

# Role of ICT4D as a catalyst for MDG achievement

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## Executive Summary

*The changing state of the world— socially, economically and environmentally – casts a compelling backdrop against which the Millennium Development Goals (MDG) seek to enlighten and address global developmental issues. Previous frameworks and paths which led the Developed world to economic prosperity are no longer open, applicable or relevant to the majority of Developing nations seeking opportunities for self-betterment. The ICT Revolution, however, may deliver such opportunities, but only if harnessed within desirable and achievable models of growth specific to the needs and wants of individual Developing countries. To rationalise the opportunity ICT may offer a Developing nation, it is necessary to identify new global role-models in the vein of the aspirants themselves; nations whom by effort of visionary policy and nurturing of critical conditions have realized tremendous growth which can be demonstrably attributed to proactive ICT-related initiatives. This chapter studies the framework for growth in Malaysia over the past 40 years, revealing lessons of how ICT opportunities were leveraged upon to place the nation squarely on a path toward achieving its MDG targets and becoming a Knowledge Society.*

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## 1. Introduction

Since the breakdown of Socialism and the fall of the Berlin Wall; the juggernaut of Globalization and the WTO Seattle Riots; the battle against terrorism since 9/11; and the force of tsunamis and hurricanes which show little respect for economic prowess; the world has endured unprecedented discontinuity. Some nations have been liberated, others remain torn, and yet others equate pre-emptive strikes with self-defence. This drama frames the paradigmatic and life-changing effects being brought about by the Information and Communication Technology (ICT) Revolution. Against this backdrop the United Nations (UN) adopted eight Millennium Development Goals (MDG) setting clear targets for reduction of poverty, disease and environmental degradation, within a global compact, before 2015.

Jeffrey Sachs, Special Advisor to the UN Secretary-General on the MDG, in evaluating the likelihood of achievement of the MDG, contends that current Poverty Reduction strategies are inadequate (Sachs, 2005). He further proposes that the ‘one-size-fits-all’ fiscal and economic remedies, benchmarks and measures advocated by the IMF are anachronistic and can be dangerous; and that an apparent incoherence exists between stated ‘development objectives’ and the manner in which ‘development assistance’ is offered. He suggests specific elements must inform any aspirant strategy that in themselves are tailored to achieve the MDG in a cohesive, coordinated manner. One element in particular is the need for ‘Differential Diagnosis’ to “identify the policies and investments that the country needs in order to

achieve the MDG” which will necessarily differ from country-to-country. This view is shared by the authors – that several Less and Least Developed Countries (LDC) will not achieve the MDG by 2015 if left to face the challenge alone; without the benefit and assistance of ICT; and without a suitable model for relative comparison of their achievements and progress. Conversely, if national strategies are properly conceived with appropriate milestones, many LDCs have a better than equal chance to break their cycles of poverty, destitution and underdevelopment. The authors, basing a case upon the actual experience of development in Malaysia over the past 40 years, and arguing from a developing country perspective, believe that certain African nations can not only achieve equivalent development but may themselves become models for the rest of Africa.

Such development is neither simplistically linear nor solely infrastructure-based. Rather, the process is first underpinned by ‘foundation conditions’ to establish the minimum, basic and necessary Infrastructure and ‘Infostructure’ (the non-physical mechanisms regulating and channeling a digital or virtual environment). These are critically supplemented by catalytic ‘driver conditions’ to seed, spawn and nurture entrepreneurial spirit and enterprise that may leverage upon the ICT revolution to deliver economic growth and create wealth.

An appropriate metaphor to illustrate the symbiosis between these different conditions is that of a sailboat and its crew. The physical construct of the vessel - *its rudder, hull and sails; GPS and communication system; and emergency generator and distress equipment* – equates to the foundation conditions necessary to take to the sea. Driver conditions required for a sea-worthy vessel would include the *competence* of the crew; the *leadership* of a Captain; the *goal* of a known destination; and, importantly, the *skill* to navigate with favorable winds. To extend the metaphor, many winds have blown over underdeveloped sailboats and crews. Industrialization, a powerful wind that accelerated Developed nations over the past two centuries, has seemingly left a Developing flotilla in need of tugs and salvage in its wake. However, a new ICT-powered wind may allow Developing sails to balloon this time around on an MDG wave. This does not ignore or subsume agendas to deliver basic priorities - food, shelter and good health; nor the need for political stability and good governance; nor the support of a critical mass of local Private Sector contribution. It is to ensure explicit convergence of these factors with any ICT initiative that every Developing nation needs a specific plan for MDG achievement with international assistance; and a national plan for sustainability thereafter. If comprehensive foundation conditions are laid, driver conditions can be nurtured through an ICT-driven Knowledge Strategy allowing nations to ‘leapfrog’ and meet MDG targets and sustain development.

This chapter is organized as follows: *Section 2* discusses the impact of ICT on socioeconomic development; *Section 3* exhibits key performance indicators for Malaysia and selected African countries to identify a problem statement; *Section 4* profiles the policies and strategies which Malaysia employed to leapfrog stages of socioeconomic development and be today ranked the 24<sup>th</sup> most competitive nation in the world (WEF, 2005); *Section 5* draws lessons from the Malaysian experience that may offer possibilities for

some African states, and identifies policy imperatives needed to develop both foundation and driver conditions for competitiveness and sustainable development.

## **2. The Impact of ICT on Socio-Economic Development**

The impact of ICT on development at the micro and macro level has been widely debated. Studies by Becchetti et al. (2000), Criscuolo & Waldron, 2003 have shown that ICT increased the productivity, efficiency and market reach of firms all over the world. Other studies by Dewan and Kramer (1998 and 2000) Brynjolffson and Hitt (2000), Kraemer and Dedrick (2001), Hernando and Nunez (2002) and Kim (2003) showed that ICT does contribute positively to productivity and economic growth in most Developed countries. ICT can also benefit the socioeconomic development agendas of Less Developed and Developing countries in the following ways:

- Providing cheaper, higher quality communication to marginalised communities; empowering them; and reducing inequalities between these communities by increasing access to education, training and employment opportunities at a fraction of prevailing costs.
- Enabling easier access to information, and a wider market reach, for farmers and small traders in poorer regions; and reducing transaction costs by removing ‘middle-men’ and other intermediaries.
- Reducing red-tape and corrupt practices via electronic public delivery systems and e-government initiatives; boosting the ability to monitor and respond quickly to hunger, poverty and other socioeconomic problems via public programs.
- Raising public awareness and disseminating educational programs on medical and social problems that plague poorer regions; and facilitating exchange of knowledge and information by medical personnel in rural and urban areas (‘tele-medicine’).
- Fostering closer interaction, cooperation and collaboration between national stakeholders; the ability to tap into the ‘collective intelligence’ of the global community to raise the innovative capacity, enhance wealth sustainability and prevent environmental degradation (forming virtual R&D clusters and innovation networks).

Nair and Kuppusamy (2004) and Nair et al. (2005) showed that while Developed countries have benefited from the ICT revolution, most Developing and Less Developed countries have fallen behind - revealing a disturbing trend that the digital-divide and the competitiveness-gap between Developed and Developing have widened over the last decade.

All is not gloomy for the inadvertent laggards, as there are ‘role-model’ nations from the Developing world that have broken away from the cycle of poverty and despair. These countries have not only met some of their MDG targets, but also raised their global competitiveness. The rise in these model nations’ standards of living was not solely attributable to pervasive ICT infrastructure. Rather, a key

springboard providing them the opportunity to leapfrog to higher stages of socioeconomic development was comprehensive, integrated, holistic strategic planning to establish a Knowledge Society underpinned by ICT that enhanced foundations and driver conditions within their societies. The case of Malaysia, one such 'role-model' Developing nation, is discussed in the coming sections.

### **3. Trends in Malaysia and Selected African States**

This section examines the trends of five socioeconomic indicators for Malaysia and eight African countries. The indicators used reasonably capture developments pertaining to an ICT-based economy; and the African nations selected are representative of other countries in Africa at differing stages of development.

*Figure 1* shows the per capita real gross domestic product (GDP) from 1975 to 2004 (under purchasing power parity). From the figure, we observe that in 1975, South Africa had the highest per capita real GDP of US\$10,617. From 1981 to 1999, the per capita real GDP of South Africa was on a downward trend. From 2000 to 2004, the GDP was on the rebound, increasing to US\$10,366. Tunisia and Morocco were the second and third fastest growing African countries. Most of the other African countries had very low per capita real GDP in 1975 and the rate of per capita real GDP growth over the sample period was negligible. In some African countries it has been on a downward trend. On the other hand, Malaysia recorded the highest per capita real GDP growth over the sample period -- from US\$2998 in 1975 to US\$9032 in 2004.

*Figure 2* shows the network readiness of the sample countries. The network readiness consists of two measures. The first measure is the Web Measure Index (WMI), which measures the presence/absence of electronic facilities/services and the sophistication level of the national portals and the web-sites of government Ministries/Departments. The second measure is the Telecommunication Infrastructure Index (TII) which is the weighted average of the following six indices: PCs/1,000 persons, Internet users/1,000 persons, Telephone lines/1,000 persons, On-line population/1000 persons, Mobile phones/1,000 and TVs/1,000 persons. On the WMI, South Africa registers the highest score. On the other hand, Malaysia records the highest score on TII. The WMI and TII scores for the remaining countries are significantly lower than that of Malaysia and South Africa.

The proportion of the population in the sample countries that have tertiary education and the human development index (HDI) are given in *Figure 3* and *Figure 4*, respectively. From these figures, we observe that, Malaysia leads the pack, followed by Tunisia, South Africa and Morocco. The remaining countries register significantly lower values for the tertiary education and HDI. The life expectancy of the people in these countries is given in *Figure 5*. This figure shows that Malaysia and Tunisia have the highest life expectancy of 73 years, followed by Morocco, with a life expectancy of 69 years. The remaining countries register a significantly lower life expectancy, with Zimbabwe recording the lowest life expectancy of 39 years.

From the empirical results, Malaysia seems to be the most successful developing country in meeting not only the targets set forth in the MDG, but also in its preparedness for the global knowledge economy. In the next section, we will examine the policies and strategies that have helped Malaysia achieve the MDG and k-economy targets.

#### **4. The Malaysian ‘GEM’ (Growth with Equity Model)**

The Malaysian economy evolved in three distinct phases over the last 40 years. This development experience may be termed as: an early *imitation* phase; leading to an *integration* phase; and being now poised for an *innovation* phase.

##### ***Independence (1957) & the New Economic Policy***

In 1960 Malaysia was a nascent economy, comparable to many peer nations in Africa. Agriculture was the main contributor to wealth of this newly independent country with per capita real GDP of US\$450. Since the 1960s, Malaysia’s socio-economic development strategies have been guided within 20-year *Outline Perspective Plans* (OPP), the progress of which are monitored, reviewed and aligned as necessary within 5-year national development plans. OPP I was developed in 1970 and informed by significant socio-political disturbances in 1969. A key agenda of OPP I was the overarching *New Economic Policy* (NEP: 1971-91) - a 20-year agenda to achieve ‘growth with equity’. This policy aimed for national and multiracial unity by focusing on two strategic targets: the eradication of poverty; and the elimination of racial segregation based on social and economic function and geography.

##### ***Vision 2020 & The National Vision Policy***

In the 1980s under the visionary leadership of Dr. Mahathir Mohamad, Prime Minister, *Vision 2020* was promulgated to transform the nation into a major regional industrial manufacturing hub. Consequently, Malaysia rose to become the largest producer and exporter of electronics and electrical (E&E) components and products outside of the US and Japan. In 1991, the NEP was succeeded by the *New Development Policy* (NDP: 1991-2000) to inform OPP II with an enlarged vision of achieving equitable catalytic economic growth for all races. The NDP was designed to be the foundation upon which Malaysia would achieve developed country status by 2020.

To boost national competitiveness and resilience in the face of globalization, technological explosion and market liberalization, a further 10-year policy was initiated. The *National Vision Policy* (NVP: 2001-2010) nurtured conditions (‘driver’ conditions) to allow realization of a knowledge-driven society by 2020. Central to this policy was the development and implementation of key programs to create environments conducive to building national capacity in science, technology and innovation.

##### ***The National IT Council & the National IT Agenda***

The strategic role of ICT became clear shortly thereafter. The 2<sup>nd</sup> *Industrial Masterplan* (IMP2: 1995), with a focus on ‘cluster’ development, recognized the role of ICT in facilitating *productivity-driven* growth leading toward a *knowledge-driven* economy. The challenge to ‘informatize’ Malaysian society was

then initiated by the Government forming a *National Information Technology Council* (NITC: 1995), which delivered a *National Information Technology Agenda* (NITA: 1996). Chaired by the Prime Minister, the NITC was focused on the NITA specifically formulated to transform Malaysia into an information and knowledge-driven economy. The three strategic objectives of NITA are to develop *People, Infostructure and Applications*; and it remains the main catalyst for the diffusion, adoption and integration of ICT in all sectors of the economy. To achieve the objectives of NITA, the Government established foundation conditions (*Infrastructure / Infostructure*) and nurtured driver conditions (*Incentives, Intellectual-capital, Institutions, Innovation, Integrity and Interaction/Networking*), also known as the *7i-Framework* (Nair and Kuppusamy, 2005).

### ***Foundation Conditions***

ICT infrastructure prior to the 1990s provided only basic telephony to most people in urban areas. During the 90s, access to fixed-line services expanded to a wide segment of the population nationally. Newer, more cost-effective ICT further enhanced digital connectivity across the nation, with widening of connectivity directly attributable to the following government-led initiatives:

- Privatisation of the state-owned telecommunication provider, Telekom Malaysia, in 1990 improved the quality and reach of the telecommunication service.
- Opening-up of the mobile phone and the Internet industry to five new entrants in the mid 1990s increased competition within the telecommunications sector. This resulted in improved levels of service and lower costs for customers.
- ICT connectivity in rural areas was intensified between 2000 and 2003. In 2000, 33 pilot community-based Internet Centres were developed nationwide (12 of which were in rural areas); with an additional 31 Internet / Information Centres established across the nation between 2001-03 (Economic Planning Unit reports, 2001 & 2003); and an NITC Strategic Task Force, experimented with a Public-Private Partnership model for another 13 pilot projects nationally (John et al., 2004).

A physical tenet of NITA is Malaysia's *Multimedia Super Corridor* (MSC). The MSC delivered world-class ICT infrastructure at a development cost of approx US\$19 billion over an area of 800 sq.km. to encapsulate new twin 'cybercities'. Putrajaya is the new administrative capital of Malaysia (a 'paperless' government city); and Cyberjaya, a city for converging new technologies. Both lie on an axis between Kuala Lumpur and the new International Airport. The MSC program first phase attracted leading technology-based organizations to relocate into Malaysia to develop customized next generation multimedia technologies, innovative content and service delivery. The second phase (2003-2010) expands the MSC to other cities nationally; and the third phase (2010-2020) expects an MSC-type environment to be prevalent throughout the Malaysia.

### ***Driver Conditions***

*Incentives:* These physical development initiatives were supplemented with incentives to raise the level of ICT adoption and acceptance nationally such as abolishing sales tax on PCs and components; granting of

accelerated capital allowance for PCs and ICT equipment; tax rebates of US\$105 (RM400) for PC purchases; and a scheme allowing contributors to the Employment Provident Fund (EPF) to withdraw savings to purchase PCs and ICT.

*Intellectual Capital:* Beyond hardware and technology, the Malaysian government recognized the high priority for human capital to sustain and develop a knowledge-based economy. Several initiatives were undertaken over the last two decades to reduce the knowledge-gap between segments of the population; increase the proportion of educated workforce; and create an 'ICT-savvy' society:

- The literacy gap between genders was reduced from 83% male / 68% female in 1980 to 97.2% male / 97.3% female in 2000.
- Investment in education increased from 7.5% of GDP in 1980 to 17% of GDP in 2003. Primary education is mandatory; and both primary and secondary education is free of charge.
- ICT learning environments were introduced in primary and secondary schools: in 1999 12,000 schools were equipped with PCs and Internet (EPU, 2003) and by end-2005 all 18,000 schools will have ICT-enabled learning. Rural schools were linked to the Internet using *Very Small Aperture Terminal* (VSAT) and wireless loop technology. The *MySchoolNet* portal was established to enable teachers and students to source educational material and information
- To increase manpower in the ICT sector, a *Multimedia University* owned by *Telecom Malaysia* was established in 1996.
- The number of universities, university colleges, polytechnics and colleges were increased over the last decade. There are 11 public universities, 10 private universities (4 run by Government-led private sector), 7 public university colleges, 10 private university colleges, 20 polytechnics, 34 community colleges and 282 other private institutions of higher learning. The tertiary education sector was opened, with 4 foreign universities having established campuses in Malaysia.
- Greater emphasis was given to Science and Technology (S&T) education at the tertiary level under the 8<sup>th</sup> *Malaysia Plan* (2000-05) with 60% of graduates in 2005 expected to be in S&T area (EPU, 2001).

*Institutions:* To facilitate connectivity, diffusion of information, knowledge and business operations a strong institutional framework is key to sustaining development in an ICT-supported economy. To address these challenges the Government created a regulatory environment with new multimedia convergence laws in 1998. The *Malaysian Communications and Multimedia Commission* (MCMC) was established with oversight on the following (<http://www.mcmc.gov.my/>):

- *Economic Regulation* – promotion of competition, prevention of anti-competitive conduct, compliance to rules and performance quality/service.
- *Technical regulation* – efficient frequency spectrum assignment, development and enforcement of technical codes and standards, and the administration of numbers and electronic address.
- *Consumer Regulation* – empowerment of consumers, protection of consumers rights, dispute

resolution, affordability and availability of service.

- *Social Regulation* – content development and content regulation.

Nair et al., (2005) have argued that for ICT to contribute to economic development, a legislative environment should be in place to support communication, commerce and trade in the digital medium. Malaysia is a leader in the developing world with a comprehensive legal architecture for the digital economy introduced over the last eight years to facilitate infostructure development (EPU, 2001):

- *Digital Signature Act (1997)* – Facilitates e-commerce and secure on-line transactions through the use of digital signatures.
- *Computer Crimes Act (1997)* – Provides for offences relating to the misuse of computers; it aims to clearly define activities such as cyber fraud, unauthorized access, interception and illegal use of computers.
- *Communications and Multimedia Act (1998)* – Provides a framework to cater for the convergence of the telecommunications, broadcasting and computing industries.
- *Telemedicine Act (1997)* – Provides a framework for licensed medical practitioners to provide tele-medical services.
- *Data Protection Act (2002)* – Aims to address matters pertaining to privacy, authentication and protection of personal and companies information that are used in formal business and social transactions.

*Innovation:* Malaysia has prioritized innovation for economic development and new wealth creation, with the Government as the main driver of innovation in the country. In the early 1960s government investment in R&D was in the agricultural sector; in the mid-1980s a greater proportion of R&D funding was channeled into science, engineering and medical areas. From 1985-2005, under a government programme for Intensification of Research in Priority Areas (IRPA), competitive bidding for research funds was promoted among government research institutions. By 2000, 32% of IRPA was earmarked for new and emerging areas such as optical technology, chemical technology, software design technology, nanotechnology and precision engineering.

During the mid-term review of the 7th Malaysia Plan, three new research grants were mandated. By the end of 2000, a total of US\$56 million (RM214 million) had been allocated collectively under: the Industry Grant Scheme (IGS) established in 1997 to foster cooperation among the Private Sector, universities and research institutes in undertaking joint research projects for industrial commercialization of research ideas; the MSC Multimedia Grant Scheme (MGS) for innovation of application of ICT; and the Demonstrator Applications Grant Scheme (DAGS) to enhance ICT for content and community development. Over the years, various steps were taken to strengthen collaboration and cooperation between Government, Private Sector, research centers and institutions of higher learning.

Private Sector contributions to R&D and the nation's innovative capacity has increased over the years



(US\$196 million in 1995; US\$255 million in 2000); with 90% in applied research concentrated in areas such as electronics equipment and components, transport equipment and petroleum-based products. Increased Private Sector R&D activity was driven by fiscal incentives provided by the Government including double-deductions on R&D expenditure and investment tax allowances (ITA) of up to 100 percent

*Integrity:* “Foreseeing the Internet Age in improving the performance of governments, the Malaysian Government in 1997 adopted a bold vision of effecting dramatic, sweeping changes through E-Government” (Rais and Khalid, 2003). This cross-ministerial, cross-sectoral, and top-down initiative sought to strengthen the Public Sector by advocating greater efficiency, productivity and transparency. In the years since, Civil Society has mirrored the same principles through Internet-publications such as [www.malaysiakini.com](http://www.malaysiakini.com), opening and channeling political and societal debate through ICT (Abdul Rahim and John, 2000).

*Interaction and Networking:* The Malaysian Government has encouraged and fostered cooperation and collaboration with technology-leaders (firms and institutions) internationally, providing Malaysian firms the opportunity to acquire new and advanced technologies from across the globe. The Government also promoted various fiscal and non-fiscal incentives for Malaysian firms, researchers and institutions of higher learning to be a part of the global innovation network. The MSC, besides delivering world-class infrastructure, is a compelling option for leading international technology organizations to locate in Malaysia to develop and innovate next-generation multimedia technologies. By 2003, 836 companies had earned ‘MSC-status’, of which 66% were Malaysian-owned companies and the remainder foreign-owned. In 2003, MSC companies invested more than US\$2 billion in the MSC (MSC.COMM, 2005). Approximately 26% of the investment was spend on R&D. As of May 2003, the MSC had a 17,854-strong workforce, where 86% of the jobs were classified as knowledge-intensive jobs and 87 % of these knowledge workers were Malaysians (EPU, 2003).

## **5. Conclusion: Lessons from Malaysia**

Key strategies and policies adopted by Malaysia which have helped it meet its MDG targets and raise its global competitiveness are:

### ***Strategic Long-Term Planning***

Malaysia has enjoyed unwavering political stability since independence in 1957. General elections every 5 years have returned a ‘grand coalition’ under the *Barisan Nasional* (National Front) composed of several parties reflecting the multi-cultural make-up of the country. Such continuity has allowed long-term planning, goal-setting and meaningful programme impact evaluation – activities rigorously carried out by the Economic Planning Unit within the Prime Minister’s Department. Being entirely Public Sector-driven, the planning process was insulated from sectarianism and parochialism remaining instead focused on the greater national interest.

### ***Comprehensive Development Agenda***

In addition to operating expenses for ministries and departments, annual Government budgets have consistently allocated funds (capital expenses budgeting) for development programmes within every 5-year plan; this foresightedness has proved integral to long-term economic planning.

### ***Integrated ICT Development***

With the setting-up of the NITC and MSC, the Government acted upon its realization of the potential of ICT; and the prospect of transforming the nation into a knowledge-society. ICT now inform all aspects of development in Malaysia, driving to achieve ubiquity of ICT of the same standard and quality as the MSC throughout the nation.

### ***Government-Led / Private Sector-Driven Development***

Government-linked institutions have been periodically created and developed to realize social agenda objectives. Some institutions have since been privatized, driving the economy in their own right through various policy and market-led models for national development. Currently about 30% of the Malaysian Stock Exchange is owned and operated by Government-linked Private Sector companies.

### ***Foundation Conditions for MDG Growth & Development***

After independence the multiracial make-up of Malaysian society required that a conscious effort be made to distribute the fruits of development and growth to ensure national unity and societal harmony. The Government took an uncompromising view to define the framework of distribution, which can now be directly related to MDG targets, and continues as foundation conditions defining the Malaysian quality of life and standard of living.

### ***Driver Conditions for FDI-driven Absorption Capacity & Capability Development***

The accelerated pace of Malaysian development in the 1980s and 1990s is unambiguously attributed to Foreign-Direct Investment (FDI) attracted by a very favorable investment environment. Nonetheless, such investment was coupled with 'technology-transfer' arrangements to build local capacity and capability. The quantum and quality of driver conditions (infrastructure, innovation, etc.) today result from leverage upon those and ongoing technology-transfers.

In conclusion, the 2005 UN General Assembly was convened to measure progress on an agenda of global poverty, development targets and institutional self-reform. Sadly, lofty ideals issued in various guises over the past 60 years were tested and found wanting in the 'reality' department, leaving little room or reason for renewed hope in the Developing world. The MDG has been a powerful wind of change that has carried some Developing sailboats some way since they were first declared; yet the filtering and funneling of what the promises *might* mean in and to different world camps suggest *even this wind* may pass the stranded flotilla of most needy sailboats. In particular the attempted backtracking on commitments by the most reactionary legacy power systems suggest more learning and response is needed to address the build-up of waves and storms which wreak havoc in ignorance of political expedience. The levees for Development must be shored-up today. A continent away, seemingly in both time and place, Africa and its

children demand access to opportunity, not simply the promise of hope. The unencumbered plasticity of ICT can offer that opportunity and the prospect of surfing the wave of change. The Malaysian experience is a *stepping-stone*, and *step-up*, and *step-over* to accelerated development using that wave. "We the Peoples" for whom UN Secretary General Kofi Annan spoke at the Millennium General Assembly in 2000, in every shade from black to blond, are bound to find a way forward if our will remains to Develop A Global Partnership for Development - the full circle of MDG 8.

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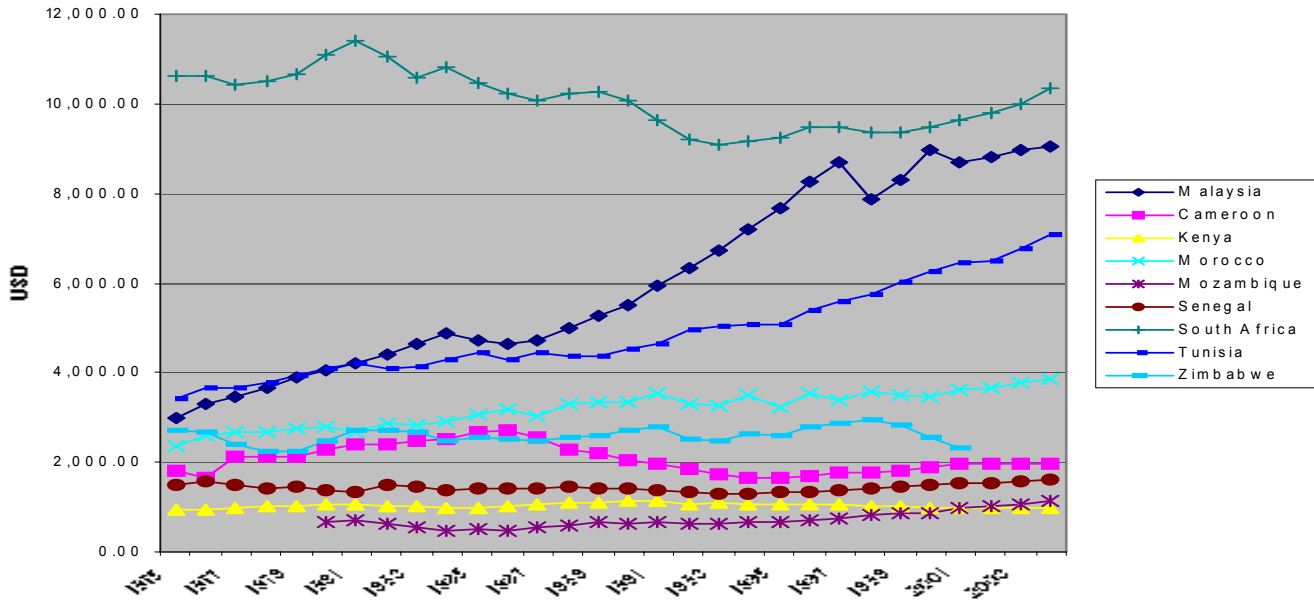
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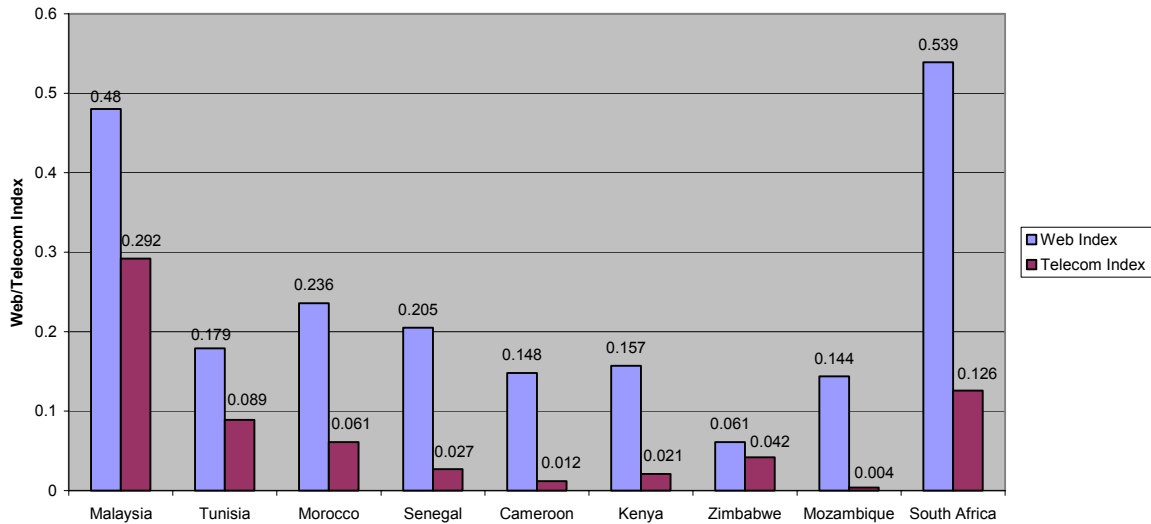
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## APPENDIX

**Figure 1: Real GDP Per Capita (PPP) [1975-2004]**  
(Data Source: WDI Online, World Bank)

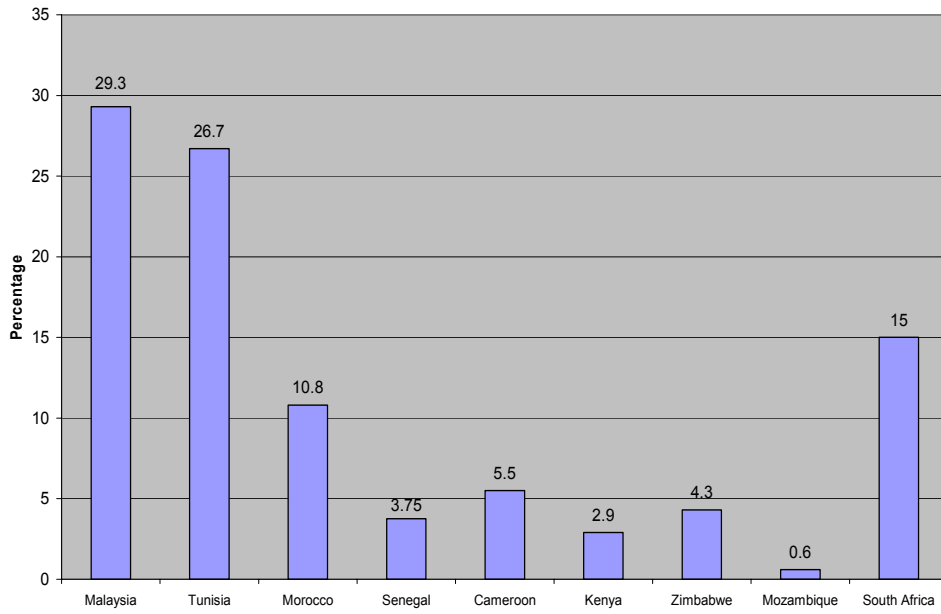


**Figure 2: Network Readiness Index [2003]**  
(Data Source: United Nations, 2003)



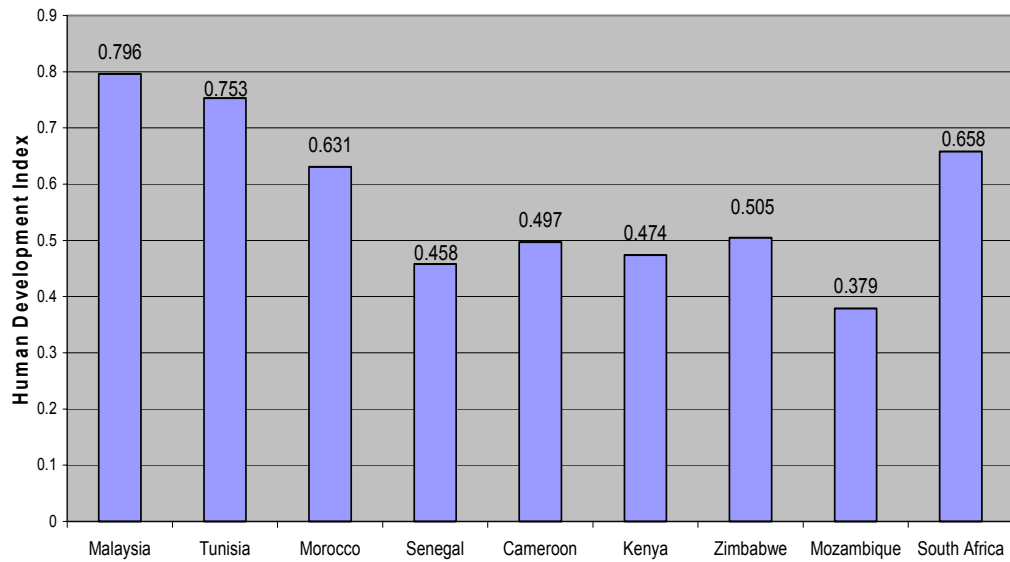
**Figure 3: Percentage Gross Enrolment in Tertiary Institutions [2002/2003]**

(Data Source: WDI Online, World Bank)



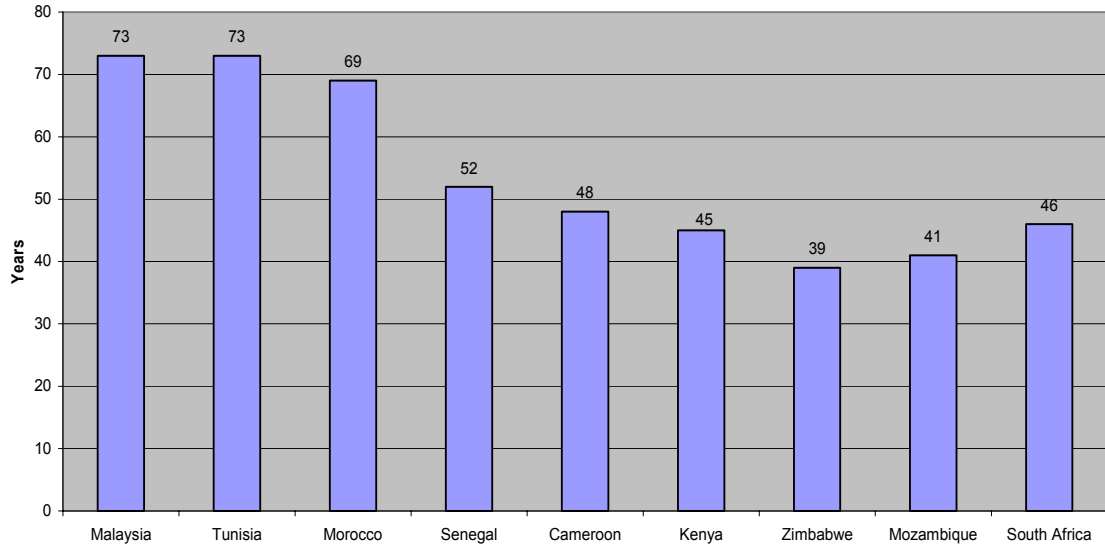
**Figure 4: Human Development Index [2003]**

(Data Source: <http://www.undp.org>)



**Figure 5: Life Expectancy in years [2003]**

(Data Source: WDI Online, World Bank)



## Authors' Profiles



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