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Research Article

Economic Growth and Welfare with Education, Financial Development and Gross Fixed Capital Formation in Asian Countries

Khalid Mahmood Mughal [1], Bushra Khanum [2,*], Anila Issa Khan [3], Hafiza Nadia Bashir [4]
[1] Department of Economics, Preston University Kohat, Islamabad Campus, Pakistan
[2] Preston University, Islamabad, Pakistan
[3] Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan
[4] University of Education Vehari Campus, Vehari, Pakistan

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*Corresponding Email: bushraissa123@gmail.com

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Abstract

Economic growth would not be achievable without the support of education, ICT, and financial development in Asian economies. Human welfare is an integral part of sustainable economic development. Before achieving sustainable development, it is very crucial to work for the development of human beings. The research highlights the significance of education in financial development and gross fixed capital formation in Asian countries. We have used data from 2009 to 2021 from 8 Asian economies for the analysis. OLS regression result shows that education and ICT contribute much towards economic growth. However, unemployment seems to affecting negatively the growth. Finally, financial development and gross fixed capital formation also affect positively the growth of Asian nations. The study suggests more education and ICT facilities for the people. More employment opportunities and credit facilities should be provided to needy people. It will increase the economic growth and welfare of the concerned nations.
Keywords: Education, Welfare, Economic growth, Gross fixed capital formation, Asian economies.

Introduction

During the colonial era, the basic practice of economic growth was the foundations and schemes of administration imported throughout colonization. There is a sharp setback of luck among deprived and rich states, which is apparent by comparing the technique of colonialism in the area. Natural features and resource endowments are not just causes of high growth. In reality, those who have been sacred with high-quality factor endowments practiced colonial extraction which has offered inadequate fast growth, while nations that are less lucky in their unique endowments practiced European arrangement, relative equality, and the use of the rule of law. These originally deprived colonies finished up raising open franchise equality, and a wide community consciousness that permitted them to practice superior economic growth as compared to colonies that had subjugated their economies of scale.

A few decades ago, economists and politicians were very concerned and focused on the acceleration of economic growth and national income. Statistics were shared of performances of different countries of the world that showed their GNP growth at the end of the year. There are three different factors that affect the economic growth of a country. First is capital accumulation second is Growth in population and third is Technological progress. Capital accumulation is very useful in the economic growth of the country. It includes the social and economic infrastructure. Infrastructure refers means roads, electricity, water, education, sanitation, communication, health, law and order, and many others. Education is very important for the

development and growth of productive labor. Investment in human capital accelerates the speed of development. Conversely, population of the country is also very useful for economic growth. More population means an abundance of labor force. That labor force can be very beneficial if that is trained, skillful and educated. The labor force plays a vital role in the development process. Thirdly, technology is very essential for the development of a country. Innovative and modern technology greatly affects the growth of the country. If a country is producing a certain amount of goods and services, then services can be increased by using modern production methods and effective productive techniques. Growing crops, building houses or construction of roads and bridges etc., the productivity of all these can be improved by using modern technology. Technological progress affected the development of the country (Todaro & Smith, 2006).

It was argued that disparity is destructive for economic development as disparity puts pressure on redistributive strategies that may influence adversely the investment and economic growth to be determined. The mainly usually used gauge of human capital is school achievement in an economy. It also assumes that human capital is made simply in proper education. They established that the superiority of human capital was considerable in relation to economic growth (Persson & Tabellini, 1994).

Sustainable development can be described as "development that fulfills current requirements hardly considering aptitude of future generations to fulfill their own needs to provide. Sustainability refers to the condition of the economy in which the needs of the present population are fulfilled without compromising the needs of the future generation. In this situation, per capita income increases and economy comes into international competition and the economy moves toward the path of economic prosperity. Sustainable economic development is a continuous process to go ahead with the increase in all types of resources and capital assets. Due to this all the sectors of the economy i.e. social, economic, cultural, law and order, education, technological, etc. are partially or fully developed. In other words, we can also that sustainable economic development is a situation in which production and productive capacity increase (Joshua, 2015).

Sustainable economic development refers to a condition of the economy in which all the basic necessities of life are available and they live think and decide with liberty with its full emoluments. One of the important characteristics of a sustainable economy is that entrepreneurs most of the time produce a variety of goods and services at a larger scale. A large number of the population live a prosperous life and a very minute number of people live an average quality of life. New innovations and creative inventions accelerated the speed of development. After sustainable economic development, there is a wide increase in the GNP and the per capita income of the economy. The total factor of production also increases proportionally. When sustainable economic growth is attained then huge structural changes occur such as the development of systems, capacities, knowledge, goods and services, health, education, law, etc. (Boulanger, 2008).

Domains of Economic Sustainability

There are four different domains of economic sustainability. These were represented by Scerri and James in 2010.

Economics: The Economic domain can be described as the put into practice and meanings linked with the production, use, and management of resources, the term "possessions" in the broadest sense of the word defined correspondingly.

Ecology: The ecological foundations of sustainable development are the availability of basic necessities of life and quality of air, water, food, and shelter.

Culture: The third domain of economic sustainability can be described as practices, discourses, and material expressions.

Politics: The political domain can be defined as the processes and meanings linked with fundamental problems of social power suitable for the organization, authorization, legitimize, and regulate social life held in common.

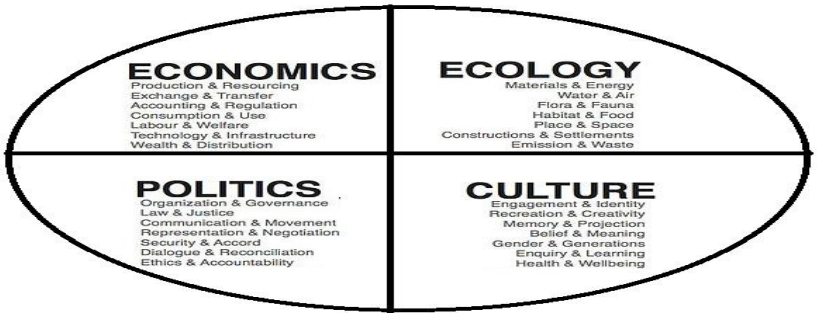

Figure 1. Domains of economic sustainability.

As shown in Figure 1, Economics, ecology, politics, and culture, are four important pillars of economic growth. These are considered to very essential from a development point of view. Economics is related to production, wealth, technology, labor welfare, and distribution of wealth. Ecology is associated with materials, food, habitat, water, air, etc. Politics describes law and order, ethics, justice, governance, communication, accountability, and security. In the end, culture represents tradition, norms, values, identity, gender, and generations' beliefs and recreation (Scerri & James, 2010).

Over the earlier period a small number of decades, the explosion of ICT has contributed much in enabling states and their administrations to influence information as a catalyst for trade and manufacturing progress. As observed by the International Telecommunication Union in 2021, 59.5% of the global population at present connects to the Internet. Such a course in ICT convenience has flicked a substantial quantity of research into its assistance to economic improvement, particularly showing its remuneration for the growth of underdeveloped economies. Even as much work has proved that ICT usage encourages growth, enhances productivity, and creates job chances, there remains a space in the studies, especially in finding how education levels affect the link between ICT use and economic growth (Sarangi & Pradhan 2020; Nabi et al., 2023). Considering the significance of above-mentioned studies, our work makes an effort to highlight that growth can be made possible with education, information communication technology, financial development, and gross fixed capital formation.

Problem Statement

Here, it has been found that economic growth is very essential for developing countries. Growth can only be achieved when all factors are engaged and there is very little waste of resources. Before achieving economic growth, first of all, we have to focus on education, ICT, financial development, and gross fixed capital formation for welfare and sustainable development. These are the prerequisites for economic growth. There are various variables that directly and indirectly influence welfare and sustainable economic development.

Research Question

1. How is unemployment a big hurdle in the progress of the Asian economies?
2. What is the effect of education on economic growth?
3. How does ICT affect the economic growth of Asian economies?
4. How does financial development affect economic growth?
5. How does gross fixed capital formation contribute much to the economic growth of Asian countries?

Objective of the Study

The objectives of the study are to find out the effect of education, ICT, financial development, and gross fixed capital formation on the economic growth of Asian countries. By this study, we can find out the root causes of different economic factors and we will be able to know economic growth is completely dependent on welfare and sustainable economic development. Welfare can be achieved by providing quality living standards to the people. The ratio of income inequality should be reduced. Similarly sustainable economic growth is a

continuous and dynamic process.

Significance of the study

It has been observed that a lot of factors affect economic growth positively and negatively. However, our study highlights the role of education, ICT, financial development, and gross fixed capital formation in the economic growth of Asian economies. Moreover, the study highlights that the Government should focus on the development of the country.

Hypotheses

The major hypotheses of this research are given as:

1. H1: Education and economic growth are negatively related.
2. H 2: There is a positive relationship between ICT and economic growth.
3. H 3: The higher the unemployment, the lower the economic growth.
4. H 4: Financial development enhances economic growth.
5. H5: Gross fixed capital formation is positively related to economic growth.

Literature Review

Here, we have tried to highlight the role of important factors such as poverty, inflation, and urban population unemployment, capital formation affecting the economic growth of developing countries. Raza (2008) focused on foreign exchange as a great source of development for the country. The foreign exchange helped the development process. Foreign exchange was earned by the remittances sent by the migrants. The result showed that emigration has also increased foreign reserves, national income, and exchange rate. It also helped in increasing consumption, borrowing, spending, and finally savings. It provided employment opportunities to the nation as well. Salman and Feng (2009) emphasized how foreign direct investment affected economic growth. Foreign direct investment promotes the economic growth of a country. By offering investment friendly, investors were attracted to friendly economic policies and brought their capital with them. The study suggested that the Government should make sure that the involvement of investors in the Pakistan economy is very valuable. Shahbaz and Amir (2009) found that lifestyle and living standards both were associated with the welfare of the people. The welfare of the people was increased when people got a sufficient quantity of basic necessities of life. One of the economic factors that helped the development process was the remittances sent by the emigrants living abroad or working in foreign countries.

Sabir and Tahir (2012) focused on the role of poverty in economic growth. Poverty affected the economy very badly. The economy did not get flourished unless the people were getting the basic necessities of life. Findings indicated that poverty affected the GDP and per capita income. The increase in poverty resulted in poor economic growth and the dream of sustainable development was very difficult to achieve. Grabova (2014) used data from 2001 to 2012 and found the influence of corruption on economic growth by using a survey method. The findings revealed that corruption led to decreased economic growth which was not good for the nations. Calişkan and Kadiu (2015) focused on the role of corruption in economic development in Albania by using data from 1980 to 2010. Regression results showed that increased population and corruption decreased the growth of developing economies.

Ibrahim and Sheu (2015) found that corruption affects the growth of Nigeria's economy. By using data from 1980 to 2013 and using by using VAR analysis, the authors found that the rise in the growth rate was the result of a high corruption rate, which caused the wealthy to become wealthier and the poor to become poorer. Becherair and Tahtane (2017) also found the role of corruption in human growth in Mena nations from 1996 to 2012, secondary data. They used the Granger Causality test and found that corruption affected human development. Duhu (2019) also checked how corruption did influence the growth in the Nigerian economy by using data from 1996 to 2017. ARDL results showed that corruption affected economic growth negatively.

Uddin and Rahman (2023) used data from 2002 to 2018. The study result showed that corruption, unemployment and political stability affected negatively the GDP per capita. However, inflation, governance

effectiveness and rule of law led to enhanced GDP per capita. Zhu et al. (2022) also focused on the role of income inequality and poverty on economic development from 1990 to 2016 in Vietnam. Findings highlighted that inequality and poverty resulted in decreased economic growth which showed a high poverty level. Focus should be made on poverty reduction policies for high economic growth. Abu Alfoul et al. (2024) examined how ICT did affect economic growth in the Middle East and North Africa region by using data from 2000 to 2020. ARDL results showed that ICT affected negatively the growth. However, education led to enhanced growth of these economies. Jouali et al. (2024) elucidated the complicated connection between ICT, the knowledge economy, and economic performance in Morocco. ARDL results showed that investments in research, development, higher education, and overall economic growth were linked positively.

Methodology

Macroeconomic variables have been taken for measuring the development and the impact of this variable has been examined on economic growth. A secondary type of data has been taken and interpreted. We have used data from 2009 to 2021. The data for the variables such as education, ICT, financial development, unemployment, and gross fixed capital formation have been used. The data has been taken from World development indicators. Data from countries such as Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan and Philippines were used. Ordinary least technique was used by the authors.

The econometric model is given as:

$$LGDPP = \beta_0 + \beta_1 SSERLit + \beta_2 ICTIND + \beta_3 UNEMPit + \beta_4 FDVP\ it + \beta_4 LGRFC\ it + uit \quad (1)$$

LGDPP= Log GDP per capita

SSERL= Secondary school enrolment ratio

ICTIND= Index of (per 100 people plus Mobile cellular subscriptions (per 100 people)

UNEMP= Unemployment rate (total)

FINDVP= Domestic credit to private sector (% of GDP)

LGRFC=Log gross fix capital formation

SSENR= Secondary school enrolment ratio

it = (time trend)

uit= (error term)

Result and Discussion

Here, we show summary statistics of variables affecting the growth of Asian countries. Table 1 indicates large variances in the figures explained here. Concerning LGDPPC, countries found it as 3.4217 percent. The mean value of secondary school enrollment is 70.4075. In case of ICTIN, the economies partaking index ranges from -1.2965 percent to 2.2436 percent. On average, the unemployment rate is 5.6817 percent in Asian countries. It is also found that FDVP is 52.3706 percent and its range has been observed as 15.3861 to 125.0618 percent. The LGRFP is 10.8577 percent in these countries.

Table 1. Descriptive statistics.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
LGDP	104	3.4217	0.3530	2.8129	4.0831
SSERL	104	70.4075	16.7202	30.8604	88.9102
ICTIND	104	0.3688	0.8018	-1.2965	2.2436
UNEMP	104	5.6817	4.1782	0.398	15.275
FDVP	104	52.3706	28.5005	15.3861	125.0618
LGRFP	104	10.8577	0.5696	9.8769	11.9785

Table 2. OLS results, dependent variable is LGDPPC.

Variables	Coefficients, Standard Errors and T-values
SSERL	0.0058*
	0.0017
	(3.38)
ICTIND	0.0034*
	0.3046
	(2.74)
UNEMP	-0.0205 *
	0.0054
	(-3.79)
FDVP	0.0055*
	0.0008
	(7.16)
LGRFP	0.1126
	0.0382
	(2.94)
C	1.3502
	0.38862
	(3.60)
F-Statistics	63.04
Probability	0.0000
R-Squared	0.77
Adjusted R-Squared	0.76

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

Education is a vital factor in determining and enhancing the economic growth of developing economies. The results shown in Table 2, that a one percent increase in secondary school enrollment results in 0.0058 percent increased economic growth in Asian nations. The reason may be that a highly educated and skilled labor force partakes in economic activities more and efficiently enhances production. The result is supported by Abu Alfoul et al. (2024). ICT also affects the economic growth of the nations. The result shows that one unit of increased information and communication technology has caused for high growth of 0.0034 percent in Asian economies. More usage of ICT increases the production process and high economic growth in industries. The result is consistent with Jouali et al. (2024). The unemployment rate also affects negatively high production and growth. The study result reveals that one one-unit increase in the unemployment rate will cause less growth of -0.0205 percent in Asian countries. The finding is inconsistent with Uddin and Rahman (2023). Financial development is very crucial for the high growth potential of nations of the world. It contributes more to the investment and production of economies. It is found that a one percent increase in financial development results in increased growth by 0.0055 percent in Asian nations. Our finding is supported by Saad and Uddin (2021). Finally, gross fixed capital formation also seems to affect the growth of nations. More capital formation boosts up production and growth of economies. It is found that a one percent increased gross fixed capital formation results in increased growth by 0.1126 percent in selected Asian economies.

Conclusions

Existing research has analyzed the relationship between economic growth and education, information and communication and technology, unemployment, financial development, and gross fixed capital formation in selected 8 Asian countries. Economic growth is not achievable without the welfare of the people and sustainable economic development. Welfare is very important from the economic perspective. If people are living healthy and prosperous life then will be energetic and productive. Contrary to this, if people are uneducated and unskilled and the basic necessities of life are not fulfilled then they will not contribute to economic growth. The OLS result shows that education information communication and technology enhance economic growth in Asian nations. However, unemployment results in less growth of these economies. The other control variables such as financial development and gross fixed capital formation also contribute positively toward economic growth. It is suggested that education is very essential for economic development. It helps to produce skilled and educated labor. Education should be available for everyone. Remote areas and backward areas should be monitored carefully and regulatory bodies should ensure the availability of quality education. More ICT and credit facilities should be provided to the people for their better welfare. More employment opportunities should be provided to the general public. Economic welfare programs should be introduced. People should be guided and educated about the proper usage of these welfare programs.

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