RESEARCH ARTICLE

Quality of Growth and Poverty in Low Income Countries: The Role of Manufacturing

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Abstract: Both the Millennium Development Goals (MDGs) which ended in 2015, and its replacement the Sustainable Development Goals (SDGs) of the United Nations which will end in 2030, target the eradication of poverty. The 2020 Covid pandemic has seriously worsened poverty incidence in many low income countries, and recovering lost ground is paramount. As low income economies try to establish a new normal, they need to aim not only for higher overall economic growth but also for a higher quality of economic growth for improved inclusion outcome. Higher quality means more inclusion per unit growth. We discuss how for the same overall growth in the economy, a higher share of the Manufacturing sector in GDP may bring about lower poverty incidence, while a higher share of Services may have the opposite effect. We first compare the poverty reduction experiences of the Philippines whose growth has been largely Services-led in the last two decades, with that of China and Vietnam, whose growth has, for the most part, been Manufacturing-led. We then present evidence based on cross-country panel data for low income countries that the Manufacturing share in GDP exhibits a significant negative association with poverty incidence, while the higher Services share exhibits a significant positive association with poverty incidence. Low income countries seeking more inclusive growth may do better if they privilege their Manufacturing sector over the Services sector.

Keywords: quality of growth, low income countries, poverty incidence, industrial structure, manufacturing, services

JEL Classification: O14, I3, O5

Introduction

Inclusive growth was the rallying cry among development institutions and practitioners and a favored fixture in economic programs around the world (Rahul et al., 2013; Ranieri and Ramos, 2013; Ianchvichina and Lundstrom, 2009) in the last decade, consonant with the Millennium Development Goals (MDGs) of the United Nations (1990=2015) now replaced by the Sustainable Development Goals (SDGs) to end in 2030. Goal #1 of the SDGs is the "End of poverty in all its forms". The 2020 pandemic crisis sent economic growth tumbling and set back the poverty outlook for developing economies (Mahler et al., 2022). As economies struggle to define and establish a new normal, it is useful to recognize that

while recovering the overall growth momentum (the quantity of growth) is paramount for recouping lost inclusiveness (Dollar and Kraay, 2004; Lopez and Serven, 2004), they should not lose sight of the fact that the quality of growth may also be a substantial contributor to inclusion. By quality of growth we mean which industrial sectors are driving overall growth. When quantity growth is being driven by growth in sectors that are particularly inclusion-enhancing, the same overall growth will translate into greater inclusion than one driven by sectors that are either indifferent or deleterious to inclusion. Inclusion-enhancement can come about, for example, by the sustainability of growth.

Sustainability of growth contributes to inclusion because there is usually a considerable time lag between economic growth episodes and inclusion outcomes. The nexus between growth and inclusion is not instantaneous. If growth is spasmodic, that promised future when growth begins to be expressed in poverty reduction may never come. For one, the scarcity of labor which raises real wages comes only slowly and only after rapid growth has been running for some time. Furthermore, Berg and Ostry (2011) show that growth in economies with better income distribution also tends to have longer durations. Thus, if GDP growth is being driven by sectors that tend to start and stop, overall growth in the longer term may be less inclusive. Rahul et al. (2013) develop a macro-social mobility measure of inclusion and show in particular that for emerging and low income countries (143 countries), among others, stable macroeconomics (inflation, output volatility, investment and government consumption) is an important determinant of inclusive growth. Now certain sectors of the economy, for the most part non-traded goods (property, real estate, stock market, to name a few), are more prone to boom-and-bust cycles than those in the tradable sector, viz., Manufacturing. Boom-and-bust episodes signal, on average, short duration economic growth; and when the banking sector gets drawn in these cycles, as they usually are, the subsequent recession episodes become protracted. Ianchivina and Lundstrom (2009), on the other hand, identify the hurdles to inclusive growth, many of which are failures in the inputs markets such as energy, telecoms, transport, and insurance. Unstable macroeconomics with boom-and-bust features often fail to provide adequate sustained funding for sizeable ancillary and arterial infrastructure which raises the cost of inputs.

The known results, however, seem to ignore the role of industrial structure on inclusion. Policy makers in low-income countries, concerned with SDGs and the imperative of inclusion, naturally want to know which industry sectors deliver the largest bang for the buck in terms of poverty reduction. There seems to have been a renewed excitement in favor of Manufacturing in such a sector. South Africa has made noises about revitalizing manufacturing (Cape Business News, 2016). ADB has counseled the Philippines to foster manufacturing for inclusive growth (Usui, 2012), and the Philippines has responded with a Manufacturing roadmap (Aldaba, 2013). India's pitch to the world, 'Make in India', is intended to make India a manufacturing destination for foreign investors to rival China (IBEF, 2021). Manufacturing and inclusive growth are becoming increasingly identified as fellow travelers in the global development conversation. We will attempt in this paper to give this belief a sound empirical grounding.

Daway and Fabella (2015) explored the phenomenon earlier identified (Fabella, 2013) as *development progeria* among low-income countries: the Service sector share in GDP grows faster than the Manufacturing share in GDP, and the economy early on becomes dominated by the Service sector. This phenomenon is normal among mature high-income (OECD) countries facing factor price imperatives. Mature high-income economies are associated with lower growth than countries on the convergent path. Low-income economies displaying development progeria also seem to grow slowly, if at all, thus precluding a convergence with mature economies. Low-income economies not similarly afflicted tend to grow faster, thus have better prospect for convergence. Daway and Fabella (2015) discuss a model showing how the growth of the Non-traded sector is affected by the exchange rate and by market and institutional distortions. Using Manufacturing as proxy for the Traded good sector and the Service sector as proxy for the Non-traded goods sector, they found that the share of Manufacturing in low income countries associates significantly with the pro-export bias of the exchange rate (positive), the ICRG quality of governance (positive), the investment rate (positive), the Power of the Service sector to absorb workers (negative), and the growth of the Service sector (negative). In this paper we enquire about the power of Manufacturing to deliver greater inclusion, thus, more sustained growth. Specifically, we compare the relative strength

of Manufacturing and the Service sectors at fostering poverty reduction among low-income countries. Ducanes, Daway, Ravago and Fabella (2016) show that for low-income countries (≤$10,000 per capita), lower power cost and more outward-oriented exchange rate, good institutions but also higher CO_2 emission are strong correlates of Manufacturing growth.

In Section II we first examine the contrasting experience between poverty incidence and Manufacturing of the Philippines, on the one hand, and China and Vietnam on the other, and the contrasting experience in Manufacturing shares as a possible example of the hypothesized nexus. In Section III, we present possible theoretic underpinnings that support the nexus. We first discuss a simple two-good (Traded and Non-traded goods) two-input (labor and capital) model where the owners of input labor are poor, while the owners of capital are affluent. We assume CRS technology and that the Traded goods are labor-intensive, while the Non-traded goods are capital-intensive. We show how the rise in the share of the Traded goods sector correlates with lower poverty incidence while the rise in the Service sector does the opposite. However, in view of the heterogeneity of the activities under the Service sector where some activities are associated with the overall competitiveness (infrastructure, power, governance), the effect on poverty reduction is more likely to be ambiguous. We then discuss the Rodrik (2008) hypothesis: institutional and market. In Section III, we test the hypotheses derived.

Comparison of the Philippines, China and Vietnam

We start this section with an object comparison of the experience of Vietnam and China in poverty reduction and quality of growth, reflected by the industrial structure. Figure 1 below shows that poverty fell much more sharply for both China and Vietnam in the past two decades.
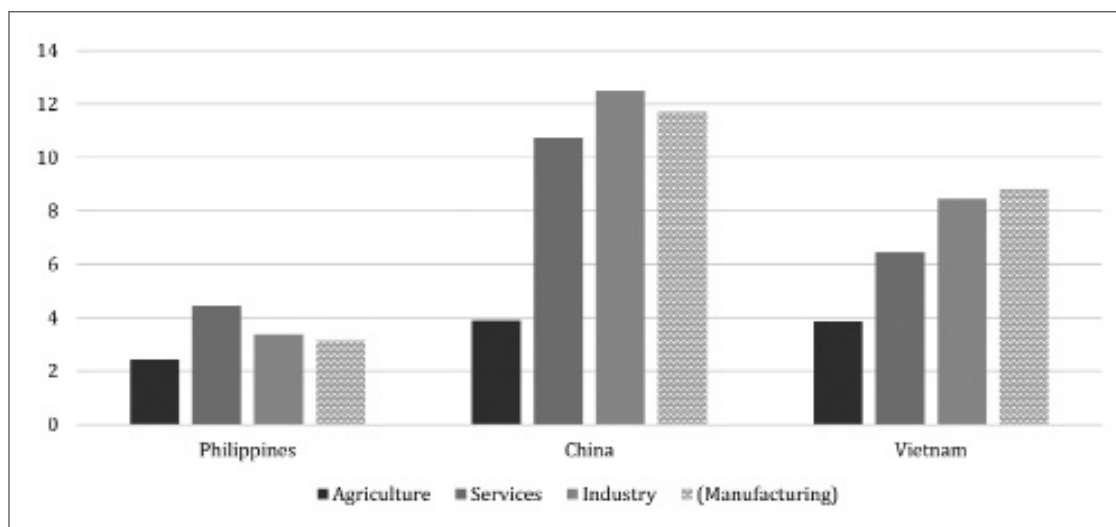
Figure 1

Poverty head count ratio 1990 to 2010 at $1.90 a day (2011 PPP) (% of population)

Figure 2 suggests possible reasons why: first, the quantitative aspect—those two countries grew relatively faster overall; but second, the qualitative aspect—the pattern of growth may have played a part. In those other two countries, growth was mainly driven by the Manufacturing sector, as opposed to the Philippines, where Services led growth.
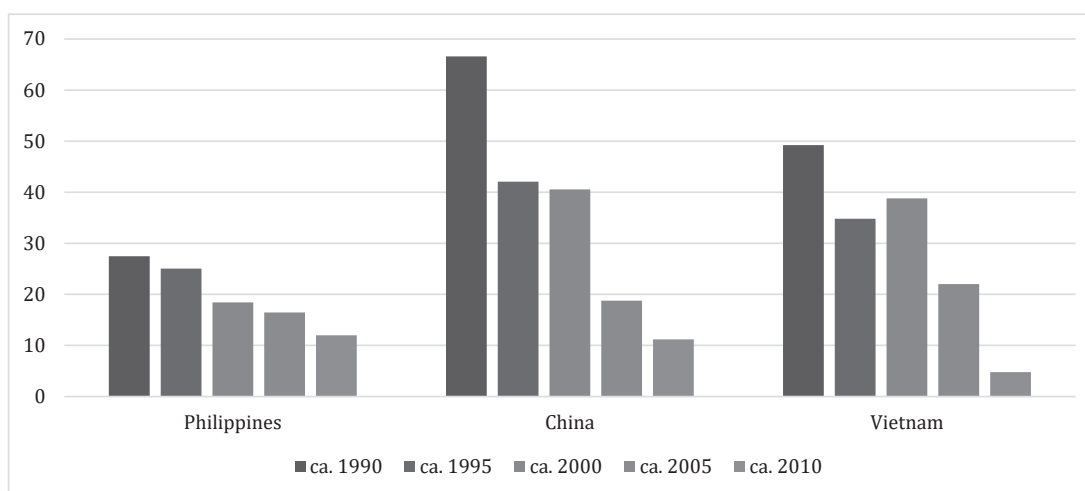
Note: From World Bank. (2016, July 22). World Development Indicators (database). Retrieved from https://data.worldbank.org/indicator

Figure 1. *Poverty head count ratio 1990 to 2010 at $1.90 a day (2011 PPP) (% of population)*

Figure 2. *Average annual growth in Sectoral Value Added (1990 to 2010)*

Quality of Employment and Inclusion by Sectors in a Low-Income Economy: The Case of the Philippines

We look at a particular low-income economy, the Philippines, as a case in point. Table 1 divides the Philippine economy into five subsectors, namely: Agriculture, Manufacturing, Other industry (mining, construction, and utilities); High-skill services (information technology, finance, research and consultancy, and teaching and health care services); and Other Services. This table compares these variables across basic measures of employment quality. These are compared by the quality of employment provided. It shows that Manufacturing beats all others in terms of median basic pay per day, apart from High-skill services. Visible underemployment (less than full-time work) is relatively low in Manufacturing, and the share of workers in permanent status is lower only than in the High-skill services sector. Overall, the table suggests that Manufacturing is next only to High-skill services in terms of quality.

The pronounced advantage of Manufacturing over High-skill services is that it is much more accessible

Table 1. *Measures of quality of employment by sector*

Sector	Median basic pay per day	Visible underemployment rate	Workers in permanent status (%)
Agriculture	150	21.0	66.9
Manufacturing	315	8.3	74.0
Other Industry	300	8.2	48.5
High-skill services	576	2.8	87.1
Other Services	250	8.4	76.5
Total	250	11.9	72.0

Note: From Philippine Statistics Authority. (2013). January 2013 *Labor Force Survey*. Philippines. Retrieved from https://psa.gov.ph/statistics/survey/labor-and-employment/labor-force-survey

to lower-skilled or less-educated workers, and because education is highly correlated with income status, also with workers from poorer households. Table 2 shows that 86% of first-time workers in Manufacturing are with high school diplomas or less education. In contrast, 79% of first-time workers in the high-skill services sector are college graduates.

Table 3 indicates the distribution of first-time workers by income quintile and shows that almost one-fifth of new workers in manufacturing come from the lowest income quintile of households (which is approximately the poor households, by official definition). Industry and Agriculture have a bigger share of first-time workers coming from the lower income quintiles, but as shown earlier, these offer lower quality jobs, on average. Services sector jobs, especially, high-skill services jobs, favor workers from the richer households. Ducanes and de Dios (2016) showed that these patterns hold when comparing export-oriented Manufacturing jobs versus Business Process Outsourcing jobs and overseas jobs, the former being more inclusive in the sense of being more accessible to lower-skilled workers from relatively poorer households.

Thus, if inclusive growth is the paramount concern as it is of the current Philippine and other low income countries, what is suggested here is that enhancing the share of Manufacturing in GDP can make a difference for inclusiveness. The data for the Philippines may also reflect the reality in other low-income economies.

Table 2. *Distribution of first-time workers by Sector and by Education*

Sector	HS undergrad	HS grad	College undergrad	College graduate	Total	Total first-time workers
Agriculture	78.6	14.9	4.5	2.0	100.0	108,172
Manufacturing	36.3	50.1	8.1	5.5	100.0	67,193
Other Industry	49.5	28.8	13.3	8.4	100.0	38,143
High-skill services	0.7	9.7	11.1	78.5	100.0	78,394
Other Services	28.7	41.2	15.5	14.6	100.0	443,357
Total	34.8	34.2	12.6	18.4	100.0	735,259

Table 3. *Distribution of first-time workers by Sector and by HH per capita income quantile*

Sector	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile	Total	Total first-time workers
Agriculture	58.0	22.6	13.5	5.3	0.5	100.0	108,172
Manufacturing	19.8	19.6	29.5	22.0	9.1	100.0	67,193
Other Industry	20.7	25.3	22.6	24.7	6.7	100.0	38,143
High-skill services	1.3	9.3	12.3	24.4	52.7	100.0	78,394
Other Services	18.3	17.0	22.8	20.9	20.9	100.0	443,357
Total	22.6	17.7	20.9	19.3	19.5	100.0	735,259

Note: From Philippine Statistics Authority. (2013). January 2013 *Labor Force Survey*. Philippines. Retrieved from https://psa.gov.ph/statistics/survey/labor-and-employment/labor-force-survey

The Theoretical Model

We consider three pathways to lower poverty incidence by way of industrial structure. The first is the classical Heckscher-Ohlin-Samuelson trade model: (i) Consider a standard two-sector economy consisting of the Traded sector, T, and the Non-traded sector, N. There are just two factors in this economy, utilized as inputs in both T and N: Labor L and Capital K. The economy is labor-abundant. We assume further that the owners of L are poor, while the owners of K are affluent. Poverty occurs only among owners of L. These above assumptions are more likely true for low-income than for high=income countries. Furthermore, T is labor-intensive and N is capital-intensive. Unit of Labor is paid wage w, and Capital is paid interest rate r. Both T and N operate under a CRS technology. This is the familiar two-good two-factor Stolper-Samuelson economy if we assume full employment always. As suggested by the label, T sells its product in the global export market which determines the prize of T, p_T. The Stolper-Samuelson theorem states thus: as p_T rises *ceteris paribus*, the returns w of the factor L more intensively used in T will rise, while the returns r of the factor more-intensively used in N will fall. Along the way, the output of T rises while that of N falls. Structurally, the share of T in aggregate national output rises while that of N should fall. Thus, when p_T rises *ceteris paribus*, the wage rate of the poor members of society rises, while the returns to affluent owners of capital falls. Since poverty is found only among the owners of L, overall poverty incidence should fall. This is only one of the ways by which the structural change can have differential impact on poverty incidence. Note however that the terms of trade are not wholly under the control of local authorities; part of it isdue to the fact that the value of the domestic currency in terms of foreign exchange can be manipulated by the local monetary authorities who change the terms of trade between the Tradable and Non-tradable outputs! The second pathway goes through the allocation of investment and employs the Rodrik differential sectoral response to market and institutional distortions (Rodrik, 2008; see also Daway and Fabella, 2015): market and institutional failures, including poor governance, will tend to weigh down the traded goods sector more than they do the non-traded goods sector, in that domestic tradable goods have to compete in the global economy with rival tradables from other jurisdictions, some with lower levels of such distortions. Under these distortions, investments will flock towards the Non-traded or Services sectors where the distortion cost can be passed on to consumers. The Non-traded sector will tend to grow faster than the Traded goods sector; and, maintaining the factor-intensity, and CRS assumptions of previous Heckscher-Ohlin growth model will generate a higher demand for K than for L, resulting in higher r and lower w. The holders of labor assets lose; the holders of capital assets gain. Thus, poverty incidence will tend to rise with a rise in N.

Note that many goods and services produced by many subsectors included in the Services sector, such as power, transportation, insurance, banking and logistics services, also serve as inputs to the Manufacturing sector. Growth in these subsectors will help boost the Manufacturing sector. They are thus complementary to the latter. This is the complementarity effect of the Service sector on the Manufacturing sector. But in low-income countries where capital is scarce, Manufacturing and Services compete for financing—the more the Service sector attracts, the less there is for the Manufacturing sector. This is the substitution effect (non-traded goods are effectively substituted for traded goods). We hypothesize that among low-income countries, the substitution effect dominates the complementarity effect. Thus, the growth in the Share of the Service sector will increase poverty incidence.

The third pathway is via the sustainability dimension: Berg and Ostry (2011) showed that growth of economies that exhibit more income equality also tends to be more sustainable. Since there tends to be a lag between growth and poverty reduction, growth that lasts longer also tends to deliver more poverty reduction. Growth that is spasmodic may deliver much less poverty incidence. If overall economic growth, i.e. driven by Manufacturing growth, tends to be more equitable, it will also tend to last longer, and thus underpin more poverty reduction than short-lived (boom-bust) growth driven by, say, in the Services sector. There is an added dimension: the Service sector, especially the real estate and property development segment, is also associated with boom-and-bust cycles which periodically reduce the duration of economic growth.

Our hypotheses: (i) A rise in the share of Manufacturing in GDP reduces poverty incidence; and (ii) a rise in the share of the Service sector in GDP increases poverty incidence in low-income countries.

Evidence from Cross-Country Panel Data

In this exercise, we use the Manufacturing sector as proxy for the Tradeable, and the Service sector as the proxy of the Non-tradeable sector. Using a sample of 50 developing economies with GNIs per capita of not more than $10,000, spanning the period 1983-2013, we first do a simple correlation exercise. Table 4 gives the result of this exercise. It shows that the percentage share of manufacturing in GDP is negatively correlated with alternative poverty measures. These measures are the poverty headcount ratio (a measure of poverty incidence), which is defined as the proportion of the population that is below the poverty line (either at $1.90 per day or $3.10 per day); and the poverty gap (a measure of poverty intensity or depth), which measures the extent to which individuals fall below the poverty line taken as a proportion of the poverty line. The correlation coefficients range from -0.32 to -0.30, suggesting that a larger manufacturing sector contributes to greater poverty reduction in developing economies. While consistent with the first part of our hypotheses, we need to do a more extensive testing.

Table 4. *Correlation of Manufacturing Share in GDP with Poverty Measures*

Poverty Measure Coefficient	Correlation
Poverty headcount ratio at $1.90 a day	-0.32
Poverty gap at $1.90 a day (%)	-0.31
Poverty gap at $3.10 a day (%)	-0.32

Note: From World Bank. (2016, July 22). World Development Indicators (database). Retrieved from https://data.worldbank.org/indicator

To properly test our hypotheses we do a more extensive experiment. To this effect we run a cross country panel data regression of Manufacturing and Service share against various poverty indices, using a sample of 50 low- and lower-income economies with real GNIs per capita of not more than $10,000 from 1983 to 2013, where each period is an average of five years to minimize the effect of business cycle fluctuations.

Table 5 presents the correlates of poverty indices in system GMM regressions. The first two columns are for poverty gap ($1.9- and $3.1) and the second two are for poverty headcount ($1.9- and $3.1). This table shows that a higher Manufacturing share associates significantly with lower poverty gap and the poverty head count ratio *ceteris paribus*. Our first hypothesis cannot be rejected. Table 5 also shows that higher Services share associates significantly with higher poverty gap and poverty headcount ratio. Thus, our hypotheses (ii) cannot be rejected.

Also each of our controls, GNI per capita (*gnipc*) and the Inter-Country Risk Guide (*ICRG*) index, a measure of the quality of institutions, associates significantly with lower poverty gap and headcount ratio as expected. A number of period dummies to account for common trend shocks are also included.

The message from these cross-country system GMM regressions is straightforward: when targeting poverty reduction in low-income countries, policymakers are well advised to pay attention to the quality of growth, that is, adopt policies that privilege those sectors that are more pro-poor. We have shown here that the Manufacturing has many features that produce pro-poor outcomes. Manufacturing can be rendered the principal engine of growth through policies that: (a) directly reduce the distortions, both market and institutional, as for example making the cost of electricity faced by domestic Manufacturing competitive; and, (b) compensate for some of these domestic distortions through a more Manufacturing- and tradable-friendly exchange rate policy, as suggested by Rodrik (2008). This poverty reduction effort through higher Manufacturing share is necessarily a long-term project, as the poverty reduction effect of growth tends to be governed by long gestation periods. But the inclusion impact is also more permanent. These twin policies are familiar as the strategy package adopted by the People's Republic of China in the last quarter century, by Japan before the Plaza Accords, and by the East Asian Miracle economies in the Post WWII period.

Table 5. *Correlates of Poverty Gap and Poverty Head Count Ratio: The Role of Manufacturing*

	System-GMM			
	Poverty gap		Poverty headcount ratio	
	$1.9/day	$3.1/day	$1.9/day	$3.1/day
	1	2	3	4
Poverty measure (-1)	0.528	0.685	0.724	0.872
	[0.010]***	[0.011]***	[0.012]***	[0.010]***
Manufacturing size	-0.063	-0.077	-0.155	-0.059
	[0.022]***	[0.029]**	[0.036]***	[0.035]*
Services size	0.106	0.145	0.192	0.262
	[0.009]***	[0.013]***	[0.033]***	[0.025]***
ICRG	-0.042	-0.096	-0.106	-0.258
	[0.008]***	[0.006]***	[0.012]***	[0.013]***
Real GNI per capita	-0.001	-0.001	-0.001	-0.001
	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Number of observations	195	195	195	195
Number of countries	65	65	65	65
AR(2) Arellano-Bond test	0.753	0.715	0.419	0.423
Hansen p-test	0.477	0.54	0.54	0.582
Number of instruments	64	64	64	64

Note: The set of regressors included Period 2 to Period 6 (dummies) which are not shown. Robust standard errors in brackets.
* $p < 0.1$. ** $p < 0.05$. *** $p < 0.01$.

Summary

For inclusive growth in low-income countries, policy makers must pay close attention not only to the quantity of growth (growth of GNP) but also, and more importantly, to the quality of growth. By quality of growth we mean here which industry sector drives the overall growth. We argue that poverty reduction will be higher if the Tradable goods sector is the main driver, and lower if the Non-tradables sector is the main driver. In this paper, we use Manufacturing as proxy for the Tradable goods sector, and the Services sector as proxy for the Non-tradables goods sector.

From the two-by-two Stolper-Samuelson model with Tradables being more labor-intensive, and the additional assumption that owners of labor input are the poorer members while owners of capital input, the more affluent members of the population, we deduce that the owners of labor win out with a rise in the price (terms of trade) of Tradables, thus, leading to a reduction in the incidence of poverty among the poorer owners of labor; coincident with the rise in the price of Tradables is that the share of Tradables in GDP rises while that of Non-tradables falls. The price of Tradables improves with a more Tradable-friendly exchange rate.

Many subsectors in the Service sector, such as power, transportation, and insurance, produce outputs that serve as inputs to the Manufacturing sector. Growth in these subsectors of Services will also boost Manufacturing. They are complementary to the traded goods sector. Likewise, in low-income countries, capital is scarce so that Manufacturing and the Services compete for financing: the more capital the Services sector absorbs, the less there is for the Manufacturing sector. This is the substitution effect. We hypothesize that among low-income countries, the substitution effect dominates the complementarity effect. Thus,

the increased share of the Service sector will increase poverty incidence.

From Rodrik (2008), we know that Tradables are more hamstrung than Non-Tradables by institutional and market distortions. In low- income economies where these distortions abound, investments tend to flock to the Non-Tradable sector and away from Tradables. Rodrik shows that a more Tradable-friendly exchange rate levels the playing field for the Tradables by compensating for these distortions and is behind the growth impetus of growth among countries with an undervalued currency.

Berg and Ostry (2011) have shown that the growth of low-income economies with better income distribution tend to have longer durations than growth of economies with worse income distribution. Since increasing share of Manufacturing associates with better poverty reduction; growth driven largely by the Manufacturing sector should also prove more sustainable than growth driven by the Service sector. The improved sustainability of growth drives poverty reduction. This is one other pathway by which the quality of growth impacts poverty reduction.

We test these hypotheses using a cross-country panel data for low-income economies. The result of the system GMM regressions show that: (i) Manufacturing share in GDP correlates significantly with lower poverty gap and poverty incidence; and, (ii) Services share in GDP correlates significantly with higher poverty gap and poverty incidence. Thus, which industry sector is driving overall growth affects the extent of poverty reduction. Quality of growth in low-income economies matter for poverty reduction! Policymakers in low-income countries concerned with sustained and inclusive growth are well advised to privilege Manufacturing (Tradable sector) growth over Services growth.

References:

Aldaba, R. (2013). *ASEAN community 2015 SME development: narrowing development gap measure* (Discussion Paper No. 2013-05). Philippine Institute for Development Studies. https://dirp4.pids.gov.ph/ris/dps/pidsdps1305.pdf. Accessed October 2016.

Anand, R., Saurabh, M., and Shanaka, J. P. (2013). *Inclusive growth: measurements and determinants* (Working Paper WP/13/135). International Monetary Fund Asia Pacific Department. http://www.imf.org/external/pubs/ft/wp/2013/wp13135.pdf. Accessed November 2016.

Berg, A. and Ostry, J. D. (2011). *Inequality and Unsustainable Growth: Two Sides of the Same Coin?* (IMF Staff Discussion Note SDN/11/08). International Monetary Fund: Washington, DC. https://www.imf.org/external/pubs/ft/sdn/2011/sdn1108.pdf. Accessed December 2016.

Cape Business News (2016, June 9). Gauteng looks to manufacturing for inclusive growth.. https://www.cbn.co.za/manufacturing/gauteng-looks-to-manufacturing-for-inclusive-growth.

Daway, S. and Fabella, R. (2015). Development progeria: the role of institutions and the exchange rate. *Philippine Review of Economics*, *52*(2), 84-99.

Dollar, D. and Kraay, A. (2004). Trade, growth, and poverty. *The Economic Journal*, *114* (493), 22-49.

Ducanes, G., and de Dios, E. (2016). The impact on labor-welfare outcomes of employment in the global supply chain: the Philippine case. Paper written for the project, *Escaping the Middle Income Trap*, funded by the Netherlands Organization for Scientific Research.

Ducanes, G., Daway, S., Ravago, M., and Fabella, R. (2016). Blameless in the stratosphere: CO_2 emission reduction, manufacturing growth and poverty reduction in the Philippines. Paper presented at the Philippine Economic Society Annual Convention. http://www.upecon.org.ph/epdp/wp-content/uploads/2016/12/8-Blameless-in-the-Stratosphere_SDaway-et-al_Policy-Briefing.pdf.

Fabella, R. (2013). Development progeria: malady and remedy. *Trans. Nat. Acad. Sci. & Tech. (Philippines)*, *35*(1).

Ianchvichina, E., and Lundstrom, S. (2009). Inclusive growth analytics: frame work and application (Policy Research Working Paper 4851). The World Bank Economic Policy Division. https://openknowledge.worldbank.org/bitstream/handle/10986/4047/WPS4851.pdf;sequence=1.

India Brand and Equity Foundation (IBEF). (2021, December). *Make in India*. https://www.ibef.org/economy/make-in-india

Lopez, H., and Serven, L. (2004). The mechanics of growth-poverty-inequality relationship (Mimeo). The World Bank.

Mahler D. G., Nishan, Y., Hill, R., Lakner, C., Wu, H., and Yosihida, N. (2022, April 13). Pandemic, Prices and Poverty. *World Bank Blogs*. https://blogs.worldbank.org/opendata/pandemic-prices-and-poverty

Philippine Statistics Authority. (2013). *January 2013 Labor Force Survey*. Philippines. Retrieved from https://psa.gov.ph/statistics/survey/labor-and-employment/labor-force-survey

Ranieri, R., and Ramos, A. (2016) Inclusive growth: building up a concept (Working Paper 104). International Policy Centre for inclusive Growth: Brazil, 2013. http://www.ipc-undp.org/pub/IPCWorkingPaper104.pdf.

Rodrik, D. (2008) The Real Exchange Rate and Economic Growth. In Elmendorf, D. W., Mankiw, N. G., and Summers, L. H. (Eds.}, Brookings Papers on Economic Activity (pp. 365–412). Washington, DC: Brookings Institution.

Usui, N. (2012). *Taking the right road to inclusive growth: industrial upgrading and diversification in the Philippines*. ADB, Mandaluyong City. https://www.adb.org/sites/default/files/publication/29722/taking-right-road-inclusive-growth.pdf.

World Bank. (2016, July 22). *World Development Indicators* (database). Retrieved from https://data.worldbank.org/indicator