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ROLE OF EDUCATION AND FINANCIAL DEVELOPMENT IN ECONOMIC GROWTH OF SELECTED ASIAN COUNTRIES

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ABSTRACT

Education and financial development are key determinants of economic growth. This research makes an effort to highlight the role of education and financial development with urbanization in the economic growth of selected Asian countries. Economic growth is used as a dependent variable, and secondary school enrolment, financial development, life expectancy, and urban population are used as independent variables. Panel data set for the time 2002 to 2019 is used for the analysis. The random effect technique is used. The study results demonstrate that secondary school enrolment, financial development, life expectancy, and urban population increase economic growth in selected Asian countries. It is recommended that government should provide free of cost education facilities in selected economies. Moreover, the public should be provided with more financial debt facilities to increase per capita income, high living standards, and economic growth in these selected economies. The plan must be placed on education and health high on the agenda in these economies.

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INTRODUCTION

Cities play a significant role in determining the economic growth of developing and advanced economies by providing a lot of chances for education, job opportunities, and health facilities. Education capital can be a determinant of an economy to improve innovative technical know-how and espouses current technologies. Education may surely determine economic well-being and upsurges the human capital essential for the workforce of an economy (Hanushek & Wößmann, 2010). Education significantly supports society in all its magnitudes. For this, all kinds of investment must be considered important in determining economic growth. A promising development in all spheres of life depends on belief and encouragement for education to place further expectations. As a final point, education is an important feature of a nation that has promoted economic growth (Goczek et al., 2021). Human capital affects monetarily profitable actions openly by influencing its worker output. Improved educational structures in cities can be availed at ease and cost less as compared to its expansion in rural areas. Returns to education are therefore normally seemed higher in urban areas as compared to countryside parts. The influence of urbanization on education is particularly constructive, and observed work highlights this association, particularly in Asian economies. Urbanization is a multifaceted occurrence and is well-defined as the demographic procedure resultant of

the increased urban population. The majority of economists have applauded this phenomenon as they have faith in that this urban development procedure may surely make better affluence of the economy with improved growth. Therefore, urbanization and economic development are positively associated (Friedberg & Hunt, 1995).

Urban populations can avail finance and indorse definitely their thoughts and have to some level, an indigenous marketplace for commercial activities. Loughran and Schultz (2005) highlight that natural features influence firms' enactment: ceteris paribus, metropolitan organizations are earning high profits if compared to the firms in rural locations. Poverty elimination can be linked with the capability to be industrialists and to establish personal, commercial undertakings. Furthermore, a city's richness and growth are dependent significantly on its capability to appeal to productive workforces, equal them properly to employment, and additional improve their expertise. Education and skills are also major determinants of economic growth. Much of the skilled and talented labor force moves to cities for high earnings. These highly skilled populations promote their skills and knowledge more professionally during their experience with comparable profiles and skilled workers in urban centers. Thus, high skill, talent, and education lead to productivity in urban areas. Education can be considered an improved technique for growth. As a social investment, education is also an economic investment; in the meantime, it has increased human capital quality. (Denison, 1962). Education can be referred to as the stock of expertise, aptitudes, and other productivity-increasing appearances. Generally, education is recognized as a major element of a state's social capital, and it enhances the worker's competence and assistances economies in raising the value chain beyond manual responsibilities or modest production processes.

Investment in secondary education makes many provisions of a great improvement to economic development as compared to worldwide primary education. Investment in secondary and tertiary education may possibly lead to enhance economic growth of economies (Marquez-Ramos & Mourelle, 2019). The workforce in urban may largely influence the economic growth and development of developing economies. To obtain economic and socio-economic objectives of an economy, increased workforce involvement has been a noteworthy policy issue in these countries. Generally, more workers' involvement in productivity leads to improve productivity. Resultantly, low production issues may be resolved. To enhance productivity and growth, many economies have been using different policy methods.

The problem of an equal approach to financial resources is even one more vital aspect for advancing the financial structure. People hardly have an approach to financial resources to get advantages due to the progressively advanced financial structure of societies. People with low financial access hardly give better educational and health facilities to their children. All this may affect the capability of people to contribute to society's economic well-being. In addition, certain persons are incapable of making better use of financial technology because of inadequate financial literacy. Financial development, urbanization, and globalization are observed as the key factors towards income in the literature. Levine (2005) proposes that financial development may improve economic growth by facilitating investment and enlightening the competence of capital dispersal. Much of the work highlights that the development of financial intermediation has a positive influence on economic growth (Zhang et al., 2007; Zhang et al., 2012).

Consistent with economic theory, financial development is the result of a prearranged financial system. A preplanned financial structure permits financial means to business regions in this way that they lead to economic growth, physical capital accumulation, and cost-effective competence. However, different studies indicate that financial development enables economic growth in times of economic globalization; the increased financial disparity and influence of economic and financial development on income disparity in underdeveloped and advanced economies remain major issues. Studies show how monetary advancement can enhance growth by increasing savings, spreading risks, and evaluating potential businesspersons (Smith & Bencivenga 1991; King & Levine, 1993). Levine (2005) far along established the proposition that financial development was important for economic growth. The role of life expectancy in determining

economic growth has also been discussed. Theoretically, an increased life expectancy may have positive influences on economic growth and per capita income. Life expectancy increases the productivity of accessible means by making improvements in the worker's health. It may also escalate the incentives to take on continuing investments like (most particularly) human capital.

A lot of work on this topic has suggested how financial development, labor force participation rate, trade openness, remittances, and unemployment influences economic growth in some countries. However, this research highlights the role of education and financial development with urbanization in determining the economic growth of selected Asian countries. This research will ensure new ideas for policymakers to make significant policy variables for high economic growth. Earlier the COVID-19 pandemic, sustainable developmental objectives were not obtained. Shortage of production, poverty, and poor living standards have been experienced by the population. Financial and societal crisis were also the great hurdle in achieving developmental goals. People were involved in low-standard and risky employment in different sectors of developing economies and were faced with new risks and threats.

In view of the above-mentioned issues, this research signifies the variables which were important for high productivity and economic growth in Asian economies. This study seems important as it highlights factors increasing economic growth. An advanced approach towards financial services to the general public accommodatingly enhances employment chances in urban areas and increases economic growth. Many of the educated urban workers are involved in economic growth in these economies. Surely, results support estimations that secondary school enrollment and financial development with urban population may become key factors in determining economic growth. The structure of the study is given in detail. Section II shows a literature review. Section III demonstrates data and methodology. Section IV highlights the results and discussion. However, section V shows the conclusion.

LITERATURE REVIEW

The review of some important studies concerning education, financial development, life expectancy, and economic growth has been done as indicated.

Barro (1996) used panel data from 100 countries and analyzed that for a starting level of GDP per capita, the rate of growth was observed to increasingly extraordinary basic education and life expectancy, low fertility rate, low state expenses, and inflation. For the observed values of the concerned factors, growth was negatively associated with preliminary per capita growth rates. Bloom and Williamson (1997) focused on the elementary association of income growth and population based on convergence configuration. The study findings indicated that demographic factors increased economic growth and development. Rosenthal and Strange (2003) showed how cities affected the economic growth of economies. The result indicated that growing cities enhanced productivity by around 5 percent, 3 to 8 percent; that was, urban areas contributed towards 85 % of GDP in economies with high incomes. Sahoo (2006) stated that foreign companies made investments in agriculture and service traditionally, which were not allowed to make investments after the independence of the economy. Such kind of investment enhanced the economic growth of Pakistan's economy.

Acemoglu & Johnson (2007) used secondary data from 1940 to 1980 and examined the influence of life expectancy on economic growth. The result highlighted that life expectancy increased GDP at a low level. Spence et al. (2009) analyzed how urbanization affected the growth of the economy. The findings highlighted that the rural-to-urban productivity difference and the rapid productivity growth in cities contributed to economic growth. They focused on rural-to-urban migration, and industrial and services sectors contributed positively to economic growth. Shabu (2010) showed that urban growth affected developing and developed economies. The findings showed that increasing urbanization led to a decrease in the growth of developing countries but increased productivity and growth in developed nations.

Bowser (2010) took data from 51 states of the USA from 1970 to 2000 and checked the effect of life expectancy on growth in the USA. The study result highlighted that a one percent increase in life expectancy led to an increase the per capita earnings by 1.9 percent at the country level and 6.0 percent at the national level.

Cervellati & Sunde (2011) focused on how life expectancy encouraged growth in economies by drawing data from 1947 to 2000 in 47 selected countries. The OLS estimate and 2SLS regressions result showed that adequately high life expectancy triggered the change to continuous income growth. Investment in education is very important; considering this, Odeleye (2012) has focused on investment in education and growth association by using a survey method. The finding showed a positive link between educational investment and growth in the Nigerian economy. Jafari et al. (2014) examined life expectancy as a determinant of growth by using data from 1965 to 2009. The smooth transition regression model result indicated nonlinear threshold behavior in an association of both factors. Ngangue & Manfred (2015) collected data from 141 countries from 2000 to 2013 and checked the influence of life expectancy on gross national per capita income. The study result indicated that life expectancy increased economic growth in these economies.

Asteriou and Spanos (2019) found how financial development influence economic growth did by using data from 1990 to 2016. The result revealed that before a crisis, financial development enhanced economic growth; however, after the crisis, it hindered the growth of economies. Marquez-Ramos and Mourelle (2019) found education as a vital tool for economic growth. The finding indicated the nonlinear association of education and economic growth. Furthermore, secondary and tertiary education have determined growth in Spain. Kumar and Paramanik (2020) have drawn data from 1996 to 2018 and found that long-term financial development led to increasing economic growth of economies. Nguyen (2022) found a link between financial development, human resources, and growth in twenty-five economies from 1995 to 2019. 1995–2019. The author has used the OLS model, fixed effects, and the two-step GMM technique. The study result showed that financial development and human resources (human development) contributed positively to economic growth.

METHODOLOGY

This study reveals how secondary school education, financial development, and life expectancy determine economic growth in selected 11 Asian economies (i.e., Pakistan, Bangladesh, India, Sri Lanka, Indonesia, Philippines, Malaysia, Iran, Nepal, Bhutan, and China) from 2002 to 2019 considering major determinants like secondary school enrollment, financial development, life expectancy at birth and urban population. The dependent variable is used as economic growth. Data on these dependent and independent variables have been drawn from the website of World development indicators (WDI). The random effect method is used to check how education, financial development index, and urban population affect economic growth in these selected Asian economies.

Model Specification

The study demonstrates how secondary school enrolment, financial development, life expectancy, and urban population determine economic growth in these selected Asian countries by using the random effects method. For this, the model is shown below.

$$\text{Model} \quad LDGPPC_{it} = \beta_0 + \beta_1 SSEN + \beta_2 FDIND_{it} + \beta_3 LLIEXP_{it} + \beta_4 LUPOP_{it} + u_{it} \qquad (1)$$

Where the subscript "i" indicates the certain, definite countries (i = 1…11 for selected Asian countries), however, "t" illustrates period measurement. Where $LGDPPC_{it}$ shows GDP growth per capita. SSEN highlights secondary school enrollment. $FDIND_{it}$ reveals the financial development index (i.e., bank deposit ratio % of GDP, domestic credit to the private sector by banks % of GDP, and stock market capitalization to

GDP (%). $LLIEXP_{it}$ shows a log of life expectancy at birth (Years). However, LUPOP indicates the urban population % of the total population.

RESULTS AND DISCUSSION

In this section, we empirically analyze how the explanatory factors determine economic growth in some selected Asian countries.

Stationarity Tests

The presence of unit root is checked in Table 1. For this, we have used diverse tests. Test statistics of 4 approaches utilized for LGDPPC, SSEN, EMR, and LUPOP at level form are insignificant, showing the data as non-stationary at level form. Though, all such factors are significant at 1st difference. In addition, the variable LIEXP is stationary at the level.

Table 1. Results of Panel unit tests.

Variables	probability	Levin, Lin & Chu t*	IP & Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square
LGDPPC	At level	0.1132	0.9975	0.8395	0.1298
	At first difference	0.0008	0.0045	0.0100	0.0000
SSEN	At level	0.0118	0.8970	0.9178	0.7972
	At first difference	0.0010	0.0000	0.0000	0.0000
FDIND	At level	0.0005	0.4207	0.3139	0.8378
	At first difference	0.0002	0.0000	0.0003	0.0011
LLIEXP	At level	0.0000	0.0000	0.0000	0.0000
LUPOP	At level	0.9612	1.0000	0.9924	0.0000
	At first difference	0.0004	0.1438	0.0249	0.0615

Descriptive Statistics

Table 2 demonstrates the descriptive data of the concerned factors in view of this research. There are large differences found in the data being used in current research. In terms of secondary school enrolment, the sample covers countries having an index ranging from 22.5115 percent to 100.3352 percent. On average urban population across Asian countries is 7.4738 percent over the period 2002 - 2019. Similarly, variations are found in the financial development index from 1.0828 to 2.9689, along with variables. On average, life expectancy is 70.4936 percent in these selected Asian economies.

Table 2. Descriptive statistics.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
LGDPPC	198	1.1180	0.04927	1.0154	1.2052
SSEN	198	70.6181	19.3086	22.5115	100.3352
FDIND	198	1.53e-08	1.0000	-1.0828	2.9689
LIEXP	198	70.4936	3.8256	62.728	76.978
LUPOP	198	7.4737	0.9358	5.2300	8.9258

Empirical Estimations

Table 3 shows the results of random effects, and the dependent variable is GDP per capita. Hausman specification test (REM): It is based on a method particularly used in comparing fixed and random effects estimates of coefficients. To select FEM or REM, the Hausman test is considered. Probability of chi² is 0.7650. The p-value by Hausman suggests random effects.

Table 3. Random Effect Results, Dependent Variable is GDP per capita.

Variables	Coefficients	Standard Errors	Z-values
SSEN	0.00004*	0.00002	1.69
FDINDEX	0.0011*	0.0003	4.15
LLIEXP	0.0004*	0.0002	2.10
LUPOP	0.0488*	0.0051	9.49
C	0.7189	0.0293	24.52
R-Square within R-Square between R-Square overall Wald chi2 Prob chi2	0.90 0.53 0.53 1600.79 0.0000		

*** p<0.01, ** p<0.05, * p<0.1

As shown in Table 3, random effects results shows that the role of education is noteworthy in determining the economic growth of selected Asian countries. The findings indicate that a one percent increase in secondary school enrolment increases economic growth by 0.00004%. The possible reason may be that skilled and educated people efficiently obtain employment and work very well and, in this way, increase their productivity. All this enhances economic growth. These results are consistent with the findings by Nguyen (2022). The variable financial development is a key variable in determining economic growth in selected Asian economies. One unit increase in financial development has enhanced economic growth by 0.0011 % in Asian countries. The possible reason may be that people have access to finance from banks which results in high investment, production, and economic growth. The result is consistent with Asteriou and Spanos (2019).

The variable life expectancy also contributes to economic growth. A healthy and active population, especially in urban areas, work very hard and contributes to enhancing productivity. The coefficient of life expectancy at birth is positive and statistically significant. It is found that one year increase in life expectancy increases economic growth by 0.0004 % in Asian countries. The result is supported by Acemoglu & Johnson (2007). Urban population plays a significant part in determining economic growth in these economies. A lot of jobs are created in urban areas due to high migration pressure and high urbanization in these economies. One percent increase in urban population increases economic growth by 0.0488. The possible reason can be that high investment creates high production and employment. Urban skilled population, in this way, enhances economic growth. Many job chances also improve growth. Growth brings much stability to economies. The urban population also contributes to high living standards and human development. People move to towns and cities for high earnings and better living. This growing population contributes much to the economy. It has many effects on the economy. The study findings are supported by Shabu (2010).

CONCLUSIONS AND RECOMMENDATIONS

This research has concentrated on the role of education and financial development in urban populations in 11 selected Asian countries. We have used the random effects technique to investigate how these major factors determine economic growth. We have used GDP per capita as the dependent variable for this study. The influence of education and financial development on urbanization has been checked on economic growth.

The study results highlight that economic growth is improved and enhanced by education and financial development with the urban population. The result also highlights the positive role of life expectancy on economic growth. The study concludes that increased secondary school enrollment, financial development with the urban population, and life expectancy enhance economic growth in these economies.

The research highlights that the governments of these selected Asian countries must play their role in enhancing more production and, investment, per capita income for high economic growth and development. The focus should be to strengthen policies to make improvements in urbanization in these economies. There is a serious need for the provision of access to credit facilities to make more investments and enhance economic growth. These actions must be helpful to determine more growth and to make high the living standard of the public in these economies.

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