The Importance of Education with Health in Increasing Economic Growth and Investment in Denmark

Cahya Budi Irawan[1], Meinarti Puspaningtyas[2]
[1,2]STIE Jaya Negara Tamansiswa Malang, Indonesia

Abstract

Investment is part of the way to increase welfare in the future, Community welfare is a benchmark for the development of a nation. The level of health, education, economy needs to be considered, in a conventional economic view, economic growth is broadly aimed at material welfare. We already have data that we examine in this study from 2000 to 2020 to develop "autoregressive vectors" that may used to know about relationships between all variable about The Importance of Education in Increasing Economic Growth and Investment in Denmark. This design was used to examine Economic Growth, Investment and Education in Denmark, with data from the World Bank. We know that We Know that Education has a positive relationship to economic growth. When the economy in Denmark is high, education will also improve, but if higher education investment will decrease, high economic growth also has a relationship, with the high investment also has a good effect on education. the same like education, investment also has a good influence on economic growth in Denmark also there is The investing choices made show that the expenses paid for schooling have advantages, we can see some importance for improving Education at Denmark because Education can affect many aspects such as economy and investment

Background

Many families instill a consumptive lifestyle in managing the ark of their family life so that all the income earned is used up for needs without thinking about an uncertain future (Lubis & Siregar, 2022). Every individual wants to have a decent and good life. One way to fulfill this desire is to invest. Investment is an alternative for investors to increase profits (Selvina, Syarifuddin, Budi, Amin, 2020). Investment is someone's trust in placing their funds in the hope of getting a profit (Evelyn & Marheni, 2023; Sasongko, Puspaningtyas, & Bawono, 2022). Investment is very important, because the development of an increasingly modern era causes people's needs to increase. It is not enough to only rely on basic income (Selvina, Syarifuddin, Budi, Amin, 2020). Investment is part of the way to increase welfare in the future (Maharani, Masrina, Albanjari, 2022). Community welfare is a benchmark for the development of a nation. The level of health, education, economy needs to be considered (Domri, Ridwa, Jaya, 2019). Considering the high cost of education while making investment selections needs competent and efficient financial management. The investing choices made show that the expenses paid for schooling have advantages (Yuspani & Hidayat, 2022). On a larger scale, the notion of placing education in the context of a larger system, such as economic development or nation-building, is behind the understanding of education as an investment. That is, educational goods are also

viewed as inputs into a larger system rather than only as outputs that may stand alone. It is important to keep in mind that investing in education requires resources not only from the budget but also from human capital, making any country with an educational system one of the service sectors with the highest labor costs. On the educational item's investment, it was hoped that it will not only provide satisfaction at any time, but have the long-term ability to provide future customers with improved goods and services (Siregar, Ratnaningsih, Nurochim, 2022). Education will shape civilization for humans. In addition, with education it is hoped that the community will live in prosperity and be able to overcome the problem of poverty (Anwar, 2022). Poverty is a condition where people in an area are unable to meet their daily needs which are still lacking. The cause of poverty is caused by the decreased productivity of human resources which has an impact on low people's income, so that efficient policies are needed to reduce and overcome poverty problems (Junaedi & Muljaningsih, 2022). Regional economic develop was some By developing collaboration patterns between local governments and the private sector to create jobs, local governments and communities may promote regional economic growth through the process of resource management (Pratama, Muljaningsih, Asmara , 2021). From a conceptual point of view, economic growth is an indicator of increasing wealth in a region over time (Anidi, Eksperiware, Adewusi, John, Judith, Stephen, 2022). In a conventional economic view, economic growth is broadly aimed at material welfare (Abidin, 2019). The primary requirement for a nation's dynamic socioeconomic development is economic growth (Gurnak & Nazarov, 2023). One of the key metrics used to determine how effectively a country is developing is economic growth. Higher economic growth indicates that a nation is more productive and sophisticated. Therefore, economic growth is needed for the welfare of society through equitable economic growth (Dalimunthe, Sitanggang, Panggabean, 2022). Economic growth, which shows a meaningful influence from the adopted development strategies, is one of the key metrics for evaluating the success of economic development. (Tumbel, Koleangan, Engka, 2019). This design was used to examine Economic Growth, Investment, Education in Denmark, with data from the World Bank open Data.

Research Method

Utilizing secondary World Bank data, this model is used to estimate Economic Growth, Health and Taxes in Denmark. A 20-year research study was conducted from the year 2000 to the year 2020, and " vectors' autoregressive " are utilized to describe the link of variable one to the other variables.

Table 1. An explanation of the variable description that we will use

Variable	Description	Source	Unit Analysis
Ecoonomic Growth (EGMT)	The data presents economic growth in Denmark from 2000 to 2020	World Bank	Percent
Investment (IVSTM)	The data shows the development of investment in Denmark for 20 years, namely from 2000 to 2020	World Bank	Percent
Edducation (EDCTN)	Data on Education is represented by this variable from 2000 to 2022	World Bank	Percent

We use the multivariate regression approach to analyze the links between the variables Economic Growth, Investment and Education in Denmark:

$EGMT_t = \beta_0 + \beta_1 IVSTM_{t1} + \beta_2 EDCTN_{t2} + e_t$ fma 1

$IVSTM_t = \beta_0 + \beta_1 EGMT_t + \beta_2 EDCTN_{t2} + e_t$ fma 2

$EDCTN_t = \beta_0 + \beta_1 EGMT_t + \beta_2 IVSTM_{t2} + e_t$ fma 3

Information :
EGMT : Economic Growth
IVSTM : Investment
EDCTN : Education
e : erroneous title
t : time sequence
β : degree in terms of causation influence
fma: method

In this study, every regression link is coupled using vector calculations, making each variable simultaneously the independent and dependent variable. Dickey-definition Fuller's of zero as obtained from PP analysis, and p=1 with $\Delta yt = (\rho - 1)yt-1 + ut$ being prepared, when Δ – This is some first attempt, different operations were used. To "unit root test," In this investigation, the following equation was used:

$\Delta Y1 = \alpha_0 + \beta_0 T + \beta_1 Y_{t-1} + \sum_{(i-1)}^{q} \alpha_1 \Delta Y_{t-1} + e_t$

Caption:

Y are a unit root variables check.

T "linear pattern" variant portrayed, with "various in lag" are Yt1, 0 was showed as "single equation," also with "t" being a "time trends" indication. The null hypothesis (h0) and the following are some alternate unit root test hypotheses:

$H0 : \alpha=0$
$H1 : \alpha\neq0$

Results and Discussion

To determine whether or not a data set is stationary, we used the stationarity test. Term of Error analysis is used to determine whether or not a series is static, as well as some possibilities if the series is not truly stationary. Table 2 displays some of the results from attempting some of the test unit's roots.

Table 2. The test of ADF's Unit Root on EGMT, IVSTM and EDCTN data in Denmark.

Variable	Unit Root	Include in the examination Equation	Statistics for the ADF Test	5% Critical Value	Description
Ecoonomic Growth (EGMT)	Level	Intercept	-3.015694	0.0505	Stationer
Investment (IVSTM)	Level	Intercept	-4.180272	0.0045	Stationer
Edducation (EDCTN)	Level	Intercept	-3.273366	0.0303	Stationer

All variable are stationary on the Level. This is demonstrated by Augmented Dickey-Fuller with results like, running the test -3.273366 and probability 0.0303, since the probability is less than 5%, in this situation, the EGMT, IVSTM and EDCTN Level data indicates that it is stationary. Both VAR and causationtry should be tested for sensitivity before starting a VAR investigation, there should be a selection of an acceptable optimal time lag with the results presented in table 3.

Table 3. The test of Optimum Lag at Lag 0 to 4, EGMT, IVSTM and EDCTN data in Denmark.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-564.6938	NA*	2.03e+25*	66.78751*	66.93455*	66.80213*
1	-561.5512	4.806326	4.16e+25	67.47662	68.06477	67.53508
2	-555.1390	7.543851	6.41e+25	67.78105	68.81032	67.88337
3	-546.8188	6.851882	1.00e+26	67.86104	69.33141	68.00720
4	-536.2084	4.993118	2.11e+26	67.67158	69.58307	67.86159

Variation outcomes in the length of EGMT, IVSTM and EDCTN lags on the LR, FPE, with SC at position number 1. Some outcome by the four components concludes that lag 1 is different, so lag 1 will be chosen. The VAR analysis's outcome is presented at the table 4.

Table 4. VAR Model Analysis

	EDCTN	EGMT	IVSTM
EDCTN	0.206992	0.007571	-2.11E+08
	(0.23247)	(0.01998)	(6.7E+08)
	[0.89040]	[0.37898]	[-0.31292]
EGMT	-4.914215	0.207364	3.02E+09
	(3.29702)	(0.28334)	(9.5E+09)
	[-1.49050]	[0.73185]	[0.31657]
IVSTM	2.17E-11	6.95E-13	-0.260456
	(1.1E-10)	(9.8E-12)	(0.33017)
	[0.19020]	[0.07085]	[-0.78885]
C	107.4954	-0.127830	3.73E+10
	(30.7584)	(2.64335)	(8.9E+10)
	[3.49483]	[-0.04836]	[0.41886]
R-squared	0.179040	0.038685	0.058653
Adj. R-squared	0.025110	-0.141562	-0.117850
Sum sq. resids	10438.87	77.09662	8.74E+22
S.E. equation	25.54269	2.195117	7.39E+10
F-statistic	1.163124	0.214620	0.332305
Log likelihood	-90.95436	-41.87204	-526.6727
Akaike AIC	9.495436	4.587204	53.06727
Schwarz SC	9.694582	4.786351	53.26642
Mean dependent	126.0959	1.156098	1.43E+10

S.D. dependent	25.86955	2.054508	6.99E+10

Education has a positive relationship to economic growth. When the economy in Denmark is high, education will also improve. We can see this with the probability of 0.007571 and 0.37898 t-statistics, but if higher education investment will decrease, high economic growth also has a relationship we can see this with the probability of 3.02E+09 and 0.31657 t-statistic, but the high investment also has a good effect on education. We can see this with the probability of 2.17E-11 and 0.19020 t-statistic, the same like education, investment also has a good influence on economic growth in Denmark, we can see this in the probability 6.95E-13 and 0.07085 t-statistic. After doing the VAR test, The test of Causality Granger was carried out with the outcomes presented in table 5.

Table 5. The test of Causality's Granger

Null Hypothesis:	Obs	F-Statistic	Prob.
EGMT doesn't cause to EDCTN	20	2.38635	0.1408
EDCTN doesn't cause to EGMT		0.16854	0.6865
IVSTM doesn't cause to EDCTN	20	0.06123	0.8075
EDCTN doesn't cause to IVSTM		0.12426	0.7288
IVSTM doesn't cause to EGMT	20	0.02113	0.8861
EGMT doesn't cause to IVSTM		0.12670	0.7263

Table 5 shows the results of the Granger Causality in Denmark. The causal relationship between a single variable and another is between IVSTM to the EGMT, EDCTN for GCMX, EDCTN to the IVSTM, This is demonstrated by the probability being less than 5%.
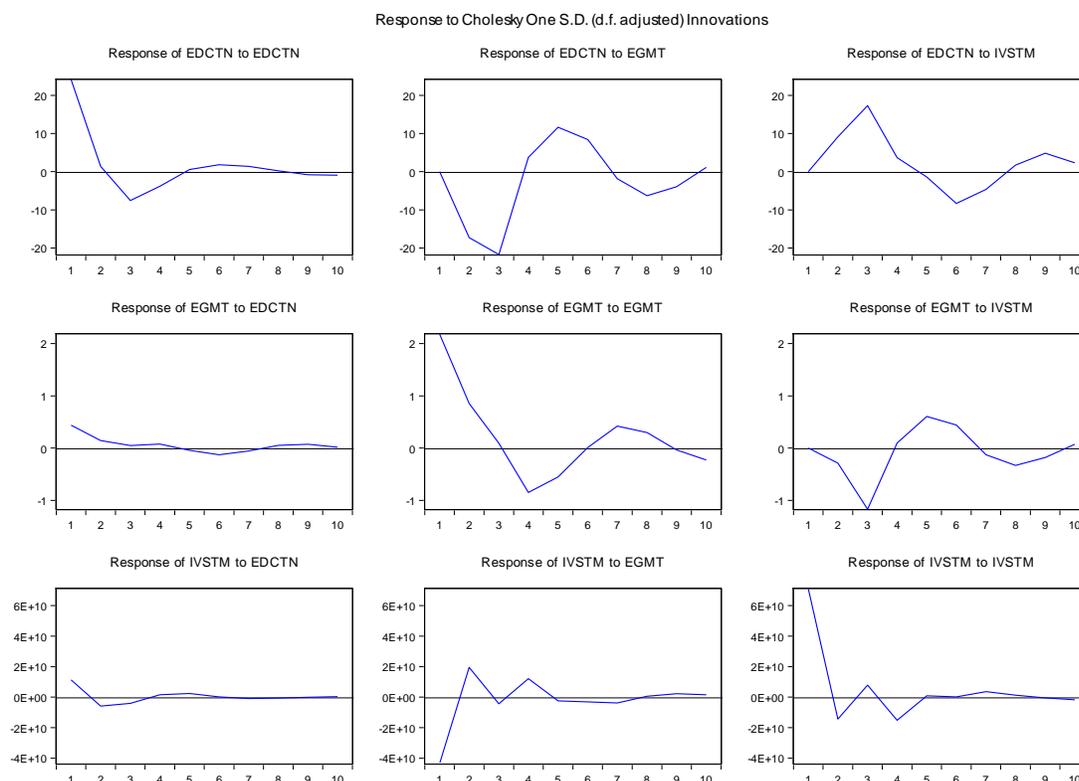

Figure 1. Impulse Response Variables

From this graph, we can see the response of education to economic growth. We can see that in the first period it decreased until the 3rd period, then it increased until the 5th period, with a decline that occurred again until the 8th period before increasing until the 10th period. to investment increased from the first to the 3rd period before decreasing in the 7th period and rose again until the 9th period and decreased again in the 10th period. The response of economic growth to education has been stable since the first period, these two variables have decreased and increased which is quite low tends to be stable until the 10th period. The response of economic growth to investment itself decreases in the first to 3rd period which is quite drastic before experiencing an increase again until the 5th period and decreases again until the 8th period before increasing until the last period. The investment response itself to education is quite stable because since the first period it only decreased until the 2nd period before experiencing stability until the 10th period. The investment response to economic education itself has increased since the 1st to 3rd period, before decreasing until the 3rd period before rose again in the 3rd to 4th period and fell again in the 5th period and then experienced stability until the last period. We can see the response of each variable to each other, they are interconnected and very closely related.

Conclusion

Education has a positive relationship to economic growth. When the economy in Denmark is high, education will also improve, but if higher education investment will decrease, high economic growth also has a relationship, with the high investment also has a good effect on education. the same like education, investment also has a good influence on economic growth in Denmark, we can see the importance in improving Education in Denmark because Education can affect many aspects such as economy and investment.

References

Abidin, Z. (2019). "Meneropong Konsep Pertumbuhan Ekonomi Telaah atas Kontribusi Sistem Ekonomi Islam terhadap Sistem Ekonomi Konvensional dalam Konsep Pertumbuhan Ekonomi". AL-IHKAM Jurnal Hukum & Pranata Sosial. 1 (2), 173 – 185. https://doi.org/10.19105/al-lhkam.v1i2.2561

Anidi, Ekperiware, M., Adewusi, A., Oyetade, J., Nwoke, J., Ogullah, S. (2022). "Government Performance and Economic Growth in Nigeria". 10 (1), 157 - 165. https://doi.org/10.26765/DRJSSES10104125

Anwar, M. (2022). "Ketimpangan aksesibilitas pendidikan dalam perspektif pendidikan multikultural". FOUNDASIA. 13 (1), 1-15. https://doi.org/10.21831/foundasia.v13i1.47444

Dalimunthe, M.B., Sitanggang, B.E., Panggabean, F.Y. (2022). "The Relationship Between Economic Growth And Poverty In Indonesia". Journal of Social Sciences. 5 (3), 3 - 38. https://doi.org/10.52326/jss.utm.2022.5(3).03

Domri, D., Ridwan, R., Jaya, M. (2019). "Efektivitas program keluarga harapan dalam meningkatkan kesejahteraan masyarakat". Jurnal Politik dan Pemerintahan Daerah. 1 (1), 1-16. https://doi.org/10.36355/jppd.v1i1.1

Evelyn, E., Marheni, D.K. (2023). "Pengaruh Faktor Perilaku Terhadap Pengambilan Keputusan Investor dalam Investasi Saham di Batam". Jesya (Jurnal Ekonomi & Ekonomi Syariah). 6 (1), 346 – 357. https://doi.org/10.36778/jesya.v6i1.935

Gurnak, A.V., Nazarova, N.A. (2023). "Tax Stimulation of Economic Growth in Russia: Problems and Prospects". Налоги и налогообложение. 1 - 16. https://doi.org/10.7256/2454-065X.2023.1.39483

Junaedi, F.A., Muljaningsih, S. (2022). "Pengaruh Tingkat Pengangguran Terbuka, Pendidikan, Pertumbuhan Ekonomi, dan Pertumbuhan Penduduk di Kabupaten Nganjuk". Equity: Jurnal Ekonomi. 10 (1), 46 - 58. https://doi.org/10.33019/equity.v10i1.82

Lubis, A., Siregar, B.G. (2022). "Pandangan Islam Terhadap Aktivitas Investasi Dalam Keluarga". Jurnal Kajian Islam. 9 (2). https://doi.org/10.24952/multidisipliner.v9i2.5705

Maharani, D., Masrina, M., Albanjari, M.F. (2022). "Pengaruh Manfaat Dan Risiko Investasi Terhadap Minat Investasi". Jurnal Pendidikan, Sains Sosial, Dan Agama. 8 (1). https://doi.org/10.53565/pssa.v8i1.472

Pratama, B.A., Muljaningsih, S., Asmara, K. (2021). "Pengaruh PDRB, Tingkat Upah Minimum dan Pengeluaran Pemerintah terhadap Penyerapan Tenaga Kerja Di Kabupaten Sidoarjo". Sintaks Jurnal Kekaguman. 2 (8), 1395 - 1406. https://doi.org/10.46799/jsa.v2i8.293

Sasongko, B., Puspaningtyas, M., & Bawono, S. (2022). The Relationship Between Agricultural Value Added, Investment and Consumption: Vector Error Correction Model Approach. Asia Pacific Journal of Management and Education (APJME), 5(2), 12-25.

Selvina, Syaifuddin, D.T.D., Budi, N., Amin, M. (2020). "Penetapan Keputusan Investasi-Selviana 2020". Jurnal Manajemen dan Kewirausahaan. 12 (1), 57 – 68.

Siregar, D.R.S., Ratnaningsih, S., Nurochim, N. (2022). "Pendidikan Sebagai Investasi Sumber Daya Manusia". EDUNOMIA: Jurnal Ilmiah Pendidikan Ekonomi. 3 (1), 61 - 71. https://doi.org/10.24127/edunomia.v3i1.3017

Tumbel, S., Koleangan, R., Engka, D. (2019). "Pengaruh Belanja Pemerintah Dan Investasi Terhadap Pertumbuhan Ekonomi Dan Dampaknya Terhadap Pengangguran Di Kabupaten Minahasa Selatan". Jurnal Pembangunan Ekonomi Dan Keuangan Daerah. 19 (5). https://doi.org/10.35794/jpekd.19389.19.5.2018

Yuspani, Hidayat, M. (2022). "Manajemen Keuangan Pendidikan (Analisis Investasi Pendidikan)". Idarah Jurnal Manajemen Pendidikan. 6 (1). https://doi.org/10.24252/idaarah.v6i1.27545