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The Promise And Pitfalls Of Leapfrogging - The Malaysian IT Experience

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Technical convergence between computing, broadcasting and telecommunications is leading to time-space compression and affecting every aspect of our lives from economy to culture, leisure and entertainment. It has unleashed a whole new array of Information and Communication Technologies (ICTs) which alter our professional and cultural practices and terms such as the Internet, Information Superhighways, digital broadcasting, mobile telecommunications and multimedia have become the buzzwords of a new age.

In recognising the social significance of IT, Southeast Asian countries have launched a number of ambitious IT infrastructure initiatives. Singapore adopted an IT2000 Master Plan in 1991 to transform the nation into an "Intelligent Island". Malaysia launched its Multimedia Super Corridor (MSC) initiative in 1996. The Philippines has launched a "Smart Philippines" IT initiative, while Japan is actively building its Fibre Optic Info-Communication Network connecting every business and household for an Intellectually Creative Society to meet social and economic restructuring in the 21st century (Mansell 1998:190). South Korea, Turkey, Brazil and India are also transforming their telecommunications environment and preparing major policy changes to pave the way for the creation of information infrastructure initiatives and their entry into the information age.

This paper examines Malaysia's leapfrogging into information technology via its MSC initiative, and its imperatives. The MSC marks the beginning of a radical transformation in Malaysia's development and economic objectives. It places IT in the centre of a comprehensive development plan. In physical terms, the US$13b MSC is located in an area of 750 sq. km. which spans from the Kuala Lumpur City Centre (KLCC) in the north to the new US$2.3b Kuala Lumpur International Airport (KLIA) in the South. Two "Smart Cities" are being developed in the MSC --

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Putrajaya, the new US$5.2b administrative capital of Malaysia; and Cyberjaya, a place that accommodates multimedia industries, research and development centres, a Multimedia University, and operational headquarters for transnational corporations which are expected to direct their worldwide manufacturing and trading activities using multimedia technology.

Development, Modernisation and Leapfrogging

Almost all of the developing nations, upon achieving political independence, swiftly embarked on a nationalist project to develop their respective economies. Their colonial subjugation in particular had left them behind, argued most of their political leaders, and thus the need to build the nation and, at the same time, try to catch up with the developed and industrial world (Tom Nairn, 1982:432-433).

Such a gigantic enterprise gained added fervour with the"expert advice" offered by development agencies in the United Nations as well as communication experts such as Wilbur Schramm (1964) and Daniel Lerner (1958) who perceived the need for developing countries to try to emulate the developed West in order to modernise and progress and, by implication, to be civilised. This modernization view, although ethnocentric in nature, however managed to hold sway and influence not only politicians but also development managers and academics.

It is indeed unfortunate and dangerous that such a perception of development and modernization has gained widespread recognition and unqualified support in many of the developing countries because it conveniently ignores a whole history of colonisation, exploitation, social and economic injustice, and structural inequities that peoples of the then colonised world had experienced and endured (see for instance W. Rodney 1981). In addition, traditions, social values as well as indigenous technologies that belong to people of the developing countries were neglected or marginalised as many of these were considered by the development gurus of the industrialised world as impediments to socio-economic progress. These are factors which still bear some degree of significance and relevance today as they do impinge upon development priorities, policies and strategies of the developing nations.

Since the Second World War, the term development has been understood in a very restrictive manner -- economic growth, high standard of living, increases in per capita income. Today, this approach to development is being challenged as there is a growing concern that it does not consider the non-material aspirations of the people as well as their cultural and social needs (Bezanson

and Sagasti 1995). An excessively restrictive and materialistic perception and strategy of development has contributed to a social and moral disquiet in most of the developing world, and this will have to be seriously considered by planners and policy-makers in the coming century.

What really does the term "leapfrogging" mean? Generally, it is argued that human society has evolved through several distinct stages or cycles beginning with agrarian society and then moving over to the industrial society. The rapid developments in Information and Communication Technologies (ICTs) are said to be taking mankind to a new age, the Information Age and is ushering a new society, the Information Society. The main feature of this transition from an industrial to an information age is the increased relevance and importance of information. This resource is held to be basic to all processes and functions and is considered to be the driving force of economic development.

The term "leapfrogging" essentially implies a quantum leap from the traditional stages of progress to the information society: "The entire development process which encompassed three centuries in the industrial nations must be telescoped into a few decades. The gains achieved through an evolutionary process elsewhere must be obtained within one generation, and there are several stages to planning" (Reddi 1986:85).

Concretely, leapfrogging applies to developing and underdeveloped nations which are still in the process of industrialisation. It implies that these nations have the possibility of "leapfrogging the industrial revolution, proceeding to the most sophisticated technological advances and using these to spearhead the development process, rather than supporting it by pushing it from behind" (ibid.:86).

As the process of leapfrogging implies skipping over certain stages of industrial development, it hence calls for a clear shift in development priorities and strategies. It also therefore necessitates a "paradigm shift" in terms of economic and political orientation and development forcing nations to change direction at all levels of organisation and in all the spheres of activity -- infrastructure, education and training, economic policy and planning as well as institutional restructuring. Leapfrogging basically entails a radical change in a nation's aspirations and activities.

Due to sheer scale and scope of the changes that have to be carried out in the political, technological and economic spheres, the process of leapfrogging is inevitably problematic and complex. In spite of this, there seems to have been little debate in Malaysia as well as in other developing nations as to whether leapfrogging is necessary and possible. In Malaysia, like many other developing countries, decision-making pertaining to issues of vital import,

such as ICT, is normally dominated by the government while the general public is usually presented its policies and initiatives as *faits accomplis*. What is however clear for the moment is that leapfrogging is being offered as desirable, necessary and inevitable. Indeed, policy-making and planning do not normally derive from a public debate and consensus as illustrated by Malaysia's ruling elite indecent haste to enact the Communications and Multimedia Act of 1988. In this specific case, consultations with media professionals, practitioners, NGOs and academics were held after this important law was enacted.

Another aspect of this problem, and which is systematically being kept away from the public eye, is the fact that leapfrogging is certainly a result of global economic forces and pressures. The international capitalist system is driving the world's economy, and, as illustrated by privatisation and economic liberalisation all over the world, transnational conglomerates and businesses play a decisive role in determining the economic destinies of the developing world. Developing nations are being forced to change their economic planning and strategies according to the dictates of the global financial markets and economy. Leapfrogging is certainly a direct consequence of these pressures. It is clear, too, that technological innovations and capabilities are themselves a response to the needs and demands of an increasingly globalised and competitive economy.

Promises and Pitfalls of Leapfrogging: IT and MSC

IT undoubtedly offers great potential and promise for developing countries. Songs of praise for IT have been sung all over the world[1] and keep echoing all the time. And IT is already being extensively used in all spheres of human activity with great benefits to human organization, efficiency and productivity. In the case of Malaysia, the government contends that IT and more specifically the MSC offer new opportunities for progress and development in the economic, political and social spheres (Mahathir 1998).

However, as with all technologies, IT too has its own set of sensitivities and weaknesses that need to be addressed. Careful planning and implementation of IT hold the key to Malaysia's success in its development and IT enterprise. One cannot, moreover, ignore the realities on the ground and the structural weaknesses and deficiencies that hinder the development of nations like Malaysia. In certain cases, IT will amplify and increase already existing deficiencies of Malaysian society. In other cases, new problems will emerge as Malaysia attempts to chart out a course of development and exploit the potential of IT.

In terms of its contribution to the Malaysian economy, which has in the past year or so suffered from the speculative activities of some of the major international financial players, the MSC is perceived as being instrumental in promoting foreign investment into the country and enhancing economic activity (Mahathir 1998:76-83). The MSC, the government argues, offers Malaysia the opportunity to become a key player in the fastest growing and most lucrative sector of the Malaysian economy, i.e. IT. The value chain of products and services in the IT industry is envisaged to contribute to the revitalization of the nation's economy.

There are however clear weaknesses within the MSC initiative. Generally, the MSC is structured in such a way that it is heavily biased in favour of the transnational IT and IT-related corporations. Indeed, the MSC aims at making itself very attractive to the TNCs. If they have already set up shop in the MSC, it is primarily because they have been lured by the economic incentives offered by the Malaysian government as well as the high-tech infrastructure of the MSC (Mahathir 1998:45-54: Zaharom Nain and Mustafa K. Anuar 1998). Moreover, these TNCs are in the MSC project essentially to further their own economic interests. Thus, it is quite difficult to visualise, at least at the moment, how they will directly contribute to the local IT industry.

For instance, owing to lack of skilled local IT workers, the government has given wide latitude for the TNCs to bring in their own workforce. Assured Mahathir (1998:53), "Knowledge workers will be able to get in and out of the MSC without hassle. They will be treated like special guests... We feel sure that where our people qualify, and many are qualified, foreign companies will employ them. However, we are not going to insist on it."

Malaysia has succeeded to a large degree in its attempt to reduce absolute poverty. Policies such as the New Economic Policy (NEP), despite sometimes its problem of implementation, have contributed significantly to the economic upliftment of the *Bumiputeras* in particular and Malaysians in general. However, the Malaysian economy is still beset with the problem of unequal distribution of wealth. There is quite a gap between the economic condition of wealthy and urban sections of society and the rural folk. The introduction of the MSC and IT in the country is highly likely to accentuate these disparities unless a conscious and committed effort is made to provide all Malaysian citizens with a minimum IT education and training. This is clearly not the trend in the country today as illustrated by various IT projects, such as the so-called Smart Schools, that essentially promise benefits to the urban and relatively richer dwellers.

The greatest challenge in the technological sphere for the

Malaysian IT initiative will be perhaps to provide access to IT infrastructure to all Malaysians. It requires heavy investment in material equipment and constant upgrading of these. Until now, the spread of personal computers has been quite limited and only a fragment of the Malaysian population have access to the Internet and other ICTs. The disparities in terms of access will become a serious issue in the coming years as it could well lead to the marginalisation of a big section of the Malaysian society. Another major technological problem is the problem of technological know-how because until now, the education and training programmes have not been able to generate an IT workforce capable of handling the country's requirements in the hardware as well as software sectors.

Politically, Malaysians in general could benefit significantly from the MSC and IT. The Internet and other ICTs can offer the people vast potential in enhancing intellectual exchange within the country and with the rest of the world. This in turn could lead to greater political maturity and democratisation, which seems lacking in Malaysia and other developing nations. IT, if its usage is made more widespread and democratic, will also offer Malaysians easier and faster access to data and information and, thus, bring about a more interactive and participatory political environment.

This said, however, it is crucial to point out that the Malaysian political climate has been known to lack transparency. The recent political crisis involving the country's dismissed Deputy Prime Minister, Anwar Ibrahim, has highlighted the structural deficiencies of Malaysian society. Also placed under close scrutiny are vital questions of democracy and freedom of expression in the country. In Malaysia, although the State professes to adhere to democratic principles and ideals, certain practices only confirm the contention that the space for political expression is constricted. This is in part reflected by the fact that communications and the mainstream media are governed and influenced by a set of laws that are punitive in nature. Another factor that is equally disturbing is the pattern of media ownership and control that is prevalent in the country.

There is the Printing Presses and Publications Act which regulates and monitors the activities of publishers and printers. The annual requirement of permit and licence has a chilling effect of making both publishers and printers vulnerable to the dictates of the State. One can imagine that an investor who has invested in printing presses and also has employed many people will be compelled to exercise caution when publishing certain matters -- even to the point of exercising drastic self-censorship. Indeed, the possibility of one's printing licence or publishing permit being

revoked by the Minister of Home Affairs can be very real, especially when his decision cannot be subjected to judicial review.

Moreover, this legal imperative is also instrumental in providing avenues and opportunities for individuals and groups closely aligned to the ruling coalition to own media organisations. For it is very likely that these people would be given preference over other applicants when it comes to acquiring permit or licence to publish or/and print, or broadcast, especially if the latter prove to be very critical of the government. The recent restructuring exercise that occurred in the giant media group, Malaysian Resources Corporation Berhad (MRCB), which owns New Straits Times Press and Sistem Televisyen Malaysia (TV3) (NST, 27/7/99), indicates that directors of these companies, widely believed to have close links to UMNO, have been pressured to resign because of their purportedly close alignment with the sacked Anwar Ibrahim. These vacant positions have subsequently been filled by people who are said to be close or friendly to the Mahathir administration.

Indeed, the legal constraints eventually lead to a concentration of media ownership in the country, thereby restricting the range of views and interests that can possibly appear in these mainstream media (See E.T. Gomez 1994, 1991, 1990). The cumulative effect is that by and large views critical of the ruling elite are censored or marginalised by the mainstream media.

Other laws such as the Official Secrets Act and the infamous Internal Security Act (ISA) have curbed freedom of expression and violated human rights. In the case of the latter, its impact cannot only be felt by media practitioners but also members of the general public. These laws go a long way towards establishing a culture of silence and acquiescence in Malaysian society.

Thus, the existence of alternative and small publications such as the *Harakah, The Rocket,* and the *Aliran Monthly,* among others, must be seen in this light. These are publications that are published, in a sense, on the periphery of society. Run on a relatively small budget, these publications are not published daily nor enjoy (with the exception of the *Harakah*) high circulation and, in the case of party organs, are confined by law to membership of the political parties concerned. Put another way, they are not expected, nor permitted, to play the role of a daily newspaper that is critical and progressive.

Given this larger social and political context, it is hardly surprising, therefore, that the recently passed Communications and Multimedia Act of 1998 provides wide powers to the Minister of Energy, Communications and Multimedia to exercise some form of monitoring and, to some degree, controlling communications via IT. It is noteworthy that while the Malaysian Communications

and Multimedia Commission is assigned the role of overseeing IT-related activities in the country, the ultimate power however resides in the Minister concerned.

In other words, while forms of technology have changed drastically over the years, the yearn to control dissent and freedom of expression still remains intact in Malaysia and many other developing countries. Hence, we would argue that it is essentially the government's earnest desire to seek active participation of TNCs in the MSC project that compels it to loosen a little its grip on freedom of expression on the Internet. This is why the ruling imposed not too long ago on Malaysian cybercafes to register personal identification of users and customers by the local government was subsequently overturned by the federal government because it was perceived to be a violation of privacy and social control, a form of political embarrassment that would not go down well with the international participants of the MSC project.

The Internet has indeed become a useful platform that promises immense potential not only for political parties, especially the Opposition, in disseminating their views, but also many ordinary Malaysians in expressing their otherwise muffled opinions. A look at some of the popular websites, such as *Sangkancil, Laman Reformasi, Saksi,* and *Free Malaysia,* to name but a few, indicates the craving for intellectual exchange and social commentaries.

However, the use of the Internet is still primarily confined to urban centres, the middle class and the business people. This notwithstanding, the popularity of the Internet has certainly soared over the last few months particularly with the active use by people who support, sympathise with, or simply are curious of, the so-called *Reformasi* movement that was sparked by the ousting of Anwar Ibrahim. The use of the computer and the Internet is complemented by the conventional use of faxes and photocopy machines which help in circulating *Reformasi*-related materials, thus heightening the impact of the Internet upon a wider circle of people.

This recent phenomenon seems to suggest that while the punitive laws pertaining to freedom of expression and human rights still exist, many Malaysians have found new and creative ways via the Internet to exercise their democratic right to express and dissent. However, the fact that a few cases of irresponsible cyber-journalism and writing have found their way into certain websites shows that the building and strengthening of democratic institutions in the society is very crucial in ensuring that the right to communicate freely comes with responsibility. There are conventions, in other words, that one has to adhere to when exercising the right to communicate.

Indeed, there are pre-conditions that have to be met before a society attempts to progress in its utilisation of IT. For instance, only when there is a democratic guarantee of freedom of expression would a writer feel confident, if not courageous, enough to reveal her true identity in an intellectual exchange. Otherwise a pseudonym will often become a convenient shield to protect oneself from undemocratic and unjust actions against the writer. Unfortunately, as with many other things in life, a pen name can also, under certain circumstances, lead to abuse of freedom of expression, irresponsibility, and even intellectual anarchy.

In terms of culture, IT has the potential to open up the world's cultural spaces to Malaysia and thereby promote cultural dialogue and exchange, which will help enrich Malaysian culture. However, Malaysia's IT initiative and especially the MSC have certain serious shortcomings when it comes to cultural space. Nowhere within the MSC project is there any mention of culture for most of the applications seem to focus on the economic, political and social. The MSC is all hardware while the software, especially in the production of cultural content has been neglected. As it is, Malaysia has been plagued by a chronic weakness of its cultural industries and relies heavily on the import of foreign media and cultural content, be they from the US, Hong Kong or India. The lack of any cultural initiative to boost the national cultural industries is only aggravated by an increasing tendency in Malaysia to leave the cultural sphere to market forces, a kind of inertia that has made the country culturally dependent. Steps taken by many local universities and colleges are not encouraging. The emphasis given is primarily to train people to become technical experts, not as creative people who would utilise IT to fill in the gap within the cultural sphere.

Finally, unless the shortcomings of the IT initiatives in Malaysia are adequately addressed and rectified, the information highway that is dreamt of will lead to nowhere at best, or its destination will be essentially determined by the transnational actors at worst. For one thing, too much emphasis has been made by the Malaysian government on the economic benefits arising from the use of ICTs, while the social and political advantages that are likely to be accrued from the ICTs seems to have been sidelined or de-emphasised.

While one could deduce that these economic gains have been given prominence because the government wants to attract active participation from international and local businesses, one is also compelled to propose that it also has got to do with the government's own trepidation about the ICT's potential of providing wider space for freedom of expression and to further democratization of society.

Indeed, the prerequisite to building a "smart" information society that the Malaysian government cherishes must be a commitment to depart from the familiar -- "a muzzled media environment, traditionally rigid governance and hierarchical communication structure" (Loo 1999). For a political and intellectual environment -- like the one in Malaysia -- that encourages muffled criticism, blind allegiance to leadership, rote learning (in the education system), and a culture of acquiescence is inimical to an ambitious IT project like the MSC that clearly requires a climate of boundless creativity, open debate, and respect for truth and knowledge. In this regard, a strong civil society is crucial and instrumental in the effort to forge an information society that is democratic at the same time.

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