

Telecommunications Role in Economic Growth with Respect to Pakistan

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Received: 14 December 2011 Accepted: 4 January 2012 Published: 15 January 2012

Abstract

This study investigates the relationship between economic growth and development in the telecom sector through foreign direct Investment (FDI) and making good infrastructure for land line and cell phones. We check the impact of the telecom sector, independent variable, on the economic growth, dependent variable, through using questionnaire based of five options likert scale then we used the simple regression model as statistical instrument to check the impact. In this study we shows that the growth in the telecom sector is not consider as a whole growth in the economy.

Index terms— Telecom, Economic growth, developing countries.

1 Introduction

he economists always consider an important factor for development in infrastructure of telecom in any county to measure growth in that country, therefore for economists, it is a positive sign for the economic growth the investment, which is in the infrastructure that ultimately impacted on the social over head capital, which consider as the education expenditure, health services, and public infrastructure e.g. roads, porches and the telecommunication. Studies measure the growth dividend of investment in telecom sector in developed countries but few have asses the impact of telecom role in developing countries (Hardy, 1980; ??orton, 1992; ??oeller & waver, 2001).

It is a well known fact that the transportation cost has heavily influent and high the price of products the economy along with the organization always touch, in this regard and keep on trying to reduce the cost of the product. In OECD Organizational Economic Cooperative Developing) countries the spread of telecom network alone consider the responsible for one 3 rd of out put growth between 1970 and 1990 (Hardy, 1980; ??orton, 1992; ??oeller & waver, 2001).

It is also consider with this expansion in the telecom network helpful in expending of the market boundaries and information flows (Hardy, 1980; ??orton, 1992; ??oeller & waver, 2001).

To understand this phenomena that expansion in the market boundaries and information growth to much dependent on the telecom network in the Era Author : M.Phil Scholar University of Lahore, Islamabad Pakistan E-mail : shakeel_mohsin@yahoo.com Author : Lecturer Management University of Lahore, Islamabad, Pakistan. E-mail :ghafoor724@gmail.com Author : M.Phil Scholar University of Lahore, Islamabad, Pakistan E-mail : Hanniamalik@live.com before and the after 1860. In 1860 before the innovation of telegraph, markets were considered as close markets and no kind of information can be pulled out from such kind of markets and now there is an expansion in the market boundaries but after the expansion of the telegraphy instruments the market boundaries have gradually increased and the information transmitted from one market to another market (telecommunication & Empire Era 1860-1930). So it means that telecom networks are much helpful in producing economic growth, in decreasing of the transaction cost impacting on the GDP for economy trading on up-word with wide range out put significantly ??Roellar & Verman, 2001). It is to remember that the level of telecom infrastructure working in the OECD countries was very low on the other hand it was at universal level

4 A) PROBLEM STATEMENT:

in US and Canada in year of 1970. Where as in the same year the other European countries like France Italy and Portugal had limited telecom infrastructure (Roeller & Verman, 2001).

It is to note that expansion in the modern telecommunication infrastructure from 1970 to 1990 the economic growth has the up-word trend rapidly as compare to the investment in telecom networks field. (Leonard Waverman & Meloria Meschi, 2007). The level of penetration of telecom networks is increasingly on growth dependent which also on the level of penetration initially and nearly universal services; a phone in every house holds and firm as for the government stander the policy to establish the universal services has not only for enhancing the equity for the government but also has the implied appreciation in growth enhancing parameter of the telecommunication infrastructure expansion. (Roeller & Waverman, 2001). According to international organization namely International Telecommunication Union (ITU), 1995, only 214 are the member of this organization where as the rest of world still lack in the development in the telecommunication sector considering modern, efficient, economic system, (Roeller & Waverman, 2001).

According to Roeller and Waverman the telecom sector only comprised on fixed line systems rather then no knowing about mobile phones as much in era of 1970 to 1990. Whereas, today there is much development in the telecom sector, the mobile phones have given much weighted especially that members ITU in numbering 102 where lowering the penetration phone level in 1995, now there is also an increase in the mobile phone sector as compared to land line phones infrastructure. In this regard we can quote the example of Moracco where the telecom penetration rate was four fixed lines per 100 people and zero in mobile per 100 people in 1995 where as in 2003, 8 years later, mobile penetration was 24 per 100 people while the fixed line penetration remained almost the same. (Leonard Waverman & Meloria Meschi, 2007).

2 II.

3 Reviewing of Literature

Telecom infrastructure development got a great attention of researchers in resent years. Hu (1996) attempted to examine the causal relationship running from telecommunications investment to economic development only using a pooled time series analysis based on 17 years data from 23 countries, and found telecommunications investment countries, and found telecommunications investment countries, Madden and Savage (1998) analyzed the relationship between telecommunications infrastructure investment and economic growth by taking a sample of transitional economies in Central and Eastern Europe. The study showed that overall, there appears to be two ways, or mutual causality between telecommunications investment and real economic growth at the aggregate level. Boy laud and Nicoletti (2000) used factor analysis and panel data analysis to examine the effects of market entry, liberalization and privatization on productivity, prices and quality of service in long-distance fixed-line and in mobile telephony in 714 (Zahra, Azim, and Mahmood, 2002) several OECD countries. In another study, Li and Xu (2001) examined the impact of privatization and competition on fixed-line subscriptions, labour and factor productivity in the telecommunication industry worldwide. A study of Yilmaz, et al. (2001) indicated that the accumulation of telecommunication infrastructure improves the overall productive capacity at the regional level by examining the impact of telecommunications infrastructure on economic output both at the aggregate and sectoral levels in the United States. Wallsten (2002) used data on telecommunication industry worldwide to analyse whether the sequence of reforms matters. Ink, et al. (2002) used data on 86 developing countries worldwide to analyse the impact of telecommunication policy reforms on industry performance. Ding and Haynes (2004) empirically investigated the role of telecommunication infrastructure in long run regional economic growth in China for a sample of 29 regions for a 17 years' period, from 1986-2002. With a panel dataset, they used a dynamic fixed effects model for estimation, which allows testing the relationship between regional economic growth with initial economic condition, fixed investment, population growth, as well as telecommunications infrastructure. On the basis of the results, they showed that telecommunications is both statistically significant and positively correlated to regional economic growth in real GDP per capita in China. The results were strong even after controlling for investment, population growth, past levels of GDP per capita, and lagged growth. They further indicated that the telecommunication investment is subject to diminishing returns, suggesting in this manner that regions at an earlier stage of development are likely to gain the most from investing in telecom infrastructure.

The result has been confirmed by more recent analysis of economic growth in OECD by Datta and Agarwal (2004) which indicates that telecommunications infrastructure plays a positive and significant role in economic growth using a similar (but not identical) data set as Roller and Waverman, which includes 22 OECD countries. A dynamic panel data method is used for estimation, which corrects for omitted variables bias of single equation cross-section regression. Again, country-specific fixed effects are included. Their results showed a significant and positive correlation between telecommunications infrastructure and growth, after controlling for a number of other factors.

4 a) Problem Statement:

The purpose of this study is exploring the relationship between the economic growths and financing through telecom infrastructure.

5 III.

6 Conceptual Frame Work

IV.

7 Formulation of Hypothesis

The study is explaining to analyze the role of telecom on economic growth with expansion in this sector rapidly deployment of the modern technology. To examine the role of telecoms in growth of the economy with respect to Pakistan telecom sector for this making following Hypothesis.

8 Telecom Sector

Economic Growth

9 FDI Land & Cellular Lines

10 Global Journal of Management and Business Research Volume XII Issue XIX Version I 2012

Year H1 : There is a significant role of telecom setup in the development of economic growth. Against the null hypothesis there is no role H2 : Foreign Direct Investment in telecom sector plays a positive role for the development of the economic growth.

Against the hypothesis there is no positive role.

V.

11 Methodology

As this study is focusing to explore the role of telecom sector in gaining the economic growth with respect to Pakistan economy which is considered as an under developed economy. Since it is a volatile market therefore to calculate the role of telecom sector demands a deep analysis of the market and the development in telecom sector is very crucial. To analyze, it is pre-requisite to examine before and after telecom sector role in increasing the GDP and Revenue of the Pakistan economy growth. It is also an important question that all the FDI's go into the telecom sector only or other sectors of the economy can be beneficial. To examine this role we have to check the impact of the telecom sector on economic growth. It is obvious that regression instruments are most logical and appropriate for this.

12 a) Statistical Instruments:

To check the impact of telecommunication on the economic growth we used the questionnaire comprising of eleven questions. We distributed this questionnaire to the students of the different universities in Rawalpindi & Islamabad. The sample size of our study is 113. We distributed and collected the questionnaire from our sample, 23 questionnaires were rejected on the basis of biasness and incompleteness.

We used simple regression model to check the relation between telecommunication sector and economic growth. On analysis we found that telecom sector plays a significant role in enhancing the economic growth of Pakistan therefore our first hypothesis proved.

Similarly to check the relationship between FDI and the economic growth we also used the simple Regression model that shows the result that FDI has also a significant effect in the economic growth so our second hypothesis also positively proved.

13 Discussion

This study explores the relationship between economic growth and telecom sector development. The result shows that there is strong relationship between both variables. In other words we can say that our dependent variable which is economic growth, has really become back bone of the economy in modern era for the developing countries like Pakistan if the policies may in the line of foreign investor (Sridhar, 2000). It is very important for the government to re-evaluate the policies to attract the foreign investor as well as for the environment suited for direct foreign investment so that capital investment required for the telecom infrastructure can be built in the country (Sridhar, 2004). According to table there is significant effect of fixed line as well mobile phone penetration on the economic growth on controlling on the factor production like capital and labor (Sridhar, 2004).

The impact of the mobile and land line phone penetration in growth of developing countries are estimated against their impacts which are not taken as per the country specific social environment then mobile phone contribution has a positive effect on national output up to 16.2% for all developing countries (Sridhar, 2004). In the case of Pakistan the cell phone penetration from the period of 1998 -2001 is accounted for up to 53.83% compounded annual growth rate (Sridhar, 2004).

14 a) Managerial Implications

Research shows in the context of Pakistan how telecom investment can impact on penetration with the increase the investment in telecom sector how and at what extant growth in the economy would be to such a level. It is also cleared from other researchers finding that a 1% penetration increment in mobile phones the growth rises up to 6.75% correspondingly.

15 b) Limitations:

This research is made on cross-sectional basis and this research can be taken on time series data which produce better results to enable us to use a good measure to determine the supply of investment in telecom sector.

16 VII.

17 Conclusion

Our study shows that development in telecom sector can become back bone of the economic growth for the modern economic universe through the development in this sector really be a leap -frogged in cellular industry at the result of which most of the economies do have de regulated this sector significantly as the result of which FDI is available for this sector especially in mobile. With the help of FDI the telecom infrastructure can be restructured and be helpful in exulting the economic growth and the elevation of poverty in developing countries like Pakistan by providing the information regarding pricing, job opportunity and the markets it is also a fact that the growth in the telecom sector cannot be become as the substitute for the actual economic growth and offsets the negative economic effects cause by the over overarching exogenous shocks but a good facilitator for the economic growth for trickling down.¹

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Model

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	t
1 (Constant)	.502	.253		1.98
FDI can enhance the GDP?	.344	.055	.399	6.24
FDI can be used to enhance PCI.	.577	.069	.521	8.32
FDI may consider good tool play	.452	.062	.370	7.31
telecommunication infrastructure.				
Expansion in cellular and land line is a symbol of increase in GDP.	-.310	.063	-.360	-4.88
Cellular and land line infrastructures expanded in result of increment of PCI.				
Cellular and landline infrastructure expansion is the result of economic growth.	-.211	.052	-.213	-4.01
FDI can be considering an indicator of GDP growth in economy.	.184	.035	.220	5.23
PCI of economy can be showed FDI level in the economy. PCI level of the economy is influenced by the expansion in cellular and landline infrastructure.	-.475	.042	-.527	-11.1
	.280	.060	.247	4.63

[Note: a. Dependent Variable : Telecommunication sector is really back bone of the economic growth VI.]

Figure 1: Table Model

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