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OPENNESS AND INCLUSIVE GROWTH IN SOUTH-EAST ASIA

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Introduction

Openness – the extent to which a country is exposed to trade in goods, services and foreign investment – played a pivotal role in fast-growing South-East Asian economies in the 1980s–2000s. It has transformed many countries, such as Indonesia, Malaysia and Thailand, from low- to upper middle-income statuses (ADB 1997; Lloyd & MacLaren 2000). Notwithstanding South-East Asia’s exceptional economic performance in terms of rapid economic growth, rising income per capita, improving standards of living and persistent poverty reduction in the past decades, it is increasingly apparent that the region’s economic development is uneven. The Association of Southeast Asian Nations (ASEAN) Economic Community (AEC) recognises the income divides between and within its member countries as a critical development agenda.

The effects of openness on inequality or inclusive growth in developing countries are, however, complex. Different initial conditions and policy reforms mean that unskilled labour or the poor may or may not fall out of the race toward liberalisation.¹ The standard trade theory suggests that

¹ Jaumotte et al. (2013) provide a comprehensive empirical analysis on this issue.

openness in developing countries brings about reallocation of resources from relatively inefficient capital- and skill-intensive production towards more efficient sectors that make use of the production factors with which developing countries are well endowed; for example, unskilled labour and land. In principle, trade and investment liberalisation is expected to deliver an upward shift in relative demand for unskilled workers, thereby mitigating inequality. On the contrary, a path toward more openness is typically followed by domestic policy changes that exacerbate inequality. For instance, proliferating free trade agreements in ASEAN have often touched upon clauses and provisions related to enhancing movement of skilled labour, which is naturally more mobile, and thus further liberalisation may be in favour of skilled rather than unskilled labour. Likewise, the establishment of industrial parks to build up competitiveness of some sectors, like automotive and electronics sectors, and to make South-East Asian countries attractive to foreign investors has, by and large, concentrated on locations where capital and infrastructure are abundant.

Given the complex interplay between openness and inclusive growth, this paper aims to empirically investigate the redistributive effects of trade and financial openness in the context of South-East Asian economies. The empirical estimates yield the following main findings. First, consistent with the literature in the context of South-East Asia, trade openness has insignificant impacts on inequality in aggregate. But when measures of trade openness are broken down into export and import components, this paper finds exports and imports have opposing effects on inequality. While export openness mitigates inequality, more exposure to imports results in higher inequality. One policy implication of this finding is that export promotion policy could be the effective impetus for South-East Asian governments to address the issues of rising inequality and put in place inclusive growth. Additionally, financial liberalisation, measured by the ratio of foreign assets to gross domestic product (GDP), helps reduce inequality. This result suggests that freer flows of cross-border capital may provide the poor with greater access to financial resources and economic opportunity.

The following sections investigate the current status of inequality in South-East Asia and explore the possible theoretical linkages between openness and inequality, define the notions of openness and inequality, detail the methodology, and present the main empirical results.

Inclusive growth in South-East Asian countries

Current status of inequality

Table 5.1. Current levels of income inequality in South-East Asia

Country	Year	Gini coefficient (%)	MLD ^b
Cambodia	2012	30.76	15.11
India ^a	2011	39.01	25.03
Indonesia	2013	43.11	30.48
Lao PDR	2012	37.89	23.58
Malaysia	2009	46.26	37.18
Philippines	2012	43.04	30.58
PRC ^a	2013	36.69	22.63
Thailand	2013	37.85	23.45
Vietnam	2014	37.59	23.81

Note. a) Data are based on income distribution in urban areas; b) MLD = mean log deviation. This is an index of inequality, given by the mean across the population of the log of the overall mean divided by individual income.

Source. PovcalNet, the World Bank

Table 5.1 reports two conventional measures of income inequality, including Gini coefficients and mean log deviation (MLD).² Among the South-East Asian countries, Malaysia's income distribution is the most uneven with all three indices taking the highest values: 46.26 per cent for the Gini coefficient and 37.18 for MLD. Indonesia, Lao PDR, the Philippines, Thailand, and Vietnam experience somewhat lower degrees of income inequality than Malaysia, with Gini coefficients between 37 and 44 per cent and MLDs between 23–30. Interestingly, the situations of widening income inequality in these middle-income countries are noticeably inferior to those in the fast-growing emerging economies, such

2 The Gini coefficient captures dispersion of income distribution and ranges between nil and unity. The nil value represents perfect equality whereby individuals have the same income, while the value of unity implies perfect inequality whereby only one person takes up all income. The quintile ratio is defined as the ratio of total income of the richest 20 per cent to that of the poorest 20 per cent, and therefore the higher values of quintile ratios mean more uneven income distribution. Last, MLD can be calculated by the mean across the population of the log of the overall mean divided by individual income. In the same manner as the Gini coefficients and quintile ratios, the higher values of MLD can be interpreted as greater income inequality.

as the People's Republic of China (PRC) and India. Cambodia seems to be at the forefront of lowering income inequality, with measures that are noticeably lower than those of Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Vietnam. As shown in Table 5.1, in Cambodia, the measures of income disparities are about 30.76 per cent for the Gini coefficients and 15.11 for MLD. A comparison with neighbouring Asian countries underlines that income inequality in Cambodia is the lowest among South-East Asian countries and lower than that in PRC and India.

Is growth in South-East Asia inclusive?

One way to examine whether growth is inclusive is to explore whether economic progress in terms of increasing income, poverty reduction, and improved standards of living have translated into reduced inequality (ADB 2012). The accelerated poverty reduction accompanied by rising income inequality is particularly discernible in Indonesia and Lao PDR (Figure 5.1). This pattern also prevails to a lesser extent in the Philippines. In Cambodia, Malaysia and Thailand, the substantial plunges in poverty have been coupled with slight drops in income inequality since the 1980s, notwithstanding some spikes in the aftermath of the Asian financial crisis for Cambodia and Thailand and in the run-up to the global financial crisis in 2008–09 for Malaysia. This pattern of change implies that in some countries such as Lao PDR, Indonesia and the Philippines, the region's rising inequality is driven primarily by the extent to which incomes of the rich surge at a faster pace than those of the poor. This is in contrast to other regions, like sub-Saharan Africa and South America, where the rich exclusively benefit from economic growth while the poor remain poor, if not even poorer. In the context of South-East Asia, this suggests there is scope for more inclusive gains from swift economic development.

5. OPENNESS AND INCLUSIVE GROWTH IN SOUTH-EAST ASIA

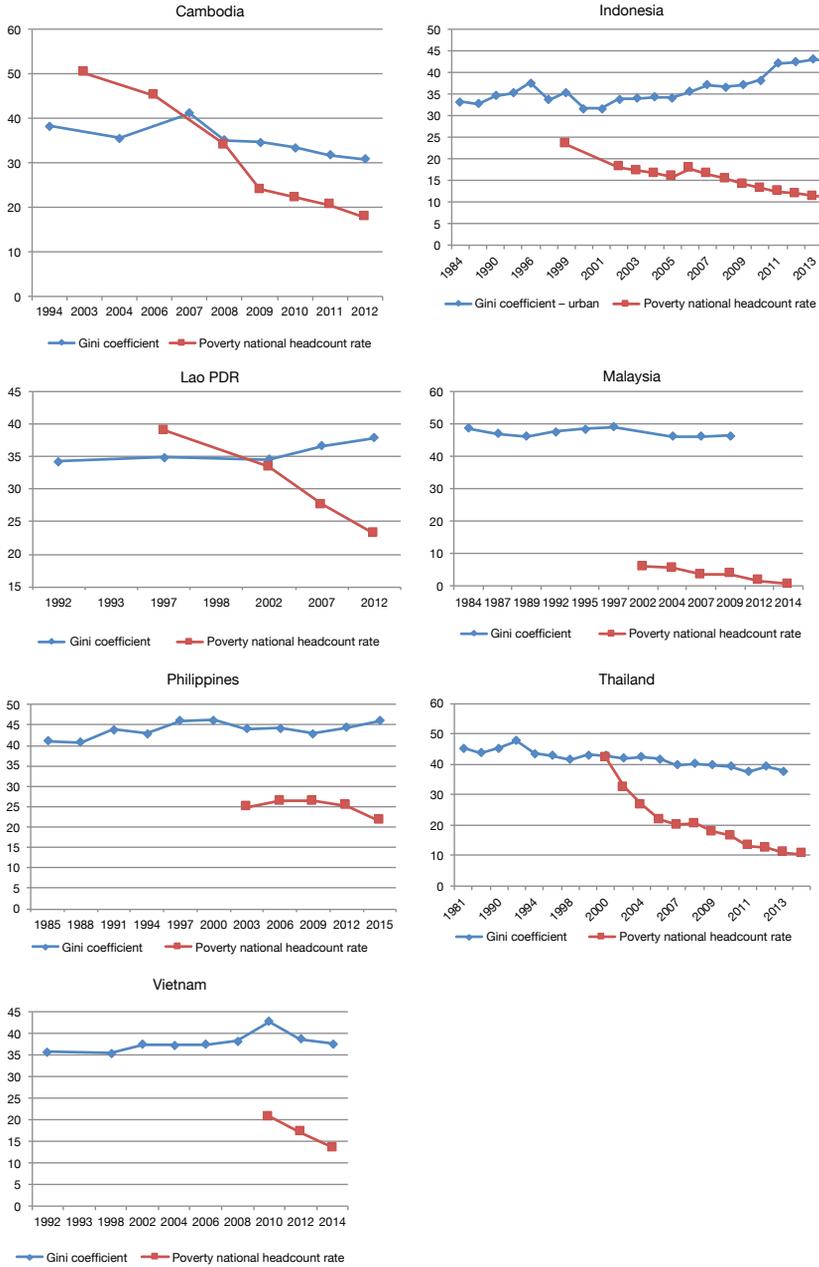


Figure 5.1. Gini coefficients and poverty headcount ratios in South-East Asia (per cent)

Source. PovcalNet and World Development Indicators (WDI), the World Bank

Pace and direction of change in income inequality can also be observed in Figure 5.1. In Cambodia, the Gini coefficients persistently soared since 1994, but have slowed since 2007. The trend in Indonesia, in contrast, is more variable. Income inequality gradually escalated from the late 1980s, but the aftermath of the Asian financial crisis witnessed a sudden plunge in income inequality even though it soon bounced back and rose rapidly after 2002, reaching the unprecedented high level of 42.15 per cent in 2011. In Lao PDR, even though the Asian financial crisis resulted in a modest decrease in income inequality during 1997–2002, the Gini coefficients have markedly increased from 30.43 per cent to 34.91 per cent in 1992–97 and from 32.63 per cent to 36.74 per cent in 2002–08. Malaysia exhibited the same pace and direction. The Gini coefficients gradually escalated during the late 1980s, followed by a drop in the aftermath of the Asian financial crisis during 1997–2004 and a widening trend in the run-up to the global financial crisis in 2009. In the Philippines, income inequality substantially deteriorated during 1985–97; nevertheless, the trend of rising inequality reversed thereafter. In the aftermath of the Asian financial crisis, the Philippines managed to achieve a consistent drop in the Gini coefficients. Income inequality in Thailand has reduced modestly since the 1990s, notwithstanding a considerable spike in the aftermath of the Asian financial crisis in 1998–2000. Lastly, inequality in Vietnam was relatively unchanged during 1992–2008. The Gini coefficients picked up insignificantly during 1992–2004, followed by a modest decline in 2004–08.

Inequality–openness nexus

Trade openness

Another cause of rises in economic inequality in South-East Asia pivots around the consequences of policies that advocate trade liberalisation. The past three decades witnessed remarkable reductions of tariff rates and non-tariff barriers such as quotas and anti-dumping duties on top of unprecedented increases in openness and exports. As noted by Milanovic (2005) and Wade (2004), most studies in developing countries find that the effects of trade liberalisation on inequality are statistically insignificant.

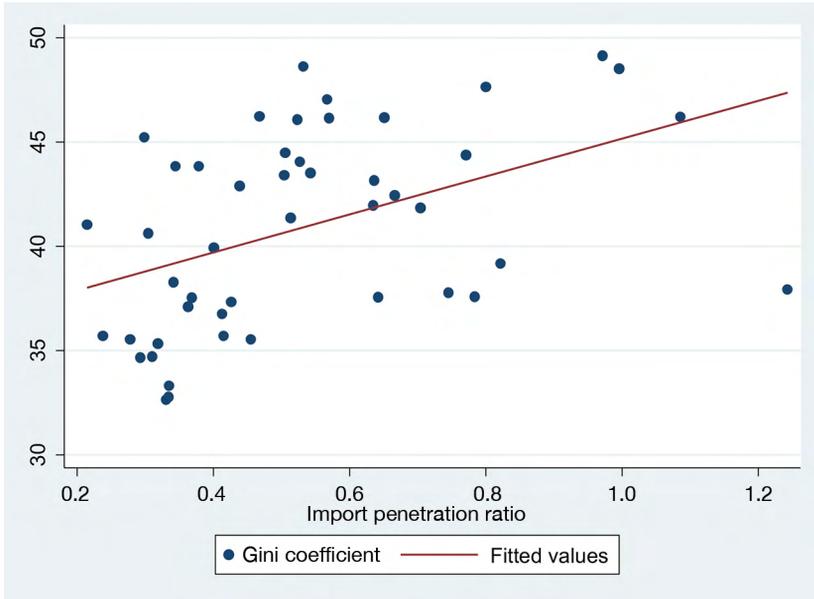


Figure 5.2. Income inequality and trade openness in South-East Asia

Note. Country samples include: Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand and Vietnam, in various years.

Source. Author's calculation based on the World Bank's PovcalNet and WDI

Figure 5.2 presents preliminary evidence that trade openness in South-East Asia may lead to aggravating inequality. As before, the Gini coefficient is utilised as a measure of inequality. A conventional measure of import penetration is employed as a proxy of trade openness (see, for instance, Bernard et al. 2006). This measure essentially captures the proportion of domestic demands that are satisfied by imports and is traditionally interpreted as indicating trade openness. The index of import penetration ($MPEN$) can be expressed as:

$$MPEN_i = \frac{M_i}{M_i + Y_i - X_i} \quad (1)$$

where M_i is total imports of country i ; Y_i is GDP of country i ; and X_i is total exports of country i . All variables are retrieved from the World Bank's World Development Indicators (WDI) and are reported at the constant price of the year 2000.

Trade liberalisation produces an unfavourable distributive impact on inequality in ASEAN. The positive correlation between trade penetration and the Gini coefficients is in contrast with the exposition by the standard trade theory that developing countries stand in good stead to bridge the disparities as they reallocate resources toward labour-intensive and unskilled production, thereby shifting the relative demand for unskilled labour. This empirical exercise underlines that the linkage between trade openness and inequality is not straightforward. Even in developing South-East Asian countries, where unskilled workers are abundant, gains from trade are more pronounced for the high-income group than the low-income one.

Financial openness

As with trade liberalisation, the effects of financial-sector development as substantiating cross-border movement of capital remain controversial (Agenor 2002; Fallon & Lucas 2002). On the one hand, domestic financial deregulation helps perk up resource allocation and returns on financial assets by channelling capital to the most efficient uses. The rises in income accrued by the holders of financial assets could potentially be redistributed to put forward equitable economic development. Financial-sector development, on the other hand, can exacerbate the distribution of income in developing countries in various ways. First, the appreciation of domestic currencies because of an enormous influx of capital inflows may divert resources away from low skill-intensive sectors and trigger a plunge in demands for unskilled workers (Taylor 2000). Second, undue development toward a free capital market puts countries at risk of financial crises in which the poor are the most affected. The 1997 Asian financial crisis offers an exceptional example of how the gratuitous, impulsive liberalisation of financial sectors ultimately propelled millions of the poor into poverty, thereby widening inequality in South-East Asia. Finally, it has been widely perceived that the problems of incomplete information, herd behaviour, weak supervision, excessive speculation and inadequate institutional infrastructure plague the well-functioning liberalised international financial system, and thus the real effects of financial market reforms on inequality are overestimated, if not adverse.

Empirics

To empirically investigate the linkages between openness and inequality in South-East Asian countries, this section develops a simple econometric model that relates the Gini coefficients to measures of trade and financial openness, in addition to other control variables. As in International Monetary Fund (IMF) (2007), the econometric specification can be loosely written as:

$$\ln(\text{Gini}_{it}) = \alpha_0 + \alpha_1 \ln(\text{TRADE}_{it}) + \alpha_2 \ln(\text{FINANCE}_{it}) + \mathbf{x}_{it}'\boldsymbol{\beta} + u_{it} \quad (2)$$

where the subscripts i and t represent a country $i = 1, \dots, N$ and the time period $t = 1, \dots, T$, respectively. Trade liberalisation, TRADE_{it} , is measured by the ratio of exports and imports to GDP. As discussed later in this section, it can be further portioned into the ratio of exports and the ratio of imports to GDP to see how exports and imports may have contrasting effects on inequality. There are two proxies of financial liberalisation, FINANCE_{it} . One is the ratio of foreign assets to GDP, and the other is the ratio of inward FDI stocks to GDP. In addition to the key variables of trade and financial liberalisation, the econometric specifications also control for four country-specific characteristics in the vector \mathbf{x}_{it} . The first is labour productivity measured by the ratio of value added to total employment. The other three control variables are the employment shares in agriculture, industry and service sectors. The empirical model (3) is estimated by the standard ordinary least squares (OLS), with the heteroskedasticity-robust estimators. It should also be highlighted that all dependent and independent variables enter the model in terms of natural logarithm to yield more amenable OLS estimates.

Table 5.2. Summary of statistics

Variables	Obs.	Mean	SD	Min	Max
Gini coefficient	57	40.71	4.82	30.43	49.15
Ratio of trade to GDP	55	1.09	0.46	0.46	2.29
Ratio of exports to GDP	55	0.55	0.24	0.23	1.21
Ratio of imports to GDP	55	0.54	0.23	0.20	1.08
Ratio of foreign assets to GDP	50	0.19	0.12	0.01	0.51
Ratio of inward FDI to GDP	50	3.07	2.42	0.07	10.52
Labour productivity	52	9,503.9	5,293.7	2,567	24,059

Variables	Obs.	Mean	SD	Min	Max
Agriculture employment share (per cent)	46	43.77	14.41	13.5	72.2
Industry employment share (per cent)	46	18.75	5.79	8.3	33.7
Service employment share (per cent)	46	37.45	9.99	19.2	59.5

Note. Labour productivity is proxied by the ratio of value added to total employment.

Source. Author's calculation based on the World Bank's PovcalNet and WDI databases

Now that the objective is to examine the effects of structural drivers on inequality in South-East Asia, the dataset involves seven South-East Asian countries including Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Vietnam. The empirical estimates should be interpreted as correlation, rather than causality. In addition, different countries have growth of domestic product, increasing employment and reducing poverty. Therefore, the empirical results in this paper do not necessarily suggest policies for reducing income inequality. It retrieves the information on the Gini coefficients from the World Bank's PovcalNet database, and the data for the independent variables are extracted from the World Bank's World Development Indicators (WDI). Table 5.2 summarises key statistics of the dataset.

Empirical results

Table 5.3 presents the estimation results. The first column (Model 1) is the regression of the Gini coefficients on the ratio of exports and imports to GDP, in addition to other control variables. The second column (Model 2) puts emphasis on the variables of financial liberalisation by regressing the Gini coefficients on the ratios of foreign assets to GDP and the ratios of inward FDI to GDP, with other control variables. The third column (Model 3) puts together the variables of trade and financial liberalisation. The fourth and fifth columns (models 4 and 5) perturbed the specification by breaking down the variable of trade liberalisation into the ratios of exports to GDP and the ratios of imports to GDP to account for the possibilities that exports and imports may have impacts on inequality in diverse ways. The main findings are recapitulated below.

Table 5.3. Determinants of the Gini coefficients in South-East Asia

Dependent variable: Natural logarithm of the Gini coefficients					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Trade liberalisation:					
Ratio of trade to GDP	.007 (.060)	--	.041 (.097)	--	--
Ratio of exports to GDP	--	--	--	-.480*** (.103)	-.554*** (.096)
Ratio of imports to GDP	--	--	--	.449*** (.097)	.501*** (.096)
Financial liberalisation:					
Ratio of foreign assets to GDP	--	-.048** (.018)	-.055** (.026)	--	-.006 (.023)
Ratio of inward FDI to GDP	--	.037** (.014)	.032* (.017)	--	.023* (.013)
Control variables:					
Labour productivity	.072 (.047)	.116*** (.040)	.118*** (.042)	.121*** (.042)	.161*** (.042)
Agriculture employment share	-.068 (.118)	-.077 (.093)	-.045 (.132)	.058 (.097)	.086 (.105)
Industry employment share	.021 (.109)	-.037 (.085)	-.042 (.090)	.056 (.081)	.056 (.069)
Service employment share	-.059 (.142)	-.021 (.120)	.012 (.170)	.188** (.091)	.209** (.096)
Constant	3.47*** (.959)	3.01*** (.792)	2.75** (1.11)	1.56* (.899)	.985 (.942)
No. of observations	46	39	39	46	39
R-squared	.251	.400	.402	.577	.679
F-statistics	2.95**	7.74***	5.69***	9.68***	13.36***

Note. a) *, **, *** denote at the 10, 5 and 1 per cent levels, respectively; b) Heteroskedasticity-robust standard errors in parentheses; c) All explanatory variables are in natural logarithm; d) All specifications are estimated by ordinary least squares (OLS); e) Selected South-East Asian countries include: Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand and Vietnam.

Source. Author's calculation based on the World Bank's PovcalNet and WDI databases

First, although the coefficients of the ratio of exports and imports to GDP appear to be statistically insignificant, the partition of the trade openness index into the ratio of exports and the ratio of imports to GDP strongly indicates that an expansion of exports as a result of trade liberalisation helps mitigate inequality in South-East Asia, while an influx of imports puts upward pressure on inequality. As shown in Table 5.3, the coefficients

of the ratio of exports to GDP are positive and statistically significant at the 1 per cent level in both models 4 and 5. In contrast, the coefficients of the ratio of imports to GDP turn out to be negative and statistically significant at the 1 per cent level. The fact that the impacts of exports and imports on inequality work in opposite directions may explain why the overall impacts of trade liberalisation captured by the ratio of exports and imports to GDP are insignificant. This may also suggest that in the South-East Asian context, exports are associated with skill-intensive production, thereby benefiting skilled workforces in the higher income groups. This is possible given the fact that the key export products from these countries are electronics, and electrical and automotive products, which are typically more skill-intensive to produce. Imports such as equipment and machinery could supplement productivity of unskilled labour and boost wages of the lower income groups, thereby reducing income inequality.

Second, financial liberalisation, which boosts the cross-border capital flows of foreign assets, seems to help bring down inequality. Although the statistical significance is somewhat sensitive in Model 5, the coefficients of the ratio of foreign assets to GDP appear to be negative in all estimations. This suggests that greater financial liberalisation provides greater access to financial resources and opportunities for the poor.

Third, consistent with ADB (2012) and IMF (2007), an increase in inward FDI from advanced economies critically fuels rising inequality in South-East Asia. As portrayed in Table 5.3, the coefficients of the ratio of inward FDI to GDP are positive and statistically significant in all specifications. The positive effects of inward FDI on inequality are, however, not surprising. In the context of South-East Asia, most foreign investments and capital resources are directed toward skill-intensive industries such as automotive and electronics industries, thereby shifting labour demands away from unskilled toward skilled workers. The widening gap between skilled and unskilled wages because of inward FDI is eventually translated into escalating unevenness of income distribution.

Fourth, labour productivity may also be a source of inequality in South-East Asia. The coefficients of labour productivity are positive and statistically significant in all specifications (except Model 1), suggesting that the countries with higher labour productivity in terms of value added per worker tend to be characterised by more unevenness of income distribution. This evidence can be explained by that fact that higher labour productivity is associated with high-tech capital accumulation

and technology advancement, which in turn bolster up the premium for skilled workers and capital. Since unskilled workers take up a larger share of population in South-East Asia, higher labour productivity leads to more uneven income disparities.

Last, developing South-East Asia's expansion of industry and service sectors, together with the downsizing agricultural sector, has implications for rising inequality. As shown in Table 5.3, the coefficients of the service employment share appear to be positive and statistically significant at the 5 per cent level in models 4 and 5, even though the employment shares in the agriculture and industry sectors do not produce statistically significant estimates. This posits that the burgeoning service sector in South-East Asia exacerbates income inequality. An explanation perhaps rests with labour market rigidity whereby labour is hindered in moving away from low-return activities in the agriculture sector to high-return service activities (Topalova 2007).

It should also be underlined that the empirical exercise in this section is subject to several caveats. Limitations of the Gini coefficient data impose somewhat critical constraints on the sample size and consistency of the dataset. Limited data availability confines the control variables only to labour productivity and employment shares across sectors and may cause estimation biases arising from the omitted variables. Additionally, the limited scope of this section leaves several econometric issues unaddressed, such as endogeneity biases, in addition to country- and time-specific effects. Therefore, the empirical results discussed in this section should be considered to be tentative.

Conclusion

This paper empirically investigates the correlation between trade openness and income inequality using the country-level information of seven South-East Asian countries including Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand and Vietnam. The empirical estimates point to consistency with the existing literature that trade openness measured as a share of exports and imports in GDP has a statistically insignificant relationship with income inequality. We find an interesting result that exports and imports, individually, contribute to income inequality in opposite directions. Imports are positively correlated with income inequality whereas exports seem to help reduce income inequality. Therefore, the

empirical exercise in this paper offers an alternative explanation of the insignificant correlation between trade openness and income inequality as in the existing literature in the context of South-East Asia.

Like any research study, this paper is not without limitations. First, there is interplay between exports and imports particularly in the context of South-East Asian countries. The prevalence of supply chains and outsourcing activities in South-East Asian countries implies that countries import for re-exports, and there is a strong correlation between exports and imports. Hence, it is indispensable to look into more detailed exporting and importing activities in the context of supply chains. Second, while this paper focuses on a country-level analysis, the nexus among trade openness, financial openness, and income inequality depends critically on industrial structures, country- and time-specific contexts, and policy goals. Therefore, it would be interesting to further investigate these results using more disaggregated data at the sector, industry, and firm levels. Lastly, there are many other indicators of income inequality, such as the relative share of the 10 per cent highest and lowest income of the population, among many others. The use of alternative measures for income inequality will help confirm robustness of the findings. Due to the limited scope of this paper, we leave these pending issues and inquiries for future research to shed light on them.

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