

# The Software Industry in Penang

## Introduction

The software industry has generated tremendous interest in recent years, both as a revenue earner in itself and as an input and enabler for other dimensions of economic growth. Software is a critical leverage for innovation across diverse areas of activities. Having a sophisticated group of companies to work with the local industry to leverage national and foreign software tools can have important productivity inducement effects throughout the entire industrial base of a country. In fact, most developing nations that are actively fostering the development of the software industry are hoping to ride on the industry to “leapfrog” the economy into more knowledge-based firms and industrial capabilities, hopefully generating high value-added exports. Given that the transition to a knowledge-based economy is no longer just an aspiration but has become an imperative for maintaining the competitiveness of the Penang economy, and that the state is continuously striving towards higher value-added production and export, the emphasis on developing the software industry is well placed. It can provide crucial supporting products and services for moving the rest of the economy to a higher plane, particularly through incorporation of local and customized content.

The world software market and related services is expected to grow from the US\$90 billion mark in 1997 to US\$900 billion in 2008<sup>1</sup>, a ten-fold growth in as many years. In 2001, the software market amounted to about US\$300 billion, with the outsourcing market making up one-third to half that total. By 2015, a total of 3.3 million US jobs and US\$136 billion in wages are anticipated to be transferred offshore.<sup>2</sup> Hence, if local companies are able to bring their capabilities to meet international requirements, there is potential for capturing a slice of this continuously expanding pie.

## Profile of the Penang Software Companies

The vast majority of the software companies in Penang are engaged in enterprise applications as their principle business activity. More detailed analysis of the products offered by the Penang-based software companies clearly show a heavy concentration in the area of Enterprise Resource Planning (ERP), leading to severe overcrowding and competition. Other products and services commonly offered by these companies include Internet surveillance, Customer Relations Management (CRM) systems and point of sales software.

The Multimedia Super Corridor (MSC) rollout in Penang has given the software industry a tremendous boost. As of early November 2005, 35 out of the 66 MSC status companies in Penang are involved in software development. As part of their product development, the software companies undertake a substantial amount of Research & Development (R&D). However, the software companies still have a long way to go in building up their credibility as none of them are currently Capability Maturity Model Integrated (CMMI)<sup>3</sup> certified. Besides the CMMI training grant, other incentives available for MSC status companies include the Multimedia Super Corridor Research and Development Grant Scheme (MGS) which grants up to 70 percent of the cost of approved R&D projects executed by MSC companies with a minimum of 30 percent Malaysian equity. But the take-up rate for such grants is very low among the software companies. Reasons cited for this low rate include the cumbersome and slow processing of applications and the inclination of the Multimedia Development Corporation (MDeC) to consider only big scale projects for such grants. Most software companies do not have the capacity to handle such big projects but proposals for smaller scaled projects are not entertained.

<sup>1</sup> Organisation for Economic Co-operation and Development (OECD), 2002

<sup>2</sup> Veloso, F. et al., 2003. *Slicing the Knowledge-based Economy in Brazil, China and India: A Tale of 3 Software Industries*. [www.softex.br/media/MIT\\_final\\_ing.pdf](http://www.softex.br/media/MIT_final_ing.pdf)

<sup>3</sup> Capability Maturity Model Integrated (CMMI) is the most widely accepted and highly regarded system of certification in the software industry

April 2006  
Volume 8, Issue 4

PP 145554/4/2007



## In This Issue

<b>The Software Industry in Penang</b>	<b>1</b>
<b>9th Malaysia Plan: Developing the Human Side</b>	<b>9</b>
<b>International Headlines</b>	<b>15</b>

## Socio-economic & Environmental Research Institute

10 Brown Road,  
10350 Penang, Malaysia  
Phone: 604-2283306  
Fax: 604-2267042  
Email: [saripg@tm.net.my](mailto:saripg@tm.net.my)  
Website: <http://www.seri.com.my>

As a recent initiative, the Malaysian Institute of Microelectronic Systems (MIMOS) has developed a scheme whereby R&D laboratories would be set up within MIMOS to develop national roadmaps, conduct R&D, productise R&D outputs and then hand over such technology outputs to industries for commercialization. Feedback will be obtained from the industries as to the types of technology to conduct R&D on and MIMOS will also play the role of matching between the industries and the relevant R&D teams. The thrust areas that have been identified for this scheme are: Language Technology, Grid Computation, Internet Protocol version 6 (Ipv6), Bio-informatics, Cyber-Security, MyGrid for Learning (MyGfl), Wireless and Micro-electro-mechanical Systems (MEMS). As many of these areas are related to software, this MIMOS scheme has the potential of providing much needed research support for the software industry.

One facility that can contribute substantially to the growth of the software industry is the availability of venture capital. Although venture capital is available under the MDeC's Technopreneur Programme, the promotion of such schemes tend to be concentrated in the Klang Valley area. Hence, many Penang-based companies are not aware of them or are not able to take advantage of the assistance available to access the schemes.



***With the heavy domination of the Windows Operating System, local users are still unfamiliar with Open Source Software.***

### **Profile of the Software Market in Penang**

In general, there is a high level of utilization of the main categories of software among the Multi-National Corporations (MNCs), local large companies (LLCs), banks, hotels and small and medium scale industries (SMLs), i.e. operating systems, enterprise application, infrastructure and utility. However, a more detailed analysis of the various utilization segments highlights significant findings on the low level of sophistication of software usage and mismatch between supply and demand.

With regards to operating systems, there is heavy domination of the Windows Operating System. Local users are still unfamiliar with Open Source Software (OSS) although there are efforts on the part of the government to promote its use. The current limited market for OSS, however, should not discourage local software companies from venturing into the field. Worldwide, Linux servers were estimated to have grown by 40 percent in sales in 2003, reaching beyond US\$4 billion in sales. The development of OSS would be particularly beneficial to the SMEs given the lower cost involved in adopting it. However, local software companies that wish to venture into OSS may face acute shortage of skilled manpower as the local Institutes of Higher Learning (IHLs) have no or limited Linux/Unix based course offerings. Concerted efforts have to be made to promote the migration to OSS and facilitate training of competencies in open source in order to make it viable for software companies to develop OSS.

In the area of Enterprise Application Software, it was found that there was almost universal usage of Accounting and Payroll software and coming second, but at a much lower rate of utilization was ERP. However, both these market segments are already heavily overcrowded. With regards to Infrastructure Software, Internet usage is quite pervasive and there is also significant usage of Database but use of Network Security and Wireless is still relatively low. There is, therefore, great potential for upgrading the infrastructure software usage among the business users. Better market research would therefore be beneficial in determining the market segments that local software companies should focus on.

In terms of Utilities Software, only Anti-virus is pervasively used. The other types of utilities software that see significant usage are Messaging and Search Engine. Hence, only very basic types of utilities software are being employed. Although the utilities market segment is heavily dominated by global players, it offers the best opportunities for local software companies because it is not as dependent on technology as the other segments. Also, the development of utilities software does not require as much R&D as other software products. Local software companies can adopt the strategy of customizing their products for the Malaysian or regional market, for instance, instant messaging in Bahasa Malaysia; development of ringtones, VOIP and mobile applications for games and information. The software developed can be adapted and repackaged for specific regional markets. In this regard, Malaysia's multicultural asset can be put to good use.

## Issues and Challenges

There are several issues confronting the software industry in Penang.

- **Market Issues**

Market issues pertain to both penetration of the existing market and expanding it. Among the companies that have never used locally developed software, some of them were not aware of the existence of local software while some cited that there is no specific one that fits the company's needs. In the case of most MNCs, their head-office overseas controls all decisions on software development / usage. Thus, penetration into the MNCs is not feasible for most of the local software companies, hence they should focus on local clients. However, local industries, especially the SMIs, lack the budget and commitment to adopt IT and software utilization. They also tend to be "good value" shoppers, seeking cost-effectiveness rather than quality products. This leads to intense price competition among the software providers; the low price then means low margins and hence a lack of resources for the R&D necessary for improving product quality and this, in turn, results in an inability to gain greater inroad into the market. This vicious cycle threatens the viability of the smaller software companies that have not been able to differentiate themselves by marketing high-value and niche products.



***Local industries lack the budget and commitment to adopt IT and software utilization...***

The bottom line is what counts and for a start, incentive schemes for SMEs to adopt ICT might be the most effective measure. In this regard, certain initiatives have been taken, such as the grant for RosettaNet adoption, SMIDEC loans for ICT adoption which give consideration to acquisition of software and the recently launched SME Bank's financing as well as hire purchase schemes for acquisition of software and computer peripherals.

Another market related issue faced by the software companies is their lack of marketing skills or the resources to engage in effective marketing of their products and services. This leads to another vicious cycle of shrinking sales or market share, which also threatens the viability of the company. Market research is also limited; hence the software companies are not able to ascertain or anticipate market demands and develop products and services to match such demands. This lack of supply-demand match has led to overcrowding in certain market segments, like ERP for instance.

The software market in Malaysia is rather small due to the size of the country and also the low rate and rudimentary level of IT adoption. In addition, most local users are still inclined towards proprietary software which is the territory of global companies. Added to that, the high degree of software piracy makes it attractive for home users especially, to use proprietary software because they are spared the otherwise prohibitive cost. The effect of this is that local software companies have to fight stiff competition to gain market share.

- **Branding**

Most local software companies have only been in operation for a relatively short time and, besides a few exceptions, have not built up well-recognized brand names. Branding also presumes a high level of credibility and high profile created through marketing or the winning of industry awards. As has been noted, none of the local software companies have attained CMMI certification and hence cannot provide objective criterion for prospective customers to judge their credibility. As also stated above, the local software companies have limited means for marketing their products and services. Hence, except for a few big names, the rest have not been able to build up their brand names.

- **Research and Development**

Although many local software companies reported a high level of expenditure on R&D, "lack of funds for R&D" is still a major challenge identified by the software companies. Inadequate R&D inevitably affects product quality or the ability of local software companies to come up with new products to meet the fast changing technological specifications and market demands. This would definitely reduce their competitiveness. Although some of the local software companies have received the MGS provided by MDeC, there are others who have difficulties obtaining them because the grants are geared towards big-scale projects that are beyond the capability of most of them while applications for funding for smaller R&D projects have been rejected.

- **Human Resource**

As with most other economic sectors in Penang, the lack of quality human resource is a bane for the software industry. However, the void is felt more acutely in this industry because of the high and special skill levels it requires. The situation is not helped by the fact that the IHLs tend to offer generic courses that do not cater for the specific skill sets needed by the software industry. One main cause of this problem is that IHLs are not interacting with industry to keep abreast of technological advancement and hence the changing skill set needs. Added to that, even if they are aware of industry needs, many IHLs do not have the resources to constantly update their hardware and software as well as other teaching resources. IHLs also point to weaknesses in the current student pool, such as:

- 1) Poor communication skills due to lack of English proficiency
- 2) Inability to grasp programming logic concepts and to apply theoretical knowledge
- 3) Not being pro-active and reluctant to ask questions when unsure of the contents of the lessons

The resultant pool of IHL graduates is largely poorly trained and not ready for employment. Companies that hire them for lack of any other alternative have to invest time in their retraining, which is not a value proposition for the companies concerned. Although the MDeC internship programme may offer some relief, it cannot be a long-term or complete solution. Many companies are looking to recruit expatriate staff but were not able to do so easily until the recent MSC rollout to Penang. However, in the long run, the solution still has to rest in improving the quality of education and training in the state and country.

- **Government Support**

As yet, there are no specific government schemes to support and facilitate the growth of the software industry. The selection procedure for MGS grants needs to be streamlined and made less cumbersome so that more software companies can benefit from these schemes. Government investment in communications and information technology infrastructure would also benefit the software industry. The quality of the current IT infrastructure is very good for general usage but fall below par where a high level of reliability is required. At present, government procurement of software also does not give preference to local software, thus denying the local players a substantial market, even as the big push towards e-government is forging ahead. Agencies like MATRADE could play an important role in helping to overcome the inadequacies of the software companies in marketing.

### **Lessons from Software Hubs in Developing Countries**

Although the circumstances in Penang differ substantially from other developing countries that have successfully developed their software industry, there may still be important lessons to be drawn from their experiences – which are themselves quite diverse. Many of the issues and challenges identified are not new and Penang may be able to emulate some of the strategies adopted by other countries with more established software industries.

- **Human Resource**

One common feature among the front runners, the 3Is of India, Ireland and Israel, is that they exhibited an “excess supply” of human capital in the 1980s and 1990s, and specifically, an excess of engineering and technology graduates. This abundant supply of highly educated, and relatively inexpensive, English speaking work force was a major factor that contributed to the success of the software industry in these three countries. With the rapid growth and expansion of the software industries in these countries, many are now reporting that manpower demand has outpaced supply. The most acute shortfalls are in the supply of high level business analysts and product managers.

India’s National Association of Software and Service Companies (NASSCOM) and some of the major Indian software firms developed their own education and training programs, either in-house or in cooperation with universities and other private educational institutions. As a result, 55,000 new students per annum were being produced, with 40 percent above the undergraduate level. The Singapore government had also recognized the need to make



*...graduates are largely poorly trained and not ready for employment...*

available sufficient software professionals to support the industry. When it initiated its strategy to develop the software and IT services industry more than 20 years ago, it established the National Computer Board (NCB) which invested \$80 million in creating professionals for this industry. Three government-run training institutes were established under this programme. The Singapore government also provides a 70 percent subsidy for software professionals who wish to pursue further studies.

Starting from a position of shortage instead of “excess supply” as in the case of the 3Is, the human resource issue in Penang has to be resolved urgently. Penang would have to ramp up its supply of well-trained engineers and IT graduates in order to ensure healthy growth of the software industry. Initiatives like those undertaken by the Singapore government may be necessary to train more IT specialists. Attempting to attract back Malaysian talents from abroad might be one way but taking advantage of the Malaysian diaspora to bring software business to Penang might be a more productive strategy.

- **Market**

Many countries have been eyeing the outsourcing market due to its reputed size and growth potentials, with the United States offering the most opportunities in this arena. In order to successfully tap the outsourcing market of the United States, then, it is crucial to understand the reasons for American companies resorting to outsourcing, which are primarily because they:

- cannot find enough software professionals fast enough,
- do not want to invest in in-house capability in areas outside their core-competence,
- want to free their in-house IT staff from mundane maintenance tasks for more creative projects, and
- want to get access to more specialized engineering talent, particularly in the area of telecommunications and want to have the option of round the clock operations

Outsourcing to reduce cost is not often cited as reason. Given these considerations, it is not difficult to understand why the outsourcing market is not the channel for software companies to climb up the value chain. Thus, even after all these years, and despite the scale of their operations, Indian firms are still finding that they are engaging in lower value added work. American firms are not locating mission critical activities in India nor are they shifting activities at the technological frontier to India. Many MNCs have globally distributed R&D or product development operations, so it is difficult to make them commit whole product developments to a single place. This lack of vertical integration in a single location means that local companies are not able to gain the knowledge necessary for the development of a total product. As a result, Indian software companies, for instance, have so far failed to master own brand product model in any significant measure.

However, in a context in which local software companies are still minor players, being able to elbow into the outsourcing market is still a progressive development. Despite the limitations of the outsourcing market mentioned above, Penang software companies would still have to play in this field given the small size of the local market and the generally low skill level of local companies. But they are likely to face stiff competition due to the limited supply of human resources. Within the domestic market, they would do better to focus on SMEs rather than MNCs and build up their domain knowledge as well as develop customized products. These capacities can then be the launching pad for them to penetrate the international market as some of them have already done. Forming linkages between software firms and domestic hardware manufacturers would be another way of moving forward. In this regard, the software companies should align themselves with the new growth areas identified by the State Government and develop products and services to suit their needs.

- **Going up the Value Chain**

As has become universal in all industrial sectors, firms have to constantly move up the value chain to fight off competition from countries or firms lower down the chain. As has been mentioned, what is being offshored to India is the production of software rather than its design and other more innovative segments of the industry which are still retained in the United States. Thus, India is finding increasing competition in low-level work from several



***...the outsourcing market is not the channel for software companies to climb up the value chain.***

countries, including China. The growth of the Indian software industry may be unsustainable unless firms begin to invest in R&D to undertake sophisticated product development. Indian firms have to move rapidly from merely performing programming to higher value activities such as design and product development. Some have entered turnkey projects which entail design and high-level systems integration that require greater skills. Leading Indian firms have also tried to move to higher value added consulting by acquiring deeper knowledge of business domains and management capability, and to reduce cost by developing superior methodologies and tools. China too has to evolve as a whole towards more complex work to sustain growth. Penang companies would also have to focus on higher value work rather than to compete on grounds of being a “cheaper” site in terms of costs.

- **Role of Government**

The Government plays a vital role boosting the development of the software industry.

- *Research & Development*

The Chinese government had an early influence on the software and hardware industries by its sponsoring of national research efforts on “core technologies” deemed essential to the nation’s computer industry. These included the Torch Program which began in 1988 and has funded several hundred industrially oriented R&D projects as well as provided financial support to commercialize products of academic research. The government sponsored R&D focused on selected areas like operating systems and security software which have helped local firms create capabilities for superior products. Operating systems were viewed as an important area for national investments, and the choice of research on OSS reflects the understanding that domestic firms have an advantage in developing products with greater customization.

In Singapore, the NCB, through its applied research arm, the Information Technology Institute, started to target the emerging technologies like AI and fuzzy logic in the mid-1990s. At the Nanyang Technical Institute, collaborative R&D by government and industry targeted computer integrated manufacturing, whilst the Institute of Systems Science and the National Institute of Singapore worked on a neural network for foreign exchange trading and logistics systems incorporating fuzzy logic principles for the Singapore Seaport. In this way, the Singapore government helps to define and guide software R&D in the country.

Local software companies have pointed out their difficulties in accessing R&D grants purportedly available under the MGS. However, this scheme is being reviewed by the Ministry of Science, Technology and Innovation (MOSTI), and hopefully a more industry-friendly scheme can be devised. More R&D laboratories should also be set up to undertake R&D, match R&D teams with industry and help to productise the technology developed. This could help to overcome the prevailing gap between industry R&D needs and academic R&D programmes.

- *Software Parks*

Both India and China established Software Technology Parks (STPs) for the production of software for export. There are now 21 STPs in India and they are deemed to have played a developmental role in the promotion of software exports with a special focus on SMEs and start up units. China established 19 Software Parks under the Torch Program and most of China’s software is produced in these parks. For instance, in 2000, 80 percent of software sales came from the 2100 enterprises located in the software parks. Thus, similar services and infrastructure can be provided in the Penang CyberCity (PCC) for the software companies in Penang.

- *Government Procurement*

Government procurement of IT systems is a policy that has contributed to the take off of China’s software industry. Preferential procurement policies, especially at the level of regional and municipal governments, enable local firms to bid for and supply IT systems and software to the government. Local software companies have lamented that the State and Federal Governments have not used public procurement as a means to support the local industry. This is definitely an action item that should be taken up by all public sector agencies.



***Penang companies would also have to focus on higher value work rather than to compete on grounds of being a “cheaper” site in terms of costs.***

- **Role of Industry Associations**

Industry associations have played a big role in facilitating the development and growth of software companies in certain countries. The renowned NASSCOM is the premier trade body and the chamber of commerce of the IT software and services industry in India. NASSCOM is a global trade body with around 900 members, of which nearly 150 are global companies from the US, UK, EU, Japan and China. NASSCOM was set up to facilitate business and trade in software and services and to encourage advancement of research in software technology. NASSCOM's objectives include maintaining close interaction with the Government of India in formulating national IT policies with specific focus on IT software and services, maintaining a state of the art information database of IT software and services related activities for use of both the software developers as well as interested companies overseas, taking effective steps to campaign against software piracy and providing an ideal forum for overseas and domestic companies to explore the vast potential available for Joint Ventures, Strategic Alliances, Marketing Alliances and Joint Product Development. In Brazil, The Association for the Promotion of the Brazilian Software Excellence (SOFTEX), established in 1996, is responsible for the administration of the SOFTEX Program, one of the most important instruments for supporting the production and marketing of Brazilian software. Its activities have the purpose of promoting competition in the software industry, Internet and electronic business in the country, as well as ensuring the availability of personnel qualified for the sector. SOFTEX has played a major role in stimulating the creation of start-up software firms in various parts of the country through the creation of business incubators.



The Software Consortium of Penang (SCoPe) was established in 2003 as an initiative of the State Government to promote and encourage higher value-added activities in Penang. SCoPe is an alliance of Penang-based software companies with diverse product and service portfolios and it has been very successful in facilitating networking among the software companies and bringing attention to the issues faced by the industry. SCoPe's role can be expanded further and it can follow NASSCOM's or SOFTEX's model in helping to build up the software industry of Penang. The time is ripe for SCoPe to review its role and structure and to register itself as an industry association so that it can work more effectively to promote the industry as a whole as well as the interests of its members. At the same time, the State Government should provide SCoPe all necessary support in this endeavour.

## **Conclusion**

There are vast opportunities available within our domestic market for local software developers to tap into. Local software companies should seek out areas where they have greater strengths and nimbleness instead of competing head-on with established global players. Software companies could concentrate on SMEs as their main target market to begin with and provide better customization at lower cost and create niche in specific types of software according to needs of these SMEs. At the same time, the State Government also has to play a vital role in encouraging ICT adoption among SMEs to encourage more software take-up among them.

Human resource development is another critical issue that needs to be resolved if the Penang software industry is to grow. In this regard, close collaboration and interaction between the IHLs and the software industry is imperative so that IHLs are constantly updated on the latest technologies and hence generate skills which meet the needs of industry. At the same time, institute internship programmes can also be carried out in software companies so that students can gain working experience, be more aware of industry's technological and skill levels, and be exposed to work culture. Industries should also give input to IHLs on curriculum development so that courses offered by IHLs would be less generic and will equip students with the specific skills required by industry. The good news is, under the 9<sup>th</sup> Malaysia Plan, local institutions of higher education will be given the flexibility of a 10 per cent pre-approved curriculum so that they can periodically develop topical courses in collaboration with the industry. Industry experts will be encouraged to teach these courses and incentives will be given to industries that support such initiatives and post-graduate studies and specialisation in the core areas of ICT, which includes software development, will be encouraged.<sup>4</sup> This is a very good start towards the formation of a much needed industry-institution collaboration that will bring mutual benefits to the parties involved.

***Local software companies should seek out areas where they have greater strengths and nimbleness instead of competing head-on with established global players.***

---

<sup>4</sup> Paragraph 5.69, 9<sup>th</sup> Malaysia Plan, 2006-2010

Although there must be concerted effort to reduce the dependency of private enterprises on government support, there are still important roles that the Government must play to support the growth of a nascent industry like the software industry. The Government should review incentive schemes for the software industry as a whole, including companies that have not attained MSC status to enable these companies to rise up to their full potentials. The 9th Malaysia Plan has also made provisions for more incubators to be established under the Technopreneur Development Programme to develop more competitive ICT SMEs, which will be undertaken in collaboration with selected MNCs, government-linked companies (GLCs), the academia and R&D institutions. The mode of assistance will include the provision of matching funds and the provision of a wide range of mentoring assistance and technology risk assessment services.<sup>5</sup> Thus, local software companies should tap into the provisions to enable them to further develop their capabilities and niche areas.



The software industry may represent a small fraction of the Penang economy and even smaller fraction of the total labour force but software is undoubtedly an input source whose importance for productivity and innovation is far greater than is reflected in revenues or share of GDP. The software industry in Penang has much ability to further progress and develop into a growth and income generator for the State so it is therefore still crucial for Penang to focus its efforts in further developing this industry.

***This article is based on the findings of the Study on Software Industry in Penang 2005 commissioned to SERI by the Penang State Government.***

### **The Multimedia Super Corridor Research and Development Grant Scheme**

The Multimedia Super Corridor Research and Development Grant Scheme (MGS) is designed to help innovate local companies or joint ventures developing relevant multimedia technologies and applications which would contribute to the overall development of MSC.

#### **Eligibility**

MSC-Status Company – the applicant must already have MSC status accreditation.  
Ownership – the applicant must be at least 30 percent Malaysian-owned.

#### **Project Selection Criteria**

- **R&D projects that are aligned with the MGS goals**
  - Potential impact on the success of the MSC
  - Linkages to local research institutes and leading companies
  - Involvement of Malaysian knowledge workers in the R&D core team
  - Growth impact on SMEs
  - Potential contribution to the Malaysian economy
- **Applicant's institutional merits**
  - Top management's commitment
  - Company's R&D track record
  - Credentials of project leader and research team
  - Company's R&D portfolio
- **Commercialisation potential**
  - Commercialisation of products
  - Projected revenues based on research activities
  - Demand for the potential R&D output, the market size and growth
  - Feasibility of commercialisation plan (e.g. project duration)
  - Appropriateness of the business plan
- **Technical merits**
  - Scientific merits of research objectives
  - Credibility of technological benefits
  - Technical methodology
  - Novelty, innovation, leading-edge technology
  - Appropriateness of risk assessment
  - Feasibility of research plan
- **Financial Plan**
  - Integrity of cost estimates
  - Cost effectiveness of approach
  - Appropriateness of grant amount sought
  - Financial management capabilities and resources

*Adapted from the **Multimedia Super Corridor Malaysia (MSC Malaysia)** website (<http://www.msc.com.my>)*

# 9th Malaysia Plan: Developing the Human Side

## Introduction

The 9th Malaysia Plan announced at the Parliament by the Prime Minister on March 31 2006 has a somewhat different flavour from previous five year plans that go back longer than Malaysia's post colonial history. The last time when such a plan was this exciting, was the *Red Book* or *Buku Merah*, i.e., the Second Malaysia Plan 1971-1975. The nation launched itself into an ambitious programme of restructuring society, redistribution of income and the eradication of poverty. Then the nation had a vision but how it is to pursue this vision was only a rough sketch because nobody had done such a thing before. The rest had to be learnt along the way. Why, because the time had come when something like that had to be done. This time round, yet another matter had become a necessity and the nation has again found itself with a new set of challenges that needed policy and developmental strategy.



The 9th Malaysia Plan is about developing the people side, rather than just more infrastructure that are found in most other plans. The importance of the quality of the country's citizenry in terms of its level of competency has been recognized way back in the 6th Malaysia Plan, 1991-1995. Then, it was observed that Malaysia's R&D sector had only 400 persons per million population which compared very poorly to ratios found in industrialized economies – 6500 per million population in Japan, 3200 per million in the U.K. and 1300 per million in South Korea.<sup>1</sup>

The 9th Plan, on the other hand, sees human development not only for the competency level that it must attain, but insist that human development must also be accompanied by a deepened sense of consciousness among its peoples. Thus, once again, while to achieve this is now an envisioned desire, little is yet known how or what needs to be done to bring it about.

## The 9th Plan has a soul

There are four things mentioned in the 9th Plan that the nation hopes to apply in order to develop the human side: Rukun Negara (on the cover page), Islam Hadhari (para.16, p.9), the National Integrity Plan (para.25.04, p.486) and the 9th Plan's five thrust areas (summarized in Chapter 1). The details that go under these four aspects are listed in brief form in Figure 1, and one will quickly realize that the terrain in which the 9th Plan wishes to develop is teeming with soft issues such as loyalty, behaviour, morality, the family as an institution, faith and piety, peoples' rights, integrity, first class mentality and so on.

What clearly distinguishes the 9th Plan from any other plans that Malaysia had, is that its success is no longer just a question of money, i.e., fiscal spending. Instead, the success of the 9th Plan will hang on how effective the government sells the idea of people development within the community itself. In the old days, villagers turn up to look curiously at the new bridge that is being built with government funds. That was all that people need to do while the plan was being implemented. This time round, people participation is no longer just passively looking but actively embracing what government hopes to do by actually making changes in their own lives. The question then is would they do so? The plan is well aware of how much it is dependent on the populace to succeed. This is why, among the human development thrust (para.11.29, p.249) is to develop a forum of engagement and consultation across the government, the private sector, parents and the community. The dynamics implied here sounds like democracy in action – society working together in pursuit of individual wants alongside community cooperation to achieve collective interests.

---

<sup>1</sup> Paragraph 6.25, Sixth Malaysia Plan 1991-1995

**Figure 1: Developing the Human Side**



<p style="text-align: center;"><b>RUKUN NEGARA</b></p> <ul style="list-style-type: none"> <li>• Belief in God</li> <li>• Loyalty to King/Country</li> <li>• Uphold Constitution</li> <li>• Rule of Law</li> <li>• Good behaviour/morality</li> </ul>	<p style="text-align: center;"><b>ISLAM HADHARI</b></p> <ul style="list-style-type: none"> <li>• Faith/Piety</li> <li>• Governance</li> <li>• Free People</li> <li>• Knowledge Pursuits</li> <li>• Balanced development</li> <li>• Good quality life</li> <li>• Rights of minorities</li> <li>• Integrity</li> <li>• Safe (Environ and defense)</li> </ul>
<p style="text-align: center;"><b>NATIONAL INTEGRITY PLAN (PHASE 1)</b></p> <ul style="list-style-type: none"> <li>• Reduced corruption/ malpractices/abuse of power</li> <li>• Better public delivery</li> <li>• Corporate govern/business ethics</li> <li>• Family Institutions</li> <li>• Quality of Life/Society Well being</li> </ul>	<p style="text-align: center;"><b>FIVE THRUST AREAS TO 9MP</b></p> <ul style="list-style-type: none"> <li>• Up the Value Chain</li> <li>• Knowledge capacity</li> <li>• Overcome inequalities</li> <li>• Improved Livelihoods</li> <li>• Strengthened Institutions</li> </ul>

Source: 9th Malaysia Plan

**National identity and nationhood**

How successful government can achieve close consultation with the citizenry as implied by paragraph 11.29 of the 9th Plan is a question of attitudes. In Malaysia, the entrenched attitude on the politics of national identity is founded on the social contract formulated as part of our 1957 Constitution. The model of ethnic hegemony in which the different races unite to form a common platform initially called the *Alliance* and later extended to become the *Barisan Nasional* has been highly successful. The country grew and developed even though no common national identity could be found due to the country’s multi-cultural composition. Instead, through the many decades all the specific identities are celebrated. For instance, many religious observations and cultural festivities are officially declared public holidays, each accompanied by its unique symbolism decorated in public places and by the media. *Open house*, i.e., officially hosted receptions open to the entire community from all races that accompany many of these festivities have been a way of life in Malaysia. The dream has always been many races and cultures but one Malaysian identity.

Even though the nation has been longing for this concept of *Bangsa Malaysia* – a common identity for all Malaysians, such a concept is difficult to perceive in the minds of people. Attitudes about the politics of national identity have always been centred on the nation’s constitutional promise to the different races – its social contract based on power sharing, in other words, ethnic hegemony. However, despite realisations that inter-ethnic competition does exist, multi-culturalism, i.e., a society in which many cultures and religions can be openly celebrated as well as shared across ethnic and religious lines, has also been successfully achieved in Malaysia.

What this means is that specific identities of the different races do not become a problematic in Malaysia. Instead the different identities are not only accepted but they are also commonly celebrated during festivities throughout the year. What then happens to power sharing and inter-ethnic competition? The answer is in nation-building as intended by the 9th Plan and all the other previous plans. The idea is to move away from the politics of national identity and into attitudes on nationhood, i.e., to develop zeal and awe for the nation among the citizenry by inculcating the thought that every single citizen counts as the basic building block that combines to make the nation.

Citizens forming the bricks that make a nation – does this mean reviving grass root politics as a useful way to achieve close consultation between the government and the people as hoped for by paragraph 11.29 (p.249)? If so, then the section of managing complaints in paragraph 26.38 (p.506) might extend to strengthen the help centers of parliamentary and state constituency representatives so that policy makers and the people are brought closer together.

In today's opened, competitive and globalised world, it is no longer enough to be a loyal citizen. More than that, the individual has to become knowledgeable as well as thoughtful and well aware of ever changing external circumstance. These are the traits that will allow the people to unite to become a versatile, vibrant and productive nation. The 9th Plan summarises all these in one word: integrity. The word is hard to fully describe, but the 9th Plan appears persuasive enough that without achieving integrity many facets of the human side of development might not be possible. Look again at the items listed in Figure 1. One would gather that everything listed there is about integrity.

### **Political and cultural will to achieve integrity**

Integrity is about honour and character, rather than agreed upon rules and the enforcement of such rules. Of course, in cases where people have little honour or character but if the rules are clear and well enforced it is still possible to achieve integrity because wrong doings would be found out and corrected via enforcements. We then have an interesting paradox. On the one hand, one might argue that it will be impossible to achieve integrity via an honour system and thus we still need rules and enforcement. On the other hand, one can also argue that because no rule enforcement can be perfect it therefore also becomes impossible to achieve integrity through a set of rules. We are then back at integrity via an honour system. Which, honour or enforcing rules, then will the 9th Plan choose to introduce integrity into its developmental goals? The list in Figure 1, shows a mixture of character building as well as rule based items suggesting perhaps that because there is a paradox both will be needed. But one thing is for sure. Character or rules, both political and cultural will to achieve integrity has first to be present – politically, such that the many compromises we have become familiar with does not continue and culturally, such that the less than civic behaviour, simple things like throwing litter or queue jumping or plain rude behaviour is no longer tolerated. Clearly, it sounds like there has to be a leap of faith before ideals such as these can come to pass. However, as a nation of faithful and pious people believing in God, making such as leap will not be impossible.



### **Institutional challenges and capacity building**

The recurring theme that has come to be associated with speeches by Prime Minister Abdullah Badawi is the public delivery system. This is one of the strategies in his budget speech as Finance Minister and it is part of the fifth thrust area in the 9th Plan. Institutional impediments have been well recognized as a major stumbling block to many good strategies and plan implementation all over the world and across time. The favourite tool to deal with institutions is capacity building and the 9th Plan has also chosen this: higher professionalism, less bureaucracy, more training, better efficiency, key performance indices and ISO certification. Perhaps to all this we might add one more critically important element: problem solving skills. Problem solving is meant to produce a better match between the means and the ends so that what is implanted bears a closer connection to what needs to be achieved, side effects kept to the minimum.

Here are some examples that show that it is not enough just to pursue the results from implementing a plan. Knowing what the side effects are, is just as important. The New Economic Policy introduced in 1971 had among its many goals, the modernization of the rural sector. Many interpreted this as moving out of rural agriculture and into secondary (manufacturing) or tertiary (services) sectors. Suppose, the goal, thirty five years ago, had instead been the modernization of agriculture. Would income opportunities for the rural poor be improved as they did over the past few decades without also reducing the importance of agriculture at the same time?

In the past few decades the government has more than adequately funded the agricultural sector but yet, agriculture as a sector in the economy has reduced from 30% of Malaysia's gross domestic product in 1970 to only 8% in 2005. Why? One reason is that the agricultural sector in Malaysia is heavily supported in Malaysia. Many public agricultural institutions could

be found in Malaysia. They range from crop research institutions (eg. RRI for rubber and PORIM for palm oil), to product specific extension services (e.g. LPN for rice and LPKN for fishing), to region specific extension services (eg. Kemubu, Muda Area) as well as teaching institutions (e.g. Agricultural College Serdang that later became Universiti Pertanian and later still, due to disinterest in the word by the university itself, dropped its agricultural nomenclature favouring instead the word *Putra*).

These organizations have undoubtedly rendered an invaluable service but collectively they came with an expensive price tag. Much if not most of the government's allocation into agriculture went into staffing and running these organizations leaving only what is left over into direct expenditures on crop production. As a result agriculture output does not appear impressive after inputs by way of public expenditure have been considered. Perhaps, the government might have put its agricultural skills directly into the farms rather than keeping such skills only in the hands of extension officers. Malaysia's public schools have long been staffed by graduates from various teacher training colleges and the universities. So too, might Malaysia's farmers be produced from agricultural colleges to staff state owned farms maybe.

Another example we might consider is poverty eradication. Malaysia has done admirably well by reducing the poverty incidence in terms of monthly household incomes falling below RM588 from 22.8% in 1990 to only 5.7% in 2005, even though the poverty line has been risen to RM691 per household per month for the 2005 incidence. The new target is then to further reduce the poverty incidence to 2.8% by the end of the 9th Plan period in 2010. Like agriculture, this success came with a heavy price tag because there are several institutions that have been appointed specially to manage the poverty problem in the country. For the money set aside as fiscal spending for the poor, a significant share of this goes not directly to the poor but to staff and towards the management of such organisations. Again just as in agriculture, these organisations have rendered their services well but will this count sufficiently if, ringgit for ringgit, a substantial share goes into management as opposed to direct assistance to the poor? Regardless, the 9th Plan appears to have a serious oversight. It did not examine closely enough the age structure of the poor. Consider figures shown in Table 1.

**Table1: Poverty incidence by age groups**

Poverty Incidence	<29 years old	30-39	40-64	>65
1999	1.7%	1.1%	1.1%	6%

*Source: Adapted from Chamhuri Siwar (2005) "Understanding Hardcore Poverty" Paper presented at the Yayasan Tun Razak Forum on New Challenges Facing Rural Development and Poverty Eradication, March 29-30 2005, Kuala Lumpur, based on data from Ragayah Mat Zin (2002), The Asian Financial Crisis and the Impact on Poverty and Inequality in Malaysia, IKMAS Working Paper Series No. 23, Universiti Kebangsaan Malaysia, Bangi.*

The data shows that the poverty incidence back in 1999, for the age groups below 65 years is already well below even the 2.8% target for 2010. In other words, past poverty eradication programmes aimed at making the poor more productive has been more successful than believed. The bulk of those who remained poor are found in those who are 65 years old and above. In other words, these are the people who should no longer be economically active and become dependent on the working age population to provide for their needs. For the people who are 65 years an older, a poverty eradication model that aims to make them more productive and economically more viable, will not be effective at all. What this means is that poverty eradication should now apply a model which is totally different from one that has been used before.

The new model is more akin to the role of the public sector in more advanced economies. At the early stage, the public sector is involved in direct investments because the private sector does not have the capital as well as the risk-taking capacity to do so. In advanced economies, the private sector will more efficiently take up the role of direct investments and then relegating the public sector to transfer payments, that is to redistribute income by raising tax revenues and then ensure more equitable access to matters like education, health, housing, other basis needs including public transportation. These matters tend to face market failure and thus cannot be totally satisfied through the price mechanism. Equitable access

can only be guaranteed by government intervention. Therefore to tackle the problems faced by those who are 65 years and older, is not to introduce another poverty eradication programme but instead by direct aid, especially in matters such as health and shelter. In this regard, care must be taken when the 9th Plan aims to further enhance poverty eradication institutions in paragraph 1.39 (p.34), because judging from the figures on Table 1 these institutions have already succeeded in reducing the poverty incidence from the working age group to less than 2% even before the turn of the century.

## Public revenues

The 9th Plan, like any other fiscal spending device, is funded through public revenues. Therefore the scope of what the government can do will much dependent on how much public funds can be raised. Malaysia's public has high expectations and this is why the annual budget speech by the Finance Minister each September and Malaysia's five year plans are given much media coverage. But bottom line, Malaysia's public sector budget is a quarter of the gross domestic product. This was roughly the figure way back in 1967, which rose to nearly 50% of the GDP in 1982 but has since retreated back to around the 25% mark during recent years. Also, about half of the public budget in Malaysia is usually raised through direct and indirect taxes.



To expand the scope of government services, those we like to see spelt out in the government's development plans is to expand the government's revenue base. In developed industrialised economies, the government is big business, with a budget amounting to about half the GDP. Unfortunately, not many people pay direct personal income taxes in Malaysia and therefore there will be little prospects for Malaysia to expand the scope of what government can do. A person who grossed around RM100,000 a year will end up paying about a months worth of taxes, i.e. an average of less than 10% after making the usual eligible deductions. His taxable income will probably be about RM70,000; which means that his marginal tax on income above RM70,000 will be in the 24% bracket. More dramatic is the person who earns around RM3,000 monthly, which is by no means a meager income and with the usual eligible deductions he probably faces a taxable income of around RM20,000. The marginal tax rate there is only 3%. The tax bill for taxable income of RM20,000 will be RM475, but because the income earned is below RM35,000, the taxman grants a rebate of RM350 thus reducing the tax bill to RM125 for the whole year. In other words, only marginally more than RM10 a month – an amount that will by perhaps buy one hearty meal. For that, kids get to be sent to public schools for free and if one can spare the time to wait for the doctor in government clinics or hospitals, health care can be received at very a very modest cost. A heart by-pass surgery in a government facility will cost probably about the same amount as an appendix operation in a private hospital in Malaysia. Never mind the added peace of mind because there are soldiers guarding the nation's borders, police keeping crime at bay and laws to protect the environment.

Think about it. During good times when government used subsidise petrol, one wonders if the subsidy alone that one received from pumping petrol into one's car each month works out to be substantially more than RM10. If this is true, then it is also true that the person earning around RM3,000 monthly is actually a charity case living off the tax money contributed by other citizens. He might argue, however, that he pays road tax for using his car but then again, the government will tell you that the total amount of road tax collected is way below the petrol subsidies paid out. All in all, inclusive of loss of revenues, road tax collections probably work out to only about 10% of the total subsidy.

Perhaps what have helped kept public revenues and expenditures going all these years, is Malaysia's vibrant corporate sector. Business entities pay a flat rate of 28% from profits earned and if a business grosses less than RM500,000 a year it is considered small business in which case the tax rate is a flat 20%. But the point to make about the 9th Plan is that we, the people, should look beyond the goodies brought by public spending, because for the government to spend more, we must be prepared to pay more taxes. Instead, much to do about government policies and government plans is not just the money but also for the leading signals that emits from them. The 9th Plan calls for responsible citizenship (para.25.16, p.489) founded on knowledgeable people, integrity and national consciousness, i.e., a sense of nationhood. The government aims to provide the enabling environment, but it is the citizenry that has to deliver the goods to bring about knowledge, integrity and building the nation.

## Conclusions

RM200 billion over five years, that is the amount set aside for the 9th Plan. But while the Prime Minister has time again remind various public agencies not to delay implementing what has been approved, ensuring success this time round will also require selling the 9th Plan in the minds of the citizenry. Developing the human side will at the very least require that people are aware of what the 9th Plan intends to achieve. More than that, to achieve what the plan hopes for, the people has also to embrace the concept of uncompromising integrity as well as develop learning capacity for acquiring knowledge. Then finally for the nation to become one people, i.e., *Bangsa Malaysia*, the multicultural identities that have been celebrated and continue to celebrate will need to foster an attitude of one consciousness of nationhood – something like many heartbeats, but all in sync to one rhythm. Malaysia Boleh!

§ *Dr. Chan Huan Chiang*

---

# INTERNATIONAL HEADLINES

---

## **East Asia Economies Gain Traction**

*02 April 2006, Asian Wall Street Journal*

The economies of emerging East Asia will grow at a steady pace in 2006 for the third year in a row, benefiting from strong U.S. growth and continued expansion in China, the World Bank predicts. The region, which includes industrial giant China and emerging economies such as Vietnam but not Japan or India, should grow 6.6% overall this year, compared with last year's 6.8% growth, the Washington-based multinational lender said in its twice-yearly "East Asia Update" report. Last year's growth was stronger than expected, despite record oil prices, higher interest rates, continued worries over U.S. current account deficit and fears about the spread of bird flu. The World Bank said the region's prospects for 2006 "look reasonably firm, with aggregate regional growth expected to exceed 6.5% for a third year in a row."

## **Taiwan Raises Interest Rates**

*02 April 2006, Asian Wall Street Journal*

Taiwan's central bank nudged interest rates higher and, by expressing concern about rising inflation, signalled at least one more increase this year. The central bank's quarterly monthly-policy meeting produced few surprises. The bank raised Taiwan's key discount rate by 0.125 percentage point to 2.375% in line with a unanimous forecast from economists polled by Dow Jones Newswires. The increase, effective Friday, results in the highest discount rate since early November 2001, when it was at 2.5%. The bank also raised the secured-loan rate to 2.75% and unsecured-loan rate to 4.625%. Taiwan's CPI rose 2.3% last year, accelerating from a 1.62% increase in 2004, as weather disturbances lifted fruit and vegetable prices. The average annualized CPI rise for the first two months of this year was 1.84%.

## **Outlook Is Cloudier for Developing Asia**

*7 April 2006, Asian Wall Street Journal*

Developing Asian economies can expect good 2006 growth after a surprisingly strong 2005, but plenty of potential dangers cloud the outlook, the Asian Development Bank said. Developing Asia grew 7.4% in 2005 despite high oil prices, largely because of robust expansion in China and India. Growth was also good in Pakistan and Vietnam. The bank said China's economy is expected to grow by 9.5% this year, while India's is expected to grow by 7.6%. Its earlier forecast for China's economic growth this year was 8.8%, while that for India was 6.8%. The growth forecast for South-east Asia was raised to 5.5% from September's 5.4%. The outlooks for most South-east Asian economies, except Indonesia, Laos, and Thailand, were upgraded. For 2007, developing Asia's economic growth is expected to slow to 7%.

## **Singapore Estimates Economy Grew 9.1 percent on year in First Quarter**

*10 April 2006, The Star*

Singapore's economy grew at a faster pace in the first quarter from a year earlier, helped by double-digit expansion in manufacturing output, the government said. Gross domestic product expanded by 9.1 percent in the first quarter of 2006, when compared to the same period a year earlier, up from on-year growth of 8.7 percent in the fourth quarter of 2005, according to the Ministry of Trade and Industry's advance estimates. Seasonally adjusted and annualized, the economy grew 1.2 percent in the first quarter, slowing from 12.5 percent expansion in the previous quarter.

## **US Trade Deficit Improves in February**

*13 April 2006, The Star*

America's trade deficit showed a bigger-than-expected improvement in February as the politically sensitive imbalance with China dropped to the lowest level in nearly a year. The Commerce Department reported that the deficit fell to \$65.7 billion (€54.2 billion), a 4.2 percent decline from January's record of \$68.7 billion (€56.6 billion). Even with the improvement, the February trade gap was the third highest ever. The deficit for the first two months of this year is running 13.5 percent above the pace in early 2005; last year the U.S. deficit hit an all-time high of \$723.6 billion (€596.8 billion).



### **China's Economy Grew 10.2% in The 1st Quarter**

*18 April 2006, Asian Wall Street Journal*

China's economy grew a faster-than-expected 10.2% in the first quarter from a year earlier, as the country struggles to rein in a trade surplus and investment spending. The year-to-year growth in first-quarter gross domestic product, or total value of goods and services produced, was faster than the 9.9% growth rate posted for the fourth quarter and full-year 2005 and surpassed economists' expectations for a 9.7% increase. China's trade surplus widened to \$11.19 billion in March, putting it on pace to surpass last year's \$102 billion surplus.

### **IMF Raises Philippines 2006 GDP Growth Estimate**

*20 April 2006, The Star*

The International Monetary Fund raised its forecast for the Philippine economy 2006 on a stronger inflow of funds from Filipinos working overseas. The IMF's latest World Economic Outlook projected the Philippines' gross domestic product will expand 5 percent this year, down from 5.1 percent in 2005 but higher than the IMF's September forecast of 4.8 percent growth. For 2007, the IMF forecast the Philippine economy will expand 5.6 percent.



### **Korean Economy Grows Briskly but Pace May Slow**

*26 April 2006, Asian Wall Street Journal*

South Korea's economy expanded faster than expected in the first quarter on steady increases in exports and domestic demand, but the Bank of Korea reiterated that the robust growth may shift down a gear in the second half. The country's gross domestic product expanded at a seasonally adjusted 1.3% in the January - March period, slower than the 1.6% rise in the fourth quarter of 2005 and the slowest pace since year 2005 first quarter growth of 0.5%. GDP in the first quarter than a year earlier- the strongest reading since South Korea posted a 7.5% rise in the fourth quarter of 2002. In the final quarter of 2005, GDP was up 5.3% from the same period a year earlier.

### **Little hit for US companies from China rate rise**

*27 April 2006, Reuters*

China's decision to raise interest rates rattled some investors, but may have a minimal lasting effect on U.S. industrial sales into the world's fastest-growing economy. China's central bank raised its benchmark one-year lending rate to 5.85 percent from 5.58 percent in an effort to slow a boom in credit and investment that could destabilize its economy. It also issued guidelines to commercial banks designed to control lending to about a dozen industries where capacity swamps demand. The step was unexpected, but analysts and executives noted that a similar move in October 2004 had little effect. Observers said U.S. companies are unlikely to be affected by this move since they do much of their China business with leading businesses, other multinationals with access to investment or ventures backed by the government.