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Impact of public sector governance and human capital development on Myanmar's economic growth

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Article Info

Abstract

Purpose — This research examines the effects of Myanmar's domestic economic reform measures on its economic growth, highlighting the impact of public sector governance and human capital development.

Methods — The Toda-Yamamoto test on Granger causality and the vector error correction model are employed to examine the impact of Myanmar's domestic economic reform measures on its economic growth.

Finding — The results reveal that unidirectional causality existed, from public sector governance to economic growth and human capital development to economic growth. The vector error correction model revealed that public sector governance and human capital development had a long-term and positive relationship with economic growth from 2001 to 2019.

Implication — The study confirms that Myanmar's domestic economic reform measures contributed to its economic growth from 2001- 2019. These findings underpin the importance of continuing domestic economic reform, such as public sector governance and promoting human capital development, to achieve economic growth in the long run.

Originality — This paper contributes to existing literature by shedding light on the impact of public sector governance, human capital development, and public sector governance on Myanmar's economic growth.

Keywords — Economic growth, public sector governance, human capital development, Myanmar

Introduction

Among its Southeast Asian regional peers, Myanmar was one of the late starters of development. Myanmar is blessed with great potential for economic growth due to, for example, its rich natural resources, abundant working-age population, and strategic location as a corridor connecting China, India, and other Southeast Asian countries. However, Myanmar has failed to translate this potential and these advantages into national economic development.

One of the reasons for this impasse is the prolonged civil and ethnic conflicts that started immediately after the country's independence in 1948. Additionally, an inward-looking and command-oriented economic system was another obstacle to economic development. In contrast to Southeast Asian peers that adopted an outward-oriented industrialization strategy, Myanmar pursued an inward-looking development strategy based on central planning under the "Burmese Way to Socialism" regime from 1962 to 1988, when a military government governed the country. All major industries were nationalized. Import-substitution policies were pursued, while external

economic ties of trade and investment were kept to a minimum. The regime resulted in only a severe and prolonged economic impasse, including stagnated industrial production, high inflation, and deteriorated living standards. As a result of this economic stalemate, the country slipped into the World Bank's group of least-developed countries in 1987.

In response to the consequent collapse of the socialist regime, the government started to promote a market-oriented development strategy in 1988. To create a more favorable policy framework to attract foreign and domestic investments to pursue higher and long-term economic growth, a series of reform policies has been implemented, including the implementation of the Foreign Investment Law to promote foreign direct investment (FDI) inflows and the State-Owned Enterprise Law, which allowed private firms. However, the integration with the global economy was held back by economic sanctions imposed by advanced countries and regions such as the United States, the European Union, and Japan in the late 1990s in response to the government's suppression of dissidents. These economic sanctions included an embargo on imports of Myanmar's products and investments in Myanmar. Consequently, Myanmar lost opportunities to accelerate its integration with the global value chains connecting these advanced countries and regions with the Southeast Asia region. In this period, Southeast Asian countries strengthened their economic ties with these advanced countries and territories through trade and investment, which brought high economic growth and upgraded their industrial structure.

In 2011, Myanmar entered a renewed phase of political and economic transformation. Owing to the transition to the democratic multi-party system, the economic sanctions were eventually lifted during this period. Additionally, reform measures towards a market-oriented economic system were accelerated, such as improving the legal and regulatory framework to attract FDI inflows (Nwe et al., 2018; OECD, 2013; Taguchi & Lar, 2015; World Bank, 2019).

Social development, including education and public healthcare, was also prioritized. Owing to education promotion policies such as a nationwide adult literacy program initiated in 1973 and long-term education planning covering the 2001-2030 period, most adults attained a basic educational level and became capable of basic writing, reading, and arithmetic. As the next step in improving educational attainment beyond primary education, public investment in education increased substantially, which improved the gross secondary education enrolment rate from 36.9% in 2000 to 68.4% in 2018 (World Bank, 2019). The efforts and achievements of these policy reform measures notwithstanding, the progress in Myanmar's economic development has been substantially disrupted by the military coup in February 2021. Economic reform measures have been reversed. The economic policy framework has shifted from a market-oriented approach to one in which the government exercises greater control over resource allocation, including tighter foreign exchange control and import licensing. These measures have deteriorated investors' confidence and curtailed the country's integration with global value chains, which were a key driver of Myanmar's rapid economic growth. More discretion by authorities in the enforcement of rules and regulations increases the uncertainty and risks of resource misallocation (World Bank, 2022a)

On the education front, schools in Myanmar remained closed for almost two years due to the negative impact of the COVID-19 pandemic and the coup. Between 19 February 2020 and 23 February 2022, schools were fully closed for 532 days and partially closed for 77 days. Myanmar's education sector has experienced a significant loss of learning opportunities, hampering human capital development in the future labor force (World Bank, 2022b). Myanmar's experience of economic development suggests that the potential of economic growth is likely to be constrained if this reversal trend continues.

Against this backdrop, this paper aims to examine the effects of Myanmar's economic reform measures, notably public sector governance and human capital development, on economic growth from 2001 to 2019. In the following ways, this paper contributes to the existing literature by shedding light on the impact of public sector governance, human capital development, and public sector governance on Myanmar's economic growth, which has not been discussed much. Secondly, this study also examines the impact of economic sanction measures by advanced countries and regions in the 2000s. The effect of these measures has received scant attention in the existing literature. Thirdly, as the study's key findings, the Toda-Yamamoto test on Granger

causality confirms that unidirectional causality exists, from public sector governance to economic growth and human capital development to economic growth. Additionally, a vector error correction model (VECM) analysis reveals that these reform measures positively contributed to Myanmar's economic growth in the long run. These findings underpin the importance of continuing reform on public sector governance and promoting human capital development to achieve economic growth in the long run.

The remainder of this paper is organized as follows: Section 2 reviews the literature related to the impact of human capital and public sector governance on economic growth. Section 3 presents the data and methods, including the model specification, followed by the results and discussion regarding the econometric analysis in Section 4. Then, Section 5 provides a conclusion, including policy recommendations.

Literature Review

In the framework of endogenous growth theory, long-run economic growth is determined by forces that are internal to the economic system, particularly forces that govern the opportunities and incentives to create technological knowledge (Howitt, 2010). Given the importance of knowledge spillovers across the economy, the roles of the absorptive capacities of a country have been highlighted. Absorptive capacities include the authorities' capability with regard to macroeconomic stabilization, financial development progress, human capital development, and good public sector governance. In particular, human capital development is highlighted as one of the essential elements of the absorptive capacity of a host economy (Barro, 1996; de Mello, 1999; Grossman & Helpman, 1991). Improving educational attainment lays the foundation for human capital development by strengthening the capacities for the adoption of new technologies and the diffusion of acquired technologies and skills.

Additionally, recent studies shed light on the importance of public sector governance or institutional quality, which is fundamental for the effective functioning of market-based economies. The stability, credibility, and accountability of the public sector reduce transaction costs and enhance investors' confidence, enabling the economy to induce productivity and innovation, leading to higher economic growth. While a consensus on the definition of public sector governance has not been reached, the focus on the connection with economic growth suggests that public sector governance is the capacity of authorities to formulate and implement sound policies transparently and accountable (Kaufmann et al., 2010). Acemoglu, Gallego, and Robinson (2014) emphasized the importance of law and order, property rights, contracts, and governance structures to secure good governance as prerequisites for economic development.

On the empirical front, evidence from developing countries points out the importance of improving the enrolment in primary and secondary education and the ability to adapt to advanced technology. Mankiw, Romer, and Weil (1992) employed the secondary school enrolment rate as a proxy for human capital investment. By examining data from 98 developing countries in 1985, they concluded that the level of human capital explained approximately 50% of income differences.

Concerning research on the East Asia region, Lee and Ruth (2010) investigated the effect of human capital development in emerging Asian countries. Rapid educational growth in the area, as measured by the number of years of schooling, was mainly due to the remarkable improvements in enrolment at the primary and secondary levels. Against this backdrop, the study concluded that high educational attainment, especially at the secondary level, significantly improved emerging Asia's human capital accumulation, promoting economic development from 1970 to 2010. Siddiqui and Rehman (2017) reached a similar conclusion that the difference in the gross enrolment rate of primary and secondary education from 1972 to 2014 explained the performance gap in economic growth in East Asian countries, specifically the Republic of Korea, Malaysia, Indonesia, Thailand, and the Philippines.

Regarding the effect of public sector governance, Asghar et al. (2015) assessed the impact of institutional quality on economic growth in 13 developing economies in Asia from 1990 to 2013. The results of the panel autoregressive distributed lag (ARDL) model analysis showed that institutional quality positively impacts economic growth. Additionally, the panel causality test

results confirmed that unidirectional causality runs from institutional quality to economic growth. Kraipornsak (2018) examined the impact of public sector governance reform using the World Bank's Worldwide Governance Indicators (WGI) for 16 Asian countries from 1996 to 2016. The study revealed that improving public sector governance contributed significantly to these countries' per capita income growth. Tran (2021) showed a nonlinear relationship between institutions and economic growth in 48 Asian countries from 2005 to 2018. The results suggested that in lower-income Asian countries, better-quality institutions promoted growth more effectively than in higher-income ones. Ngo and Nguyen (2020) employed a Generalized Method of Moments (GMM) model on 13 low-middle-income Asian countries from 2000 to 2018. They found a negative impact of the institutional quality on economic growth in these countries. The results could be explained by the low institutional quality of these countries, which distorted economic activities and stifled growth momentum.

Regarding the impact of the interplay of human capital development and institutional reform on economic growth, Uddin et al. (2021) argued that human development and institutions had a significant positive effect on economic growth in their econometric analysis of 120 developing countries from 1996 to 2014. They also found that incremental investment in human development would negatively impact economic growth in the presence of weak and dysfunctional institutions because additional stock tends to be employed in rent-seeking and socially unproductive activities. In a similar vein, Aslam (2020) analyzed the impacts of institutions and human capital development on per capita economic growth in selected South Asian Countries between 1996 and 2017. The results identified the interaction between institutional quality and human capital development. Human capital alone did not ignite a growth-generating process in these countries without improving institutional quality, indicating that human capital and institutions were substitutes.

Several previous studies have highlighted the positive effects of improving public governance and human capital development on economic growth. However, there has been little discussion as to whether this conclusion could apply to Myanmar's context. This study conducts a quantitative assessment of the impact of the improvement of public governance and human capital development on Myanmar's economic growth.

Methods

Data Sources

Table 1. Data details and sources

Variables	Definition
Gross domestic product *(GDP)*	Local currency-based real gross domestic product Asian Productivity Organization, *Productivity Database 2023*
Public sector governance quality *(GOV)*	A simple average of indexes comprising accountability, political stability, government effectiveness, regulatory quality, the rule of law, and corruption is sourced from the *World Bank's Worldwide Governance Indicators (WGI)*. The WGI is a research dataset summarising the views on the quality of governance provided by a large number of enterprise, citizen, and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes (Kaufmann et al., 2010).
Human capital development *(HCD)*	The gross enrolment rate in secondary education serves as a proxy of human capital development, following Lee and Ruth (2010) and Siddiqui and Rehman (2017). Data are sourced from the World Bank's *World Development Indicators.*
Economic sanction dummy *(DUM)*	A dummy variable that captures the impact of economic sanction measures imposed by advanced countries and regions such as the United States, the European Union and Japan. The value is set at one from 2001 to 2011 and zero thereafter.

The analysis employs annual time series data from 2001 to 2019, the latest available data. The data details and sources are presented in Table 1. The study also examines the impact of

economic sanction measures by advanced countries and regions, the effect of which has received scant attention in the existing literature. The descriptive statistics of the data in the form of the natural logarithm (*ln*) are displayed in Table 2.

Table 2. Descriptive statistics of the data

	lnGDP	*lnGOV*	*lnHCD*
Mean	17.439	0.498	3.908
Median	17.342	0.507	3.883
Maximum	17.954	1.918	4.226
Minimum	17.019	-1.148	3.632
Std. Dev.	1.541	0.858	0.171

Model Specification and Methodology

Unit root tests

As the first step in a time series analysis, the stationarity of the data is examined by employing a set of unit root tests. The unit root tests are conducted on the null hypothesis that the data have a unit root. If the data are not stationary at level but are stationary at the first difference, then the data are integrated at order one, or I (1). The augmented Dickey-Fuller (ADF) test (Said & Dickey, 1984) and the Phillips–Perron (P-P) test (Philips & Perron, 1987) are the unit root tests conducted.

Johansen cointegration tests

Cointegration indicates one or more long-run equilibriums or stationary relationships among non-stationary variables. As the next step in examining the properties of the data, the existence of cointegration between variables *lnGDP, lnGOV,* and *lnHCD* is tested based on Johansen tests (Johansen & Juselius, 1990). The results of the Johansen tests are shown in Table 4. The trace test result and the maximum eigenvalue test unanimously show that at least one cointegration vector significantly exists among the variables at the 5% level. The results imply that the linear combination of one or more of these variables could have a long-term equilibrium relationship.

Lag length

The optimal lag length is selected by running a vector autoregressive (VAR) model, and the results of the Akaike information criterion (AIC), Schwarz information criterion (SC), and Hannan-Quinn information criterion (HQ) are presented in Table 5. While the results of the optimal lag length among the AIC, SC, and HQ are not conclusive, the optimal lag length is set at four by taking the AIC test result that gives the lowest information criteria value or the best model specification. Additionally, the AIC may have better properties than the SC and HQ under a small number of observations (Lütkepohl, 2005).

Examining the Causality Test

The Toda-Yamamoto Granger causality test is applied to the causal relationship between economic growth, public sector governance, and human capital development (Toda & Yamamoto, 1995). The existence of cointegration among the variables in the model implies a causal relationship in at least one direction. In examining the Granger causality between variables, the standard Granger causality test cannot be valid when time series data are cointegrated since the F-statistics of the test do not have a standard distribution. The advantage of the Toda-Yamamoto Granger causality test is that it avoids the problems associated with the standard Granger causality test caused by possible cointegration among the variables in the model.

The Toda-Yamamoto Granger causality test employs estimation through an augmented VAR model. The augmented VAR model is estimated by applying the (k +$dmax$) model at level, where k is the optimal lag length in the original VAR model, and $dmax$ is the maximum order of integration for the variables in the model. The Toda-Yamamoto Granger causality test provides a

chi-square asymptotic zero distribution for the Wald Granger causality test statistics in the VAR model (Khan et al., 2018; Payne, 2009; Sijabat, 2022).

The equations for the Toda-Yamamoto Granger causality test are formulated as follows:

$$lnGDP_t = \alpha_0 + \sum_{i=1}^{k} \alpha_1 lnGDP_{t-i} + \sum_{i=k+1}^{k+dmax} \alpha_2 lnGDP_{t-i} +$$
$$\sum_{i=1}^{k} \alpha_3 lnHCD_{t-i} \sum_{i=k+1}^{k+dmax} \alpha_4 lnHCD_{t-i} + DUM + \epsilon_t \qquad (1)$$

$$lnGOV_t = \beta_0 + \sum_{i=1}^{k} \beta_1 lnGDP_{t-i} + \sum_{i=k+1}^{k+dmax} \beta_2 lnGDP_{t-i} +$$
$$\sum_{i=1}^{k} \beta_3 lnHCD_{t-i} \sum_{i=k+1}^{k+dmax} \beta_4 lnHCD_{t-i} + DUM + \epsilon_t \qquad (2)$$

$$lnHCD_t = \alpha_0 + \sum_{i=1}^{k} \gamma_1 lnGDP_{t-i} + \sum_{i=k+1}^{k+dmax} \gamma_2 lnGDP_{t-i} +$$
$$\sum_{i=1}^{k} \gamma_3 lnGOV_{t-i} \sum_{i=k+1}^{k+dmax} \gamma_4 lnGOV_{t-i} + DUM + \epsilon_t \qquad (3)$$

Where *GDP* is real GDP, *GOV* is the quality of public sector governance, *HCD* is human capital development, *DUM* is the economic sanction dummy, and ε_t is the random error term.

Examining Long-term Relationships and Short-term Dynamics

After confirming Granger causality, the next step of this study is to examine the impact of economic reform measures consisting of public sector governance and human capital development on GDP growth. The model specification for the empirical analysis is as follows:

$$lnGDP_t = \alpha lnGOV_t + \beta lnHCD_t + \gamma DUM + \delta + \varepsilon_t \qquad (4)$$

GDP is real GDP, *GOV* is the quality of public sector governance, *HCD* is human capital development, and *DUM* is the economic sanction dummy. δ is a constant. ε_t is the random error term. In light of the literature, the coefficients of α and β are expected to be positive since these two variables are supposed to promote economic growth. However, the sign of γ is expected to be harmful since economic sanctions are supposed to obstruct trade with advanced countries and investment from them.

The econometric analysis in this step employs VECM analysis. A VECM approach can identify long-run equilibrium or a cointegration relationship among the variables while augmenting short-term dynamics.

As a result of checking the properties of the data, the VECM is formulated for the purpose of this study as follows:

$$\Delta lnGDP_t = c_0 + c_1 ECT_{t-1} + \sum_{i=1}^{p-1} c_2 \Delta ln\,GDP_{t-i} + \sum_{i=1}^{p-1} c_3 \Delta lnGOV_{t-i} +$$
$$\sum_{i=1}^{p-1} c_4 \Delta lnHCD_{t-i} + e_t \qquad (5)$$

ECT_t, the error correction term that indicates a long-term relationship, is defined as follows:

$$ECT_{t-1} = lnGDP_{t-1} - a_2 lnGOV_{t-1} - a_3 lnHCD_{t-1} - a_4 \qquad (6)$$

p is the lag order; � the first-difference operator; *et* is the random error term.

Results and Discussion

In the first step, we conduct the unit root test of all variables. Table 3 displays the results of the ADF and Phillips-Perron (P-P) tests.

Table 3. Results of the unit root tests

	ADF test statistic with intercept		P-P test statistic with intercept	
Variables	Level	First difference	Level	First difference
lnGDP	-0.363	-4.393***	-0.017	-4.425***
lnGOV	-0.355	-3.666**	-0.521	-3.674**
lnHCD	-1.091	-3.899***	-1.057	-3.991***

Note: *** and ** indicate significance at the 1% and 5% levels, respectively.

For all the variables, the null hypothesis that each data has a unit root is not rejected at the level but is significantly rejected at the first order at the 5% level. Therefore, the results of the unit root tests confirm that all the variables, *lnGDP, lnGOV, and lnHCD* are integrated at order one or *I (1)*. Based on this results, we continue with the cointegration analysis using Johansen test (Table 4).

Table 4. Results of Johansen cointegration tests

Hypothesized number of coefficients (s)	Trace statistics	5% critical value	P value
None*	43.567	29.797	0.001
At most 1	7.640	15.495	0.505
At most 2	0.029	3.841	0.864

Hypothesized number of coefficients (s)	Max Eigen statistics	5% critical value	P value
None*	35.927	21.132	0.000
At most 1	7.610	14.265	0.420
At most 2	0.029	3.841	0.864

Note: * denotes a significant rejection of the hypothesis of the existence of cointegration at the 5% level

Table 5. Results of lag length tests

Lag	AIC	SC	HQ
0	-1.101	-0.952	-1.076
1	-5.015	-4.419*	-4.914
2	-5.184	-4.141	-5.008*
3	-4.753	-3.262	-4.501
4	-5.288*	-3.350	-4.960

Note: * denotes the optimal lag length of each test.

By following the procedure of the Toda-Yamamoto Granger causality test (Amiri & Ventelou, 2012; Khan et al., 2018), the augmented VAR model is estimated to the levels of the variables by applying the (k+*dmax*) model where k=4, as determined in Table 5, and *dmax*=1, as defined in Table 3. The additional lag *dmax* and *DUM* are added to the original VAR model as exogenous variables.

The results of the Toda-Yamamoto Granger causality test are presented in Table 6.

Table 6. Results of the Toda-Yamamoto Granger causality test

Null hypothesis	df	Chi-sq	P value	Decision
GOV does not Granger cause *GDP*	4	10.082	0.039**	GOV→GDP
HCD does not Granger cause *GDP*	4	16.585	0.002***	EDU→GDP
GDP does not Granger cause *GOV*	4	4.725	0.317	No Granger causality
HCD does not Granger cause *GOV*	4	15.825	0.003***	EDU→GOV
GDP does not Granger cause HCD	4	1.620	0.805	No Granger causality
GOV does not Granger cause HCD	4	2.142	0.710	No Granger causality

Note: *** and ** indicate significance at the 1% and 5%, respectively.

The results of the Toda-Yamamoto test significantly reject the null hypothesis that *GOV* does not Granger cause *GDP* at the 5% level. The null hypothesis that *HCD* does not Granger cause *GDP* is also significantly rejected at the 1% level. Therefore, the results confirm that unidirectional Granger causality exists, running from public sector governance (*GOV*) to economic growth (*GDP*) and from human capital development (*EDU*) to economic growth (*GDP*). Additionally, the unidirectional Granger causality from human capital development (*HCD*) to public sector governance (*GOV*) is significantly identified at the 1% level. This result could indicate that improving educational attainment promotes better public governance by increasing political

awareness. Nonetheless, a detailed examination of this issue falls beyond the scope of this study. The estimation results are presented in Table .

Table 7. Estimation results

Variables Long-term relationship	Coefficient	Standard errors	t-statistics
lnGDP(-1)	1.000	-	-
lnGOV(-1)	-0.139	0.019	-7.267***
lnHCD(-1)	-1.556	0.047	-33.129***
Constant	-11.297		
Short-term relationship			
ECT(-1)	-1.581	0.520	-3.041***
ΔlnGDP(-1)	0.776	0.357	2.172**
ΔlnGDP(-2)	0.232	0.355	0.653
ΔlnGDP(-3)	-0.058	0.281	-0.206
ΔlnGOV(-1)	-0.173	0.083	-2.095**
ΔlnGOV(-2)	-0.100	0.076	-1.325
ΔlnGOV(-3)	-0.164	0.079	-2.066*
ΔlnHCD(-1)	-1.713	1.256	-1.364
ΔlnHCD(-2)	-1.080	1.123	-0.962
ΔlnHCD(-3)	-1.799	0.954	-1.886*
DUM	0.118	0.066	1.795*
Constant	0.141	0.077	1.829

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

The VECM analysis shows that a positive and long-term relationship or cointegration relationship exists among the variables *lnGDP, lnGOV,* and *lnHCD*. The relationship is expressed as follows:

$$ECT_{t-1} = lnGDP_{t-1} - 0.139lnGOV_{t-1} - 1.556lnHCD_{t-1} - 11.297 \qquad (7)$$

The coefficient of *ECT* is -1.581 and is significant at the 1% level. The coefficient value of *ECT* indicates the speed of adjustment towards the convergence towards long-term equilibrium. Therefore, it is usually expected to be between -1 and 0. However, the coefficient value of *ECT* in this VECM analysis is not within this range. According to Narayan and Smyth (2006), the value of the coefficient of the error correction term between -1 and -2 implies that the error correction process fluctuates around the long-run equilibrium in a dampening manner. The process takes the form of oscillatory convergence instead of monotonic convergence towards the equilibrium path directly. An *ECT* value in this range could reflect the fledgling process of Myanmar's economic reform measures.

Nonetheless, the analysis results are consistent with the literature reviewed in Section 2. The positive impact of the improvement in public sector governance conforms to the results of Asghar et al. (2015) and Kraipornsak (2018). Similarly, the positive effect of human capital development on economic growth aligns with existing studies such as Lee and Ruth (2010) and Siddiqui and Rehman (2017). Therefore, we concluded that Myanmar's economic growth from 2001 to 2019 followed a trajectory similar to that of other emerging economies that benefited from these economic reform measures. Contrary to expectations, the coefficient of the economic sanction dummy (*DUM*) is positive but is not statistically significant at the 5% level. This result could imply the uncertain effectiveness of the economic sanctions imposed by major advanced countries and regions.

This uncertain effectiveness of economic sanctions could be caused by Myanmar's diversification of export products and trade partners, particularly China and the Association of Southeast Asian Nations (ASEAN) countries, during economic sanctions. Due to the economic sanctions, the export of apparel, whose primary destination was the United States, fell sharply

during the period of economic sanctions. However, the fall was partially offset by diverting the destinations mainly to China and Southeast Asian countries (Maung Thawnghmung & Sarno, 2006). Furthermore, this negative impact notwithstanding, Myanmar's exports showed an increasing trend in this period. Natural gas exports primarily brought this trend to Thailand. China also emerged as one of Myanmar's most extensive trade and investment partners (Ajmani et al., 2018; Kubo, 2014).

Conclusion

This paper examines the effects of Myanmar's economic reform measures on its economic growth, highlighting public sector governance and human capital development. The Toda-Yamamoto test on Granger causality confirms that unidirectional causality exists, running from public sector governance to economic growth and human capital development to economic growth. The VECM analysis reveals that public sector governance and human capital development had long-term and positive relationships with economic growth from 2001 to 2019. The study also shows that the impact of economic sanctions by major advanced countries and regions was uncertain, which has not been assessed quantitatively in the existing literature.

Despite the achievements of these policy reform measures, the progress in Myanmar's economic development has been disrupted by the military coup in February 2021. Since the coup, policies promoting openness and market-based pro-growth, which was a key driver of Myanmar's solid economic growth, have reversed to inward-looking and control-oriented policies (World Bank, 2022b). As a late developer in Southeast Asia, Myanmar still needs to overcome several challenges, such as a lack of institutional capacities, infrastructure, physical capital, and human capital (Nwe et al., 2018). Myanmar's experience of economic development suggests that the potential of economic growth is likely to be constrained if this reversal trend continues.

Finally, as a limitation of this study, due to the relatively short data period available, the econometric model needs to be parsimonious, and the number of variables in the model is limited. It is expected that subsequent studies can address these factors in the analysis to mitigate the limitations of this study.

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