

Information and Communications Technology Development Products Towards Strengthening Rural Communities in Malaysia

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Received 2 August 2012; accepted 4 October 2012

Abstract

This study aims to evaluate the extent of development of Information and Communication Technology (ICT) ability to empower rural communities and enhance their economic productivity. ICT is a core catalyst for the development of a country to achieve developed nation status. However, rural communities are still exposed to the challenges and constraints in order to promote ICT development in rural areas. To address this issue, the government has established various objectives to ensure that rural communities are not marginalized. In an effort to take advantage of ICT development in rural areas, governments and agencies have developed various ICT-based products in rural areas. Programs such as Center of Telecenter, Rural Internet Centre (PID), Medan Info Desa, e-Village/e-Community, K-TRAK, PKIT and others are among the products introduced to the rural community. The purpose of the introduction of this product is to focus on the government's efforts in ensuring the development of balanced urban and rural areas from different angles. Through ICT products, a rural community not just only follows the development of the ICT revolution, but to create a knowledgeable society and helps to boost the quality of life of rural communities. Thus, this paper will discuss ICT products developed in the rural areas of Malaysia, the purpose and prospects of the product development and the challenges faced during its implementation. Hopefully, the discussion and recommendations given could trigger the opportunity and space in making ICT as a driving force to economic development in rural areas.

Key words: ICT products; Rural communities; The use of ICT; Economic catalyst

Siti Masayu Rosliah Abdul Rashid, Fatimah Hassan (2012). Information and Communications Technology Development Products Towards Strengthening Rural Communities in Malaysia. *Canadian Social Science*, 8(5), 91-98. Available from <http://www.cscanada.net/index.php/css/article/view/j.css.1923669720120805.1075> DOI: <http://dx.doi.org/10.3968/j.css.1923669720120805.1075>.

INTRODUCTION

Information and communication technology (ICT) is a very important area that should be controlled and utilised so as not to be left behind in achieving the Vision of 2020. The Government in the Ninth Malaysia Plan (RMK-9) has arranged a number of strategies to accelerate the growth of ICT so that it is in line with national development objectives in making Malaysia a knowledge-based country or k-economy. Therefore, to ensure that all communities are able to access to ICT technologies, various programs have been introduced, especially those involving the rural community. Among them is the Universal Service Provision (USP), Rural Internet Centre (PID), Medan InfoDesa and so on. Such programs now act as the local ICT training centers, mechanisms in developing a knowledge-culture society and as triggers in creating ICT entrepreneurship activities center in rural areas. In Malaysia today, Broadband Community Centres established in each state have amounted to more than 200 that is actually 246 centers with a total number of users at 153,332 people (Malaysian Communications and Multimedia Commission (MCMC, 2011).

According to Noor Sharifah (2006), there were various ICT products that have been implemented in Malaysia for ICT programs in rural areas. For example, the establishment of Medan Infodesa and Rural Internet Center (PID) is a benchmark for the involvement of the rural population, especially in the digital world and the world of ICT. It is also a step taken by the government to help bridge the digital divide and provide ICT to the rural population (Noor Sharifah, 2006). The establishment of telecenters also enable to bridge the digital divide between the urban and rural

areas. According to Shakeel *et al.* (2001), the modernisation changes would create a difference in knowledge and significant ICT access between urban and rural areas, known as the digital divide. This difference resulted from a lack of exposure to the rural population in the latest technologies, especially internet (Shakeel *et al.*, 2001). According to Harris (2001), as well as providing internet exposure to the population, these applications also can save time and energy. Facilities like these will accelerate the process of technology development and promote Internet use among people in rural areas (Harris, 2001).

Thus, the presence of the center of telecenter equipped with Internet facilities and ICT infrastructure, enabling local communities to get various services at the telecenter. Subsequently, the ability to obtain various information and an easy exchange of information, it will be a catalyst and mobilizing vehicle for rural communities in undertaking development activities that eventually will be able to lift them out of poverty. In conclusion, the existence of ICT centers in rural areas would be able to improve the socio-economic status of rural communities, especially when rural communities are capable of operating their knowledge resources independently and effectively for personal, family and community. The purpose of this paper is to introduce the diversity of ICT products that exist, especially in rural areas of Malaysia. Discussion that will base upon literature references would also focused on the aspect of prospects and challenges of the formation of such products, especially the Village Internet Centre.

THE CONCEPT OF ICT

The rapid development of ICT has changed the way of human life from time to time. ICT can be interpreted as a discipline of science, technology, engineering and administration that is used to manage and process information, create a human computer interaction and the description related to the social, economic and human culture and the environment (Abdul Razak *et al.*, 2000). ICT is also the services, applications, and technologies that use various equipment and software that is embedded in all telecommunication links. In this regard, all telecommunication services such as telephone (permanent and mobile) and fax, as well as technological applications

such as video-conferencing, tele-working, e-learning, information management systems and all forms of technology from conventional methods such as radio and television until to date and modern such as GPS, PDA, iPad, tabloid, android and computers including the use of ICT in various network either fiber optic cable, wireless or satellite system communication (Wafula-Kwake & Ocholla, 2007). With the help of technology, distribution process, dissemination, processing and storing of information becomes easier, fast and updated. ICT is a vehicle that is capable of generating a knowledge society when this technology is integrated into the culture of lifestyle, career and education across all communities in Malaysia.

In order to ensure the digital divide in this country can be reduced, various programs and ICT products have been introduced in rural areas. The digital divide is a term used to describe the difference between those who received ICT facilities and vice versa. Measurement of the digital divide usually based on the number of telephone, computer and Internet users. From the MCMC statistics (2010), the number of Internet users in rural areas is only 14.7 per cent, while the remaining 85.3 percent are users in the city. With the introduction of ICT products services in rural areas, it is expected to be a catalyst to the government's efforts in enhancing knowledge and information communication technology at all stages of life in rural areas. Products introduced in rural areas also act as the government's strategy to bridge the digital divide between the rural and urban population in line with the rapid advances in ICT. It is hoped that the digital divide which is a form of poverty can be addressed so that the importance of ICT can be enjoyed by all levels of society in Malaysia.

ICT PRODUCTS IN RURAL MALAYSIA

The literature review shows that in Malaysia, there is a variety of ICT products and these products were developed by various parties. For ICT products handled by the federal government, there are four types of products under the supervision of the government for rural communities. Refer to Table 1 for a list of ICT projects that are under the purview of the federal government for rural communities and the major operator together with a brief description for each product.

Table 1
ICT Development Program Operated by the Federal Government for Rural Malaysia

Item	Products	Operator	Descriptions
1.	Rural Internet Center (PID)	Ministry of Energy, Water and Communications (MEWC) in collaboration with Pos Malaysia Berhad	A project to nurture and promote ICT in rural communities to bridge the digital divide between rural and urban communities
2.	Universal Service Provision	Ministry of Information Communication and Culture	A parent project under the MCMC that focus on identified rural areas. This project is to provide access to telephone and basic internet services. This project is designed to ensure that the local telecommunications industry focussing on profitless areas.
3.	School.Net Network Project	Ministry of Energy, Water and Communications (MEWC) in collaboration with Ministry of Education	A project involving the provision of broadband Internet access to 10,000 schools across the country by providing the communications infrastructure to implement the smart school program in all schools in Malaysia
4.	Medan Info Desa	Ministry of Rural and Regional Development	A physical entity project which is equipped with ICT infrastructure located in rural areas. This project is a catalyst for bridging the digital divide in rural and urban areas

Source: Modified from Aspirasi Digital Online (2006), Official Website Ministry of Rural and Regional Development (n.d)

Besides the development of ICT-based projects are also run by private corporations and as well as by several non-governmental organizations (NGOs). This is because the ability of the government is limited and it is the responsibility of corporate bodies also to get involve

in local community development activities. In addition, the corporate sector also received tax exemption when such activities are implemented. Table 2 lists some of the projects undertaken by corporations and others that exist in urban and rural areas of Malaysia.

Table 2
ICT Development Program Operated by Private Corporation and NGOs

Item	Products	Operator	Descriptions
1.	Maxis Cyberlab	Corporate Initiative	A program that provides exposure to the community to learn about ICT education more closely and effectively
2.	PINTAR	Corporate Initiative	Create awareness among students the success in ICT education and application
3.	Celcom XChange	Corporate Initiative	Program for teens in connection with a positive lifestyle and use of ICT in our lives
4.	'Excellent PC' Project	Corporate Initiative	Support the government effort on "One House One Computer" program
5.	WiFi Village	Corporate Initiative	Program works to share knowledge with all Malaysians on Fidelity Wireless technology (WiFi).
6.	TaniNet	NGO Initiative	Information and online services on agriculture and biotechnology and access to expert advice
7.	CyberCare	NGO Initiative	Build an electronic community for the orphans and administrator of the home.
8.	e-Deaf	NGO Initiative	Access for communication among the deaf community through the use of ICT in our lives.

Source: Modified from Aspirasi Digital Online (2007).

In addition, there are also some ICT-based projects run by government agencies and state governments in urban and rural areas. Below is a list of ICT development

project founded by the State Government and relevant government agencies (See Table 3).

Table 3
ICT Development Program Operated by the Government

Item	Products	Operator	Descriptions
1.	Smart School	Education Ministry Malaysian	Enculturation of ICT in education to improve the quality of school and teacher competency
2.	Shop.com	Communication and Multimedia Commission (MCMC)	This program is designed to provide opportunities for communities to an access and communication services. The program is a premise managed by local entrepreneurs and developed in a relatively developed area in a community.
3.	Smart.com	Terengganu Government	The program is an oriented information resource center program and act as ICT learning and training center for people in rural areas.
4.	e-Village	Johor Government	A program which aims to bridge the high risk digital divide such as the rural community. Established to enhance the skills of the farming community by training them to use ICT skills in the hope of improving their living standards through the use of ICT.
5.	e-Malacca	Malacca Government	This program is a learning exercise program on computers and internet for the Malaccans. The program aims to obtain informations and gain knowledge online.
6.	IT Community Centre (PKIT)	Selangor Government	The aim of the program is to produce an illiterate and knowledgeable Selangorians.
7.	IT Wake (K-TRAK)	Selangor Government	Programs to provide equal opportunities to society in Selangor in the study of information technology
8.	Mobile Internet Unit	MIMOS	A program that comes with PCs, multimedia software and trainers. This program also serves to ICT skills training to rural students through the use of mobile internet unit.
9.	e-Learning for Life	Government Agency	Community Center Program that provide e-learning, training and the access of ICT to all.
10.	e-Bario	Government Agency	Community Development Program in the interior of Sarawak through the ICT facility.
11.	Agri Bazar	MIMOS Berhad in collaboration with the Department of Agriculture	A program that focuses on bridging the digital divide, increase productivity and competitiveness in the agricultural sector in Malaysia. Through the initiative of the parties involved, the internet has been developed for manufacturers / vendors / suppliers and buyers of agricultural products in order to carry out transactions online.

Source: Modified from Aspirasi Digital Online (2006), Aspirasi Digital Online (2007), The K-Economy Division of the Chief Minister of Malacca Department (n.d), PKIT (n.d).

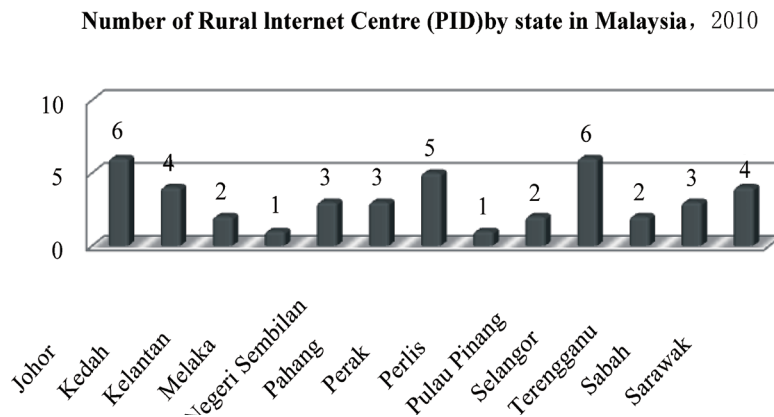
Based on the three tables, they clearly show that there are various types of ICT-based products that have been developed and implemented in urban and rural areas of Malaysia. From the diversification of the product, the most famous is the Rural Internet Centre (PID). Among all the projects undertaken, the Rural Internet Centre (PID) project which provides Internet connectivity in rural areas is now acceptable by all rural communities had received

recognition and was awarded the Major Innovation Prize in the Public Service International Innovation Awards CAPAM 2006 (Aspirasi Digital Online, 2007). Through statistics gathered in 2004, there were more than 53,000 PID users while 35,000 users have undergone training under one of the PID training program since it was launched on 3 April 2000 (Aspirasi Digital Online, 2007). According to MCMC (2010), there are currently 42 PID

units across the country furnished with several numbers of computers along with the Internet via ADSL or ISDN. Based on the chart below, Johor and Terengganu have the highest number of PID with 6. The distribution of the PID in every state clearly shows that the amount is not

uniformly distributed. This condition may be caused by several factors such as the size of the respective states. For example, in Perlis and Malacca there is only 1PID in each state (MCMC, 2010).

Chart 1
Number of Rural Internet Centre (PID) by State in Malaysia, 2010



Source: Modified from Statistic Information Book of MCMC (2010).

PID is established to increase awareness and understanding among local residents on the development and the role of ICT in shaping the present and future life. PID is established with these objectives (Harris, 2001)

- (I) to improve access of communication information to the rural communities
- (II) to provide a perfect place and free internet access to the communities surrounding the PID.
- (III) to provide basic training to improve literacy and ICT skills to rural communities.
- (IV) to develop a website that can provide interesting and useful information to the local communities.
- (V) to teach the local communities how to update the website.
- (VI) to stimulate social and economic activities based on ICT facilities to local communities.

According to Harris (2001), groups such as students, youth, the poor, single mothers and senior citizens are targeted in the establishment of the PID. The rural poor are viewed as those who could not afford to own computers. With this available facility, the target groups will be exposed to Internet technology and online services and thus enabling them to improve their socioeconomic level. PIDs are often found in the Post Office compounds with TM Net DSL connection, ADSL or ISDN because of its site facilities, security and electricity supply which is also funded by the local Post Office. However, computer equipments and Internet connections are

operated by private operators and financed by the government. The supervisor of PID who receives a special allowance is also given training to operate the center as well as the establishment of a volunteer committee to initiate activities at the PID. Thus, the PID is a holistic approach in providing Internet access and provision of infrastructure, capacity building and development of ICT content. PID also serves as the Community Knowledge Centre and as a one-stop-center for services such as e-Government Services (eG), e-learning, communication center, application development center base on sharing of software, test and certification center and others.

In addition to PID, MCMC (2010) stated that the access for rural communities also includes five other categories that is Community Broadband Centre (PJK), Mini Community Broadband Centre (Mini PJK), Broadband Library (PJL), the People's Communication Development Program (PPKR) and Village WiFi. Table 4 shows the distribution of these five community access throughout Malaysia. So far Malaysia has 240 rural PJK with 86,633 users, 11 Mini PJK, 110 PJL, 58 PPKR and 7 Village WiFi (MCMC, 2010). From the MCMC records, Penang does not have any access to rural communities but have only two Rural Internet Centre (PID) that is the Balik Pulau PID and the Tasek Gelugor PID. Indeed, all the establishment of ICT products and community access are to reduce the digital divide and facilitate development whenever the use is accurate and strategic.

Table 4
The Total Number of Community Access in Malaysia Until 2010

State	Community Broadband Center (PJK)		Mini Community Broadband Center (Mini PJK)	Broadband Library (PJL)	People's Communication Development Program (PPKR)	WiFi Village
	Number of Centers	Number of Users				
Johor	45	16,026		7		1
Kedah	20	8,029	1	21	2	
Kelantan	19	5,029		15		
Melaka	13	3,271		5		
Negeri Sembilan	16	4,524		8		2
Pahang	36	12,035	2	6		
Perak	15	8,173			55	
Perlis	3	1,792			1	
Selangor	12	4,179	2	11		
Terengganu	17	6,637	1	10		
Sabah	19	6,708	2	1		1
Sarawak	25	10,230	2	26		3
Malaysia	240	86,633	11	110	58	7

Source: Malaysia Communication and Multimedia Commission (MCMC, 2010).

PROSPECTS AND FUTURE DIRECTIONS

The purpose for the establishment of various ICT products, especially in rural areas, is to develop a balanced development between urban and rural areas and bridging the digital divide. This will help empower the community with the knowledge of ICT, help supervisors to teach and assist the local community to use all the facilities provided. The literature review found that the contribution of ICT products to rural communities is impressive. Among the first is in terms of improved knowledge. From an Impact Study Report done by the Ministry of Rural and Regional Development (Ministry of Rural and Regional Development, 2011), based on a survey on 20 "Medan Info Desa" in several states in Malaysia found that 86.3 percent of respondents acknowledged the positive impact of ICT products from the point of adding to their knowledge (Ministry of Rural and Regional Development, 2011). This situation clearly shows that public awareness of the existence and the importance of "InfoDesa" program which indirectly contribute to the increased in IT literacy among the public. The study also found that 70 percent of respondents acknowledge that the existence of ICT products gave an impact and a positive effect on the changing aspect of the society's socio-economic especially in rural areas (Ministry of Rural and Regional Development, 2011).

Secondly, the existent of rural ICT products also help save costs and time spent by the rural communities. Harris (2001) reported that the study on PID in Tanjong Malim in 2005 found that consumers can save on expenses while acquiring knowledge of ICT as it is free and 60% were very satisfied with the services offered and were willing to buy their own computer if they were affordable. While Norizan Razak (2009) found that the ICT products offered are capable of saving the cost of transport to get the services in the city. This occurs when there is an increasing number of community participation in rural areas

especially in the online application through e-government, e-business, e-banking and a host of other on-line activities which aims to empower rural communities in socio-economic aspects through the use of ICT.

On the third aspect, the ICT products established also aim to change and improve the income level of rural communities. According to Commoli (2008), the establishment of telecenters model has the potential to generate revenue because it allows people to source information, develop applications and sell the products and services that offer high added value at the community level respectively. Therefore, based on the basic concept of the establishment of MID that is community ownership, society's empowerment and sustainability, the activity of MID in the form of entrepreneurship can be enhanced. Such courses in multimedia, software development, website and others will be able to produce skilled manpower in ICT that can produce ICT products for local markets (Official Website Ministry of Rural and Regional Development, n.d.). Thus, as the long-term government's target is to enable the local community generate higher income from activities undertaken and will eventually manage the MID at a later date. The study by Ruth (2007), in Wu'an, a remote region of China, found that the establishment of ICT center that is telecenters enabled it to stimulate the economy of the community. He explained that the establishment of telecenters in this area not only have an impact from an economic standpoint alone, the local community were even more affected by the increase in ICT literacy and their more advance attitude or motivation (Ruth, 2007). While in Malaysia, the best PID in 2004, the Simpang Empat PID in Perlis has its own uniqueness, especially to the rural community, whereby it have its regular users consisting of paddyfield farmers and other farmers who have undergone training in computer skills and internet. These farmers utilised their skills to find information on cultivation techniques, fertilizers, and crop seeds (Aspirasi Digital Online, 2006).

Fourth, the positive contribution of ICT products to rural communities is also confirmed by the findings obtained by Cecchini and Scott (2003) that the rural community in India is able to reduce poverty. The ICT products created could address the needs of rural communities in obtaining informations and made an opening in communication between the villagers (farmers) and government officials in matters such as providing information about crop prices, current market or others. In addition, Grameen Telecom of Bangladesh, the only ICT centers that operate in rural areas through the sponsorship of Grameen Bank offers loans from a microfinance institution to purchase mobile phones and call credit to the villagers to repay loans and generate income (Kenney, 2000). The existence of AgriBazar's program in Malaysia, also benefit particularly those who work in the agricultural sector, especially in rural areas. The study found that "AgriBazar" program has a relatively positive economic impact in increasing agricultural production and thus increasing the income of the agricultural communities (Aspirasi Digital Online, 2006). In addition, the existence of programs such as "AgriBazar" would be able to transform the lives of people engaging in agriculture because the use of ICT in transforming the agricultural sector is an appropriate government's effort now (Transformation of the Agricultural sector contributors, 2011).

Fifth, the emergence of Internet technology, especially ICT is seen as a basis for the social and economic development thus, increasing the quality of life particularly in rural communities. Esselaar *et al.* (2008) gave an opinion that a study conducted by their group in the African countries found that, the effectiveness of ICT would be able to increase the capability of rural communities in the Small and Medium Enterprises (SMEs) in their country. Through the use of ICT, the SMEs entrepreneur would emphasis more on the production of products, thus helping to improve product quality and better services. According to Esselaar *et al.* (2008) also, the people living in rural areas can market the SME products such as handicrafts, local foods and others through the Internet to the public and doing business right from home without a large capital, either full time or part time (Esselaar *et al.*, 2008).

Based on the above examples given, clearly it can be seen that the direction of the establishment of rural ICT products is centered on one main objective that is to improve the living standards of rural communities and thus to bridge the digital divide between urban and rural areas. However, all the constraints and challenges should be emphasized, so that all the prospects discussed could achieve the goal of its establishment.

CHALLENGES AND IMPLICATIONS

Strategic use of ICT can not only enhance and increase knowledge but also increase productivity and economic

growth. Based on statistics from the Malaysian Communication and Multimedia Commission (MCMC) showing the number of Internet users in rural areas increased from 12.0 percent in 2005 to 14.0 percent in 2008 (MCMC, 2010). This shows that awareness and the knowledge about technology is significant among rural communities. Although it is seen that the establishment of ICT products are able to have a positive impact on every community, especially in rural areas as discussed before, but there are still challenges and problems faced in carrying out this mission.

The first is the problems and challenges of rural communities themselves, especially in terms of perception and motivation. Harris (2001) found that educating and training the rural communities whereby the majority are illiterates in ICT requires patience and determination. Many rural communities are made up of people who are old aged and have no sense of interest in ICT anymore. Some of them are very difficult to accept and use ICT. They may be embarrassed or afraid of the new technology in which there is a phenomenon known as a technology phobia or phobias to online. According to Faiola and Buckley (2000), the benefits especially from the existence of ICT telecenters can not be achieved by people who are in the middle ages in any rural area. This is because the level of ICT literacy is low and thus they will not willingly open the door of the telecenters and press a button to operate a computer (Faiola & Buckley, 2000). This condition is usually strongly further influenced by their group of senior citizens and those who are forever living in rural communities.

Apart from that, he suggested that the instructors or supervisors who were given the responsibility should understand the needs, interests and actions of the community that surround the ICT products that are created. All these are essential to ensure continued participation and the use of the product offered were always at the maximum level. Harris (2001) also recommended the creation of specialists among the local community for any references to be made in creating a comfortable position during using the ICT products. Secondly, the technical and infrastructure problems, particularly in terms of the preparation and maintenance of infrastructure such as damaged computers, outdated software, limited speed and others. A study by Mohamed Awang Lah (2000) found that there were only a few of the earliest rural ICT centers established since 1997 still exist and the rest could not operate due to damage to the computers and the lack of instructors to manage the courses. This is because there is some presumption from some parties that the provision of ICT infrastructure is a cost, not an investment (Mohamed, 2000).

Thirdly is the challenge in obtaining convenient location and space. The challenge in this aspect should be handled and planned as best as possible, especially when awareness of the growing importance of ICT in rural

communities. For example if we look at the year 2010, the total number of Community Broadband Centre (PJK) in Malaysia is 240 and the number of users is about 86,633 people (MCMC, 2010). Whereas in the first quarter of 2011, the number of PJK increased to 246 units and the number of users increased to almost double that is to 153,332 people (MCMC, 2011). The total increase in the number of users of PJK shows that people come to realize the importance of ICT in their midst. However, if seen by the increasing number of members, the parties involved need to be more sensitive to the increase in the number of members and number of facilities available in order to prevent traffic congestion in the centers and ICT products in the future. This situation clearly shows that a challenge like this still need to be fully addressed for the successful implementation of ICT in rural areas such as by increasing the initiatives on the purchase of computers to every household in rural Malaysia.

Fourth, there is the view that there is a weakness in terms of the implementation approach. Among these weaknesses is too much emphasis given by the government on developing rural community awareness and exposure, rather than an economic agenda. The economics benefit of ICT in the long term is based only on assumptions, not applied exactly. This has been proved by a study by Harris (2001) who found that many consumers of PID Tanjung Malim were able to save cost, but at the same time no respondents were able to supplement their income from activities carried out. Thus, effective activities, especially in terms of stimulating the use of ICT that will enhance ICT products related to consumer income must be implemented, for example, online marketing, supply of payable consultancy or services, publishing based on experience and so forth.

The fifth challenge is to identify the purpose of contribution during the implementation of the program that requires contribution from contributors which may have their own agenda. Hence the development of ICT products on the basis of contributions to the community, society development project and enterpreneur policy will create different profits and goals. According to Harris (2001), ICT product is a vehicle for human development. If it was considered only as a development project it will be peeled in the context of beginning, middle and at the end with a result that can be assessed. However, should it be considered as a process of continuous development, the level of development will vary to a certain situation and adopted massly and new technologies observed in the best possible way. This will become more complicated when the outcome of the focus on a variety of different levels of either the individual, household, group, community, county, district, regional, state, national or international level.

It can be seen clearly that, although the government has established various programs or projects based on ICT in rural areas, the rural communities have still not fully utilized them and there are many constraints and

challenges existed that need to be tackled in order to reduce the digital divide in the future.

SUMMARY

In general, we could see that establishment of ICT products that exist with different names and through the contribution of various parties whether the government or the private sectors have a positive impact on the socio-economic rural communities. The purpose is same that is boosting the information technology culture in rural communities. Finally, the discussion showed that the establishment of ICT products has helped rural communities to enjoy development and information technology facilities, including in terms of infrastructure and ICT courses and community activities. All of these can increase knowledge, information search, career improvement in some way to improve income levels and socio-economic status of rural communities. The direction and prospects are very positive, but many obstacles and challenges, such as maintenance issues, the objectives of implementation and motivating the people should be handled eventhough taking a long time. Indeed, not only profits on products should be assessed but the transformation placed on the ICT products would be the determinant. Hence, in ensuring the effective establishments of the ICT products were implemented successfully, the empowerment through all the parties involved must be done with a strong commitment to boost the ICT community throughout Malaysia in the future.

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