG has acquired the PAKTAL in 2008. The PTCL is Pakistan based telecommunication company and it also involved in M&A activity. PTCL have merged with ABU DHABI Company ETISALAD in 2001.

The data of the above both companies have collected (2008 to 2012) from Pakistan telecommunication authority. The reason for selecting these companies was easy access to their data. In this paper we study the intensity and sequences of acquisition. Technical efficiency will be analyze by using the expense model and current asset model over last 5 years 2008 to 2012.

The population contain all three companies based in telecom sector of Pakistan, we collected the required data of these companies to use the DAE application on these data to know about their relative efficiencies. DAE is a program for measuring the efficiency of merged and non merged companies. This study employ total asset, current asset and total expense as input.

Total asset model (TAM).

Current asset model (CAM).

Total expense model (TEM).

Total asset model. It contain the existing property, plants and other equipment of the firm which it has since 2008 to 2012, and showing the current assets of company, and their output is only to generate higher revenue. the return on asset is also the category of that but DAE not showing the results of this according to the requirements, so ROA is excluding from it.
Current asset model. Its comprise the cash in hands and cash for short term investment for further investing in business and their account receivables and their output is also is revenue. Total expense model. Contain the categories of those plants or asset which is depreciated to the firm or amortization is charged on it and other expenses for operating the firm, the output of expenses model is also the revenue.

These three models showing the data of the firms and then us putting the data into the DAE program for evaluation.

The below are the hypothesis for this paper,

H1. Higher the intensity acquisition of acquiring firms lower the technical efficiency.

H2. Acquiring firm have higher sequence, lower the technical efficiency.

H3. Acquiring firms size are positively related to technical efficiency.

**FINDINGS**

DAE, each year the firms are treated the separate decision making units and 3 companies have selected for the study over the period of 5 years which have 9 MDU’s.

Table 2. Technical efficiency model.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>COMPANY</th>
<th>YEAR 2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL ASSET MODEL</td>
<td>PTCL</td>
<td>0.832</td>
<td>0.894</td>
<td>0.921</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ZONG</td>
<td>0.441</td>
<td>0.498</td>
<td>0.532</td>
<td>0.567</td>
<td>0.621</td>
</tr>
<tr>
<td></td>
<td>MOBILINK</td>
<td>0.524</td>
<td>0.598</td>
<td>0.632</td>
<td>0.702</td>
<td>0.722</td>
</tr>
<tr>
<td>CURRENT ASSET MODEL</td>
<td>PTCL</td>
<td>0.781</td>
<td>0.799</td>
<td>0.801</td>
<td>0.856</td>
<td>0.953</td>
</tr>
<tr>
<td></td>
<td>ZONG</td>
<td>0.392</td>
<td>0.401</td>
<td>0.422</td>
<td>0.458</td>
<td>0.501</td>
</tr>
<tr>
<td></td>
<td>MOBILINK</td>
<td>0.462</td>
<td>0.489</td>
<td>0.501</td>
<td>0.565</td>
<td>0.610</td>
</tr>
<tr>
<td>TOTAL EXPENSE MODEL</td>
<td>PTCL</td>
<td>0.735</td>
<td>0.786</td>
<td>0.797</td>
<td>0.823</td>
<td>0.932</td>
</tr>
<tr>
<td></td>
<td>ZONG</td>
<td>0.321</td>
<td>0.344</td>
<td>0.376</td>
<td>0.385</td>
<td>0.401</td>
</tr>
<tr>
<td></td>
<td>MOBILINK</td>
<td>0.421</td>
<td>0.435</td>
<td>0.475</td>
<td>0.498</td>
<td>0.503</td>
</tr>
</tbody>
</table>
Table 2

The values which near to 1 are consider being more volatile than near to 0.

In the above table the PTCL have reached to 1 which shows the highest total asset in 2011 and 2012, while the zong have lowest digits which result having less efficiency as compared to others.

Table 3. Intensity and sequence of acquisitions.

<table>
<thead>
<tr>
<th>COMPANIES</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTCL INTENSITY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>ZONG INTENSITY</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MOBILINK INTENSITY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The above table shows that the mention companies did how much acquisitions and how it should be managed. the PTCL have merged with Etisalat in 2011, and ZONG acquired the Paktel company in 2008 while mobilink is not did any such merger or acquisition. The table 3 shows the efficiency score of different models in which 9 MDU’s working efficiently and remaining others are not enough like this,

ZONG total asset model is consistently improving from 2008 to 2012, in current asset model zong as consistently improving because in 2008 it was merged with paktel. In expenses model zong also increasing their expenses it’s because of depreciation and increasing the operating expenses like advertising etc. PTCL is the largest firm in Pakistan it’s total asset is also increasing in property and other equipment purchasing like plants etc.

Current asset model is showing also increase like the total assets, expenses model is highly increasing before merging with Etisalat and later decrease their expenses and increase the productivity and operating expenses. Mobilink is the first largest telecommunication
company in Pakistan. And also increasing their all model consistently and especially there expenses model and current asset model.

The output of these companies has to earn more and more revenue.

**REGRESSION ANALYSIS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MODEL SUMMARY</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADJUSTED R square</td>
<td>F</td>
</tr>
<tr>
<td>TAM</td>
<td>.562</td>
<td>15.938</td>
</tr>
<tr>
<td>CAM</td>
<td>.501</td>
<td>14.177 .000</td>
</tr>
<tr>
<td>TEM</td>
<td>.018</td>
<td>1.231 .318</td>
</tr>
</tbody>
</table>

Independent variables are, experience in M&A, Size, Intensity of firm.

Dependent variable, technical efficiency.

The model shows the TAM and CAM registered value is 56% and 50% in TE, which will be select for further examining, however the TEM value is 1.8% which is less than 1 so it will be exclude from it and it not able to examine further and it not explaining the effect of variance.

**HYPOTHESIS TESTING**

**RESULTS OF COEFFICIENT REGRESSION ANALYSIS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>STANDERD COEFFICIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
</tr>
<tr>
<td>TAM</td>
<td>TE (technical efficiency)</td>
</tr>
<tr>
<td></td>
<td>.360</td>
</tr>
<tr>
<td></td>
<td>SIZE</td>
</tr>
<tr>
<td></td>
<td>INTENSITY</td>
</tr>
<tr>
<td></td>
<td>SEQUENCE</td>
</tr>
</tbody>
</table>
The TEM model did not show because of no effecting the variance and it caused by other variables like intensity, size and sequence. In testing H1 the coefficient of acquisition is positive and insignificant (p>0.1) thus relationship is weak. H2 is negatively but highly significant (p>0.001) so it will be strongly supported, H3 is coefficient of acquisition found have a significant (p>0.001) but having negative relationship.

Thus H3 is strongly supported because of the size and current asset model have positive relationship with technical efficiencies, their relationship is significant (p>0.05), it’s mean when a firm bigger in size it would result in increase in technical efficiency so H3 is supported.

**CONCLUSION AND RECOMMENDATIONS**

The purpose of this study is to find the technical efficiency trend in telecom sector of Pakistan, which have done the merger and acquisition. We measured all the 3 companies based on size, intensity and sequence on technical efficiencies on base of 3 models which is total asset model, current asset model and total expenses model.

The DAE score analysis that which company decreasing or increasing in 3 models for 5years data. It also explains that which company investing more and how much are their expenses and revenues. ZONG and PTCL have not requires sequences because they did only 1, 1 on merger and acquisition, while their intensity is required to that it how to manage it and lead to profitability and they have to focus mind for next merger and acquisition, Lu & lo 2006, studied that size is negatively related to efficiency because if its right so the smaller firms will not go to involve in it and it will be mostly in loss.

The loophole of this study includes its relatively short period of observation and scarcity of data because most of the telecommunication companies involved in M&As only recently undergo public listing in the Malaysian Bursa website.

Redtone and Green Packet are listed in 2004 while Axiata in 2005. Notwithstanding to this loophole, the findings of this study still provide a valuable insight into the operating status
of companies which would enable the formulation of a future approach towards strategic intensity and sequence of acquisitions so that higher relative efficiencies can be realized.

Therefore with coming of this study I believe that it will be most beneficial and significantly interested for telecom sector of Pakistan and encouraging the companies for more merger and acquisition.

REFERENCES


