ICT POLICY AND REGULATION IN MALAYSIA

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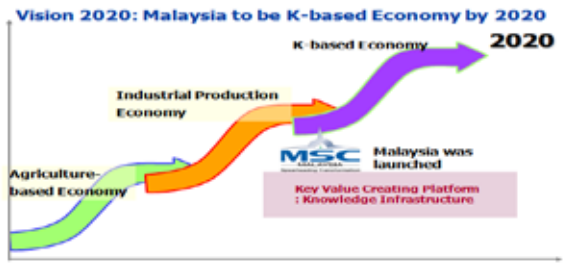
1.0 INTRODUCTION

Figure 1 shows the Nation's phases and transition towards the K-based economy.



FigFigure 1 : Phases of Malaysian Economy (Source: MSC)

The several phases of economic transformation with each phase resulting in increased job and wealth creation enables Malaysians to attain higher standards of living. It is predicted that the new areas of growth in ICT and knowledge-based activities would gain greater significance

in the 21st century. And this is shown in the growth of the nation's GDP from year to year due to the growth in the Information and technology sector as exhibits in Figure 2 appended below.

Malaysia Key Economic Indicators		
	2008	2009 *(forecasted)*
Population	27.73 million	28.31 million
GDP	RM528.8 billion (US$148.54 billion)	RM562.61 billion (US$158.04 billion)
GDP Growth	4.6%	3.5%
Per capita income	RM25,796 (US$7,246)	RM27,334 (US$7,743)
Inflation rate	5.4%	3.8%
Labour force	12.0 million	12.2 million
Unemployment	3.7%	3.3%
Total export (f.o.b.)	RM663.51 billion (US$186.38 billion)	RM710.99 billion (US$199.72billion)
Total import (c.i.f.)	RM521.5 billion (US$146.49 billion)	RM584.34 billion (US$164.14 billion)
Major exports	Electrical and electronic products, palm oil, crude petroleum, liquefied natural gas, chemical and chemical products, refined petroleum products, machinery, appliances and parts, and manufactures of metal.	
Major imports	Intermediate goods, capital goods, and consumption goods.	

Figure 2: Key Economic Indicator *Sources: "Economic Report 2008/2009" published by the Ministry of Finance, Malaysia, Malaysia External Trade Statistic 2008, Bank Negara Malaysia Annual Report 2008*

The Malaysian development strategy thus far has been one of investment and trade-led growth However, in the new environment characterized by rapid advance in ICT, globalization and liberalization, and greater reliance on knowledge for value creation, this investment-driven growth strategy is no longer sufficient to achieve the medium and long-term goals of Vision 2020. As what has been summed up by Dr. Zeti Akhtar Aziz, Governor of Central Bank Malaysia quoted in Abdul Talib (2004);

> *"The challenge for Malaysia now is to evolve new sources of competitiveness and build new capabilities to produce new sources of economic growth."*

With information and knowledge serving as the primary factors of change and value creation, knowledge-based development has now become Malaysia's development imperative. Therefore as a strategy to achieve Vision 2020, Malaysia plans to pull on the extensive utilization of ICT as a strategic technology for national development by enriching the infrastructure, enhancing the policy and guidelines as well as empowering the knowledge and skill of Malaysian and simultaneously increase the e-readiness of the nation.

2.0 OVERVIEW OF ICT IN MALAYSIA

The followings are the chronological events of ICT development in Malaysia[1].

- 1874 - The installation of the first telephone line.
- 1966 - Developed its first computer
- 1987 - The privatization of the telecom sector
- 1994 - Formation of the NTP (National Telecom policy)
- 1998 - The enactment of the Communications and Multimedia act established the Malaysian

1 SME and ICT (Kotelnikov, 2007).

Communication and Multimedia Commission (regulator) in support of national policy objectives.

Malaysia's first telecommunication charted in history was the phone installed by the British Resident's office in Perak in 1874 followed by the telegraph line a few years after (International Telecommunication Union, 2002). The aforesaid report further stated that in 1960, Malaysia had just under 50,000 telephone lines with a density of less than one per 100 inhabitants. Now 50 years later there were over four million fixed telephone subscribers and a density of fifty (50) per 100 inhabitants (Figure 3)

Talian Ibusawat Terus

DEL (Direct Exchange Line) Connections

		KEDIAMAN		PERNIAGAAN	
Tahun	Suku	Bilangan Langganan ('000)	Kadar Penembusan (per 100 isi rumah)	Bilangan langganan perniagaan ('000)	Jumlah langganan ('000)
2000		3,392	66.4	1,236	4,628
2001		3,400	65.1	1,310	4,710
2002		3,323	62.3	1,347	4,670
2003		3,194	58.0	1,378	4,572
2004		2,938	52.3	1,508	4,446
2005		2,839	49.5	1,527	4,366
2006		2,831	48.3	1,511	4,342
2007	1	2,872	48.9	1,480	4,352
	2	2,866	48.6	1,484	4,350
	3	2,865	48.3	1,493	4,358
	4	2,851	47.8	1,499	4,350
2008	1	2,793	46.6	1,557	4,350
	2	2,762	45.8	1,544	4,306
	3	2,751	45.4	1,551	4,302
	4	2,734	44.9	1,558	4,292
Year	Quarter	Number of subscriptions ('000)	Penetration rate (per 100 households)	Number of business subscriptions ('000	Total subscriptions ('000)
		RESIDENTIAL		BUSINESS	

Figure 3 : Malaysia Direct Exchange Line Connection.
Source: (The Malaysian Communications and Multimedia Commission)

However, in order to create a knowledge-based society, accessibility to the telecommunications network is crucial. Although Malaysia has a broadband fibre optics telecommunications-based (Kraemer & Dedrick, April 12, 2001), which can support extensive public, educational and business applications, there is a wide disparity in accessibility between the rural and urban areas (International Telecommunication Union, 2002). Efforts need to be taken to improve the accessibility in the rural areas through the provision of more telecommunications infrastructure.

3.0 ICT POLICY INITIATIVES, STRATEGIES AND PROGRAMMES

3.1 The Malaysia Plan

The Malaysia Plan, since 7th National Plan in 1996 till the latest 9th National Plan has ecognize that in the Information Age, ICT is central to competing in the global economy, increasing productivity and efficiency and enabling the enhancement of quality of life. . This is evident from the existence of a separate chapter for the ICT sector in the said plan. The National Plan outlines a number of steps to expand the ICT infrastructure, to promote the extensive application of ICT and to accelerate ICT usage in the various sectors of the economy. The document clarifies several national strategies for adoption by the public, private and community interest sectors and these strategies are designed to[2]:

- Ensure widespread diffusion and acculturation of IT within and across sectors;
- Develop a national plan to ensure a more systematic approach to manage the development of ICT through the National Information Technology Agenda and the Multimedia Super Corridor;
- Increase and enhance IT education and training;
- Expand and upgrade the communications infrastructure to increase accessibility;

2 Malaysia 9th National Plan (The Economic Planning Unit, Prime Minister's Department, 2006).

- Review laws and regulations to promote the growth of electronic communities and the development of a continuous learning environment;
- Promote the development of e-commerce, indigenous contents and the local IT industry, especially the software and knowledge products industries, to generate new growth opportunities; and
- Review and improve the national innovation systems to generate R&D output capable of driving the knowledge economy.

3.2 The National Information Technology Agenda (NITA) and National Information Technology Council.

As what has been discussed earlier, the Information and Communications Technology (ICT) will be the driving force of change, in which will impact on social, cultural, administrative, and business practices. At the same time, the industrial economy will be evolving into a new environment influenced by globalization, where money, information, goods and services are transacted electronically.

Recognizing the emergence of this phenomenon, Malaysian government has making an effort in focusing on strengthening the foundation to build an information-intensive and a knowledge-based society and economy with a technologically literate and innovative workforce, able to integrate the global environment (Ahmed, 2008).

The Government has also established the National Information Technology Council (NITC) in 1994. The Prime Minister chairs this Council and MIMOS Berhad serves as the secretariat (Malaysian Communications and Multimedia Commission, 2008). The NITC advises the Government on matters pertaining to the development of ICT in Malaysia. It also provides direction on public policy formulators in the planning and management of ICT as a strategic tool in the development of various socio-economic sectors.

NITA was officially launched in 1996 by NITC. The primary objective is basically to ensure the orderly transformation of the Malaysian society into an information- and knowledge-based civil society by 2020 (International Telecommunication Union, 2002). Since then Government has adopted NITA as a major strategy for national development and nation building.

To further enhance the realization of NITA, Government could formulate a strategic agenda to provide the framework for collaboration by the public and private sectors as well as the general community in the five thrust areas of Sovereignty, Learning, Community, Public Services and Economy.

3.3 Multimedia Super Corridor

Multimedia Super Corridor (MSC) was established on August 1, 1996. MSC was designed specifically to enhance and develop a world-class multimedia industry with cutting-edge technologies.[3] The development of MSC will be:

- a vehicle for attracting world-class technology-led companies to Malaysia, and developing local industries;
- offering a productive, intelligent environment in which multimedia value chain of goods and services will be produced and delivered across the globe;
- an area of excellence with multimedia specific capabilities, technologies, infrastructure, legislation, policies, and systems for competitive advantage;
- a place for invention, research, and other ground breaking multimedia developments.

There are seven primary areas for multimedia applications and it is further divided into two categories namely «Multimedia Development» Flagship Applications consisting of 4 Flagship Applications. These

3 MSC Malaysia (http://www.mscmalaysia.my/topic/12073049215060)

Applications offer concrete business opportunities to facilitate the development of MSC:

- Electronic Government
- Multi-Purpose Card
- Smart Schools
- Telemedicine

The second category is the «Multimedia Environment» Flagship Applications consisting of 3 Flagship Applications. These Applications provides an optimal environment that supports multimedia companies entering the MSC.

- R&D Cluster.
- Worldwide Manufacturing Webs
- Borderless Marketing.

3.4 Demonstrator Application Grants Scheme

In order for all Malaysians to respond to the NITA, the NITC has established and adopted the Demonstrator Application Grants Scheme (DAGS) on 15 January 1998 as a key initiative in ICT development.

DAGS was subsequently launched in April 1998 with an initial allocation of RM 50 million to provide Malaysians nationwide with the opportunity to be involved in the ICT and multimedia development (MDEC, 2001). The primary objectives of the DAGS are[4]:

- to encourage Malaysians to embrace ICT, enabling them to maximize the benefits of ICT applications at work and at home;
- to build an integrated network of electronic communities using ICT and multimedia technology;

4 DAGS on MDEC (http://www.technopreneurdevelopment.net.my/cms/Generalasp?whichfile=&ProductID=20850)

- to promote the dynamic growth of Malaysian web-shapers and web-adapters;
- to develop entrepreneurial communities enabled by electronic networks;
- to enhance closer co-operation and collaboration between public agencies, private corporations, non-governmental organisations and not-for-profit organisations through joint ventures and institutional linkages
- to encourage Malaysians to be more innovative in using and adapting existing ICT and multimedia technologies.

3.5 Financial and Non Financial Incentives

The Government has provided several incentives to encourage the growth of multimedia companies. For example, companies that are granted MSC-status are eligible for a package of financial and non-financial incentives (The Malaysian Communications and Multimedia Commission, 2008). Financial incentives include zero income tax for a maximum period of 10 years or a 100% investment tax allowance on new investments made in MSC designated zones.

Non-financial incentives include unrestricted employment of foreign knowledge workers, freedom to source capital globally and freedom of ownership (International Telecommunication Union, 2002). This is because the government believes the successful development of human resources for the MSC is of strategic national importance. The same package of financial and non-financial incentives is also offered to universities / institutions of higher education that have faculties that qualify for MSC status (International Telecommunication Union, 2002).

3.6 Research and Development Grant

Under the Malaysia Plan, a lump sum of amount is allocated for R&D budget to Multimedia Development Corporation (MDC). This sum is to be distributed to small and medium enterprises in the MSC that are at least 51% Malaysian-owned (The Economic Planning Unit, Prime Minister's Department, 2006). Companies have to apply to the MDC, if they want to benefit from these R&D grants. Known as the Multimedia Super Corridor Research and Development Grant Scheme (MGS), this R&D grant is designed to help innovative local companies or joint ventures developing relevant multimedia technologies and applications, which would contribute to the overall development of MSC.

4.0 MALAYSIAN ICT REGULATION AND LEGISLATION[5]

The government has regulated the necessary laws to provide support to the MSC. Some of the multi-specific legislation that has been passed in Parliament includes:

- The Digital Signature Act 1997, which governs electronic signatures.
- The Computer Crimes Act 1997, which outlaws the fraudulent use of computers and unauthorized access to and modification of the contents of computers.
- The Electronic Government Act 1997, which regulates communication within the public sector. This Act also enhances communication between the public and private sectors.
- The Multimedia Convergence Act 1997, which streamlines communication, information and broadcasting services.
- The Telemedicine Act 1997, which allows for the promotion of medical services.
- The Communications and Multimedia Act 1998, which facilitates

5 Source: International Telecommunication Union, ICT Regulation Toolkit for Malaysia (http://www.ictregulationtoolkit.org/)

the orderly development of the multimedia industries, in particular the contents industry and to replace existing inadequate legislation.

- The Intellectual Property Protection Act 1998, which protects copyright laws.

The above legislation has been prompted by the establishment of the MSC, however the stated laws are also applicable for general application. The Electronic Government Act 1997 has also provides a mechanism for business and the community to voluntarily choose electronic communications when dealing with government agencies. Therefore the said legislation will also be used to facilitate the development of electronic commerce in Malaysia.

5.0 CONCLUSION

In the era of globalization, Information and Communications Technology (ICT) has become the driving force of change that have a big impact on social, cultural, administrative, and business practices. Government efforts are therefore expected to focus on strengthening the foundation to build an information-intensive, knowledge-based society and economy with a technologically literate and innovative workforce to be able to integrate in the global environment.

And in order to enable and speed up the transition towards the K-economy, the Government will have to continuously promote and encourage wider applications of ICT in order to increase national efficiency, productivity and competitiveness. Having said that measures also need to be taken to ensure that telecommunications tariff rates and property prices remain competitive as well as to ensure the ICT and multimedia products and services continuously evolve from the current service-based industry clusters in the MSC to involved more in telecommunications, software and contents development.

There is a potential in the development of software required by the industry that is involved in electronic media, animation and post-filming

production. This provides an opportunity for creative and innovative small and medium enterprises to collaborate with larger firms in expanding the value chain of the ICT and multimedia industry.

Other than that, MDeC could also spread more of their wings in giving out advices to encourage more SMEs participation. In Malaysia alone,

"SMEs represents 99.2% of total business establishments and are now employing over 5.6 million workers, developing a competitive, productive and resilient SME sector which is an important thrust to support the Government's aim in achieving a balanced economic development and higher standards of living at all levels of society" (Small Medium Enterprises Annual Report 2007)"

Therefore when this group of enterprises start adopting ICT in their business, it will help boost their way of doing business and hence increase profitability. This could be done by introducing more desirable policy and incentives for the SMEs and introduce another legislation that's more adoptable for small and medium enterprises.

Also to be noted that future competitiveness in the e-economy and k-economy is dependent on the availability and quality of human capital with the right knowledge, skills and ability. Therefore, there is a dire need to develop a well-educated, trained and ICT-literate workforce capable of applying new processes and techniques to increase output and productivity. In order to meet the challenge of producing an ICT-literate workforce, a review of the education policy needs to be undertaken on an ongoing basis. Education needs to continuously raise the general technical competency, developing creativity, engaging in strategic thinking as well as increasing the skill of workers for lifelong learning.

Another way of facilitating the upgrade of knowledge and skills of the legal manpower in the latest development in local and international cyberlaws, higher educational institutions need to be encouraged to offer cyberlaw studies other than undertaking research in the development of cyberlaws and their impact on society.

Last but not least, the entire institutional infrastructure developed and established to assist the development of ICT in Malaysia should actively do their part and continuously oversee their functions and activities so that no overlapping of duties will take place. They should also actively spread the words and give out advice to the public and private sectors and to advertise all the incentives that the government has awarded to the interested parties as most of the time, all these incentives are always unbeknown to them.

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