Available Online
Journal of Education and Social Studies
ISSN: 2789-8075 (Online), 2789-8067 (Print)
https://www.scienceimpactpub.com/jess

IMPACT OF ECONOMIC AND SOCIAL INFRASTRUCTURE AND GOVERNMENT FINAL CONSUMPTION EXPENDITURES ON ECONOMIC GROWTH: AN EVIDENCE FROM SELECTED ASIAN COUNTRIES

Sumra Khalid [1,*] and Iram Batool [2]

[1] *Bahria University Islamabad Campus, Islamabad, Pakistan*
[2] *Director (Treasure Office), PMAS-Arid Agriculture University, Rawalpindi, Pakistan*

ABSTRACT

The existing research set forth the impact of economic and social infrastructure along with government final consumption expenditures on economic growth by using panel data from a number of selected Asian nations. The GDP per capita has been used as the dependent variable. However, economic and social infrastructure along with Government final consumption expenditures have been taken as major explanatory factors. The authors have used the random effect technique to analyze an association of dependent and independent variables. Findings reveal that both economic and social capital lead to increased economic growth of the concerned economies. The result also points out that Government final consumption expenditures also result in increased growth of the Asian economies. The study recommends that Asian nations must improve economic and social infrastructure to improve growth and development. In addition, the Government should focus on investments in urban settings to absorb the increasing population. Finally, the Government must ensure the proper allocation and utilization of funds towards developmental projects for achieving high growth.

Keywords: Social infrastructure; Consumption expenditures; Economic growth; Asian countries.
** Email: sumrakhalid347@gmail.com*

https://doi.org/10.52223/jess.2024.5322
Received: June 09, 2024; Revised: September 15, 2024; Accepted: September 24, 2024

INTRODUCTION

In emerging economies, education is well thought-out as a main concern to make a reduction in poverty, and quite a lot of studies have put emphasis on the significance of education in the alleviation of poverty. Barro (1991), Chu and others (1995), and Tanzi and Chu (1998) point out that community expenditure distribution for education can make better economic growth even by endorsing equity. Gupta and Verhoeven (2001) and Verhoeven et al. (1999) proposed that both the size and the competence of public education expenditure are significant in recuperating socioeconomic improvement. Improving the educational zone in general involves growing public expenditure on education. Like education, population also plays a major role in determining the growth potential of economies. For this, the increasing attentiveness of the population in the world in main cities and towns in low- and middle-income nations indicates that the association of urbanization and development has turned out to be a most important policy issue.

Labor force participation has also gained much significance in the production process and in determining the growth of the nations. Bloom and Canning (2000) place interest that when labor is healthy, their inducement to expand new skills and knowledge is elevated for the reason that they are expecting to take pleasure in long-term benefits. However, when the workforce is regarded as a workforce with underprivileged health, they have an unfavorable outcome on output; this shows the inequality in development in diverse regions of the globe (Cole, 2006). Healthcare resources, together with cooperation

labor (e.g., physicians) and capital (e.g., hospital beds), are inputs for producing healthcare services, which consecutively are significant inputs in the health production function, as are high-quality health behavior and better quality atmosphere. A worldwide contrast of health concern assets divulges two significant pieces of evidence. Primary, at one stage, a considerable disparity in care of health resources amongst nations can be found. Specifically, just about the planet, health concern assets are dispersed unequally. Rich nations possessed health-concerned assets as compared to underdeveloped economies. Second, there is an extensive difference in the compactness of better health-related resources inside regions and nations, generally like maldistribution (Rosenthal et al., 2005; Shinjo & Aramarki, 2012; WHO, 2006).

Information communication may increase capital formulation and expand markets by escalating investments in information communication technology (Miller, 2000) Sulaiman et al. (2015). It offers benefits to the country's industrial sectors by creating up-to-date manufacturing methods leading to an increase in job level through the creation of extra job opportunities, and is the reason for poverty diminution (Pernia & Quising, 2005). For the current study, we put emphasis on the effect of economic and social infrastructure and government expenditure on economic growth in selected Asian economies. This study will provide many guidelines to the policymakers for supplementary development and key implementations.

A lot of work has been done showing the impact of financial development, foreign direct investment, health expenditures, literacy rate, etc. on economic growth. However, the existing study highlights the significance of economic and social infrastructure on the economic growth of selected Asian countries. Barro (1996) used data from 1960 to 1990 to show how factors affect the economic growth of 100 countries. The findings revealed that early schooling and life expectancy, improved rule of law, and terms of trade led to enhanced growth. Moreover, lower fertility and lower government consumption were inversely associated with growth. Finally, it was also found a nonlinear relation between political freedom and economic growth. Education also improves economic growth. Considering the key role of education in growth and development. Hanushek and Kimko (2000) used panel data from 31 countries and found that initial income and educational quantity had increased GDP per capita among the nations.

Similarly, focusing on the significance of educational quality, one more study was done by Barro (2001) who highlighted that, while both the quantity and the quality of education increased the economic growth of the sample countries. Cai et al. (2002) have analyzed the inequality in a structure of growth theory in China. The study results found conditional convergence in China's growth. It was also found that labor market distortion led to a decrease the regional growth rates. They suggested improving the growth of the regional economy. Jung and Thorbecke (2003) focused on how public education expenditure affected human capital, and various labor skills supply by using the multi sector CGE model in Tanzania and Zambia. The study findings indicated that education expenditure tended to increase economic growth. It was suggested to raise high-level investment to boost up more growth. Finally, much of the education expenditure resulted in poverty alleviation.

Hanushek and Wößmann (2007) focused on the important role of education in endorsing economic well-being by emphasizing the educational quality in developing economies. It was found that the cognitive skills of the population affected positively individual earnings and economic growth. It was also found a strong positive relationship between and high-level skills, the complementarity of skills, and institutions' quality and growth. Henderson (2010) pointed out the role of urbanization on gross national income per capita in 2004. The result showed that urbanization had increased the growth of economies at the world level. The study suggested the significance of urbanization in the economic development of the nations. Anyanwu (2014) used data from 1980 to 2010 and found that domestic investment, net ODA inflows, education, government effectiveness, urban population, and metal prices increased economic growth in Africa. However, in China, the key growth was increased due to increased domestic investment, trade openness, initial income, and rural share of the population. However, growth decreased due to the inflation

rate, financial development, net ODA inflows, high population, and telephone density in China. Qin and Hsieh (2014) used panel data for China from 1949 to 2010 and focused on the role of health care on growth by using a dynamic convergence model. It was found that the provinces having densities of physicians, and hospital beds grow faster. The study showed the health care Kuznets curve in China showing the relationship between health care and growth in China.

Fetahi-Vehapi et al. (2015) emphasized the role of trade openness growth of nations. Furthermore, economic growth was increased due to foreign direct investment and trade openness among nations. Piabuo and Tieguhong (2017) showed a comparative analysis of how health expenditure affected growth in African nations. The regression results indicated that health expenditure has increased the economic growth in both samples. The study suggested that African nations should attain the Abuja target. Qayyum and Zaman (2019) showed the influence of trade with other factors on economic growth in Pakistan by using Johansen cointegration and the Granger causality test. The findings indicated that trade participation and gross fixed capital formation led to increased economic growth. Rehman et al. (2022) highlighted the role of foreign direct investment and information and communication technology on growth in Pakistan by using data from 1976 to 2019. The study showed that foreign direct investment was positively linked with the growth of the economy.

Ogbuabor et al. (2023) focused on determinants of Africa's productive capacity on the basis of data from 2000 to 2018. The authors have used the generalized moment methods technique. It was found that industrialization, trade openness, and labor force participation tended to enhance Africa's growth. Moreover, the study found a positive association between human capital development, foreign direct investment inflow, institutional quality, and productive capacity. Maestas et al. (2023) pointed out that population aging tended to slow economic growth in the United States. By using data from 1980 to 2010, it was found that an increase in population will lead to a decrease in the per capita GDP in the United States. Chandana et al. (2024) investigated how Nigerian government expenditure affected economic growth by using data from 1970 to 2019. The authors have used the Autoregressive Distributed Lag (ARDL) model. It was found that capital expenditure has increased economic growth both in the short run and long run at the same time as recurrent expenditure did not affect economic growth. The study suggested increased capital expenditures for the welfare of the public.

Research Questions

1. How does the educational index increase the economic growth of Asian nations?
2. What is the influence of information communication and technology on the growth pattern of Asian nations?
3. Does the federal government's final consumption expenditures boost up growth of Asian countries?
4. What is the effect of urban population on economic growth in a number of Asian countries?
5. How does the number of hospital beds increase economic growth?

Significance of the Study

Much of the literature was observed on the impact of trade openness, population growth, inflation, literacy rate, and life expectancy on economic growth. This work focuses on the role of economic and social capital with federal Government expenditures on the economic growth of selected developing economies which is appallingly necessary for further growth of Asian economies.

Research Hypothesis

The major hypotheses of current work are given as:

H1: The higher the education, the higher the economic growth of economies.

H 2: Information communication and technology are positively associated with the growth of nations.

H 3: The number of hospital beds (per 1,000 people) leads to increased economic growth.

H 4: Urban population is positively linked to economic growth.

H5: Government expenditures are positively related to GDP per capita.

METHODOLOGY

By using data from 2005 to 2018, we have analyzed the impact of economic and social capital with final consumption expenditures affect the economic growth of selected Asian countries such as Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan, Philippines and Sri Lanka. The data from the dependent and explanatory variables were used from World Development Indicators. The GDP per capita ($ US) was used as a dependent factor and independent variables are economic and social capital (secondary and primary school enrollment, information communication and technology, urban population, number of hospital beds (per 1,000 people), and federal Government consumption expenditures (% of GDP) are utilized in current analysis.

Model Specifications

The econometric model for our work is shown as:

$$LGDPPC = \beta 0 + \beta 1\ INDXEDit + \beta\ 2INDEXICT + \beta\ 3\ URBANPit + \beta\ 4\ NHBEDSit + \beta\ 5\ FGCEPit + uit \quad (1)$$

INDXED= Educational index (secondary and primary school enrolment % of GDP)

LGDPPC= Log economic growth (GDP per capita)

URBNPOP= Urban population % of the total population

INDICMT= Index of (fixed telephone subscriptions per 100 people plus Mobile cellular subscriptions (per 100 people)

FGCEP= Federal Government final consumption expenditure % of GDP

it = (time trend)

uit= (error term)

RESULTS AND DISCUSSION

In this section, summary statistics of major drivers of economic growth have been revealed. Here, it is pointed out how economic and social infrastructure in conjunction with federal government final consumption expenditures and urban population may affect economic growth in a number of selected Asian nations.

Table 1. Summary statistics of major drivers of economic growth.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
LGDP	112	3.4150	0.3548	2.79067	4.08313
INDXED	112	170.4538	24.1877	106.9143	200.102
INDICMT	112	0.2744	0.8584	-1.4632	2.2436
URBANP	112	53.1271	19.9630	26.8090	90.979
NHBEDS	112	1.0747	0.5365	0.30000	1.90000
FGCEXP	112	10.8481	3.3760	5.0393	21.2724

Results in Table 1 indicate that on average, the educational index is 170.4538 percent in Asian nations. This index having range from 106.9143 to 200.102 insample of countries. On average, information communication and technology index of some Asian countries is observed as 0.2744 percent. In the same

way, differences have been seen in the federal government's final consumption expenditure as % of GDP from 5.0393 to 21.2724 percent. On average, number of hospital beds per 1000 people is found as 1.0747 percent.

Empirical Estimations

Table 2 indicates the results of the random effect method by making use of major factors affecting growth among nations. In the study, the Chi2 value is 1.21 and the probability value is 0.9434 which is in favour of random effect results. It reveals that economic and social infrastructure with government consumption expenditures led to enhanced growth patterns in few selected Asian nations.

Table 2. Random effect results, the dependent variable is economic growth.

Variables	Coefficients, Standard Errors and Z-values
INDXED	0.0027*
	0.0004
	(6.09)
INDICMT	0.0241 *
	0.0085
	(2.85)
URBANP	0.0077*
	0.0020
	(3.78)
NHBEDS	0.0632 *
	0.0205
	(3.08)
FGCEXP	0.0040
	0.0034
	(1.16)
C	2.4332
	0.1558
	(15.62)
Wald chi2	399.93
Probability	0.0000
R2 Within	0.79
R2 Between	0.82
R2 Overall	0.81

z-values are in parentheses; ** p<0.05, * p<0.1 and*** p< 0.01.

The study findings from random effect methods have been explained in Table 2. Education seems a key reason for the leading economic growth of the economies. The workers having her educational levels and professional skills lead to the enhancement of the production process and productivity. In this way, they with their efficiency may prove very positive and productive for high growth and development in the underdeveloped nations of the world. As our finding shows that one unit increased educational index resulted in increased economic growth by 0.0027 units. The reason can be that educated people may prove helpful in the production of goods more and meet demand from the public. This finding is consistent with Hanushek and Wößmann (2007).

Information communication technology has also been well thought out as the most significant cause for having high economic growth. People make use of mobile phones and the internet in major investments and production processes with their education and knowledge resultantly in increased economic growth and development in these nations. It is pointed out that one unit of increased information communication and technology index will increase growth by 0.0241 percent in concerned nations. The study result is supported by findings by Rehman et al. (2022).

The role of urbanization cannot be ignored in the growth path of nations. Urban population makes a good contribution towards economic growth and development in Asian nations. A lot of people are working in factors in urban areas of emerging economies. Urbanization has absorbed much population and contributes positively to economic growth. The skilled, semi-skilled labor is busy in making more production of goods and services which will prove more beneficial for the growth and development of economies. It is found that a one percent increase in urban population enhances economic growth by 0.0077 percent. The finding is supported by Anyanwu (2014).

Social capital or infrastructure like the number of hospital beds per 1000 people also has a positive and contributively influence on the economic growth of the nations. It is believed that more provision of beds for patients in hospitals may become helpful in better and timely treatment of people to make them physically and mentally healthy. And mentally healthy people may participate more in the labor force and partake more in producing economic activities. The finding indicates that a one percent increase in the number of hospital beds tends to increase growth by 0.0632 percent in Asian nations. The result is favored by Qin and Hsieh (2014).

CONCLUSIONS

The existing work points out the influence of economic and social infrastructure along with government final consumption expenditures on the economic growth of selected Asian economies. By making use of a panel data set of 9 Asian countries, it tried to find out the significant influence of economic and social capital on the growth trend of economies. The GDP per capita has been used as the dependent variable and economic and social capital such as the educational index, information communication and technology index, number of hospital beds, and urban population along with government final consumption expenditures have been used as explanatory causes for growth. Random effect results point out that the educational index, information communication, and technology index have boosted economic growth in chosen Asian nations. Furthermore, the number of hospital beds, Government expenditures, and urban population are also positively contributing to the economic growth of Asian countries. It is concluded that economic and social infrastructure may prove supportive in enhancing growth in developing nations. On the basis of the results, it is suggested that more educational facilities and more provision of less costly information communication and technology services must be provided for high economic growth. There is also a need for more investments in urban settings to absorb the needy people. As it will improve the economic growth of nations. Finally, the Government must spend very carefully on developmental works and ensure the proper usage and allocation of funds towards the important sectors. Such kind of enforcement mechanisms will play a contributing role in the economic growth of the nations.

REFERENCES

Anyanwu, J. C. (2014). Factors affecting economic growth in Africa: are there any lessons from China?. African Development Review, 26(3), 468-493.

Barro, R. J. (1996). Determinants of economic growth: A cross-country empirical study. https://www.nber.org/papers/w5698.

Barro, R. J., (2001). International data on educational attainment: Updates and implications. Oxford Economic Papers, 53(3), 541-563.

Bloom, D. E, & Canning, D. (2000). PiaMalaney. Demographic Change and Economic Growth in Asia. Population and Development Review, 26, 257–90.

Cai, F., Wang, D., & Du, Y. (2002). Regional disparity and economic growth in China: The impact of labor market distortions. China Economic Review, 13(2-3), 197-212.

Chandana, A., Adamu, J., & Musa, A. (2024). Impact of government expenditure on economic growth in Nigeria, 1970-2019. CBN Journal of Applied Statistics (JAS), 11(2), 6.

Chu, M. T., Funderlic, R. E., & Golub, G. H. (1995). A rank–one reduction formula and its applications to matrix factorizations. SIAM review, 37(4), 512-530.

Cole, M. A., (2006). The impact of poor health on total factor productivity. The Journal of Development Studies, 42(6), 918-938.

Fetahi-Vehapi, M., Sadiku, L., & Petkovski, M. (2015). Empirical analysis of the effects of trade openness on economic growth: An evidence for South East European countries. Procedia Economics and Finance, 19, 17-26.

Hanushek, E. A., & Kimko, D. D. (2000). Schooling, labor-force quality, and the growth of nations. American Economic Review, 90(5), 1184-1208.

Hanushek, E. A., & Wößmann, L. (2007). The role of education quality for economic growth. World Bank policy research working paper, (4122).

Henderson, J. V. (2010). Cities and development, Journal of Regional Science, 50(1), 515–540.

Jung, H. S., & Thorbecke, E. (2003). The impact of public education expenditure on human capital, growth, and poverty in Tanzania and Zambia: a general equilibrium approach. Journal of Policy Modeling, 25(8), 701-725.

Maestas, N., Mullen, K. J., & Powell, D. (2023). The effect of population aging on economic growth, the labor force, and productivity. American Economic Journal: Macroeconomics, 15(2), 306-332.

Miller, S.M. (2000). The effects of openness, trade orientation, and human capital on total factor productivity. Journal of Development Economics, 63, 399–423.

Ogbuabor, J. E., Emeka, E. T., & Iheonu, C. O. (2023). Do industrialization, trade openness, and labor force participation enhance Africa's productive capacity?. Innovation and Development, 1-26.

Pernia, E. M., & Quising, P. F. (2005). Trade openness and regional development in a developing country. In Globalization and Urban Development; Springer: Berlin/Heidelberg, Germany, 2005; pp. 79–94geria. SAGE Open 2015, 5, 2158244015615166.

Piabuo, S. M., & Tieguhong, J. C. (2017). Health expenditure and economic growth-a review of the literature and an analysis between the economic community for central African states (CEMAC) and selected African countries. Health Economics Review, 7(1), 23.

Qayyum, A., & Zaman, K. (2019). Dynamic linkages between international trade, gross fixed capital formation, total labor force and economic growth: empirical evidence from Pakistan. Acta Universitatis Danubius. Œconomica, 15, 1.

Qin, X., & Hsieh, C. R. (2014). Economic growth and the geographic maldistribution of health care resources: Evidence from China, 1949-2010. China Economic Review, 31, 228-246.

Rehman, A; Radulescu, M; Ahmad, F., Khan, M. K., & Cismas, L.M. (2022). Investigating the asymmetrical influence of foreign direct investment, remittances, reserves, and information and communication technology on Pakistan's economic development. Economic Research-Ekonomska Istraživanja, 1-22. DOI: 10.1080/1331677X.2022.2131591.

Rosenthal, M. B., Zaslavsky, A., & Newhouse, J. P. (2005). The geographic distribution of physicians revisited. Health Services Research, 40, 1931-1952.

Shinjo, D., & Aramaki, T. (2012). Geographic distribution of healthcare resources, healthcare service provision, and patient flow in Japan: a cross sectional study. Social science & medicine, 75(11), 1954-1963.

Sulaiman, C., Bala, U., Tijani, B. A., Waziri, S. I., & Maji, I. K. (2015). Human capital, technology, and economic growth: Evidence from Nigeria. Sage Open, 5(4), 2158244015615166.

Tanzi, V., & Chu, K. Y. (Eds.). (1998). Income distribution and high-quality growth. MIT Press.

Verhoeven, M., Gupta, S., & Tiongson, E. (1999). Does Higher Government Spending Buy Better Results in Education and Health Care? (No. 1999/021). International Monetary Fund.

WHO. (2006). The World Health Report 2005: Make every mother and child count. World Health Organization.