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Post-Industrial Malaysia: A Look At Some Local Issues

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***Abstract*—Malaysia, in its quest to achieve its Vision 2020 (a goal about reaching developed nation status), should rightly continue to focus on, amongst others, the development of human capital, sustainable development, and computerization in the country. The aim of this article is to briefly highlight the social, economic, legal, and political impact of computerization in the country. Then, several serious micro-level issues will be discussed as they might later derail Malaysia's efforts to realize its goal of achieving high income and the developed nation status. Based on my own personal observation (as methodology) over several years since 2002, the issues which I deemed to be serious are Malaysia's national unity, deviance, health, slow Internet connection, and the lack of local software development.**

Borrowing from Daniel Bell's usage of the term 'post-industrialism' [1], I am using this term for Malaysia. In this essay, 'post-industrial Malaysia' is used to denote the country's eventual success in reaching Vision 2020, the goal of being a developed and high-income nation. A post-industrial Malaysia must have resolved the mentioned local issues too.

Keywords-post-industrialism; sustainable development; Vision 2020; deviance; computerization

I. INTRODUCTION

Post-industrial Malaysia is a direct reference to sociologist Daniel Bell's 'post-industrialism' which refers to technology that supports an information-based economy [2]. A post-industrial society is also sometimes known as an information-based society or knowledge-based society. In Britain, the more popular term is "post-modernism".

Malaysia, with its Multimedia Super Corridor (MSC) project, has already launched its seven flagship applications to achieve this end. More recently, in the 2011 Budget, Prime Minister, Datuk Seri Najib Tun Abdul Razak also announced financial allocations to continue transforming Malaysia into a high-income economy. These allocations include skills training for our people, the creation of an innovative digital economy, and the development of green technology [3] for better quality of life in the nation.

A post-industrial Malaysia must have resolved certain social issues which can affect its human capital development and its people's quality of life in general. As clichés would have it, it is the citizens who make or break their own country. Therefore, social issues such as gender equality, digital gap between the haves and have-nots and worthy social goals for the youth are pertinent in nation-building. How will a post-industrial Malaysia be like? It is not difficult to say that computers will continue to play a major role in our nation's development. The more difficult issue is how computers will affect the way we live 100 years from now. While it is not my intention here to gaze into the crystal ball, it is safe to say that computers have already affected almost every aspect of the Malaysian way of life, and will continue to do so.

In this article, the words 'information and communications technology', 'computer technology', and 'information technology' are used interchangeably. They mean the use of all types of computer-related technology like the Internet, the personal computers, the mainframe computers, multimedia technology, and computer chips.

In the following sections, I will highlight some social, economic, legal, and political impact of computerization in the country since the launch of the MSC in 1996. Then I shall outline the issues that Malaysia should be concerned about if it wants to look ahead. These highlights are by no means extensive; they merely represent a collection of my observations done over several years since 2002 when I started to put my thoughts into paper.

II. THE SOCIAL IMPACT OF COMPUTERIZATION

The 200-year-old industrial revolution held out the hope for a better world. Although there are many unfulfilled dreams such as continued global poverty, the world did, in fact, become better in some aspects such as the closing gap between the haves and the have-nots [1], as well as democratization in the world's nations. In Malaysia and the Western world, for example, there is now more equality among the genders (even though the women 'struggle' continues), and an increasing number of women are aware of their rights. Moreover, the modernizing influence of industrialization and computerization has helped Malaysia become a "tiger cub".

For the Malaysian government, at least, the information revolution which began in the West in approximately the 1950s, promises to help us even more – to become industrialized, high income, and hopefully socially enlightened by the year 2020.

A. Education

In Malaysia today, citizens who had received at least a Standard Six education in a public school would now know how to use a computer. Some of them are even more proficient or well-versed in the intricacies of the computer

[1] See the Kuznets Curve in Macionis, John J. (2010). *Introduction to Sociology (Thirteenth Edition)*. New Jersey: Pearson Education.

than their parents. For students who have been brought up to use the computers to do their work, some of them have already encountered the feeling of a "lost arm" without the computer. Some youngsters already have their own web pages, while others are into software development, and robotics.

For college and university students, they also use the Internet to search for information and to complete their assignments. With the Internet, it is now possible for young Malaysians to do distance learning with institutions of higher learning overseas. Moreover, with the establishment of Wawasan Open University (WOU) in 2006, working adults-cum-students use its relatively well-equipped digital library which is open 24 hours a day, 7 days a week.

In my opinion, digital libraries are a thing of the future – even established mortar-and-bricks universities should consider this option because young students do not sleep as regularly or as normally as adults do. Partly, this is the result of the easy availability of computer games which they play wee hours into the morning. The health impact is not to be ignored either. In fact, this is quite a serious issue of concern in universities where young people do not have enough energy to pay attention on their lectures and tutorials in the mornings as a result of their 'owlish' habits. On the other hand, digital libraries are very helpful for students with 'owlish' habits because such digital libraries do not close at all. Even people who suffer from insomnia will benefit from such easy access to information.

The information revolution has also affected the Malaysian educational policy. For example, many new universities now offer more information and communications technology (ICT) courses, and less of the Arts courses. Students are also encouraged to take up these courses in line with the nation's present and future needs.

Through research & development, there are now locally produced computer products. For example, Universiti Sains Malaysia (USM) lecturer, Dr Sureswaran Ramadass and his group of researchers who founded the Mulitmedia Research Labs Malaysia Sdn Bhd have created the multipoint-to-multipoint Multimedia Conferencing System (MCS).

B. Social Stratification

For sociologists concerned with gender equality, the information revolution might 'overturn' the beneficial effects of the industrial revolution[2]. This is because many computer games that introduce children to computers are designed for boys [4]. A lot of these PC games are also violent in nature, and thus, this seems to attract more males than females. As Malaysia does not produce many local PC games and edutainment software, such gender bias towards boys probably occurs as well because such Western products are bought off the shelf or installed in local cybercafé computers where young people hang out to play.

It is also of concern to many that the gap between the rich and the poor, the urban and suburban areas, will increase with the advent of computerization. This digital divide is not only between the people within a society but also between countries in the world. This trend is inevitable because it is commonly known that new technology usually benefits the rich first, and then the not-so-rich [5].

In Malaysia, efforts have also been made to bridge this digital divide, like the one undertaken by Dr Lin Mui Kiang in a project called SMASY, short for Smart Masyarakat or "Smart Community" [6] in Kampung Raja Musa, or the one in Sarawak, undertaken by Englishman Roger Harris in a project called E-Bario [7]. The electronic community (e-community) project to bridge digital divide is one of the five thrust areas of the National Information Technology Council [8]. Kampung Juasseh Pekan, Negri Sembilan, is another example of such village chosen for this pilot project. Of course, there is now a need to evaluate the effectiveness of such projects as it's been quite a while since they had been undertaken. Nevertheless, such projects are small scale in nature and will have very little impact on the urban-suburban digital divide in the macro sense.

C. Entertainment

Besides Les' Copaque which is the maker of local 3D animation movie "Geng: The Adventure Begins[3]" [9], there is a need for more of such companies in Malaysia to tap into local talents and local folklores. Computers also play a major role in the art like special effects in movies and other entertainment such as music.

Where youngsters of the past play hopscotch and physical games with their peers, youngsters of today tend to play computer games for entertainment. Even a game of chess or monopoly can now be played at the computer. This naturally affects the way young people interact with their elders, siblings, and peers. For example, they might find their computer software more interesting than their human counterparts. Or they might spend more time at the computer than interacting with other fellow human beings. Such occurrence will indirectly affect their social skills because virtual life is different from the 'real' (flesh-and-blood) world.

D. Environment

do all used computers go? Increasingly, this will become an issue that Malaysia must deal with as part of its sustainable development plan. If not dealt with, the discarded PCs will become 'mountains' of eyesore and an environmental burden and/or hazard. The use of computers will also require an increase usage of electricity. With two nation-wide electricity outages in the country already, Malaysia's need for electricity is ever increasing. The need for more electricity to power computers and other machineries is also considered as an environmental issue because in China, for example, its government had decided to dam the Yangtze River to generate electricity. In Malaysia, we have the controversial Bakun Dam project in Sarawak

[2] See Kuznets Curve again for the forecast. (Macionis, 2010), pp. 264-265.

[3] According to Aimi Aziz (2009), this animation movie "Geng: The Adventure Begins" highlights the travels and experience of twins Upin and Ipin. It also grossed the second highest ticket collections in Malaysia's history of local films, with earnings of more than RM6 million.

that was objected to by some quarters for fear of its negative environmental impact.

In terms of paper usage, computers can help reduce the need for paper because of better storage facilities, such as keeping data in CDs or hard disks. Computers also can reduce trash as writing drafts can be done electronically. Nonetheless, the environmental impact of computerization remains an issue which needs to be addressed.

E. Helping the Disabled

Computers provide the disabled a certain degree of freedom from their disability. For example, we now have speech synthesisers to read aloud to the blind. This gives them freedom from total dependence on human readers who, due to poor reading abilities, might render the texts difficult to understand for the blind.

F. Health and Medicine

Health problems do arise as a result of spending too much time at the computer. Some of the common complaints include headaches, blurred vision, dry eyes, eye strain, and muscular pain like neck, shoulder, and back pain. Repetitive Stress Injury or Repetitive Strain Injury (RSI) [10] is a variety of injuries which may happen such as tingling, numbness, and pain of the wrists [11]. In 1992, more than 280,000 RSI cases were reported to the U.S. Bureau of Labour Statistics [12]. Although these statistics are old and are only from the United States, cases of RSI have also been reported in BBC News in the United Kingdom in 2008 [13]. Do Malaysians also experience RSI? If there are such cases they have not been widely reported, and hence, further research is required to find out. Nonetheless, Malaysia has the National Institute of Occupational Safety and Health (NIOSH) to address such occupational-related risks and diseases[4].

Under one of the seven MSC flagship applications, the government has launched Tele-health, which also focuses on "wellness" programmes, to deliver cost effective healthcare to the public. With this, it makes information more easily available to Malaysians. Moreover, there is tele-consultation which comprises a network of 41 Health Ministry centres across the country. It allows online exchanges of medical documents. In this way, physicians in remote areas have access to information and expertise of other physicians who are far away. Unfortunately, I am not able to ascertain if this had been undertaken successfully because there's been no mention of this at all now in the official Health Ministry website.

In the Selayang Hospital, for example, computerization has made research on diseases easier. Moreover, computerized patient records save costs, and allows for easier medical treatment [14].

G. Communications

In local newspapers like the *New Straits Times* and *The Star*, for example, journalists' e-mail addresses are sometimes included to facilitate speedy feedback from the public. One is also able to e-mail or sms feedback to editors. With Twitter, politicians on both sides of the political divide now use it to quickly disseminate information or opinions to their supporters.

Malaysians use the Internet facilities quite extensively. For example, Malaysia has about 14.9 million Internet users today which is 53% of the total population[5].

For business people, communications have improved by leaps and bounds with the mobile phones, fax machines, pagers, e-mails, and the personal digital assistants (PDAs), iPhones, and the iPods.

H. Buying Habits

According to Professor Toru Nishigaki [15] from the University of Tokyo, the buying habits of a post-industrial society are different from that of an industrial society. How? The post-industrial or information society finds value in and attaches a price to information itself. Therefore, consumers in a post-industrial society usually equates price with quality, and are also willing to part with their money to buy goods endorsed by famous sports personalities. These are symbolic acts! The products may not be that great in quality nor taste good but they are bought for their symbolic value which promotes and enhances status.

III. THE LEGAL IMPACT

New laws have been promulgated to address new issues and problems created by computer technology. In Malaysia, such laws include Digital Signature Act 1997, Computer Crimes Act 1997, Telemedicine Act 1997, Communications and Multimedia Act 1998, and Copyright (Amendment) Act 2002.

On 5 April 2010, the Personal Data Protection Bill was passed by the Dewan Rakyat (lower house of Parliament). After royal assent and gazetting, this Personal Data Protection Act will be enforced, making Malaysia the first ASEAN nation to have such a law [16].

IV. ECONOMIC IMPACT

Computerization has changed the way we interact with our bosses and co-workers. The company hierarchy has been flattened because now everyone can e-mail the top boss if he or she chooses to do so, at his or her own risk. There are other significant changes in Malaysia too.

A. Employment

Computerization has changed the way we work. For example, we can now work from home with a PC. Computerization has also changed the number of people needed to do the work. Moreover, computerization also generates new kinds of jobs. For example, more and more jobs are now created in the services sector such as accountancy, banking, law, communications, and computing. I suppose this kind of change will be the same elsewhere

[4] At the time of writing, NIOSH Malaysia has not replied to my query about RSI cases (if any) in the country.

[5] The figures were provided by the Malaysian Communications and Multimedia Commission (MCMC). Quoted in Afiz Abdullah. (2008). Broadband Defined. *GRADAsia* (2009 Edition 2): p. 22.

where computerization takes place, and where a post-industrial/knowledge/information society is being formed.

B. Managing Human Resources

In a post-industrial society, human capital or human resources (HR) are considered the *primary* resource in the economy, and an organization's people will determine its competitiveness. Similarly, in any country, its own people will make or break the country. Thus, it is important to manage HR we achieve goals of being competitive and progressive.

With computer technology, it becomes easier to manage an organisation's human resources. Using a Human Resource Information Systems (HRIS), an organisation can obtain timely and relevant information to make crucial human resource decisions [17] in its business operations. Although I am unable to verify this, it's believed that some companies in Malaysia are already using HRIS for effective HR decision-making in their daily operations.

Besides, in the recent 2011 budget, the Malaysian PM Najib Razak announced the establishment of a Talent Corporation under the PM's office. This shows how significant 'brains', 'talents' and 'skills' (i.e. HR) are now being focussed. Where previously, Malaysian politicians only talked about race and ethnicity and a share of the economic pie, such talks have been 'drowned' by issues of national unity, economic competitiveness, and globalization.

C. Banking and Finance

It is now so easy to do banking over the telephone, or the Internet. One can also transfer money between accounts easily at home, and many more people use the credit cards.

Malaysia will transform into a "cashless" society with debit cards being more encouraged now than credit cards and they too are plastic money; cashless.

In many parts of the West, a "cashless" society is becoming a reality. And in the English town of Swindon, for example, this has already happened [18]. People there pay for everything from McDonald's hamburgers to clothing by using a bank card [19].

V. THE POLITICAL IMPACT

The political impact of computerization is obvious in Malaysia especially during the 12th General Election which was held on 8 March 2010. The Opposition gained a very much stronger foothold in the country as a result of the role played by alternative media in disseminating non-mainstream news.

The Malaysian PM maintains a blog which disseminates information and receives feedback from the readers. This makes him seem accessible to the people. He even twitters! Opposition Leader, Datuk Seri Anwar Ibrahim does the same thing too.

A. Political Freedom

The Internet has provided Malaysians with more political freedom because they can voice their views or anger through an uncensored medium. In contrast, mainstream newspapers and magazines here are still under the strict control of the Printing Presses and Publications Act (1984) which curbs press freedom in Malaysia.

The citizens can also join the thousands of discussion mailing lists on the Internet to talk about any topic of interest to them. Hence, their access to information and knowledge decreases the government's ability to abuse its power [20].

Moreover, the unique feature here is this – the Malaysian government has continued to maintain its policy of non-censorship on information posted on the Internet. This atmosphere encourages much political debate in the country. Computer technology, then, has played a significant role in the political freedom of Malaysians.

B. Political Control

Computers have also dramatically increased a government's ability to collect information on its citizens [21]. They can be used to track citizens' movements and activities. For example, using a computer's search facility, and networking sites like Facebook [22], it's now so easy to track its citizens' activities.

C. Security

Computers have opened up new risks especially when our data are all stored and linked up (i.e. networked). Besides the issue of invasion of privacy, there are risks of unidentified hackers hacking into our system to retrieve classified information about national security and military intelligence. Such risks are higher with digitization or computerization.

VI. POST-INDUSTRIAL MALAYSIA: LOOKING AHEAD

It is necessary to address pertinent micro-level issues even as we pursue a macro goal like Vision 2020. These issues are as follows.

A. National Unity

National unity is once again an important issue because many young people today have grown up without the horrific memory of the racial riots of 13 May 1969. Moreover, there have been discussions and disagreements as to what constitutes Malay/Bumiputera rights and privileges. What are birthrights and what are not? These are sensitive and explosive issues and must be handled well.

B. Deviance

Malaysia is losing a lot of young talents through not being able to solve the *Mat Rempit*, 'hell-rider' motorcyclists, and drug addiction problems. These are all social costs. The *Mat Rempit*s, and the drug addicts all seem to reject our society's conventional goals[6]. There is indeed an urgent need to think and re-think about how to bring these people back into the mainstream fold as they constitute our nation's scarce human resources.

Apart from these, how will Malaysia cope with citizens whose sexual orientation is different from the majority? Our laws do not seem to provide these people with any solace or refuge.

[6] Read Merton's Strain Theory (Macionis, 2010), p. 220.

C. Health

More and more of our citizens are obese and this is so worrying because there are economic costs and health consequences of obesity [23]. Our scarce human capital or HR are being threatened here.

D. Slow Internet Connection

Slow Internet connection is also a concern to many local users. When compared to high-income countries' internet speed(s), Malaysia's is much slower. Perhaps because this is a very capital-intensive venture, to provide high speed and at relatively affordable surf rates, are too much of a challenge for us. Perhaps this is the reason for the much slower Internet speed in Malaysia.

E. Lack of Local Software Development

One can never be too complacent or dependent on foreign software alone. The lack of locally produced software could be due to many factors, one being the lack of piracy enforcement. Although it is important that middle-income and lower-income countries have access to knowledge and information from the West, our values and culture are very different from our Western counterparts. In the West, where its culture is more individualistic, copyright is quite well-accepted. However, in Asia and Africa where cultures are more collectivist in nature, enforcement to prevent software piracy is difficult. This is despite realizing that rampant software piracy indirectly discourages the development of local software and creative works.

VII. Conclusion

Malaysia has changed much since the launching of the MSC project in 1996. While computerizing to help the nation leapfrog into a high-income country status, the Malaysian government must also pay attention to the micro-level issues mentioned in this article. I deemed these issues to be serious as they involved our nation's most important software, i.e. human capital (HR).

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