Spatial Linkage of Technological Progress, ICT base and Economic Output in CLMV Region

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Abstract

Rising technological progress and innovation, ICT base toward the era of modernization and globalization in developing countries has driven economic into the new structure of transitional development. The paper examines spatial linkage between technological progress and economic output in CLMV region during the observation period of 1995 to 2016. The conventional approach of RE and FE estimation with robust standard error, reveals the consistency of empirical outcomes. It yields the crucial role of technological progress, as the proxy of internet server connection and ICT, computer import products in boosting the structure of economic output which generate to the growth rate in CLMV region. The findings suggest policy maker in exerting policy toward climate investment and trade to bring the country into path of facilitating flows of capitals, goods and service, particularly the business structure in line with adopting the technological innovation.

Keyword: Technological Progress, Economic Output, Economic Significance Analysis, CLMV
JEL classification: O3, CO1

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INTRODUCTION

A state of change of human behavior in the era of modern economics, particularly the digitalization or simply the digital era has turned economy into the new path of transitional development in technological progress or information and communication technology (ICT) base. ICT in particular has transferred the economy in many structures such as reorganization of economics, globalization in trade, FDI or multinational enterprises (MNEs) which leads to enhance information and big data availability. In this context, access to the internet connection and servers has become a vital development tool for the country, particularly the developing one.

The so-called Fourth Industrial Revolution is a digital revolution that requires universal and reliable internet access; without it, many developing countries will not be able to fully participate in an increasingly mobile and digital-based economy. ICT plays a significant role in development of each economic sector, particularly during liberalization process, Saidi K. H. (2015). The theoretical framework suggest the crucial tool for the country to boost productivity via innovation in the factor production. The significance and positive relationship between ICT and economic growth found in the empirical studies of both developed and developing countries, Adak (2015), Ahmad J. S. et al., (2015), Alani (2012), Benhassen (2015), Hlya K. . (2015), M. Farhadi (2012), M. Farhadi (2012) and Niebel (2014).

The technological impacts primarily make a change in promoting innovation, raising productivity and simulating economic growth and therefore economic well-being of human beings, Ahmad J. S. et al., (2015). Beside this, it is enable economic, particularly enterprise and individual to use technologies more efficiently and facilitatively toward the cost reduction and enhancing productivity gains as well as good payoffs from investment Hlya K. . (2015), and Adak (2015). Moreover, technological development is an important factor increasing the growth rate of economy at macro level and profits and market shares of the

firms at micro level Hlya K. . (2015). Precisely, ICT investments made by the private sector seem to have contributed significantly to the countrys growth compared to investments made by the government, M. Kuppusamy (2009). With a large cross section analysis, the diffusion of new technology has accelerated the pace of economic growth, Benhassen (2015) and M. Farhadi (2012). As the result, ICT or technological progress disclosed the strongly association to economic growth, made a better trade off between enterprise and individual usage.

Cambodia, Lao PDR, Myanmar and Vietnam, known as CLMV countries have been taking a ways longer for the nation to reform her economic and connect to the world through trade and financial liberation since 1986. With the total population of 168 million and GDP growth rate averagely approximates 7% per year, CLMVs market size is 267.33 billion USD, (World Bank, 2016). According to ASEAN Secretariat indicates that in 2015, combined merchandise trade amounted to USD 385.5 billion and contributed 16.9% to ASEANs total trade, compared with 14.1% in 2014. In the same period, foreign direct investment into the four countries totaled USD 17.4 billion, which constituted 14.6% of total inward direct investment to ASEAN.

The central research question of the study is to find out how essential technological progress generate economic output in CLMV region? And how the relationship matter?. Simply, the main objectives of the study are firstly to examine the spatial linkage between technological progress, ICT base and economic output. Secondly, is to measure economic significance toward estimated outcomes. Therefore, the organized structures of the study is designed as follows: 1st session is to demonstrate background and motivation of the study whereas the 2nd one is to present the stylized facts of technological progress and economic output. The 3rd session is to design the methodology and data description. The 4th session is to discuss the empirical outcomes and technical observations. The last session, say 5th is to make the concluding remarks and highlight some suggestions.

STYLIZED FACTS OF TECHNOLOGICAL PROGRESS AND ECONOMIC GROWTH

Robust economic output toward the population growth is essential if investment is economically equal to saving. This suggests the stock of saving supposedly becomes the pocket of investment. The phenomenon is emerged since the classical theory of R. Solow (1958) in line to growth model. Therefore, economic growth can accurately exist in the long term if research and development (R&D) throughout investment take into account, S. Peter (1989). Investment which presents the endogenous factor has been known as the endogenous growth model. It can be sustained in the long term due to level of innovation, especially innovation and investment in technology. The recent empirical studies put in plaint to investigate the impact of technological progress and investment, ICT base to economic output via both cross section and /or country level analysis.

The empirical analysis due to macro-level of technological progress or ICT base and economic growth in developing and emerging countries examines the comparability and generalizability of estimated results. Niebel (2014) denoted that investment in ICT are seen as a key driver of productivity growth. M. Kuppusamy (2009) carried out data from both the private and public sector over the period of 1992 2006 revealed that ICT investments undertaken have paid off albeit at different scale in different economic sectors. Those from private sector seem to have contributed mainly to the countrys growth as opposed to the governments investment. Thus, investment in ICT resulting in benefit to social well being due to greater ICT-enabled community that will translate to escalated economic growth. Adak (2015) revealed similarly that there is a significant effect of technological progress and innovation on economic growth in Turkey. Hlya K. (2015) stated that technological development made the very important contributions to the economic and social-cultural life. Additionally, Alani (2012) pointed that growth in technological progress resulted in economic growth, whereas it increases either in capital productivity or labor productivity.

With the large cross sections of 50 ICT import countries, Khuong Vu, (n.d.) suggested that ICT investment has a significant impact on economic growth not only as traditional investment, but also as a boost to efficiency in growth. In addition, this proposed that more a higher level of ICT capital stock per capita allowing an economy to achieve a higher growth rate for given levels of growth in labor and capital inputs. Similarly, M. Farhadi (2012) applied dynamic panel data based on GMM method from 159 countries over the period 2000 to 2009 indicated that there is a positive relationship between growth rate of real GDP per capita and ICT. Yet, with 43 countries over the period 1995-2011, Benhassen (2015) suggest a positive and significant relationship.

METHODOLOGY

Data Source and Calculation

Our data obtains from World Development Indicator (WDI), the World Bank. The study uses GDP per capita growth rate as the proxy of explained variable, representing as the economic output. Internet server connection (%/radio of population) and computer, communication and ICT (% of export) are the explanatory variable, denoting as the proxy of technological progress. To capture the causal effect in the system equation, other controlled variables such trade openness, investment flow (FDI) and inflation rate (as the proxy of CPI) are included in our analysis. The sample observations are converted to the nature of logarithm. Therefore, the descriptive statistics presents in appendix 1 in the last session. Additionally, the study scatters GDP per capita to internet and import computer and other communication service in graphical illusion. The graphic somehow demonstrates in the following figure.

EMPIRICAL METHODOLOGY

Due to an increasing of internet connection and usages in CLMV region and capturing from existing literature reviews, the study derives the specification function of the linkage between technological progress and economic output towards the controlled variables as follows:

$$\log y_t = \alpha + \beta log Tech_{it} + \phi W_{it}^{'} + \mu_{it} \tag{1}$$

where,

- $y_{i,t}$ **is per capita GDP growth rate at time** t **and cross section** i
- $Tech_{it}$ **denotes technological progress, used as the proxy of internet connection and computer, ICT import as % of total import**
- $W_{it}^{'}$ **is a matrix of controlled variables, employed some crucial variables such as foreign direct investment (FDI) as the percentage of GDP (%), trade openness and inflation rate (CPI)**
- μ_{it} **distribution whereas mean and variance,** $N(0,1)$

The baseline model including and excluding control variable simultaneously is employed. The other models incorporating dummy variables and interacting with the proxy of technological progress to examine differential effects from individual country of Cambodia, Lao PDR, Myanmar and Vietnam are adopted. Yet, to examine effect from individual country and time dummy applying as binary variable, say 0 and 1, the study subscripts its function as follows: lets consider country dummy $CD_r = 1$ **for r equates to the evaluated country, as example** $CD_r = 1$ **if** r**=***cambodia* **and** 0 **otherwise. As the result, we denote as follows:**

$$Country_{dummy} = \theta_{rt} CD_r \tag{2}$$

Where, country dummy, CD_r and $r = 1, , R$ is dummy variable taking number 1 for country r, and 0, otherwise. More importantly, FDI, trade per capita, broad money supply and domestic credit provided to private sector are adopted as country dummy in line with multiplying by its own determined factors of globalization and financial development variable. Again, it calculates as multiplying to country dummy variable. With regard to time dummy, lets denote ${}_jT_j$ as time trend effect or time dummy where ${}_j$ is the parameters of time trend, T_j. It equals to 1 on year j and 0 otherwise. For any given year j, denotes the function by setting $T_j = 1$ for j equates to determined period and 0 otherwise. As the result, we get an expression as follows:

$$Time_{dummy} = \sum_{j=1}^{T-1} r_j T_j \tag{3}$$

From equation (1), (2) and (3), we can accordingly rewrite a new specification function of technological progress and economic output in CLMV region as follows:

$$\log y_t = \alpha + \beta logTech_{it} + \phi W_{it}^{'} + \theta_{rt} CD_r + \sum_{j=1}^{T-1} r_j T_j + \mu_{it} \tag{4}$$

Equation (1) and (4) will estimate throughout panel data models, namely fixed effect (FE) and random effect (RE) estimator as well as maximum likelihood estimation (MLE). Therefore, the brief description of panel data model explains as follows. Lets consequentially consider an explained variable, y_t and a set of explanatory variables, x_{it} at time t and cross section i. Controlled variable, $W_{it}^{'}$ incorporates in the regression equation. Accordingly, we get the regression equation toward the panel data analysis as follows:

$$y_{i,t} = \alpha + \beta x_{it} + \psi w_{it}^{'} + v_i + \epsilon_{it} \tag{5}$$

Where, α is constant term and $\mu_{it} = v_i + \varepsilon$ is a random effect across the country. From simple equation (5), Hsiao C., (1986) discloses that pooled OLS estimator takes into account the country specific effect; accordingly panel data models

based on FE and RE estimator use to eliminate those problems by considering the assumptions as follows. FE assumes that the slops are common and differ in intercept and allows for unobservable country heterogeneity whereas in RE estimator, it considers unobservable country heterogeneity effect but flexible of variation across the entities. Unlike FE, RE estimator incorporates these effects into error term which is assumed to be uncorrelated with dependent variable, Hsiao C., (1986). It is worth noting that, since time-invarying variables such as distance and common languages as well as religion were removed in FE estimator for which leaded to be less efficiency. Accordingly, to eliminate that issue, RE estimator takes into account. In addition, to select whether FE or RE estimator is appreciated, Hausman (1978). The null hypothesis is that difference in coefficients not systematic and vice versa for an alternative one.

The equation (1) and (4) will estimate throughout RE and FE and estimator toward diagnostic test of Breusch-Pagan / Cook-Weisberg test for heteroskedasticity as well as Hausman specification test. Still, the robustness of standard error (SE) in increasing an accuracy of estimation is applied. Economic significance analysis is calculated due to estimated coefficients from all proposed models. Last but not least, to capture more detail of panel data approach, they can be found in Hsiao (1986), Hausman (1978), C. Hsiao (2003),Baltagi (2008), Jeffrey M. Wooldridge (2009), Manning (1998) and W. H. Greene (2012).

EMPIRICAL ESTIMATED RESULTS

In this session, the study aims at discussing the empirical outcomes from the baseline regression model. Three estimators, namely FGLS, RE, FE and MLE are adopted to estimate equation (1) and (4) in line with controlling dummy variables of cross section term. It is such the idea of multiplying variable by cross section to technological progress one. The results show in table 1 and 2 for the estimations without robust standard error and table 3 and 4 for those with robust standard error.

Primarily Results

Overall statistical significance of the estimation perfectly explains due to F - statistics value for all tables. This suggests the proposed estimation methods and models are econometrically modified. Table 1 reports that model (1), (2) and (3), the study estimates the proxy of technological progress of internet server with and without controlled and dummy variables. The model (4), (5) and (60, the study takes import of computer and ICT product as the proxy variables. It estimates with and without controlled and dummy variables as same as model (1) to (3). Model (1), (2) and (3) reveals a statistical significance of internet server to economic output by positive relationship. This suggests that 1% changes of internet server, make an increase of 0.10%, 0.05% and 0.038% in economic output in CLMV region. It discloses the idea of rising investment in ICT from which connected to internet in the recent period. Model (4), (5) and (6) reflect association to economic output by negative sign. The reason is due to the facts that country in CLMV region is those of importation country, particularly Cambodia and Myanmar, there is trade deficit nearly the last decade. Thus, a big among of import results in decreasing economic out if government expenditure or population somehow excludes and unpracticed. Looking closely to controlled variables such as FDI, trade and CPI are positively associated to economic growth with a statistical significance. Simply, this reflects the sense of rising capital flows into CLMV region as well as other developing world after global financial crisis in 2009. Year on year, FDI approximates nearly 18% contributing to ASEAN (source in 2015). CPI is negatively affected to economic output. Yet, we can see the facts of rising world fuel price which cause to augment in price level. Nevertheless, inflation rate does not cause in decreasing economic growth since in CLMV countries the gap of overall price level is relatively and comparatively modest, approximated annually and averagely 3.5%. It somehow indicates the better crack for investment and trade, particularly the nearby neighbors. Turning to FGLS result, it is similar to those of table 1. it

discloses significance explanation at 1% for all proposed models. The statistical significance of explaining economic output remains constantly. Internet server is positively relation to economic output at 1% level of significance. It reflects what the World Bank stated in 2017 that progress is possible. Effective ICT policy reform can trigger greater private investment in broadband infrastructure and make Internet access more affordable . Computer is remain negatively associated. Controlled variables are constantly and positively impacted to economic output. More importantly, with respect to dummy effect as multiplying to country and technological progress variables indicates negatively relationship in explaining economic output. Few variables are dropped due to the correlation (nearly singular matrix).

Robustness Checks

The study now reports the empirical outcomes of robust standard error (SE) in table 3 and 4. Table 3 shows internet server is remain positively and statistically significance in explaining economic output. Controlled variables lost its explanation if we estimate the baseline regression equation separately between technological progress and explained variable. Conversely, it does whereas the full specification function estimates simultaneously. Our key variables of interest are internet connection server since the central research question and objective of the study is to examine its linkage to economic output. More importantly, controlled variables such as FDI, trade openness and CPI jointly relates in explaining economic output as well. Furthermore, the estimated magnitudes of the parameters tend to be stable across different model specifications. This findings encourages since it indicates the robustness of our estimated parameters, and hence, a lower risk that our estimates are biased once stated by Levine et al., (2000), Beck and Levine (2004) and Gemma Estrada (2010) in their study of factor productivity growth. Overall, our evidence fits perfectly in line with the empirical literature, which suggests the technological progress measured by in-

ternet connection to server and importation of computer and communication plays a significance and essential role in boosting economic output and growth.

Economic Significance Analysis

Next, the study turns measure the estimated regression of the significant factors into economic significance analysis. It says a dubbed the economic significance of a one - standard deviation increase of variable. It calculates from multiplying of the estimated coefficient of the variable and its standard deviation (SD). The largest and smallest impact presents in figure 2. Economic output is largely driven by internet based technology followed by FDI, trade openness and inflation rate. This suggests the key important role of economy where has adopted the transformation of usage ICT both in trade and investment form. Furthermore, it refines that these countries posted strong growth in internet user numbers over the past 12 months, with users in Laos up an impressive 83% year-on-year versus January 2016. Cambodia also at the lower end of the regional rankings also posted strong growth, with internet users growing by 43% over the course of 2016 to reach 45% penetration in January 2017, Kemp (2017).

CONCLUSIONS

The empirical analysis yields the evidence that is strongly supportive of the positive linkage between technological progress measured as internet connection and economic output. Our findings indicate that overall technology investment followed by FDI, trade and CPI exerts a significant and positive effect on real per capita GDP growth in CLMV region during the observed period. The evidence is robust and consistent across different specifications for cross sectional analysis towards the decomposition data into dummy effect between cross - section and determinant variable itself. Yet, there are a number of key messages which emerged from our empirical analysis for CLMVs policymakers. Above all, it

suggests that it will be a key ingredient of the regions medium- and long-run growth. Another important means of furthering technology investment is to accelerate climate investment and trade via technological means in addition to augmenting the supply of investment in ICT, foreign investors often bring in new technology, management, and boost the domestic economys productivity and efficiency.

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Table 1: Technological progress regression, internet server connections

Economic output	RE model					
	(1)	(2)	(3)	(4)	(5)	(6)
FDI		0.078***	0.066***	0.117**	0.120***	0.043*
		(3.88)	(3.98)	(3.02)	(3.5)	(2.55)
Trade		0.018	0.021*	0.053**	0.065***	0.024*
		(1.53)	(2.06)	(2.62)	(3.76)	(2.4)
CPI		0.353***	0.380***	0.393***	0.381***	0.364***
		(7.56)	(8.73)	(11.45)	(12.36)	(5.77)
Internet server connections	0.107***	0.051***	0.038***			0.054***
	(18.33)	(6.85)	(6.18)			(3.82)
Internet x Cambodia			0.055***			0.024*
			(6.0)			(2.08)
Internet x Lao			-0.005			-0.054***
			(-0.43)			(-3.94)
Internet x Myanmar			0.005			
			(0.57)			
Computer				-0.079*	-0.059	-0.105***
				(-2.03)	(-1.55)	(-4.33)
Computer x Cambodia					-0.220***	-0.146***
					(-8.25)	(-10.05)
Computer x Lao					-0.016	-0.009
					(-0.62)	(-0.74)
Constant	6.763***	5.062***	4.962***	4.918***	5.122***	5.540***
	(97.43)	(22.46)	(22.81)	(16.71)	(25.18)	(19.17)
Time dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cross-section dummy	Yes	Yes	Yes	Yes	Yes	Yes
Fitted model	124.56***	175.19***	208.67***	83.12***	115.75***	177.77***
Observations	73	72	72	57	57	51

Source: Authors estimates

Note: t-statistics in parentheses and *** p<0.1, ** p<0.05 and * p<0.1

Table 2: Technological progress regression, ICT and computer import

Economic output	FE model					
	(1)	(2)	(3)	(4)	(5)	(6)
FDI		0.0796***	0.0674***	0.120**	0.107**	0.042*
		(3.82)	(3.82)	(2.96)	(3.29)	(2.36)
Trade		0.02	0.022*	0.057**	0.049**	0.025*
		(1.63)	(2.06)	(2.69)	(2.88)	(2.4)
CPI		0.356***	0.383***	0.393***	0.350***	0.433***
		(7.37)	(8.33)	(10.99)	(11.58)	(5.39)
Internet server connections	0.107***	0.051***	0.093***			0.102***
	(18.07)	(6.56)	(9.37)			(5.26)
Internet x Lao			-0.06***			-0.131***
			(-4.82)			(-5.47)
Internet x Myanmar			-0.05***			-0.064**
			(-4.35)			(-3.38)
Internet x Vietnam			-0.0548***			
			(-5.63)			
Computer				-0.0799	-0.706***	-0.056
				(-1.97)	(-5.74)	(-1.15)
Computer x Cambodia						0.174
						(1.05)
Computer x Lao					0.618***	-0.094
					-4.98	(-1.51)
Computer x Myanmar					0.808***	
					-5.47	
Constant	6.760***	5.037***	4.938***	4.895***	5.674***	4.819***
	(391.13)	(24.15)	(23.75)	(20.11)	(23.36)	(11.69)
Time dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cross-section dummy	Yes	Yes	Yes	Yes	Yes	Yes
Adjust r square	0.7534	0.6673	0.7242	0.3254	0.388	0.039
Fitted model	326.53***	194.18***	176.95***	49.56***	57.13***	124.35***
Observations	73	72	72	57	57	51

Source: Authors estimates

Table 3: Technological progress regression, robust SE

Economic output	RE model					
	(1)	(2)	(3)	(4)	(5)	(6)
FDI		0.021	0.007		0.120**	0.043***
		(0.4)	(0.14)		(3.03)	(4.86)
Trade		-0.019	-0.015		0.065*	0.024***
		(-0.61)	(-0.51)		(2.07)	(7.08)
CPI		0.126	0.091		0.381**	0.364***
		(0.7)	(0.4)		(2.68)	(3.84)
Internet server connections	0.107***	0.10*	0.074**			0.054**
	(5.61)	(2.15)	(2.82)			(2.81)
Internet x Cambodia			0.097***			0.024**
			(5.01)			(2.58)
Internet x Lao			0.035			-0.054***
			(1.12)			(-7.06)
Internet x Myanmar			0.034			
			-1.34			
Computer				-0.271***	-0.059	-0.105***
				(-4.38)	(-1.38)	(-4.63)
Computer x Cambodia					-0.220***	-0.146***
					(-6.59)	(-31.61)
Computer x Lao					-0.016	-0.009*
					(-0.40)	(-2.38)
Constant	6.763***	6.263***	6.438***	7.440***	5.122***	5.540***
	(88.21)	(7.17)	(6.02)	(37.01)	(6.98)	(10.87)
Time dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cross-section dummy	Yes	Yes	Yes	Yes	Yes	Yes
Adjust r square	0.7534	0.7517	0.8119	0.1075	0.8688	0.9694
Observations	73	72	72	62	57	51

Source: Authors estimates

Note: Robust t-statistics in parentheses and *** p<0.1, ** p<0.05 and * p<0.1.

Table 4: Technological progress regression, robust SE

Economic output	FE model					
	(1)	(2)	(3)	(4)	(5)	(6)
FDI		0.0796**	0.0674*		0.107	0.0421*
		(6.51)	(5.84)		(2.82)	(8.68)
Trade		0.0195	0.0224 *		0.0493	0.0247 *
		(2.53)	(4.95)		(3.14)	(5.75)
CPI		0.356 *	0.383 *		0.35	0.433
		(3.5)	(3.77)		(2.79)	(3.49)
Internet server connections	0.107*	0.0505	0.0927**			0.102*
	(5.54)	(2.59)	(8.24)			(6.59)
Internet x Lao			-0.0600 **			-0.131 *
			(-6.92)			(-6.81)
Internet x Myanmar			-0.0500 **			-0.0639*
			(-7.16)			(-6.76)
Internet x Vietnam			-0.055***			
			(-32.85)			
Computer				-0.277	-0.706*	-0.0564
				(-4.17)	(-5.43)	(-1.82)
Computer x Cambodia						0.174*
						(5.05)
Computer x Lao					0.618*	-0.0935
					(8.81)	(-1.75)
Computer x Myanmar					0.808*	
					(4.48)	
Constant	6.760***	5.037**	4.938**	7.462***	5.674*	4.819*
	(858.25)	(11.44)	(11.41)	(32.35)	(8.13)	(8.71)
Time dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cross-section dummy	Yes	Yes	Yes	Yes	Yes	Yes
Adjust r square	0.7534	0.6673	0.7242	0.1075	0.388	0.039
Observations	73	72	72	62	57	51

Source: Authors estimates. Robust t-statistics in parentheses and *** p<0.1, ** p<0.05 and * p<0.1.

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Table 5: Appendix 1 Data description and source from WDI, the World Bank (1990 2016)

Sign	Variable	Obs.	Mean	SD	Min	Max
Explained variable						
GDPPC	GDP per capita is gross domestic product divided by mid year population.	88	6.645	0.487	5.506	7.479
Explanatory variables						
Technological progress variables						
Internet	Individuals using the internet (% of population)	73	-0.408	3.144	-8.912	3.965
Computer	Share of ICT goods imports (% total goods imports) and Communications, computer, etc. (% of service imports, BoP)	62	3.471	0.675	1.534	4.596
Controlled variables						
FDI	Foreign direct investment, net inflows (% of GDP).	79	1.415	0.666	-1.374	2.333
Trade	Trade (% of GDP). Trade is the sum of exports and imports of goods and services.	83	3.732	2.065	-1.787	5.219
CPI	Inflation, consumer prices (annual %)	88	4.084	0.792	1.713	5.008
Dummy based variables, 1 for determined period and 0 otherwise						
Internet x Cambodia Dummy		73	-0.217	1.176	-5.142	2.944
Internet x Lao Dummy		73	0.04	1.087	-4.64	2.901
Internet x Myanmar Dummy		73	-0.494	1.86	-8.794	3.082
Internet x Vietnam Dummy		73	0.263	1.914	-8.912	3.965
Computer x Cambodia Dummy		62	1.064	1.562	0	3.845
Computer x Lao Dummy		62	1.213	1.798	0	4.596
Computer x Myanmar Dummy		62	1.194	1.713	0	4.405
Computer x Vietnam Dummy	19	62	0	0	0	0

Source: Author's compilation