Economic Research

KDN No.: PP14787/11/2012(030811)

Malaysia's Middle Income Trap Truth or MITH-ology?

MALAYSIAN RATING CORPORATION BERHAD
(364803-V)

Vol.: ER/004/2013

Economics Team

Nor Zahidi Alias
Chief Economist
+603 2082 2277
zahidi@marc.com.my

Nurhisham Hussein
Economist
+603 2082 2231
nurhisham@marc.com.my

Afiq Akmal Mohamad
Economic Analyst
+603 2082 2274
afiq@marc.com.my

Please read the disclaimer on the last page of this report

In a nutshell

- The Middle Income Trap Hypothesis (henceforth, the MITH) has been the core ideology behind the attempted transformation of Malaysia's economy in recent times, and is considered by some to be one of the biggest problems in global economic development. But is Malaysia in fact in a Middle Income Trap? We will look at the evidence, both for and against, and evaluate Malaysia's policy efforts in light of this evidence.

- This "narrative" of the MITH appears to be related to the structural change hypothesis of economic development, where economic development is largely driven by higher quality and quantity of inputs of production in going from the low-income to the middle-income stage, but requires improvements in productivity to achieve the leap from middle-income to high-income levels. The empirical evidence for this pathology exists, but is mixed up with other causal factors.

- Whether or not there is cause for thinking the Middle Income Trap exists, the general case that Malaysia is stuck in a Middle Income Trap is compelling: Headline growth has indeed dropped over the years while growth in inputs such as the capital stock and human capital is also slowing. Growth in the manufacturing sector has also been trending down over the years, from over 10% in the 1980s and 1990s to 3.8% in the 2000s.

- Other socio-economic factors have also been taken to be factors contributing to or indicative of Malaysia in a Middle Income Trap, such as a low-skilled workforce, inadequate tertiary enrollment, low-value-added in manufacturing, and evidence of a brain drain.

- While the argument that Malaysia is in a Middle Income Trap appears compelling, there are problems with the evidence. Foremost among these is that slowing growth is not in itself evidence of a country being unable to achieve the next stage of development. Evidence of this is measured by the convergence or divergence of a country's standard of living relative to the highest level achievable at any given point in time.

- For these reasons, it is difficult to fully credit that Malaysia, specifically, is suffering from a structurally induced slowdown and unable to make the leap to high income status without intervention. Malaysia is sustaining convergence in incomes towards the global technology frontier as well as sustaining convergence against the World Bank high income classification. Looking at these two points, if we take non-convergence of the income level as the main criteria for a MITH, it appears that Malaysia may have already hit the Middle Income Trap and long since left it behind.

- As noted, a more holistic view of the MITH is that it is in essence more about the general drivers of growth and economic development than it is about a uniquely identifiable phenomenon. In that sense, Malaysia's recent efforts towards development via encouraging private investment, raising the level of human capital, emphasising value-creation and value-added activities, liberalising regulations and licensing requirements, and overall raising the efficiency of government, are policies that would be recommended and to be encouraged irrespective of whether Malaysia is in a Middle Income Trap or not, or whether those policies take the MITH as their point of departure.

- Thus while the Middle Income Trap might not exist in reality for Malaysia, the promptings that underlie its existence as a concept in economics remain somewhat relevant. While care has to be taken that policy recommendations not be given based on the parts of the structural narrative of the MITH that might not exist in reality, the fundamental principle that growth cannot be taken for granted should be readily accepted.

Introduction

The Middle Income Trap Hypothesis (henceforth, the MITH) has been the core ideology behind the attempted transformation of Malaysia's economy in recent times, and is considered by some to be one of the biggest problems in global economic development along with its close cousin, the Poverty or Low Income Trap. At heart, it is a question of why some countries reach developed status, while others do not. Malaysia's economic policies over the past five years – the New Economic Model and its offshoots, the Economic and Government Transformation Programmes and the 10th Malaysia Plan, are aimed squarely at overcoming the limitations and constraints identified in the MITH paradigm.

Yet surprisingly, there is little research support in the economics literature for the MITH – What is it? How does it come to be? There are more than a few research papers looking at how to overcome a Middle Income Trap, but less than a handful that actually examine it as a phenomenon.

This note will not attempt to remedy that deficiency, but take a more focused view and ask the very direct question, Is Malaysia in fact in a Middle Income Trap? We will look at the evidence, both for and against, and evaluate Malaysia's policy efforts in light of this evidence.

The Middle Income Trap: A Theoretical Perspective

While the MITH as a consistent theory is largely missing from academic economics literature, there is some consensus on it as a pathology:

1. A low income country begins to develop through low wage manufacturing.
2. Growth is driven by a shift in labour resources from low productivity agriculture to higher productivity manufacturing, which results in greater output per worker, which raises incomes.
3. Investment in the accumulation of capital relative to labour drives productivity improvements, both absolutely and relative to agriculture and mining.
4. Rapid growth comes from both an increase in productivity and an increase in the quantity and quality of factors of production (investment in fixed and human capital; improvements in healthcare and diet which reduces mortality rates and increase population levels and the supply of labour). This typifies lower middle income countries.
5. At some stage, diminishing returns set in for capital, while population growth slows to a maintenance level as fertility levels drop.
6. Since growth is increasingly dependent on total factor productivity rather than increases in the factors of production, countries that lack the capability to improve productivity find growth potential limited by this constraint and remain stuck as middle income countries.

This "narrative" of the MITH appears to be related to the structural change hypothesis of economic development (see Box 1), where economic development is largely driven by higher quality and quantity of inputs of production in going from the low-income to the middle-income stage, but requires improvements in productivity to achieve the leap from middle-income to high-income levels.

The empirical evidence for this pathology exists, but is mixed up with other causal factors. Many episodes of growth slowdowns occur due to external, non-structural factors such as wars, regime change, financial crises and the like. What appears clear is that drivers of growth, and of growth slowdowns, are pretty diverse – countries at all income levels experience growth slowdowns, and even regress. For example, the major Latin American economies (e.g. Argentina, Brazil) were accounted among the wealthiest at the beginning of the 20th century yet currently have income levels less than half of the United States. However, growth slowdowns appear to be more prevalent in middle income countries. In that sense, there appears to be some basis for the existence of the Middle Income Trap, though not its causes.

Box 1 – Structural Change as a theory of economic development

Growing interest in the determinants of growth in the post-World War 2 era led to a number of efforts to establish a unifying theory of economic growth. As Europe began recovering from the ravages of war, the focus then shifted to the less developed countries of the global economy, which had rapidly emerged from the umbrella of colonialism and imperialism as independent nations in their own right. As such there was a growing demand for policies and practices that could enable undeveloped and under developed countries to make the leap to developed status.

Initial theoretical efforts at growth and development led to breakthroughs such as the Solow-Swan model of economic growth, which is still taught in economic courses today. However, in the realm of development economics, the initial thinking was based on the historical experience of the industrialised West, or the so-called structuralist approach, or structural change theory. The more academically inclined posited a two-sector economic model with a low productivity, highly labour-intensive rural sector and a high productivity, highly capital-intensive modern sector. Wage increases in the modern sector attract surplus labour away from the rural sector, thus driving up overall productivity and growth. Crucial to the functioning of this model is an assumption of diminishing returns to scale and the presence of surplus labour.

A later, more empirical approach known as the patterns of development model took an explicit look at the observable processes involved in industrialisation and formulating stylised facts. Policies were then recommended based on emulating these stylised facts, thus facilitating each stage in the development process, i.e. promoting changes to the structure of the economy as incomes and productivity rise.

Both these approaches have significant problems.

In the academic model, the availability of surplus labour is not empirically supported. Neither is the assumption of diminishing returns to scale, as the experience of many advanced economies shows *increasing* returns to scale. The patterns of development approach also has a severe flaw – the interrelationship between the cause and effect of each stylised fact with the broader economy are not well known, and blindly following the set pattern ignores both comparative advantage and country-specific factors.

The experience of policies implemented based on the structural change hypothesis has not been a happy one. Many developing countries failed to achieve growth “take-offs” and not a few have regressed through pursuing large scale investments and structural transformation programs financed through foreign aid. In fact, there appears to be a negative correlation between growth and the volume of foreign aid – the more a country received in foreign aid, the worse its performance became.

Later theories of economic development have built on the original work, and there now exist general models and development frameworks that do a better job of exploring both the determinants of growth as well as economic development in general. For example, the importance of sequencing of liberalisation and reforms is better recognised today, as is the importance of institutional development.

However, one clear lesson remains – there is no one set “pattern” to development, and a one-size-fits-all approach can be hazardous. The latest World Bank methodology for instance, while taking its cue from the old structuralist theories, explicitly weighs country-specific factors (such as climate and historical linkages) married with assessments of a country’s factor endowments (land, labour and capital) in formulating a development plan.

Be that as it may, the field of development economics continues to be in a state of flux, and while advances have been made over the decades, the roots of economic growth and development remain imperfectly understood.

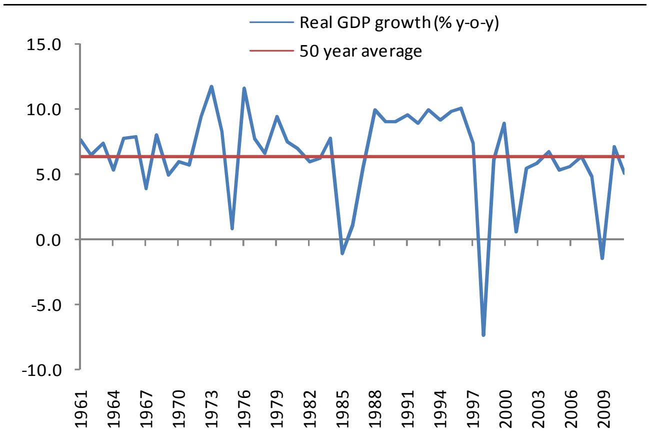
The Case For the Prosecution…

Whether or not there is cause for thinking the Middle Income Trap exists, the general case that Malaysia is stuck in one is compelling:

1. Headline growth has indeed dropped over the years. From an average of 7.7% growth in 1970s, growth has slowed to just 4.8% in the 2000s.
2. Growth in inputs is also slowing. For example the compound annual net rate of increase in the capital stock, i.e. the rate of investment, which provides the foundation for productive activity and growth, has dropped from 13.4% in the 1970s to 2.8% in the 2000s.
3. The other pillar of economic development and growth – human capital – is also showing signs of coming through the demographic transition. From a 2.6% average growth in the 1990s, growth has dropped sharply to 2.0% in the 2000s and is expected to slow even further to less than 1.3% in the 2010s.

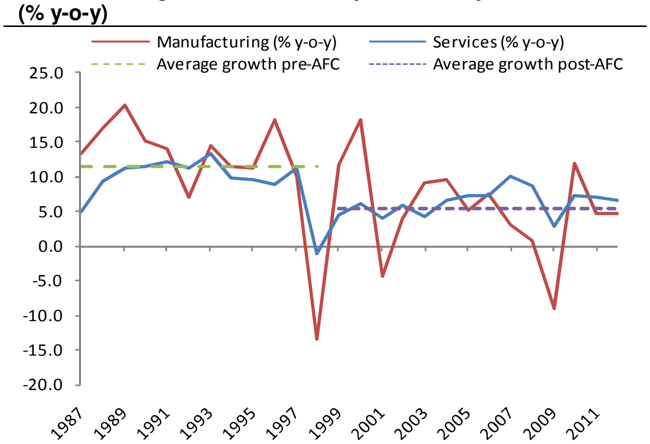
Growth in the manufacturing sector has also been trending down over the years, from over 10% in the 1980s and 1990s to 3.8% in the 2000s

Chart 1: Real GDP growth 1961-2011 (% y-o-y)



Source: CEIC, World Bank

Chart 2: Real growth in secondary and tertiary sectors (% y-o-y)

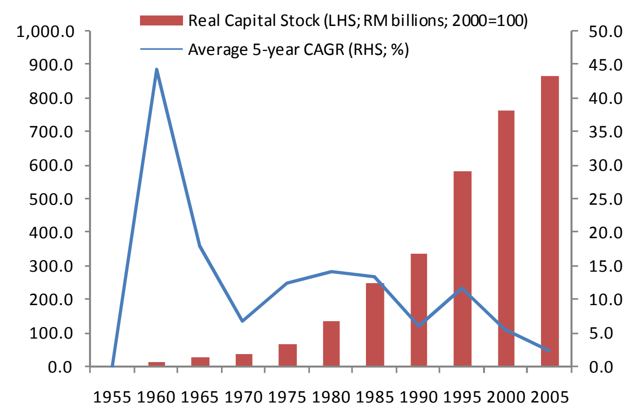


Source: CEIC

Beyond the aggregate numbers, other socio-economic factors have also been taken to be factors contributing to or indicative of Malaysia in a Middle Income Trap.

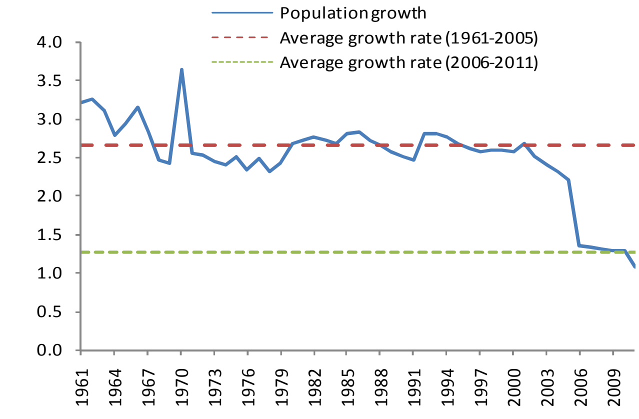
1. Low skilled workforce – Lack of skills is almost the number one complaint of prospective employers in Malaysia, who especially cite poor communication and technical skills. This has been taken as evidence that the school and university system is not equipping graduates for a modern, knowledge-based economy.
2. Inadequate tertiary enrollment – even setting aside the quality issue, the rate of tertiary enrollment is not at a level typical of developed economies. For example, the UK is acknowledged to have one of the lowest rates of tertiary enrollment in the European Union, yet even this is almost half as much again the level of Malaysia's. An enrollment rate of above 60% is the norm among advanced economies, a level Malaysia has yet to reach, and this limits the formation of human capital and hence growth.
3. Low value-added in manufacturing and in exports – Malaysia's value-added in manufacturing is around 30%, compared with an estimate of 60% in German export goods. This limits the domestic gains from international trade as less of the value is created within the country, Malaysia's ranking as a top-20 trading nation notwithstanding.
4. Brain drain – What human capital does exist in Malaysia is diminishing, as the country appears to be losing its best and brightest to better economic opportunities beyond its borders.

Chart 3: Real Capital Stock (2000 prices)



Source: DOS, MARC Economic Research

Chart 4: Population (mid-year) growth (% y-o-y)



Source: CEIC

Based on these factors, there appears to be little doubt that Malaysia has all the hallmarks of fulfilling the criteria of a Middle Income Trap, or is in danger of falling into one – the MITH narrative fits. Slowing growth in the capital stock and in human capital causes overall growth to slow as well, which can only then be sustained by higher productivity levels. But while value-added in manufacturing is higher than in agriculture or mining, the low rate of Malaysian value-added in manufacturing also limits Malaysia's growth potential.

Although below the levels of the 1980s or 1990s, the primary sectors of the economy (agriculture and mining) continue to garner a large share of the economic pie, thus lowering average productivity and inefficiently consuming capital and labour. High primary sector activity exposes the economy to the "natural resource curse" or "Dutch disease", where upward pressure on the exchange rate and competition for capital reduce the impetus to shift to a structure dominated by higher productivity processing and services industries. Outside rubber and palm oil, agriculture in Malaysia is dominated by smallholders, which reduce economic efficiency and productivity even further.

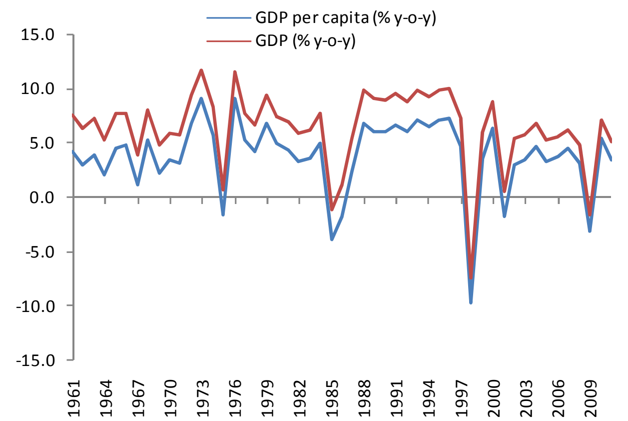
In these terms, policies designed to overcome the Middle Income Trap, such as educational reform, deregulation and promoting investment in high growth potential sectors, make a great deal of sense. If Malaysia is truly in a Middle Income Trap, then these policies would overcome the obstacles to growth and set Malaysia on the path to becoming a developed nation.

The Case For the Defense

While the argument that Malaysia is in a Middle Income Trap appears compelling, there are problems with the evidence. Foremost among these is that slowing growth is not in itself evidence of a country being unable to achieve the next stage of development. If a growth slowdown is primarily due to a slowing rate of population growth and capital accumulation (net of depreciation) while productivity growth is sustained, there is no particular barrier to a country achieving higher income status.

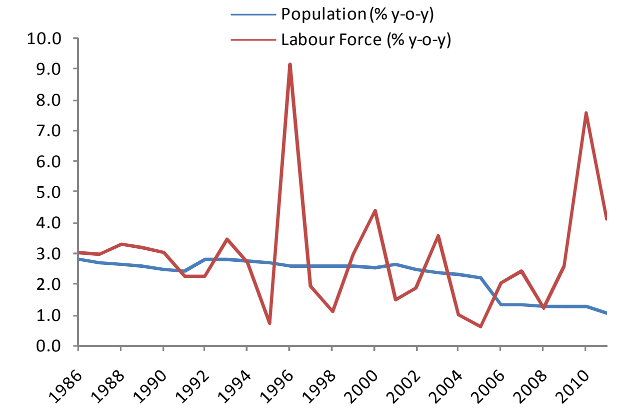
Slowing headline growth in this sense is both natural and to be expected. For this reason, many researchers look to growth in per capita output rather than headline output growth, which helps mitigate the effect of changes in population growth. However, even this measure is imperfect because it implicitly assumes no changes in the age structure of the population. But developing countries, with a couple of notable exceptions like China and Thailand, typically have considerable changes in the age-structure of their populations as they develop, which have a considerable impact on income potential and income growth. In particular, the combination of declining infant mortality in the early stages of development together with declining fertility afterwards gives rise to a "baby boom" generation that eventually substantially increases the portion of the population of working age (also known as the "demographic dividend"). This factor puts a downward bias to income estimates of developing countries with younger populations relative to developed countries with older populations.

Chart 5: Real GDP and GDP per capita (% y-o-y)



Source: CEIC, MARC Economic Research

Chart 6: Population and labour force growth (% y-o-y)



Source: CEIC, MARC Economic Research

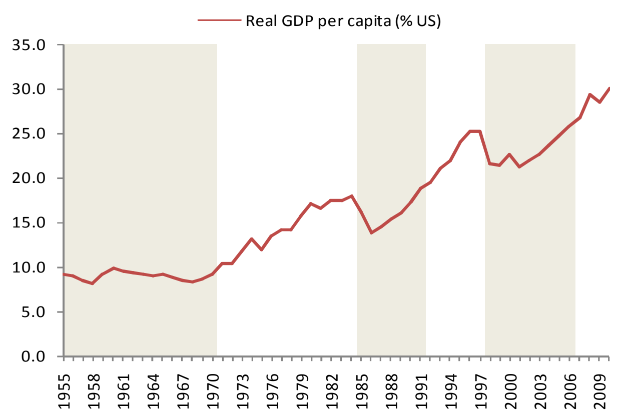
Another related viewpoint is that at any given point in time, the state of technology places an upper bound on productivity and thus on standards of living. Countries that have not reached the highest level of technological development can achieve higher rates of growth as they "borrow" or "transfer" foreign technology into their economies (which explains the attraction of FDI). But as those countries begin to approach this global frontier of potential production, gains from this source of productivity become increasingly hard to come by, and growth will naturally also slow. Hence slowing growth cannot be taken *prima facie* as evidence of a Middle Income Trap – the more theoretically correct measurement would be against growth norms at particular technological levels.

Evidence of this is measured by the convergence or divergence of a country's standard of living relative to the highest level achievable at any given point in time. This is typically proxied by looking at a country's output per capita against the global technology leader, which in our present time could be considered to be the United States. If this measure is converging (i.e. the gap is closing), it would be evidence against that country being in a Middle Income Trap. More simply still, if we take the view that the World Bank's income categories form the basis of determining whether a country is in a Middle Income Trap, sustained progress against the high income threshold would count as pretty much the same thing.

A third criticism that can be leveled at MITH is that it recognises only one path of development, and one mechanism for the failure to successfully graduate to High Income status. The history of the past century shows multiple models of development, from the natural resource-intensive extraction of the Middle East, to the resource-poor, manufacturing-based growth take-offs of Japan and the Asian Tigers, to everything in between. Growth slowdowns too have had a multiplicity of causes, including armed conflict, external crises and plain bad government.

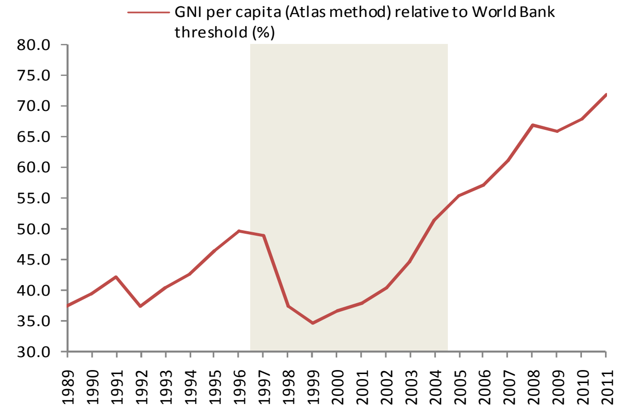
Research into the MITH has been, from an academic standpoint, less than satisfactory. Empirical definitions of a Middle Income Trap have been arbitrary, typically using a span of years from middle income to high income status as indicative of whether a country is "trapped". This unfortunately divorces the empirical investigation from its theoretical underpinnings, which makes any resulting conclusions somewhat suspect. For example, if span of years were used to define a Middle Income Trap, that would lead to the conclusion that many nations of the developed West were actually victims of the Middle Income Trap during their development phase. This theory-agnostic approach also means that looking at the MITH became for practical purposes really an investigation into the overall sources of growth and not into a uniquely identifiable phenomenon.

Chart 7: GDP per capita (PPP) relative to the US (%)



Source: Penn World Tables

Chart 8: GNI per capita relative to World Bank high income definition



Source: World Bank, CEIC, MARC Economic Research

For these reasons, it is difficult to fully credit that Malaysia, specifically, is suffering from a structurally induced slowdown and unable to make the leap to high income status without intervention:

1. Growth in income per capita has not slowed to the same extent as headline growth – this implies that much of the slowdown in headline growth is largely due to demographic factors, rather than declining total factor productivity.
2. Delayed demographic transition – expanding on the point above, the slowdown in Malaysia's population growth has occurred much later than in the Asian tigers, which means that the country is still undergoing a demographic transition, with the demographic dividend only now starting to kick in. IMF research into the impact of the demographic dividend stage in East Asia suggests a boost to growth of between 1% and 2% for the Asian Tigers during their growth takeoff phase.
3. Capital intensity per capita is still growing – Malaysian capital stock data (net of depreciation) shows that growth in capital investment was sharply higher before 2000, but has slowed since and reached a nadir in 2005. Nevertheless, growth in capital per capita has since picked up again.
4. Sustained convergence in incomes towards the global technology frontier – measured against US GDP per capita, Malaysia's income level has shown continuous growth except in three distinct periods - from Independence to about 1970, from 1984-1986, and from 1997-1999. In the post-Independence era, there was virtually no progress in terms of raising relative living standards. From thence until the 1980s, there was a sustained increase in living standards until the onset of the 1980s, when relative growth plateaued. The 1985-87 crisis appears to have been nearly as damaging as the Asian Financial Crisis (AFC) a decade later, with relative living standards not exceeding pre-crisis levels until 1991. The 1997-98 crisis on the other hand caused GDP per capita to regress enough to halt gains against US standards of living until about 2006, although growth had resumed at least three years earlier. Since then, convergence has resumed against the US level at a fairly sustained pace, even taking into account the 2009 recession.
5. Sustained convergence against the World Bank high income classification – the World Bank's income classification for member countries has a much shorter history, coming into being only in about 1989. Malaysia's income level against this definition mirrors that of convergence against the US level of income over the same period – sustained progress overall that was broken by the 1997-98 AFC, with a minor setback during the 2009 recession. In the former crisis, income levels did not return to the same ratio against the World Bank definition until 2004, two years earlier than against the US level.

Looking at the last two points above, if we take non-convergence of the income level as the main criteria for a Middle Income Trap, it appears that Malaysia may have already hit the middle income trap and has since left it long behind.

It is interesting to note that the two fallow periods in the convergence trend coincided with deep and highly damaging recessions, which are at odds with the hypothesis of a structural reason behind a Middle Income Trap. The latter AFC crisis is unambiguously non-structural, a result of monetary and external imbalances that affected not just Malaysia but the region as a whole.

The 1980s experience is more interesting as it more closely fits the structural narrative of the MITH. Growth in per capita GDP had slowed against the US norm even before the property bust of 1985-86. The Plaza Accord of 1985, which resulted in coordinated global intervention to weaken the US dollar, did not help matters by reducing gains from terms of trade. However, the weakened ringgit eventually helped to attract foreign investment, as the stronger Japanese yen prompted Japanese manufacturers to seek lower-cost production bases in the region. That helped pull Malaysia out of a Middle Income Trap, and back along the path of convergence until the AFC, which as noted was largely exogenous to Malaysia's economic structure.

Conclusion and Policy Implications

Would the truth or fallacy of the Middle Income Trap as a real-world phenomenon have any policy implications, especially given Malaysia's economic transformation plans? Not necessarily. The latest IMF research suggests that pro-growth policy initiatives and reforms are just as useful to avoid damaging growth slowdowns as they would be in getting out of a putative Middle Income Trap.

As noted above, a more holistic view of the MITH is that it is in essence more about the general drivers of growth and economic development than it is about a uniquely identifiable phenomenon. In that sense, Malaysia's recent efforts towards development via encouraging private investment, raising the level of human capital, emphasising value-creation and value-added activities, liberalising regulations and licensing requirements, and overall raising the efficiency of government, are policies that would be recommended and to be encouraged irrespective of whether Malaysia is in a Middle Income Trap or not, or whether those policies take the MITH as their point of departure.

Economic development and growth, as history shows, is not a given. If Malaysia's current circumstances do not perfectly fit the MITH narrative, that is not to say it might not do so in the future, or that other countries do not (for example, Thailand). Countries do not begin on the development path and automatically move towards successively higher levels of income, especially given widely varying endowments of natural resources and factor endowments of capital and labour. There needs to be in place the institutional and legal frameworks, and the investment in physical and human capital, for sustained growth to be achieved. Because of externalities that may exist to markets, government involvement in the development process is necessary, both to provide a framework for the proper functioning of the economy, as well as to regulate excesses and market failures.

Thus, while the Middle Income Trap might not exist in reality for Malaysia, the promptings that underlie its existence as a concept in economics remain somewhat relevant. While care has to be taken that policy recommendations should not be given based on the parts of the structural narrative of the MITH that might not exist in reality, the fundamental principle that growth cannot be taken for granted should be readily accepted.

THIS PAGE IS INTENTIONALLY LEFT BLANK

THIS PAGE IS INTENTIONALLY LEFT BLANK

Published and Printed by:

MALAYSIAN RATING CORPORATION BERHAD (Company No.: 364803-V)
5th Floor, Bangunan Malaysian Re, No. 17, Lorong Dungun, Damansara Heights, 50490 KUALA LUMPUR
Tel.: +603 20822200 Fax: +603 2094 9397 E-mail: marc@marc.com.my
Homepage: www.marc.com.my