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Growth Slowdown and the Middle Income Trap in Asia[#]

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Abstract

Many Asian developing countries are alleged to be stuck in a "middle-income trap." A middle-income trap is associated with the slowing down of growth due to policy rather than the natural and inevitable consequence of catching-up with high-income countries. If growth slowdown is due to policy, does it mean *ipso facto* that a country is "trapped?" The answer is no, unless the policy maker has a vested interest in growth-inhibiting policies. Why should that be a particular problem for middle-income countries? The paper provides answer and some circumstantial evidence to support it.

Keywords: Middle-income trap, economic growth, Asia
JEL Classifications: E61, E20, O53

[#] Invited paper from *Thailand and the World Economy (TWE)*
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1. Introduction

"Middle-income Trap" is a concept of recent origin, but is already a household word in the foreign aid community, think tanks, government agencies and the popular press in Asia. A Google search of "middle-income-trap" yields tens of thousands of results, but a search on IDEAS (the internet database of economics articles and working papers) produces no more than a handful of references to the subject, which suggests that while the middle-income trap is a popular concept, especially in Asia, it is not one that economists have yet taken seriously.

The notion of a middle-income trap is associated with a slowdown of long-term growth somewhere in the middle-income range. But the slowing down of growth in developing countries, according to conventional growth theory, is a natural and inevitable consequence of diminishing returns to capital-deepening and technology catch-up. Those who allude to a middle-income trap as an explanation for growth slowdown, however, generally ignore natural causes and instead attribute the slowing down of growth to various policies middle-income countries take that inhibit growth and others they fail to take that would promote it.

Even if growth slowdown can be attributed, *inter alia*, to policy acts of omission and/or commission, the trap metaphor is not necessarily warranted. For if all that is necessary to accelerate growth is to adopt different policies, how can a country be considered trapped? The trap metaphor would only appropriate if there were some external constraint (e.g. politics) that prevented and/or discouraged authorities in middle-income countries from taking the necessary measures to restore growth to its long-run potential.

Policy failures are not, of course, unique to middle-income countries, and indeed are likely more prevalent in low-income countries than in middle-income ones. If there is a distinct middle-income trap, then it must be that the constraints that limit governments' ability and/or willingness to abandon growth inhibiting policies and adopt growth promoting ones are particularly binding in the middle income range.

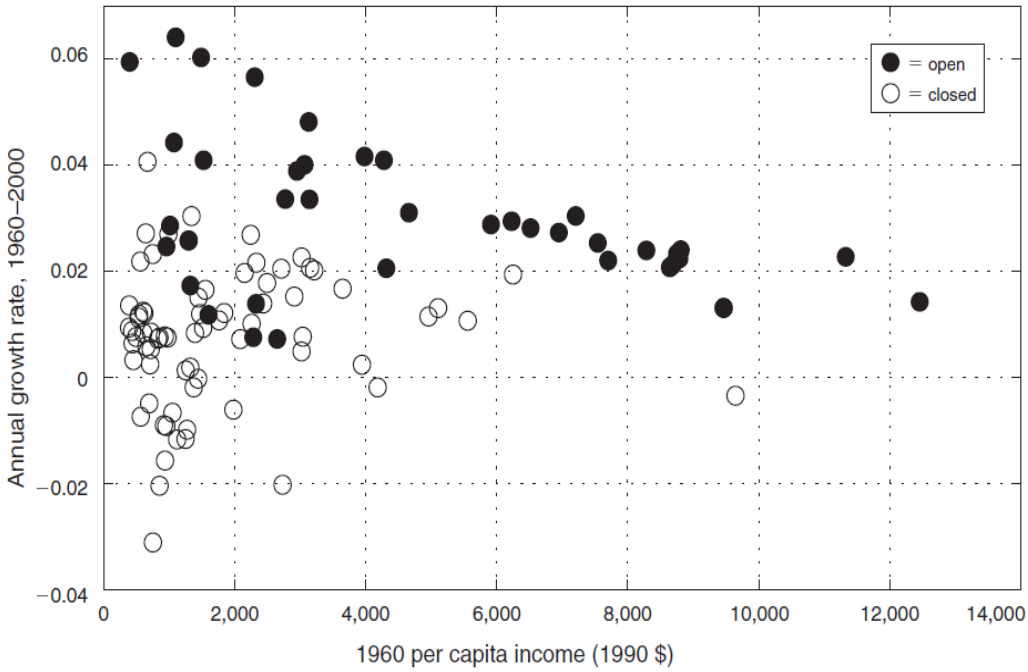
This paper puts forward a hypothesis as to why middle-income countries may be particularly vulnerable to a middle-income trap, but one that is inherently political rather than economic. Before getting to the core hypothesis of the paper, it is useful to briefly review the theory of growth slowdown and the common interpretations of the supposed causes of a middle-income trap.

2. The economics of middle-income growth slowdown

One does not have to look far for a theory of growth slowdown. It is a central proposition of the Solow growth model, deriving from the assumption of diminishing returns to capital-deepening, but in the Solow model growth slowdown (i.e. convergence) is not confined to countries in the middle income range. It begins at the outset of growth and continues until a country reaches its steady-state, which could be at a high income level, depending on the underlying determinants of the steady-state. If changes in steady-state determinants occur that are favorable to growth, such as a rise in the saving/investment rate or a fall in population/employment growth rate, the growth rate of per capita income jumps to a higher level, but then resumes a downward trend due to the inextricable force of diminishing returns.

The Solow model is essentially a model of growth in closed economies.[1] But, in closed economies the central proposition of the model—convergence—does not generally hold empirically. It is only in open economies, which typically grow faster than closed ones, that cross-country growth convergence is observed, as Figure 1 indicates. Since convergence occurs predominantly among open economies, openness is obviously a key ingredient of rapid growth in developing countries, which is confirmed empirically not only by cross-country growth studies, but even more convincingly in the vast empirical literature on industrialization and growth experiences of developing countries, especially in Asia, to which Prema-chandra Authokala has made many important contributions.[2]

Figure 1: Convergence in 112 Open and Closed Economies



Source: Lucas, 2009 (p. 4)

In the Solow model, the rate of technology change is assumed to be exogenous and constant, which may be a reasonable assumption for developed countries that operate on the frontier of technology, but is not appropriate for developing countries, which by definition are latecomers and hence start out well inside the interior of the technology frontier.

Technology change in open developing countries occurs, in large part, from a process that has become known as "technology catch up"—absorbing the world's exiting technology by investing in imported machinery and equipment that embody new and better

[1] As Venture (1997) has explained, in open economies diminishing returns to capital-deepening is not inevitable because of Rybczynski effects (capital-deepening leading to factor reallocation in favor of capital-intensive sectors).

[2] Prema-chandra Athukorala has more than 100 publications on Asian development, including Athukoral, et.al.(2006), (1999) and (1998) which are cited in the references to this paper.

technology, attracting foreign direct investment and investing in the acquisition of new and better production and business techniques from abroad. The rate of technology change via catch-up is endogenously determined by the rate investment and its efficiency, which in turn rests of the openness of the economy and the efficiency of factor and goods markets generally. One of the important reasons why open developing countries grow faster than closed ones and much faster than more advanced countries is that, by virtue of being open, they are able to engage in technology catch up.

Technology catch up is primarily concentrated in the industrial sector. When an economy opens up and begins to invest in technology catch up, industrial employment expands, drawing labor from the rural agrarian sector, where productivity typically is relatively low. As the share of the labor force in industry rises, the average level of productivity rises, compounding the growth effect of technology change via catch up.

These three elements of the growth process in relatively successful developing countries—openness, technology catch up and labor reallocation from agriculture to industry—are brought together in a model of growth dynamics introduced by Lucas (2009). Lucas models growth under "AK" assumptions, according to which GDP per capita is proportional to K, termed the stock of technology, knowledge, human capital or, as he puts it, "whatever term you like." "A" in this framework is an efficiency index that serves to capture the effect on overall productivity of labor reallocation from agriculture to industry.

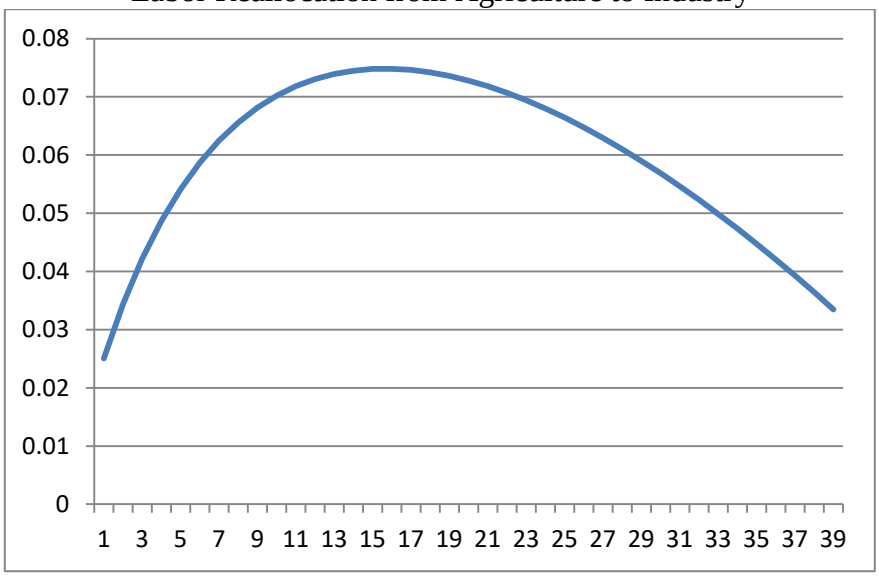
In Lucas model, the rate of technology catch-up is a positive function of a country's distance from the technology frontier, which is represented by a country's per capita income (y) relative to that of countries at the frontier ($\bar{y}$). At the frontier, per capita income grows at a constant exponential rate (μ), as in the Solow model. Inside the frontier, per capita income grows at the rate

$$\mu\left(\frac{\bar{y}}{y}\right)^{\theta}$$

where θ represents the technology spillover parameter, the value of which Lucas (2009) ascertained to be between 0.5 to 0.7. With $0< \theta<1$, technology catch up is subject to diminish returns, hence the growth rate diminishes as per capita income rises relative to that of countries at the frontier, but right from the outset of opening up not just at the middle-income range.

Right from the outset, however, as the industrial sector expands, drawing labor from agriculture. As a result, the overall level of productivity in the economy rises. The combined effects of technology catch up and labor reallocation, spurred by technology catch up, generate an initial period of rising growth rates, but eventually—somewhere in the middle income range—diminishing returns to technology catch up take over and growth slows down, as illustrated in Figure 2.

Figure 2: Simulated Growth Pattern with Technology Catch Up and Labor Reallocation from Agriculture to Industry



Source: Author's calculations.

2.1 The empirics of middle-income growth slowdown in selected Asian countries

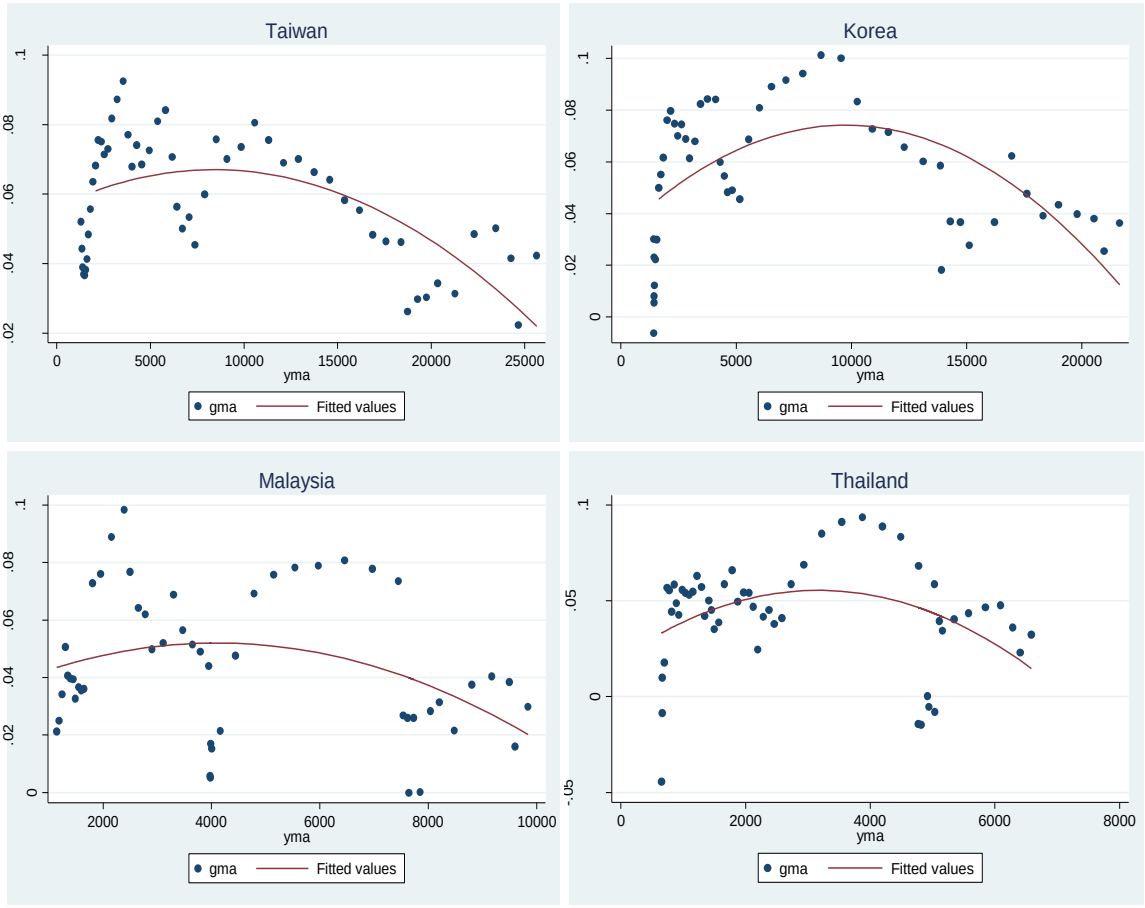
2.1.1 Growth slowdown

As noted, the concept of a middle-income trap is especially popular in Asia. Asia's two most successful developing countries, Taiwan and Korea, having maintained relatively rapid growth over more than three decades and as a result reached a level of per capita income in the OECD income range, are generally considered to have avoided the middle-income trap. The two Asian developing countries that are most frequently associated with the middle-income trap are Malaysia and Thailand.

As Figure 3 indicates, all four countries exhibited an initial phase of growth acceleration, followed by a phase of growth deceleration, similar to the pattern the Lucas model predicts. What differentiates Korea and Taiwan from Thailand and Malaysia, and is interpreted as empirical evidence that the latter have fallen into a middle-income trap, is that the level of per capita income (measured in 2005 constant PPP dollars) at which growth slowdown occured. In Thailand and Malaysia it was at a level of per capita income that was about one-half the income level at which growth began to slowdown in Korea and Taiwan[3]

[3] Korea: $9,725, Taiwan: $8,388, Malaysia: 4106, Thailand: $3,171.

Figure 3: Five-year moving averages of actual and estimated real per capita income growth rates (gma) plotted against the level of real per capita income (yma): 1955-2011



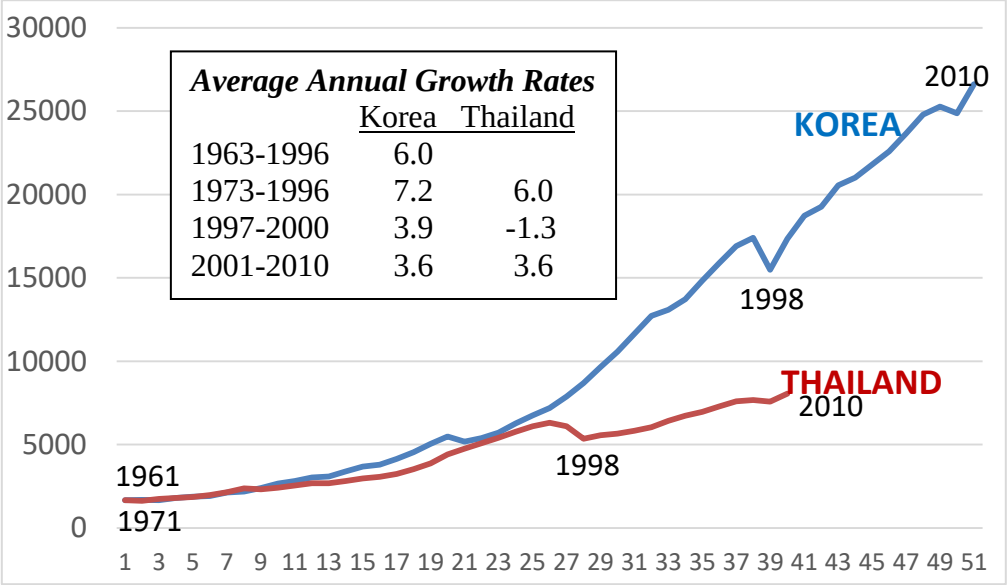
Source: Penn World Tables

2.1.2 Timing matters

It is useful to look more closely at the timing of the growth slowdowns. For purposes of illustration, we focus on the cases of Korea and Thailand. Figure 4 provides data on the level and rate of growth of per capita income in constant 2005 PPP dollars for the two countries, beginning when each was at comparable level of per capita income level (about $1,600), which for Korea was 1961 and for Thailand a decade later in 1971.

As Figure 4 indicates, the growth performance of the two countries over the first 25 years after take-off was similar, Korea growing at 6.8 percent per annum and Thailand at 6 percent. Sustained rapid growth ended in both countries with the onset of the Asian financial crisis in 1997. The crisis dealt a much heavier blow to growth in Thailand, the epicenter of the crisis, than in Korea. After the crisis ended, neither country was able to restore growth to pre-crisis rate, both growing from 2001 to 2010 at 3.6 percent per annum.

Figure 4: Per capita income in constant 2005 PPP U.S. dollars:
Korea (1961-2010), Thailand (1971-2010)



Source: Penn World Tables

The data suggest that the big gap in per capita income between the two countries has less to do with the differential impact of the crisis than with the fact that Korea got a ten-year head start on Thailand. When the crisis hit, Korea's per capita income was, as a result of its head start, almost three times higher than Thailand's. Even though both countries have grown at about 3.6 percent per year since the year 2000, the gap in the level of income between them has expanded dramatically because the base level from which per capita income grew was so much higher in Korea due to its head start. There is a saying—"everything is a matter of timing"—well, maybe not everything, but timing matters! On the basis of the two countries growth performance, it is hard to discern evidence of a trap which one country fell into and the other avoided.

2.2 Middle-Income Trap and the Dynamics of Comparative Advantage

The middle-income trap is commonly associated the inability of middle income countries to achieve spontaneous industrial diversification and movement up the ladder of comparative advantage, as exemplified by the following quotes from World Bank publications:

> "For decades, many economies in Latin America and the Middle East have been stuck in this middle-income trap, where countries are struggling to remain competitive as high volume, low-cost producers in the face of rising wages costs, but are yet unable to move up the value chain and break into fast-growing markets for knowledge and innovation-based products and services." (World Bank, 2010, p 65)
>
> "The "middle-income country trap" is a development stage that characterizes countries that are squeezed between being low-wage producers and highly-skilled, fast-moving innovators. Countries caught in this trap tend to grow slower and often fall behind. Cost advantages in labour-intensive sectors, such as the manufactured exports which once drove growth, start to decline in comparison with lower-wage

> poor country producers. At the same time, they do not have the institutions, capital markets, track record, or critical mass of highly-skilled people to grow through major innovations like rich countries. Caught between these two groups, many are without a viable high-growth strategy." (Flaaen, et.al. 2013, p.6)

2.2.1 Comparative advantage dynamic

An interesting question, given our focus on the comparative performance of Korea and Thailand, is whether these two countries, one of which avoided and one of which is alleged to be in a middle-income trap, exhibited significant differences in terms of the dynamics of their respective comparative advantages in international trade. In addressing this issue we draw on a recent study (Pham and Riedel, 2013) that develops a simple method for describing the nature of comparative advantage and how it changed as per capita income increased.

The standard Heckscher-Ohlin trade theory argues that countries find a comparative advantage in those products that use relatively intensively the relatively abundant factor of production—in other words, relatively labor-abundant, low-wage countries find a comparative advantage in relatively labor-intensive goods, while relatively capital-abundant, high-wage countries find a comparative advantage in relatively capital-intensive products. Growth theory tells us that as countries undergo capital-deepening and technology catch up their income and wage levels rise, and with rising wages their comparative advantage shifts away from relatively labor-intensive products to relatively capital intensive ones. Presumably this is what we might expect to find in a country, like Korea, that avoided the middle-income trap, but not in a country, like Thailand, that is stuck in the trap. Do the data confirm that expectation?

The question is answered in two steps. In the first step we estimate the following linear equation: $RCA_{i,j,t} = \alpha_{j,t} + \beta_{j,t} \cdot k_i + \varepsilon_{i,j,t}$, where $RCA_{i,j,t}$ is the revealed comparative advantage in product i of a country j in year t and k_i is a measure of the "revealed" capital-intensity (capital/labor ratio) of product i.[4] The Heckscher-Ohlin theorem predicts that estimates of the beta coefficient ($\hat{\beta}_{j,t}$) should be negative for low-wage, labor-abundant countries and positive for high-wage, capital abundant countries, as illustrated in Figure 6. In any given country, as per capita income rises, $\hat{\beta}_{j,t}$ would be expect to rise from a relatively high negative values when per capita income is low to a relatively high positive values when per capita income is high (see Figure 6).

The second step analyzes the statistical relationship between $\hat{\beta}_{j,t}$ and $y_{j,t}$. The predicted relationship between $\hat{\beta}_{j,t}$ and $y_{j,t}$ is illustrated in Figure 7.

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[4] Revealed comparative advantage ($RCA_{i,j,t}$) is the share of product i in j's exports in year t divided by the share product i in world trade in year t. RCAs are computed using 5-digit SITC manufactures export data (860 products) taken from the U.N. COMTRADE database. k_i is a measure of the revealed capital intensity (capital/labor ratio) of product i, at the same 5-digit SITC level for manufactured products), which is recently available from UNCTAD database (see Sirotori, Tumurchudur and Cadot, 2010). Since k_i is constant across countries or time, all changes in RCAs are due to changes in country j's export composition relative to that of the worlds as a whole.

Figure 6

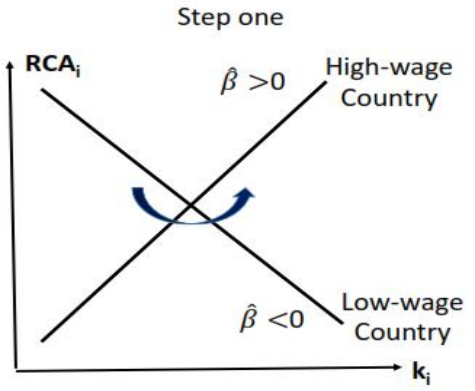
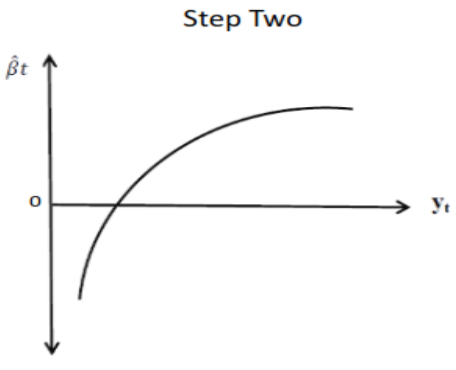
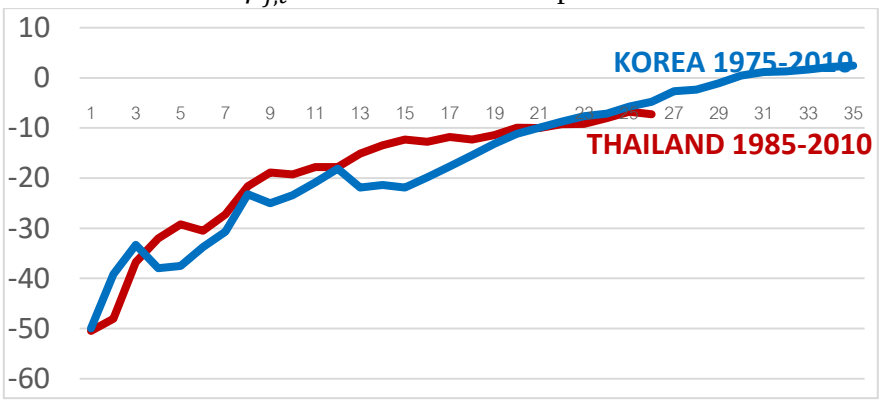


Figure 7



Estimated values of $\hat{\beta}_{j,t}$ for Korea over the period 1975-2010 and for Thailand over the period 1985-2010 are given in Figure 8. The two countries began with strong revealed comparative advantages in relatively labor-intensive products (as indicated by the high negative values of $\hat{\beta}_{j,t}$ in the yearly years). As per capita income increased the composition of exports and hence revealed comparative advantage shifted increasingly to relatively capital-intensive products, just as theory predicts. The value $\hat{\beta}_{j,t} = 0$ represents a threshold between an export bundles biased toward relatively labor-intensive products and those biased toward relatively capital-intensive products. Korea crossed the $\hat{\beta}_{j,t} = 0$ threshold around the year 2000. One may surmise that Thailand will follow suit a decade or so later, provided it can find a way to restore growth rates to (or closer to) their potential.

Figure 8: Estimates of $\hat{\beta}_{j,t}$ for manufactured exports of Korea and Thailand*



Note:* Regression analysis of the parametric relation between $\hat{\beta}$ and per capita income in Thailand and Korea is given in Appendix A.
Source: World Bank, WITS, U.N COMTRADE data.

2.2.2 Export diversification

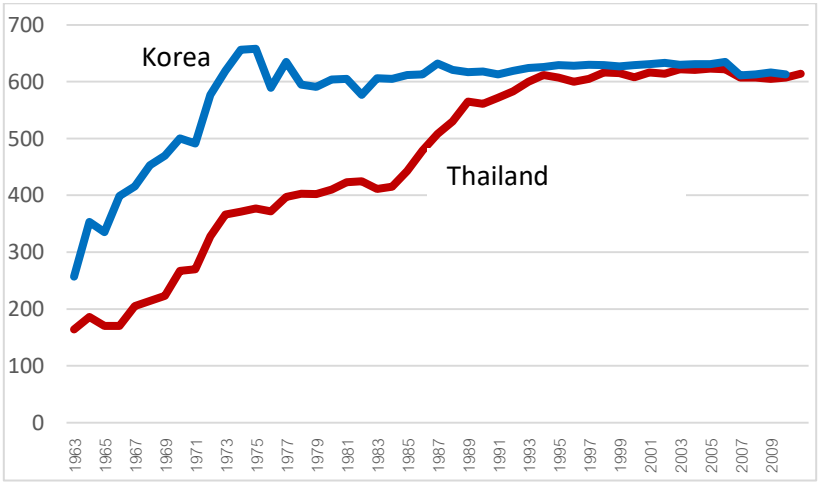
One of the recently discovered stylized facts about the dynamics of comparative advantage is that as per capita income rises to a relatively high level of about $25,000 (in constant PPP dollars) exports become more diversified, mainly as a result of new products

being added to the export bundle.[5] After reaching a per capita income of $25,000, exports begin to re-concentrate.

Initially, export diversification was interpreted as evidence that comparative advantage does work as theory predicts on the mistaken premise that comparative advantage should lead to product specialization, not diversification.[6] But the fallacy of that premise is apparent in the empirical framework introduced above. At low levels of per capita income, exports are concentrated in relatively few labor-intensive products, as evidenced by relatively high negative values of $\hat{\beta}$. As income rises, comparative advantage weakens in the more labor-intensive products and spreads over a wider range of less labor-intensive products (as evidenced by rising values of $\hat{\beta}$). As income rises countries shed products in which their comparative advantage has weakened and add new products in which their comparative advantage has strengthened, with the result that exports become more diversified at higher levels of per capita income, at least up to a relatively high level of income. At the opposite end of the chain of comparative advantage, the process works in the opposite direction, as more products in which comparative advantage has weakened are shed than new ones are added, with the result that exports become re-concentrated.

Export diversification resulting from the entry of new products into export bundle is clearly exhibited in the manufactured export data for Korea and Thailand, presented in Figure 9. The pattern of export diversification from the addition of new export products is found to be quite similar in Korea and Thailand, albeit with ten-year lag.

Figure 9: Number of manufactured products exported (at the 5-digit STIC level) in Korea and Thailand: 1963-2010



Source: WITS COMTRADE data. Author's calculation

The analysis of the dynamics of comparative advantage in Korea and Thailand, presented above, does not lend support to the proposition that what constitutes a middle-income trap is the inability of middle-income countries to achieve spontaneous industrial diversification and movement up the ladder of comparative advantage. The dynamics of comparative advantage in Thailand, a country presumed to be in a middle-income trap,

[5] Imbs and Wacziarg (2003); Klinger and Lederman (2006); Cadot, et. al. ((2011).

[6] Rodrik (2004, p.7) citing evidence that exports become more diversified as income rises, jumped to the conclusion that "Whatever it is that serves as the driving force of economic development, it cannot be the forces of comparative advantage as conventionally understood."

closely parallel those we observe in Korea, a country presumed to have avoided the middle-income trap, albeit with a ten-year lag. It is apparent that change in the factor-intensity of comparative advantage in Thailand has slowed after the year 2000, but that can be explained by fact that growth too slowed after the year 2000.

3. Trapped by Policy

This brings us to the question of why, more than a decade after the financial crisis, growth has not rebounded in Korea and Thailand. In the case of Korea, given its relatively high level of per capita income, it is conceivable that a growth slowdown would have occurred as a result of diminishing returns even in the absence of the financial crisis, but validating or refuting that counterfactual is beyond the scope of this paper. In the case of Thailand (and perhaps Malaysia too), where per capita income is still relatively low, it more than likely that low growth rate over the past decade represents a significant departure from these countries growth potential. As to why growth in Thailand and Malaysia has fallen short of its potential since the crisis, experts on these countries are fairly unanimous in arguing that it is because inappropriate policies have landed them in a middle-income trap.

In the case of Malaysia, Wing Thye Woo (2009, p.10) states clearly that "Malaysia is now caught in a middle-income trap." What is preventing Malaysia from realizing its growth potential, according to Woo, is generally "too much emphasis on redistribution of income" and specifically "ethnic quotas on bank loans, business licenses, government contracts and employment," which he argues "promote corruption throughout society."[7]

In Thailand, it is argued, the middle-income trap is due to the government's unwillingness to do "anything about reforming Thailand's antiquated systems of primary and secondary education," without which Thailand cannot sustain growth by moving up the ladder of comparative advantage to more capital- and skill-intensive products (Warr, 2011). Populist governments, appealing to the "frustrated expectations of many low- and middle-income people," have held power in Thailand in recent years, but instead of addressing the fundamental problem (education) have, according to Warr, instead used public resources to develop mega infrastructure projects that generate rent-seeking opportunities and income redistribution initiatives to consolidate their hold on power.

4. Trapped by politics

That politicians choose policies, by omission or commission, that create opportunities for themselves to engage in rent-seeking and consolidate their hold on power is hardly shocking, especially in countries with so-called "extractive" political regimes, to use the term made popular by Acemoglu and Robinson (2012). Politicians are maximizers too, presumably. But, why should this kind of political behavior be particularly detrimental to growth in middle-income countries?

To this question a simple explanation (more accurately, hypothesis, since it remains untested) is offered. The hypothesis rests on a premise that policy-makers are rent-seekers and set policy to maximize the rent they can extract by exercising their discretionary power

[7] See Hill (2010)

to grant privileges to favored enterprises and individuals, often in the form of licenses, land-use rights, government procurement contracts, employment, etc.[8]

The rent that policy makers can extract (R) depends on policy (P) via two channels, which work in opposite directions. Suppose that we could construct an index (P) of the economic efficiency of a country's overall policy framework—the higher P the less discretionary power in the hands of the policy makers. In other words, the higher P the less *scope* there is for rent-seeking. On the other hand, the higher P, the fewer policy-created distortion and hence the more efficiently the economy operates, allowing it to generate a higher is the level of GDP (Y).[9] In other words, the higher P, the larger the economy and hence the greater the *scale* of rent-seeking.

The rents that policy makers can extract depend on both the scope and the scale for rent seeking:[10]

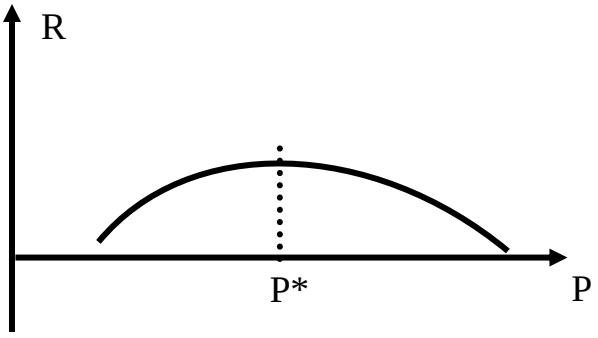
$$R = R(Y(P), P) \quad R'_Y > 0 \quad Y'_P > 0 \quad R'_P < 0$$

The effect on rent of a change in policy (dR/dP) is ambiguous:

$$dR/dP = R'_Y \cdot Y'_P + R'_P.$$

The first term on the right-and-side, the scale effect, is positive, but the second term, the scope effect, is negative. If we assume that the effect of policy reform on GDP is subject to diminishing returns (Y''_P <0) then it follows that the scale effect dominates at the early stage of reform and the scope effect dominates at the latter stage. The policy that maximizes rents (P*) will, therefore, fall in the middle, above the value for a centrally planned economy where the scale of rent-seeking is low and below the level of a fully liberalized economy where the scope for rent-seeking is low. In other words, the rent-maximizing policy falls somewhere in the middle, half way toward a fully-liberalized (high-income) economy, leaving middle-income countries stuck in a "middle-income trap," as illustrated in Figure 10.

Figure 10: The Middle-Income Trap



[8] This hypothesis is inspired by Acemoglu and Robinson (2006) who present a more complicated model with electoral politics to show that political elites are unwilling to initiate change and even block economic development out of fear of being replaced by their political opposition.

[9] On the relation between rent-seeking and economic efficiency, see the classic paper on the subject (Krueger, 1974)

[10] R'_P *and* R'_Y represent the first deriviates of R with respect to P and Y, respectively. A double prime ('') represents a second deriviative.

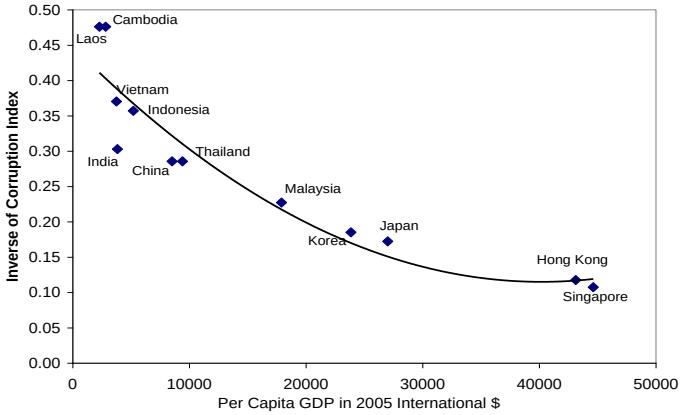
The rent-seeking hypothesis answers the question as to why the momentum for policy reform may die somewhere in the middle-income range, but it also raises a question as to why rent-seeking regimes in low income countries are reticent to initiate the reforms that would allow them to seek higher rent via the scale effect. When low-income rent-seeking regimes have initiated reform, as for example China in 1980 or Vietnam in 1990, the motivation was to maintain their hold on power in the face of severe economic crises that threatened it. The question then is why was an economic crisis required to force these rent-seeking, power-hungry regimes to begin liberalizing their economies? The answer (hypothesis) would seem to an aversion to risk the status quo in the face of uncertainty about the outcome of economic liberalization. Risk and uncertainty about potential rent-seeking opportunities and the political outcome of reform may also explain why some countries (e.g. Vietnam, and perhaps India), having initiated the reform process, slow the momentum of reform well before they advance very far into the middle-income range.

5. An empirical illustration of the middle-income trap hypothesis

In the absence of direct empirical evidence supporting the middle-income political trap hypothesis, an empirical illustration of how it may work is offered. There are international indexes for many things, but not one (so far as we know) that gauges the intensity of rent-seeking activity by country. There is, however, a widely cited index on corruption, or more precisely the perception of corruption.[11] Corruption and rent-seeking are not the same things, but they are related.

The Corruption Perceptions Index (CPI) ranges from zero to ten, with a higher score indicating less corruption. For purposes of this illustration, the reciprocal of the index is used, so that a higher score indicates a higher intensity of (perceived) corruption. The reciprocal of the PCI for selected Asian countries is plotted against per capita income (measured in 2005 constant PPP dollars) in Figure 11. If policy reform leads to higher income and less scope for corruption/rent-seeking, then a negative relation between corruption/rent-seeking intensity (the reciprocal of the CPI index) and per capita income should be (and is) observed.

Figure 11: The relation between corruption and per capita income

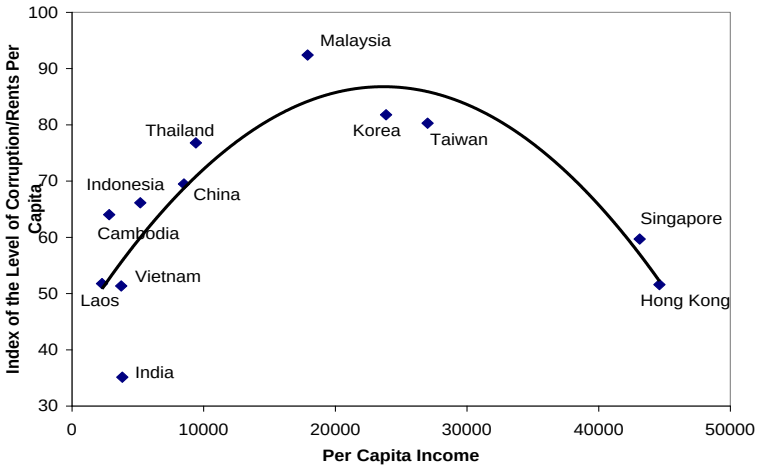


Source: Transparency International, 2011 and Penn World Tables

[11] Transparency International, Corruption Perceptions Index 2011 (www.transparency.org/policy_research/surveys_indicies/cpi)

Figure 11 indicates that poorer countries are more corrupt, but are the proceeds from corruption (i.e. rents) higher? In low-income countries, the scope for corruption is higher, but the scale of corruption is lower. The level of corruption/rent-seeking, combining the scope and scale effect, can be gauged simply multiply the inverse CPI (squared) by per capita income, which is plotted against per capita income in Figure 6. No claim is made that the values of corruption/rent-seeding shown in Figure 12 are valid for any country. They are intended only to illustrate the middle-income trap hypothesis.

Figure 12: The Level of Corruption/Rent-Seeking and Per Capita Income*



Note: * The level is $((1/CPI^2) \times real\ per\ capita\ income)/100$.
Source: Transparency International, 2011 and Penn World Tables.

6. Final Observation

Growth slowdown in the middle-income range is not *prime facie* evidence of a middle-income trap. Slowdown at the middle income level is natural and inevitable. On the other hand, that does not preclude the possibility that policy choices may cause growth to slow down prematurely to a rate below a country's long-run potential growth rate.

When economists identify policies that inhibit growth and prevent an economy from realizing its potential, they naturally rail against them and occasionally invoke catchy metaphors, like middle-income-trap, to strengthen their case. If their arguments are effective—i.e. if there is political will to reform policy so that the country can grow faster—the metaphor is not valid, though it may have served a purpose in garnering support for reform.

If there is no political will to reform policy to restore growth because the policy makers do not perceive reform to be in their own best interest, then the country may be considered to be in a trap, but one originating in politics, not economics. How to get out of a political trap? We have no answer to offer. All we know is that it cannot be easy, for if it were the country would not have been in a trap.

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Appendix A

Estimates of the parametric relation between $\hat{\beta}$ and per capita income in Korea, Malaysia and Thailand*

Dependent Variable: $\hat{\beta}$	Ln(y) *(t-statistic)*	Constant *(t-statistic)*	R^2	y at $\hat{\beta}$ =0	DF test-statistic**
Korea 1970-2010	23.38 *(26.72)*	-235.33 *(-26.97)*	0.95	23,529	-9.83***
Malaysia 1969-2010	9.08 *(10.60)*	-85.79 *(-11.34)*	0.72	12,652	-3.69***
Thailand 1975-2010	36.17 *(11.73)*	-329.45 *(-12.12)*	0.78	9,034	-1.77*

*Weighted regression using as weights the inverse of the standard error of the estimates of beta obtained in the first step.

**Critical values for DF test: (*)10%= -1.61: (**)5%=-1.95; (***)1%=-2.60