

The role of human capital investment in development: the experience of Malaysia

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-مستخلص

يعتبر الاستثمار في الموارد البشرية المدخل الرئيس والأهم لتحقيق التنمية المستدامة في أي مجتمع كان، نظرا لأن الموارد البشرية هي العنصر الأكثر تأثيرا مقارنة بباقي الموارد التي تملكها الدول، لذا حظي موضوع تنمية (تطوير) الاستثمار في رأس المال البشري باهتمام متزايد من طرف الباحثين والدارسين سواء على المستوى الكلي أو الجزئي.

تهدف هذه الدراسة إلى تحليل أثر فعالية الاستثمار في رأس المال البشري من خلال سياسات التعليم.

-الكلمات المفتاح: رأس المال البشري- الاستثمار في رأس المال البشري- التنمية المستدامة- اقتصاد المعرفة- التعليم

Abstract

In any society, investing in human resources is considered the most important approach to achieve the sustainable development, because human resources are the most influential factor compared with the states-owned ones. Therefore, developing the human capital investment was the focus of interest of many researchers and experts at macro and micro levels.

This study aims to analyze the impact of the effectiveness of human capital investment through education policies.

Key words: Human Capital - Human Capital Investment - Sustainable Development - Knowledge Economy - Education

introduction

In any society, investing in human resources is a keystone to achieve sustainable development. Human resources are the most important and influential State-owned resource. Therefore, human capital investment received increase attention by researchers and scholars, both at the micro or macro level.

The states are developing the human resource capital by its education and development of competencesÖetc, in order to make it play its role effectively and efficiently in the development process. Moreover, the modern management literature contains a new concept, namely, the strategic management of human resources.

Malaysia is a pioneer country in human capital investment, which made its experience worthy to research and study. Malaysia is achieving sustained economic growth and it has succeeded in establishing a strong educational system, which has helped to meet its requirements of the skilled labor force. This system effectively contributed in the economic transformation from a traditional agricultural sector to a modern industrial sector. Education in Malaysia is employed as an effective instrument for achieving a knowledge economy based on information and communication technology.

This study deals with the effective impact of investment in human capital through education policies on human resources development, and its impact on sustainable development in the context of Malaysia's experience of development.

Research`s question

The research attempts to answer to the following questions:

Question 1 / what is the impact of investment in human capital on sustainable development in general?

Question 2 / what is the role of investment in human capital through education in the achievement of significant economic development in Malaysia?

We shall answer these questions through the following points:

First: The analysis of the concept of human capital and its importance for sustainable development

The analysis of this point will treat the following elements:

1- The development of the concept of human capital in economic thought

Recently it has prevailed that the wealth is only the physical assets (i.e., concrete). Nevertheless, due to technological development and the emergence of the knowledge economy, a human resource has become the decisive factor in the institutions success in performing their economic and social roles. It has been convinced that both human and physical capital increased through investment.¹

Theodore W.SCHULTZ² was the first person who defined the human capital as an economic concept. **Gary BECKER** had made an important adjustment to this concept.

Firstly, we shall analyze the intellectual foundations of the idea of human capital in the economic thought.

Secondly, we deal with the analysis of **Schultz theory of human capital** as one of the leading scientific contributions.

The idea of human capital is very old in the history of economic thought, and we found it in the contributions of the **Mercantilism** thought. The **Mercantilists** realized the importance of this idea and at the same time, they realized the importance of the concept of education and training as investment. However, these ideas did not have the analytical nature, which led to neglect of the idea at least intellectually.³

In addition, the idea of human capital was in the classical economic thought. **Adam Smith** considered the capacities and skills acquired by individuals as a component of the national capital, and as a part of the individual and society wealth, as well as an investment in human capital.⁴

The neoclassic school did not overlook the importance of this concept from its literatures and intellectual contributions. Since The emergence of **Alfred MARSHAL**'s economic thoughts -the Leader of Cambridge School- there was a comprehensive and accurate perception of the human capital concept. Marshall confirmed that the human element is a capital and the increase in

human capital productivity is through investment in education and training, which is a national investment.⁵

The intellectual contributions in the concept of human capital continued with several intellectuals and writers, including (Irving FISHER) who said that capital is any asset capable of pumping out a stream of income over a period, despite it contained little material, or is not for sale"⁶

Therefore, we notice that Irving FISHER included the human element into capital factor.

2- T.W. SCHULTZ Contribution in the formulation of the foundations of the human capital theory

The formulation of the human capital theory was due to the research of **SCHULTZ**, and the promotion and the widespread of the idea of assessing the individuals as human assets came after the emergence of Schultz's theory. Schultz's theory is considered as a coup in the economic concepts and ideas prevailing in the sixties of the last century.

Schultz in his theory confirms that skills and knowledge of individuals are a form of disposable capital investment. He based in fondling this from the fact that investment in human capital led to the fastest economic growth rates in developed economies compared with physical capital. Therefore, the development of human capital can be one of the most distinctive features of the economic system.

Schultz built the concept of human capital upon three main hypotheses:⁷

A- If the economic growth cannot be explained by the increase in material inputs is considered because of the development in skills and knowledge of the accumulated stock of human capital.

B - The differences in the financial revenues between institutions are due to the disparities in human capital investment.

C - Income equality can be realized by increasing the proportion of human capital to traditional capital.

It should be noted that **Schultz** has focused on his first research for the human capital investment in the agricultural sector, especially in the United States of America. At the meantime, he stressed on the importance of the education process as a necessary investment for the development of human

resources and as a form of capital, as long as it achieves an economic value. Education has become an integral part of the individual who receives this education, which it cannot be sold or purchased, or treated as institution-owned.

It is noteworthy that before Schulz's theory, there are many intellectual contributions which have draw attention to the importance of the human capital, and the benefits of investment in human capital, and assess the value of this type of capital. Thus, to determine the amount of the economic importance of human resources stock, as well as determining the economic value that can help the society as a whole, of such attempts were established by: (Engel- Farr), and (Walras-Senior), and (Metz-Wood-Huebner).

Similarly, Schultz's theory followed by other complementary contributions on human capital, including Becker and Munser contributions. Becker focused on the study of the activities that affect the physical and non-material income through increased resources in human capital. He considered training the most effective aspects of human investment in clarifying the impact of human capital on income, and employment and other economic variables. He adds that the rate of return on investment is the main and the most important factor in determining the amount invested in human capital. Thus, we can say that Becker has contributed in the development of the human investment concept through the clarification of how to use the theoretical concept as an analysis means in the economies of human resources investment.*

While Munser contribution focused on the using of the human capital concept to build a model that could explain the deviations in the revenues distribution. Munser has concluded that there is a positive relationship between investment in human capital and the growth of productivity through education and training '9

Although there are various interpretations of the human capital theory, but it agreed with this concept in the point that anything that would increase the productive capacity of the individual, such as knowledge, and skills gained from training, learningÖetc. Kendrick confirmed that human capital is the intellectual capital (non material and intangible), which is accumulated through investment in education and research in order to increase the efficiency of resources in the future" 10

Therefore, we can deduce from this definition and other intellectual contributions the importance of human capital in promoting development, both at the local or the national level, and the human capital is more important than the physical capital. Without human capital, physical capital of the institution cannot be exploited effectively and efficiently. In the other hand, it is linked with the institution existence in the market and its continuous contribution in the economic development by the permanent need for human capital, which functions at the optimal use of the physical capital (material resources).

The studies of the World Bank confirm this approach. These studies included (192) state shows that physical capital does not represent an average of only (16%) of the total wealth, and natural capital (20%), while the human capital represents (64%) of the wealth. This dominance of human capital is more clear in developed countries, for example, we find that human capital in countries such as Germany, Japan, and Switzerland is about (80%) of total capital, while this percentage is still low in poor countries, especially Africa, which is characterized by the domination of the natural resources, of more than half of the wealth¹¹

3 - The impact of human capital investment on sustainable development within the knowledge economy

Knowledge is valued and important because it represents the basis for the production of wealth, and the activation of creative activity, hence, the production and application of ideas and information that would bring about continuous improvement. In practice, this embodied in the creation of new processes and new various products.

the environment where local institutions function, which is the responsible for economic development, is characterized by intense competition. Thus, knowledge and its management has become a source of force and quality of these institutions, which imposes at the same time to take the data and the factors of the knowledge-based economy into account, considering this as a strategic choice if it wants to improve their competitiveness.

There is a strong relationship between the knowledge-based economy and investment in human capital, because of the important role played by the two

elements in achieving economic development. This is manifested through the knowledge economy as one of the important requirements for development, in return for this, knowledge cannot be employed only through the development of human capital - as part of the total investments of the institution - and through the investment in human capital such as training and education ... etc ¹²

Emphasizing on the importance of the aforementioned relationship, some recent studies confirm that there is a direct correlation between the volume of investment in human capital through training and the degree of creativity in solving problems facing the institutions. This pushed the modern institutions to make efforts to attract and recruit human resources characterized by a creative ability. With the refinement of these resources through a strategy linked to the development of knowledge is in turn leading to the preparation of creative people with specialized knowledge. All this in order to enable the institution to adapt to their environment, which is characterized generally by conditions of risk and uncertainty.¹³

Among the empirical studies conducted to demonstrate the importance of investing in human capital in the development, the study of Abramovitz. This study addresses economic growth in the United States of America in the 19-century and 20 century, where it found significant results. The results including technological development in the 19-century were strongly biased in favor of the use of physical capital, whereas in the 20 century biased toward the use of human capital and of knowledge, i.e. the intangible capital which has contributed to increase productivity. Moreover, contemporary studies conducted to diagnosis the causes of economic stagnation in developing countries, attributed the causes to the failure of the human element in its role in processes of change. This is due to the wrong and irrational use of human resources, and because of the smallness of the amount of investment devoted to human capital; thereby it produced a small percentage of human scientific skills, in most of developing countries, particularly in Africa.¹⁴

On the other hand, specialized studies confirm that the small allocation to training in the human investment leads to the scarcity of specialized human resources, and poor effectiveness of individuals, which affects negatively the development process. Therefore, we can find solutions to the raised work pro-

blems in the institutions through investment in appropriate training for workers, which will affect positively on the rates of growth and development in general¹⁵

As a result, investment in human capital through training has a positive effect on the functioning of institutions in the long term. Therefore, the training must given the necessary importance in order that the institutions succeed in the performance of their roles, and contribute in the achievement of sustainable development.

After this analysis of the concept of human capital, we shall try to identify and analyze in which way the perception of a human resource contributed as a capital, and the importance of its investment through education from the Malaysia economic development experience.

Second: - The analysis of Malaysia's experience in investment in human capital and its impact on sustainable development

We shall take up this theme through the analysis of the following elements:

I-Analysis of educational policies in Malaysia from the perspective of investment in human capital.

The most important educational policies adopted within the investment in human resources in Malaysia are:

Government's commitment to free primary education:

Since independence in 1957, Malaysia has provided primary education services free of charge (the period of 11 years). The federal government's support for the education sector was up the average (20.4%) annually in the public budget. While public expenditure on education increased as a percentage of GNP from (2.9%) in 1960 to (5.3%) in 1995.

One of the consequences of this investment is that the number of literate people in the year 2000 reached about (93.8%) of the total population compared with (53%) in 1970. It considered as a highest proportions in the world and about (99%) of children who have reached the age of 10 years old has been named to school, and (92%) of primary school students went to study in the secondary school. We must mention that the Malaysian law punishes parents who do not send their children to schools.

The following table shows the size of central government expenditure on the education.

**TABLE (01): Central government expenditure on education
for the years 1996, 2000.(U.S dollar)**

The nature of expenditure	1996	2000
Total public expenditure on education	2.9 Billion	3.7 Billion
The percentage of expenditure on education of total expenditure	21.7 %	23.8 %
Per capita expenditure on education	145 Million	150 Million
Annual return for the cost of a student in primary school	381 Million	408 Million
Annual return for the cost of a student in secondary school	1448 Million	597 Million
Annual return for the cost of students in vocational and technical schools	1606 Million	2160 Million

Source: <http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>. consulted on : 09/02/2009 at 10:00

From the volume of expenditure devoted to education, we observe the importance of investment in human resources in Malaysia. On the other hand, it shows also how with investing more in education can catch up the digital development and the integration in knowledge-based economy. Education expenditures have raised to 9.6 Billion Malaysian Ringgit (approximately 3.2 Billion dollars) in 2001; where as in 2000 was equivalent to 7 billion ringgit (about 2.3 billion dollars).

This amount spent on building new schools and laboratories of sciences and computers and new technical schools, and loans to pursue higher education within and outside Malaysia.

There are also other signs of the importance that Malaysia attaches to investment in human capital, including the size of the expenditures allocated to the education sector compared to the rest of other service sectors, as shown in the following table:

TABLE (02): The percentage of Central government expenditure on other service sectors for the years 2000, 2001.

Sector	2000 %	2001 %
Education	65.9	64.1
Health	7.5	11.5
Housing	13.1	10.8
Other Services	13.5	13.6
Total	100 %	100 %

HYPERLINK"<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>"consulted on : 09/02/2009 at 10:00

We note from the table that the government allocated large proportion of expenditures to education sector compared to other service sectors. This shows the awareness of the Malaysian government of the important role of education sector in achieving economic development. This is through the intensification of investment in the human element.

2- Pre-school education (Kindergartens): It is one of effective policies in the valuation of human capital investment. This was through the Government's interest in the Malaysian pre-school education, which includes children between the ages of five and six. Therefore, we find in the Education Act 1996 that the pre-school education is a part of the federal system of education, which requires the registration of all the Kindergartens and the pre-school with the Ministry of Education, as well as the application of the educational programs of the ministry.

This includes the program outline and general instructions to the Kindergartens concerning compulsory education for the country's official lan-

guage (Bahasa, Melayu) as well as allowing the use of English and languages of ethnic groups in Malaysia (Chinese and Indian - Tamil). In addition, allowing the use of teaching methodology and methods of educational supervision and guidance of social and religious, as it would allow the provision of religious education for Muslim children.

Official agencies, social organizations and private sector managed many schools. The most known institutions that provide pre-school education services are the united governmental pre-school (since 1960) and the Federation of Malaysian and kindergartens services, which are widespread in cities and urban areas (since 1976).

According to the Ministry of Education statics, there are about 1076 public kindergartens, 27883 pupils, 1699 teachers and 1189 school classes, while the number of private kindergartens is about 2161.

3- Concentration on primary education, basic knowledge and national meanings:

Education Focuses at this stage to teach students reading, writing and basic knowledge in numeracy and science (Malay Muslim and native population 65%, Chinese 26%, Indian 8% and other races 1%).

Primary school starts from the age of six in the child's life, and it will last for six years. Education system takes into account the multi-ethnic of the country. There are two types of schools, national schools and local schools (in the latter is allowed to use the Chinese or Indian languages as well as the official language). All schools follow the government educational program and there are two exams: the first in the third year and the other in the sixth year to evaluate the performance of pupils.

The rate of teachers for students in primary schools falls from teacher for 20 students in 1990 to teacher for 18 students in 2000.

Ministry of Education has made successful efforts in building schools, created the best schooling environment and teaching means and services to the school. Besides that, teacher training and rehabilitation to keep up with school programs and contemporary teaching methods and compatibility with the requirements of the right educational process.

4- The orientation of Secondary education towards severing of national goals:

Secondary schools offer a comprehensive education. Where the program includes many subjects such as science, literature and professional and technical fields, which allow students the opportunity to develop and refine their skills. The secondary school divided to two stages. The first stage known as small secondary schools (similar to medium school in the Arab countries) and the second stage called high secondary school (similar to secondary schools).

There is an exam in the third year of small secondary schools. After passing, the exam students oriented to stage that are more specialized. The orientation is up to the willingness and the performance of the student. Student will be re-evaluating in the fifth year through the Malaysian Certificate of Education examination.

At high secondary school, students study specialized educational modules, especially technical and vocational education. There are many technical and vocational high school make an early step for the training of the student the necessary work skills. Some high schools conduct public examinations by which the student obtained the certificate of the Malaysian secondary school and the qualifications to enter the labor market.

The sixth level of secondary school provides students direct access to local and foreign universities. From the fifth level, students can attend directly the preparatory year at local universities.

There are 31 special schools for handicapped persons. There are global schools with different stages (40 primary and secondary schools, 5 kindergartens and pre-schools) and following the American, English, Japanese, Taiwanese, Saudi, Indonesian and German educational program. The rate of teachers for students has decreased in secondary schools from one teacher per 19 students to 18 students in 1990, 2000 respectively.

Table (3): Data on primary and secondary schools for the years 1999-2001

	1999	2000	2001
Primary schools	7152	7217	7305
Number of schools	287927	2932141	2931847
Number of pupils	157415	157985	154920
Number of teachers	89826	91766	92788
Number of classes			
Secondary schools	1586	1641	1713
Number of schools	1986334	1957483	2015579
Number of pupils	106031	108892	115098
Number of teachers	55268	57533	58748
Number of classes			

HYPERLINK "<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>**"**

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5- Establishment of teacher-training and industrial-training institutes:

Government has paid special attention to the issue of training through the establishment of special institutes for teacher training and rehabilitation at the national level. These institutes aim to provide guidance to the education sector, teacher training, inspection and educational rehabilitation.

In Malaysia, the establishment of the first teacher-training college was in 1947. In the year 2001, the number of graduates reached 296 teachers compared to 45 teachers in 1949. The most important training institute is the National Institute of the Department of Education and has branches in various Malaysian states, which is responsible for developing and implementing national policy in the field of teacher training.

As well as the establishment of many vocational training institutes to accommodate secondary school students, and qualifies them to enter the labor market with skills in the field of mechanical engineering, electrical and technical plastics. The most famous is the Malaysian Industrial Training Institute that has nine

branches in the Malaysian states as well as the federal capital this institute is under the Trusteeship of the Ministry of Human Resources.

The Department of Technical and Vocational education (The Ministry of Education) founded in 1964 to supervise the public industrial training institutions and the development of training plans and policies at the national level.

Table (4): Numbers of technical and vocational secondary schools and technical institutes and teachers 1998-2002

Schools	1988	2000
Technical secondary schools	46	80
Vocational secondary schools	9	11
Technical institutes	5	12
Teachers-training institutes	21	27

"<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>"

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6 - Compatibility with the technical and information developments:

In keeping with the era of the technical revolution in communications and information, the Malaysian Government is taking towards the re-classification of public schools the trend towards the establishment of several so-called smart schools (Smart Schools) in which there are study modules to help students to develop their skills and they will have a new technology.

The attended modules in smart schools are intelligent manufacturing systems, communication networks, systems of non-polluting energy use, and intelligent transportation systems.

Smart School is an educational institution based on the teaching of new applications and management tools to help students catch up the information age. The most important elements of the smart school are to find the appropriate teaching environment for learning, and new school systems and management policies and the introduction of developed technical and educational guidelines.

The State is still testing, evaluating and re-engineering these components to achieve efficiency and effectiveness of the smart school.

The process of teaching and education implemented, according to the students needs, abilities and their different levels of study. Teachers adopt teaching methods and modules to meet students' needs and requirements at different stages. The school director selected from eminent educational leaders. A team of teachers who have excellent professional skills assists the director. Teachers and parents with the students themselves participate in the selection of educational programs and the implementation of some important school activities such as school trip.

The Minister of Education in 1996, the Director-General of Education (Tan Sri Dato Zahid Wan Muhammad) developed the concept of Smart School. The main applications of the smart school began in a number of States to use and invest the computer in education. States such as United States and Australia have developed national strategies and plans to introduce techniques to schools and benefit from them.

The point of view of the political leaders in Malaysia is that the smart school will assist countries to engage in the information age and to provide quality education appropriate to the country in the future. The government signed a contract with Telecom Smart Schools - a joint venture between the government and the private sector - to implement the smart school concept in the 19 pilot schools for a period of three years from 1999 and ending in 2002.

In 1996, the commission of overall development of the Malaysian State has developed a technique to make Malaysia developed country. One of the main objectives of this plan is the introduction of computers and Internet access in each classroom of pilot schools.

This stage of the implementation plan should complete before 2002 but economic crisis of 1997 delayed completion. However, in December 1999, the proportion of class schools connected to the Internet in more than 90% and 45%. Regarding the infrastructure has been associated with all schools and universities in Malaysia, the backbone of the fiber optics network, which allows the rapid transfer of large packets of information transfer and multimedia video.

Malaysia aims to generalize this type of schools over the country to absorb the information and communication technology. In order to employ and use them positively in the educational process, and to develop the teacher's capacity, and raise the level of knowledge for students and enable students to access directly to the learning sources and improvement of educational outcomes to produce a highly qualified generation.

7- The employment of university education in the service economy:

The establishment of the first university in the country was in 1949 and it is located in Singapore. Today, there are more than 11 public universities and many branches of foreign universities based in Malaysia.

The Malaysian government has developed hardware and software for the development of higher education.

While all universities try to follow the international standards of education and systems of the study and identification of disciplines and programs, and promote the relations and links between local universities and world famous universities and others to the acquisition of expertise, experience and development.

In addition, universities and local institutions of higher education focus on the use of the education, which aims to meet the country needs of skilled labor.

The Ministry of Education aims to provide schools and education centers with computers and Internet supply systems, and that education in smart schools will be with the Internet and modern means of communication and information technology.

Table (5): Data on higher education in Malaysia, 1996-2000 .

	1996	2000
Governmental universities and faculties	50	55
Senior lectures	8451	19702
Students	108845	344250

"<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>"

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Today universities of Malaysia tend to become a regional center for post-graduate students, especially from developing countries. This means more qualitative education and an abundance of educational facilities such as libraries, laboratories, computer networks and experienced teachers and qualified programs.

The following table shows the number of graduate students at the National University of Malaysia during the period 1980-1999.

Table (6): The Numbers of the post-graduates students from the National University of Malaysia 80-1984, 95-1999 .

	80-1984	95-1999
Masters	85	2270
PhD	6	146
Total graduates	91	2416

"<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>"

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8- Link between education and research activities:

The government established between all universities a database network with huge equipments.

The government supports the efforts of scientific research in universities through the Malaysian Foundation of promoting the techniques. This promotes links between companies and researchers, financial institutions and technical activities for the use of university research in commercial purposes.

Many centers aim to establish cooperation between the factories and scientific works and provide the resources necessary to carry out applied research work.

National council of scientific research and development plays a role in managing the research institutions and strengthening the relationship between research centers, universities for research and development, and the private sector, and the result is the creation of a group of specialists in the disciplines required by the country and this in itself a strategic objective of the State.

9- Openness on the advanced education systems:

The education system in Malaysia is moving towards the openness on west educational systems (British and American) and expanding the use of English as medium of education.

The private sector plays a key role in emphasizing the quality of education, and it follows international standards in terms of programs and scientific disciplines. There are branches of universities from Australia, New Zealand and Great Britain. There are about 415 private institutes and faculties provide higher studies and twinning programs with universities abroad, and give professional and medium certificates. They also provide opportunities for Malaysian students to continue their studies in foreign universities.

10- The education of women:

Women have received their share of education as men, and the data of the Ministry of Education shows the increase of their share in the education sector. This is due to the state heed for the education of girls, in addition to the large percentage of the female population and their participation in the labor force is close to the contribution of men.

The following table shows the achievement of women's education in Malaysia. The government grants free interest loans to enable parents to send their daughters to schools and providing school supplies, while giving the poor free of charge assistance in this regard.

Table (6): The proportion of females in schools and universities for the year 2000

Total population	23 Million
The percentage of females\total population	49..3%
The percentage of females in primary schools	64.6 %
The percentage of females in secondary schools	62.8%
The percentage of females in technical schools	41.9%
The percentage of females in universities	54.9%

"<http://www.islamonline.net/arabic/economics/2002/05/article11.shtml>"

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11- The public spending on pre-university education

The interest given by the Malaysian government for public expenditure on pre-university education, (pre-school, primary and secondary schools), has an important role in accessing the effectiveness of investment in human capital, and thus achieving the desired development. This is evident through the evolution of interest rates of public expenditure on education, as shown in the following table:

Public expenditure on education				The public expenditure by educational stage (%)					
% of GDP		% of total expenditure of the government		Pre-school		Primary school		Secondary school	
1991	2002-2005	1991	2002-2005	1991	2002-2005	1991	2002-2005	1991	2002-2005
5.1	6.2	18	25.2	34	30	35	35	20	35

Source: The Human development report 2007-2008, United Nations, p. 254

The table above shows the importance given by the Malaysian government to education as an investment in human capital. Expenditure on education as a percentage of GDP increased from (5.1%) in the year 1991 to (6.2%) during the period (2002-2005), and as a percentage of the total expenditure of the government increased from (18%) in the year 1991 to (25.2%) during the period(2002-2005).

If we take into account the proportion of public expenditure on education by educational stages we note that this percentage varied from one stage to another, the percentage of public expenditure in pre-school decline from (34%) in the year 1991 to (30%) during the period (2002-2005), while the expenditure on the primary school was 35% during the two period, but expenditure on secondary school increased from (20%) in the year 1991 to (35%) during the period(2002-2005). This explains the Malaysian government's interest in secondary school, because of their importance in achieving a greater return for investment in human capital and hence development.

II-Impact of education investment in sustainable development in Malaysia

The attention to human capital with the intensification of quantitative and qualitative investment in education led to achieve spectacular results on sustainable development in Malaysia, which can be found in the Malaysian economy by:

1 - Malaysia is a symbol of modern economic revolution on a global scale. Thus, it created for itself a well-deserved place in the category of newly industrialized countries. That means getting out of the list of developing countries, which belong to, due to the growth rate of the economy ranging on average between (7 % and 8%) annually since 1970, without forgetting the contribution of industrial production in creating the superiority of the economy. The industrial production grows at an annual rate of more than (10%). Note that (25%) of the active population (i.e., who are in working age) employed in the industrial sector, which makes this sector contributes to the creation of a third of GDP.

2 - Malaysia has become able to go beyond the effects of the regional financial crisis that affected the economies of the region in 1997, as shown by economic indicators. The economic growth rate increased from (5.8 %) in 1999 to (6.3%) in 2007. It was expected that the growth rate of in 2008 will be between (6% and 6.5%)¹⁶

3- GDP in 2007 was (200.46 billion U.S. dollars). This is due to several interacting factors, including the expansion of the activity of strong domestic demand, driven by private consumer spending and investment activities. In 2007 domestic investment increased to (10.2%) after development in 2006 of (7.9%). In addition, the increase in domestic consumption (11.7%) compared to (7.1%) over the last year. It should be noted that the services sector has played an important role in this development. The expansion of this sector during 2007 to about (9.7%) compared to the years 2006(7.2%) and 2004 (4.2%). On the other hand, knew that the volume of foreign investment in services and manufacturing rose to (69%) in the year 2007, more than (13.7 billion)¹⁷

4- In addition, low rate of inflation (5.1%) during the first six months of 2000 compared to the rate of (8.2%) during the same period of 1999 and (3.5%) during the year 1998. As for the unemployment rate has reached (3%) in the 1999 comparison with the rate of (3.2 %) the year of 1998.

5 - Malaysia's economy depends especially on electronics industry. Giving the importance to the innovation in this field not only has led to the achievement of significant and important progress in the development of techniques of modern technology, but become an exporter of electronic products to different parts of the world.

In parallel, however, Malaysia has continued to conclude agreements on access to the licensing of producing new goods and patent rights so that keep pace with technological developments in the world. In addition, the Malaysian economy depends on oil palm, Malaysia produce (75%) of the world production. In addition, the rubber industry and tourism have an important role in the development of the Malaysian economy. ¹⁸

6 - Malaysia has followed a rational financing policy for the productive projects by financing an refinancing the local projects partially by the profits obtained from exportation. Thus, the government ensures that the national and foreign Capital implement the objectives of political power.

7 - Malaysia's economy is characterized by openness to foreign investment. We find a large number of factories in various fields including car plants, venture capital Malaysian-Japanese. There is also a plant of the Korean company Kia Motors. In addition, most plants with branches in Malaysia, or at least a trademark. All this has led to a positive social impact mainly on unemployment, reduced crime largely in Malaysia. It is well known that, any country suffers from unemployment has a high crime rate due to a direct correlation between unemployment and crime.

We note Malaysia has achieved that level of progress and economic development is largely due to the adoption of a manufacturing strategy and investment in human capital. Hence, what are the parameters and dimensions of this strategy?

II-Analysis of the industrialization strategy of Malaysia

In the early seventies of last century, Malaysia has begun to adopt and implement its strategy of industrialization. Before independence, the economy was dependent on the production of primary products such as palm oil, tin, rubber, cocoa, wood, and the provision of raw materials to industrial countries. At the beginning, the strategy of industrialization focused on industries with intensive labor, in addition to assembly operations.

With the early eighties of the twentieth century, industrialization strategy of Malaysia has seen Qualitative development with the acceleration of the industrialization process, focus on advanced technology, increased capital, and information technology and support industries to export-oriented products.¹⁹

There is several indicators show the importance of this strategy in the Malaysian economy. For example, the growth rate of manufacturing sector, which is a source and a key factor in the gross domestic product, was (13.5 %) in 1999, and (24.6%) during the first half of 2000. The contribution of manufacturing sector in GDP increased from (27.9%) during the years 1998 to (30.1%) in 1999.

Those indicators show that Malaysia has become one of the Asian countries that have famous experience in the process of industrialization, inspired by the Japanese experience values and how to prepare the plans. What are the main stages of the experience of industrialization in Malaysia, and then what are the main factors that contributed to the success of this experience?

1 - Stages of the industrialization strategy in Malaysia

Malaysian experience of manufacturing has been in various stages ²⁰:

A - Import-substitution policy:

In the early sixties of the last century, there was the adoption and implementation of the import-substitution policy with the establishment of small industries and the other industries to replace imported products. These include the industries such as food, construction materials, tobacco, printing, plastics and chemicals.

B- Export-oriented industries policy:

This policy was implemented in the early eighties of the last century, by

attracting foreign investments to Malaysia in electronics and textile industries because of the provision of cheap labor, tax incentives and licensing of foreign products, and the creation of free zones.

C- Heavy industrialization and Malaysian resource-based industries:

This phase began in the early eighties of last century, by the government encouragement to establish industries based on natural resources and heavy industry and the processing of the Malaysian national car (PROTON, then the expansion of the cement industry, iron and steel, with an emphasis on electronics and textile industries. Electronics and textile industries present two thirds of the value added in the industrial sector and (40 %) of employment.

D - high-tech and value-added industries:

Because of the large success of the early policies in promoting economic development, Malaysia has resorted to the adoption and implementation of a new phase in the nineties represented in the state encouragement to invest in industries with high technology and capital-intensive use and industries with high added value. This was, in order increase the competitiveness of Malaysian products abroad and augmenting its share in the local markets.

In evaluating, the Malaysian manufacturing experience, we can say that during the twenty years of investment and industrial production (1980-2000), the Malaysian economy knew a large expansion of the industrial investments represented by more than 15 thousand industrial project with a total capital amounting to more than (210 billion U.S. dollars)²¹

Note that in this investment the foreign funds account for about (54%), while local projects (46%). On the other hand, these projects have employed about two million jobs, and made huge transfer of modern technology, and the development of employment skills and create new marketing channels.

One could also argue, however, that the continuity is one of the most important characteristics of the manufacturing strategy. This characteristic embodied in Malaysia by the adoption of a 10-year general development plan focused on certain industries characterized by high technology and intensive-capital and knowledge management and industries producing intermediate goods in order to

reduce the import. In addition, more interest added to the information technology and the petrochemical industry, pharmacy and ancillary services, and the activation of R&D and technical design products and marketing, supply, distribution and employment.

2- Success factors of the industrialization strategy

We summarize the factors that led to the success of the industrial experience of Malaysia as follow:

1- Heading East

From 1981 until 1991, Malaysia has adopted the philosophy and policy of what we might call the "look east". This policy suggests that creation of development is reached by the focus on the need to belong to the swarms of "Flying Geese" and inspire its philosophy and dimensions. The objective of "look East" policy was to encourage Malaysians to emulate and learn the positive attitudes of the Japanese experience, such as work ethic and industrial methodology, technical and economic development and outstanding economic performance, good and balanced Fiscal and monetary policies and trade.

The Look East policy has two main dimensions. First dimension is the introduction of East Asian values such as discipline in the work and administrative applications with emphasis on discipline and hard work and dedication team work (i.e. the belief in the idea of team spirit in work), and promoting productivity, and self-sufficiency, patience, perseverance and lifting the spirit of a family. The second dimension is the outlook of the modernization and industrialization process by the year 2020.

The Look East policy does not mean total simulation of the Japanese but must be selective to the appropriate social and economic conditions of Malaysia, given that Malaysia is characterized by a multiplicity of races and religions. For example, Malaysia has learned from the Japanese direct investment in the mobilization of domestic savings, capital formation to finance economic and social development projects.

Japanese have contributed to the success of the industrial experience in Malaysia by the provision of vocational training programs through the Japan

International Cooperation Agency. This has enabled Malaysia to enjoy the Japanese experience in the field of training and cultural exchange programs, which was funded by Japanese institutions to encourage Malaysians to recognize the Japanese culture, and provide an opportunity for Malaysians to study the experience of Japan in various aspects.

In 1991, a unit of the Japanese studies has been established within the Institute of Strategic and International Studies of Malaysia, which is a famous reflection and research institute in Malaysia. In addition, the adoption of programs to study the Japanese language, and this is to assist and rehabilitate the Malaysians to study in Japanese technical and vocational institutes and universities.

B - Manufacturing cluster:

Malaysia believed that the success of manufacturing experience related to what extent is controlled the process of vertical integration between the various stages of the industry process. Thus, Malaysia adopted the so-called manufacturing cluster method. This method is based on the existence of interdependent relationships; interaction and complexity are organized in the form of cluster. Where, the pearls of the cluster are the production units and related activities either the upstream or the downstream activities. It could be argued that this method can be summarized in three key elements industries (i.e., the original activity), suppliers and business services. These will be under a system of infrastructure and economic institutions, which include human resource development and management development, technical services, logistics, finance, insurance, and the system of incentives.

C- The role of institutions in industrial development:

The success of the Malaysian industrial experience is not due only to the nature of the strategic choice of the industrial approach and relevant human, financial and material resources, but there are also many organizations and institutions have contributed to this success, including:

1- Malaysian Industrial Development Authority (MIDA):

An organization whose mission is to provide all relevant information on the investment climate to the investors who intend to create projects related to industrial or manufacturing sector in Malaysia. This information enables the investors to have a clear and transparent vision about the nature of industrial investment climate. MIDA grants licensing, and all procedures and ratifications required for the execution of the investment. In addition, it provides incentives, grants and investing privileges to industrial investors, whether local or through multinational institutions, and ensuring basic services and support to access trained and skilled employment.

2- National Productivity Corporation (NPC):

NPC is a Federal Agency interested in increasing overall productivity in the economy of Malaysia (the productivity of factors of production: capital and labor). NPC established in 1962 as a centre of productivity, in a cooperation between the Malaysian Government and the International Labor Organization and the Special Fund of the United Nations. In 1966, the Center became governmental center interested in overall productivity and giving proposals on policy and planned productivity, resource development.

The center carried out several tasks, including promotion and support of applications of research in the field of regular productivity and competitiveness to achieve a level of excellence, and provides information and data on productivity in the Malaysian economy. In addition, NPC plays a role by activating the network of communication between local and foreign institutions in the field of productivity and quality, while encouraging and supporting research and development activities, training and administrative systems in the field of quality, productivity and application of information technology.

3- Malaysia External Trade Development Corporation

(METDC) was founded in 1993, in short (MATRADE), with a mission to promote and encourage foreign trade in Malaysia and to provide information systems to the Malaysian exporters and suppliers, and to develop and promote exports of Malaysia, with a focus on industrial products and conduct research

on foreign markets to increase their shares in these markets. Hence, improving their competitive position, and work to create a database to assist Malaysian exporters. It provides training programs to enhance skills of Malaysian exporters in the field of international marketing and protection of investments outside Malaysia; this body formed from various government agencies and private sector representatives, to be administered under the supervision of the Ministry of Industry and external Trade.

4 - Heavy Industries Corporation of Malaysia (HICOM):

This organization has begun to enter the field of investment in several important projects, the project of national car (Proton) in partnership with the company (Mitsubishi) of Japan, and the second national car project (Perodua) in partnership with the company (Daihatsu) of Japan and the creation of the giant complex of iron and of Steel.

To sum, the success of Malaysia industrial experience is considered as the main protagonist in the development of the Malaysian economy and the achievement of economic and social development goals, which affected positively the level of income per capita and prosperity.

We can infer from the above, it should be the factors and conditions have contributed to Malaysia to gain access to the advanced economic and global development and sustainable economic growth. Investing in their human capital is one of the most important factors. This is due to the establishment of a strong education system has helped to meet the needs of skilled labor. This factor also contributed to the qualitative transformation of the economy depends on the traditional sector-based economy to a modern industrial sector. In addition, the new role of the educational system using its potentials and resources, in order to be an effective tool to reach the economy knowledge-based information and communication technology.

Hence, we can say that the adoption of effective education policies in Malaysia led the economy to achieve a significant accumulation of human capital, which is the pillar of development.

-Conclusion

Human and intellectual Capital is the most important resource for the countries and communities, and the most expensive owned assets. Hence, countries give more interest to this type of resources, and managing it from a strategic perspective by investing in the development of skills to be able to contribute to the achievement of development goals, which resulted in the to achieve high rates of economic growth.

Human and intellectual capital is also a real resource, which generates potential capacities. It creates, invents and manages the other assets of institutions. Therefore, human resources are a strategic capital and its value superior than the physical capital. This requires the development of these resources through investing in human capital to achieve the economic development goals.

Human capital is fertile ground for investment, and hence spending in this field is an investment and not cost. Human capital is the basis on which the institutions in all nations attain competitive advantages, and the key factor in creating development and Superiority.

In the other hand, the Malaysian experience is a model to emulate. It cannot be for any economy to grow only by intensive investment in the human element. It has become the most important element in the production process in an era when the information and technology is the key to a strong economy; which led Malaysia to be a developed country.

The smart schools in Malaysia are a pioneer experiment in education within the framework of investment in human capital, helping pupils to catch up with the information age, by the appropriate educational environment and new school management systems and policies and the introduction of skills and newly educational techniques.

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