

# Turnitin

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# **Education and health to support the quality of work participation in Cambodia**

## **Abstract**

This study investigates Work Participation, Education, Health and Economic Growth. This study investigates data from the 2000 to 2020 starting point to generate "autoregressive vectors" that can be used to determine relationships between variables. This model is used to analyze Work Participation, Education, Health and Economic Growth in Cambodia and we utilize the World Bank's data. We find something about this research, like good work participation requires education and good health as well, because if education and health are poor, work participation will also be bad. When work participation is good, apart from health and education, there will also be economic development that will improve in Cambodia.

**Keywords:** Work Participation, Education, Health, I15.

**JEL Classification:** I21, I10 P10, J01.

## **Background**

Teachers in a school education must implement health education for their students and teachers in order to increase immunity in learning (Mary, 1994), education is important, but health is more important, because if the health of students or teachers is good, the quality of education will also be good. this relates to the influence of students when they graduate and want to find a job, or the quality of a teacher in serving their students to learn. Health education must be incorporated further into education system rather than presented like a separate course, tat was expected that all instructors has appropriate topic comprehension and understanding (Martha, David, 2003). Some implementation of health in an education must also adopt a health-oriented approach, such as using medicine education as an example, programs that are oriented to disease/risk factors that are very important and oriented to alternative health (Paul, 2013).

Health also contributes to education which has benefits for skills development, because education contributes to the development of workforce skills so that they can work efficiently in accordance with economic conditions and the needs of the business sector (Hamani, Rusminingsih, & Damayanti, 2022). Education has an impact on increasing one's adaptability. Education increases one's comparative advantage and increases one's ability to master technology. Education increases the individual's ability to adapt. (Afriani, 2021). Blasques et al. (2021) concluded that out-of-work workers with higher levels of education were more likely to look for other jobs. A person's level of education reduces the duration of unemployment and gets an education faster than other people with lower levels of education. Nature & Parvin. (2021) also obtained a positive and substantial link among academic achievement also there is speed with which a person gets a job and this is will make economic growth more stronger.

Tax also increases another conduit of the long-run adverse effect caused by government borrowing to the growth of (Ferreira, 2014; Esteve & Tamarit, 2018). The country's capacity to increase economic growth depends on the financial resources available to support its spending, and the country depends on the creation of internal funding sources in the economy sector. (Musaiyaroh & Bawono, 2018). And also foreign payments's impact to the growth of economic is equally beneficial as in the short run, but turns out to be bad on the long term, acording to the capital's density development (Elmendorf & Mankiw, 1998).

Capacity of state to spend publicly and promote economic growth depends on the financial resources available to support its spending, and the state depends on the creation of internal funding sources on the one hand, and the utilization of external funding sources on the other. It emphasizes the function and importance of taxes in growing the internal funding and financial resources necessary for growth. An internal source of funding, the essential tax, is created through the mobilization of national resources needed for development in order to generate additional income from taxes (Musaiyaroh & Bawono, 2018).

Also there is, Human capital who plays an important role, not only related to employee skills, but also employee steadfastness and moral capital attached to employees is very important in achieving organizational goals (Widarni & Bawono, 2021) with good skill of human capital this will make work participation will increased. Education does not only play a role in improving skills but also employee self-development and morale including employee empathy and loyalty can be developed through educational mechanisms. However, education alone is not enough to require health care and health facilities for employees, both mentally and physically well-being (Mukhlis, 2021).

The higher the education level of the average population, the faster an area or country absorbs labor the better. Some connection among employment, education, also economic involvement. Education has a significant impact on the ability of humans to adapt to economic shocks that have an impact on labor market shocks. Education gives humans the ability to adapt and work well to earn a better income (WIDARNI & BAWONO, 2021). The human capital and human resource efficiency also can be promoted by education. Research by Naval et al. (2020), concluded that employee training and education can increase human capital which is characterized by increased work efficiency and employee performance in the workplace. Baerlocher et al. (2021) conclude that population growth through increased demand increases people's work participation.

Education is able to anticipate employment participation shocks due to economic shocks. Education shows a considerable beneficial effect on labor participation in the linear component, confirming that education can build human capital and enable individuals to have sufficient human capital according to the needs of the business sector. This study investigates Work Participation, Education, Health and Economic Growth. This study investigates data from the 2000 to 2020 starting point to generate "autoregressive vectors" that can be used to determine relationships between variables.

### Research methods

This model is used to analyze Work Participation, Education, Health and the growth of economic in Cambodia we utilize a secondary data from World Bank. 21 year research study started by the year of 2000 until 2020 was conducted, "vectors's autoregressive" are utilized for express variable one to the other variables connection. We investigate Work Participation, Education, Health and Economic Growth in Cambodia. To study some connection, we use method regression's multivariate among the variables called Work Participation, Education, Health and Economic Growth in Cambodia :

6	12
WIP <sub>t=0+1</sub> ECI <sub>t+2</sub> HLT <sub>t+3</sub> ECG <sub>t+e</sub>	fma 1
ECI <sub>t=0+1</sub> WIP <sub>t+2</sub> HLT <sub>t+3</sub> ECG <sub>t+e</sub>	fma 2
HLT <sub>t=0+1</sub> WIP <sub>t+2</sub> ECI <sub>t+3</sub> ECG <sub>t+e</sub>	fma 3
ECG <sub>t=0+1</sub> WIP <sub>t+2</sub> ECI <sub>t+3</sub> HLT <sub>t+e</sub>	fma 4

Information :

WIP: Work Participation

ECI : Education

HLT : Health

ECH : Economic Growth

e : erroneous title

t : time sequence

$\beta$  : degree in terms of causation influence

fma: formula

This research employs vector computations, in which every regression connection is combined so that every variable simultaneously becomes both the independent and  $\beta$  the dependent variables. The concept of zero from Dickey-Fuller, derived by PP analyze, with  $p=1$  and  $\Delta y_t = (p-1)y_{t-1} + u_t$  are formula, while  $\Delta$  – This is very **first** try, various operations were utilize. For the "unit root test," the following equation was employed in this study:

$$\Delta Y_t = \alpha_0 + \beta_0 T + \beta_1 Y_{t-1} + \sum_{i=1}^q \alpha_i \Delta Y_{t-i} + \epsilon_t$$

Caption:

Y are check of unit root variables.

T "linear pattern" variable represented, and "different in lag" are  $Y_{t-1}$ , 0 are displayed as "single equation," also with "t" being a "time trends" indication. The null hypothesis ( $H_0$ ) and the following are some alternate unit root test hypotheses:

$H_0 : \alpha = 0$

$H_1 : \alpha \neq 0$

## Results and Discussion

### Stationery Test

This test can utilized to assess whether the data is stationary or not. Error term analysis is used to determine whether the series is stationary, which includes the possibility of autocorrelation if the series is not. After trying on the following unit test root: findings obtained:

**Table 1.** The test of ADF's Unit Root on WIP, ECI, HLT and ECH data in Cambodia

Variable	Unit Root	Include in the examination Equation	Statistics for the ADF Test	5% Critical Value	Description
Work Participation (WIP)	Level	Intercept	-1.441240	0.5416	
	First Diff	Intercept	-6.093378	0.0001	Stationer
Education (ECI)	Level	Intercept	-5.004844	0.0013	Stationer
Health (HLT)	Level	Intercept	-2.599557	0.1095	
	First Diff	Intercept	-4.289630	0.0038	Stationer
Economic Growth (ECH)	Level	Intercept	-1.513732	0.5063	
	First Diff	Intercept	-3.122801	0.0418	Stationer

WIP with HLT and ECH data are stationary on the first diff, when variable ECI are stationer on original Level. This is demonstrated by Augmented Dickey-Fuller with results like, running the test -5.004844 and probability 0.0013, since the probability is less than 5%, in this situation, the difference of the ECI level data indicates that it is stationary.

Both VAR and causationtry must be tested for sensitivity before starting a VAR investigation, there must be a selection of an acceptable optimal time lag. This is the outcome:

**Table 2.** The test of Optimum Lag at Lag 0 to 4 WIP, ECI, HLT and ECH data in Cambodia

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-151.3222	NA	1014.585	18.27320	18.46925	18.29269
1	-107.3660	62.05579*	40.62286	14.98424	15.96449	15.08168
2	-84.23460	21.77074	26.39211	14.14525	15.90970	14.32064
3	-38.99637	21.28858	3.654327*	10.70546	13.25411	10.95880
4	1669.462	0.000000	NA	-188.4073*	-185.0745*	-188.0760*

And the results of the variations in the length of the WIP, ECI, HLT and ECH lags are in LR, FPE, and SC at position number 1. The results of the three components conclude that lag 4 is different, so lag 4 will be chosen.

### Variable Model Analysis

**Table 3.** VAR . Model Analysis

	WIP	HLT	ECI	ECH
WIP	1.254934 (0.39590) [ 3.16984]	-0.152686 (0.06229) [-2.45115]	-0.102486 (0.28714) [-0.35692]	0.307681 (0.83030) [ 0.37057]
HLT	-0.039630 (1.65608) [-0.02393]	0.180598 (0.26057) [ 0.69308]	0.067327 (1.20114) [ 0.05605]	-3.314839 (3.47323) [-0.95440]
ECI	-0.220451 (0.43756) [-0.50381]	0.125081 (0.06885) [ 1.81678]	0.489357 (0.31736) [ 1.54195]	-0.514694 (0.91768) [-0.56086]
ECH	-0.289718 (0.69446) [-0.41718]	-0.083158 (0.10927) [-0.76104]	0.205446 (0.50369) [ 0.40789]	0.099855 (1.45646) [ 0.06856]
C	6.666383 (25.7168)	3.695044 (4.04636)	40.56828 (18.6522)	2.095325 (53.9346)
R-squared	0.931760	0.947169	0.990009	0.689363
Adj. R-squared	0.767985	0.820375	0.966031	-0.056166
Sum sq. resids	16.20086	0.401082	8.522439	71.25896
S.E. equation	1.800048	0.283225	1.305560	3.775155
F-statistic	5.689271	7.470136	41.28741	0.924663
Log likelihood	-24.59312	8.694757	-18.81187	-37.92443
Akaike AIC	4.177014	0.478360	3.534652	5.658270
Schwarz SC	4.820060	1.121407	4.177699	6.301317
Mean dependent	74.56333	6.632360	88.09418	7.054188
S.D. dependent	3.737028	0.668264	7.083573	3.673403

The relationship between WIP and HLT, very negative, has -0.152686 the coefficient with the -2.45115 t-statistic. The connection among WIP to the ECH are very good, having 0.307681 coefficient with 0.37057, meaning that the more WIP the more ECH. Some connection among ECI to the ECH are greatly positive, with 0.099855 coefficient also with 0.06856 t-statistic. This shows that work participation has a bad relationship with health, but good health can create education and good economic development as well.

### Granger Causality Analysis

Table 1. The test of Causality's Granger

Null Hypothesis:	Obs	F-Statistic	Prob.
HLT does not cause WIP	17	0.32062	0.8566
WIP does not cause HLT		0.51401	0.7281
ECI does not cause WIP	17	1.94775	0.1959
WIP does not cause ECI		0.63074	0.6544
ECH does not cause WIP	17	0.80181	0.5568
WIP does not cause ECH		0.70620	0.6097
ECI does not cause HLT	17	0.84236	0.5357
HLT does not cause ECI		1.60400	0.2637
ECH does not cause HLT	17	1.41651	0.3122
HLT does not cause ECH		1.60403	0.2637
ECH does not cause ECI	17	2.44065	0.1316
ECI does not cause ECH		6.41394	0.0129

The outcome test by Granger Causality in Cambodia we presented at Table 4. The causal relationship between a single variable and a variable is between the HLT variable for WIP, ECI for WIP, ECH for WIP, ECI for HLT, ECH for HLT and ECH for ECI. This can be seen from the probability that is lower than five percent.

## Conclusion

Good work participation requires education and good health as well, because if education and health are poor, work participation will also be bad. When work participation is good, apart from health and education, there will also be economic development that will improve in Cambodia.

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