An integrated approach towards ICT4D

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Abstract

The avalanche of developments that followed the advent of the Internet as well as the growth of social networking exponentially enlarged the need for ICT access amongst disadvantaged communities. ICT access was seen as the Holy Grail to all kinds of development especially the economic empowerment. Now after more than a decade of developments in the ICT4D domain, the majority of these expectations have still not been realized while the needs of the disadvantaged groups have increased. Researchers openly question the potential of ICTs to act as a catalyst for improvements especially in the field of economic growth. The role of telecentres and other public access facilities feature prominently in many critical analyses of ICT-driven economic growth models. This paper contains some of the results of a study that was mostly conducted in Thailand on a unique development model that links the sustainability of telecentres to the market activities of small and medium enterprises. The findings that were generated from a number of case studies that were conducted in Bangkok and in the North of Thailand pointed to the fact that the integrated approach or partnership approach with all its contextualized dimensions holds the key to the modeling of sustainable telecentres.

Keywords

Telecentres, case studies, empowerment, economic development, integrated approach, disadvantaged communities

Introduction

The commercialization of the Internet in 1995 triggered an avalanche of new technology and applications. These innovations created colossal expectations regarding job creation and economic opportunities however the majority of these predictions failed to realize the anticipated results.

Although governments as well as the private sector have during the last decade launched a wide array of initiatives aimed at the provision of ICT access to disadvantaged

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 11-22

communities who could not afford to pay for it, the digital divide remains a major lagging factor preventing the empowerment of disadvantaged communities Telecentres, multi-purpose community centres and information kiosks are but a few of these sponsored facilities.

Sustainability proved to be the biggest stumbling block in the way of the operational success of these facilities. By linking telecentres with the Thai OTOP-model, Thai communities succeeded to achieve satisfactory levels of sustainability for these centres. The government-driven OTOP-model is aimed at assisting municipal subdistricts in the cities, as well as towns in the rural areas to specialize in the production of goods or services that are unique to that region. According to Tuamsuk, Phabu and Vongprasert (2013:361) the government set the following objectives for the OTOP-initiative:

- creating opportunities for entrepreneurs to access capital sources;
- developing products and innovations; and
- developing marketing, both domestically and internationally, to build competitiveness
  through initiated and continual mechanisms.

The model has evolved to the point where OTOP has become a prominent brand for products and services that are produced in terms of this model. Incentive schemes and award programs have been introduced by government to stimulate entrepreneurship. “Although the government has been running the OTOP project for many years, the amount of research on the OTOP project is small and studies in this respect are still limited (Tuamsuk, Phabu and Vongprasert (2013:365). In the final stage of this research project that has been running since 2010, the researchers completed a critical analysis of this economic growth model based on these telecentre hubs. The study took the form of a compilation of small case studies in the cities of Bangkok and Chiang Mai in Thailand.

Literature review

Rao (1998) defined the role of telecentres in India in the following comprehensive manner. “Telecentres, known more popularly as community information centres, are public-access information and communication initiatives that serve as a community-gathering place where people can access communication technology and applications, learn new skills, tackle local social issues, face common challenges and empower their neighbours. Since the Rao-definition was formulated in 1998, it does not make provision for telecentres to offer Internet access. In a more recent definition a typical telecentre is described as a place providing ”connectivity and access to information via a range of information and communication technologies including phone, fax, computers and the internet” (Bailur, 2007:62). The role of the telecentre as a training platform should under no circumstances be negated. A telecentre can only be developed into a business hub if the users are properly trained to use the facility. Training is the catalyst that can give members of a disadvantaged community access to jobs. Plou (2009) relates the following hearsay account of the use of telecentres in the African state of Mali. “Alima tells me about a young woman from Kati who has just been hired as a secretary at a local organisation thanks to the computer courses she took at the telecentre.”

The researchers responsible for this study did include Internet access as a prerequisite for a viable telecentre. Since a number of telecentres in Thailand are formally or informally embedded in some form of integrated business model, these linkages were also investigated.

Economic development in Thailand is driven by the creation of small regionalized subeconomies based on one product range/service for which that region/district is known. This concept however did not originate in Thailand. “The ‘One Village One Product’ (OVOP) movement was initiated in Oita Prefecture, Japan, in the late 1970s, and aimed to vitalise the prefecture’s rural economy. The original concept of OVOP was to encourage villages in Oita each to select a product distinctive to the region and to develop it up to a nationally and globally accepted standard” (Natsuda, Igusa. Wiboonpongse, Cheamuangpan, Shinghkharat & Thoburn, 2011:1). “OVOP development is seen as a way of enhancing local communities’ entrepreneurial skills by utilising local resources and knowledge; creating value adding activities through branding of local products; and building human resources in the local economy” (Natsuda *et al.* 2011:1-2).

Thailand followed in the footsteps of the Japanese and introduced their own initiative named One Tambon, one Product (OTOP). “Initially, it was the government under Prime Minister Thaksin that officially launched the OTOP Development Policy in 2001 as a measure to revitalize and diversify the rural economy as a part of national economic restructuring” (Kurokawa, Tembo & te Velde, 2010:10). Curry and Sura (2007) explained OTOP in the following way:” local communities form private sector enterprises that produce and market finished products made from local resources and made by local workers whose skills are improved with assistance that increases their technical and marketing attributes. It is a publicly inspired program that depends upon whether private agricultural and forestry enterprises are successful in terms of profitability and market survival.” “The central government played an active role in providing funds, awards and trainings, conducting OTOP product championship for brand-making, and in building web sites for OTOP groups (Kurokawa, Tembo & te Velde, 2010:10). In the same vein as the OVOP-model, the OTOP-model centers around a prominent product or service of the tambon to anchor economic development in that region. Noknoi, Boripunt and Lungtai (2012) confirmed that OTOP uses local wisdom and community skills, and aims to support unique locally made products, by utilizing the indigenous skills and craftsmanship of the community combined with available natural resources and raw materials. Six product categories have been identified in the OTOP policy, namely (1) fresh and processed food, (2) alcoholic and non-alcoholic beverages, (3) clothes and garments made of natural and mixed fibers. (4) ornamental products including hats, scarves, bags and necklaces, (5) decorative and handicraft items produced from Thailand's forest resources and (6) herbal products made of natural ingredients (Curry & Sura, 2007). The success of the OTOP initiative moved government to utilize it as a national brand. (Noknoi, Boripunt & Lungtae, 2012). A network of OTOP shops has been established spanning all over Thailand from small rural villages to elaborate product exhibition areas at all the Thai airports.

The researchers were guided by the following challenge posed by Andersson and Hatakka (2013:294): “In order to move forward we need to focus the development outcomes by using theories that more explicitly draw our attention to the connection between technology and development.” The challenge is embedded in one of the most comprehensive, if not the most comprehensive, analysis of ICTD4D theories.”

From a theoretical viewpoint it is clear that the OTOP network meets all the criteria of classical contextualism. “Contextualism is defined as the localization process of a program being implemented. It indicates “mechanisms by which actors adapt a policy design to fit a situation” or “mechanisms for fitting the program to the local context” (Lejano & Shankar, 2013:83).

The investigation of linkages between telecentres and OTOP activities are also in line with formulated partnership theory relating to ICT4D. Park and Lejano (2013:40) pointed out that Global Knowledge Partnership (2003) has defined *ICT4D partnership* as “alliances between parties drawn from government, business and civil society”. They linked this statement to the pronouncement of Stewart and Gray (2006) that ‘partnership’ is interpreted as “work[ing] with society.”

Methodology

The researchers strung a number of case studies together. The inclusion of multiple case studies in one research design is supported by Yin (1994:14). Eisenhardt and Graebner (2007:25) explained that “each case serves as a distinct experiment that stands on its own as an analytic unit.”

Yin (1994:13) defines the case study research method as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between the phenomenon and the context are not clearly evident.” “The central notion is to use cases as the basis from which to develop theory inductively. The theory is emergent in the sense that it is situated in and developed by recognizing patterns of relationships among constructs within and across cases *and* their underlying logical arguments” (Eisenhardt and Graebner, 2007:25).

The problem statement addressed in the study is validated by a statement of Karanasios (2013:45) who alluded to the fact that “(w)hile there is mounting evidence on the positive national level economic benefits of Information Communication Technologies (ICT) in developing countries, one area where knowledge could be improved is how ICT and information has led to a re-orientation and transformation of human activity. That is, changes in activities in terms of how they are conducted, the actors, actions and laws/norms and the labour that contributes to the activity and how ICT introduced in one activity impacts on other activities and the creation of new activities.” The researchers are of the opinion that the forging of a linkage between a telecentre and an OTOP activity, whether achieved by pre facto design or post facto business process reengineering offers a researchable contribution in this field.

The researchers used four of the six recommended sources of evidence that Yin (1994:80) recommend i.e. documentation, interviews, observation and participant observation. They visited a number of telecentres in Bangkok and Chiang Mai during the period 2010-2013. These telecentres all offered Internet access as well as a training facility. Although some of the telecentres served the general community, a significant number of them were aimed at serving special interests, i.e. the disabled, the aged and the prison population. Semi-struc-

tured interviews were conducted with telecentre operators, users and other stakeholders. Interviews were conducted at the following telecentres:

Type	Owner	City	Interviews & Language	Presentation & Language
Telecentre for the Disabled	Foundation of Disability Empowerment	Bangkok	2 Managers, 2 residents (T)	-
Telecentre for the Aged	The Family Development Centre	Bangkok	2 Managers (E & T)	1 x T
Telecentre in the Female Prison	Klongprem Prinsoner Jail	Bangkok	2 Managers (E & T)	-
Telecentre at the School under the tree	Pakdee Community Telecentre	Bangkok	1 Manager & 3 learners (T)	
Telecentre linked to silverware industry	Pradittorakarn Artisan Telecentre	Bangkok	1 Manager (T)	-
Telecentre at school	Kotharam Temple Telecentre	Bangkok	2 Managers (T)	
Telecentre that are linked to recycled plastic industry	The Family Development Centre / the Garbage Bank Centre	Bangkok	2 Managers (T)	-
Telecentre at training centre for young ladies	Foundation of Young Girls Development	Chiang Mai	1 Manager (T), 1 Sponsor (E)	-
Multi-purpose telecentre linked to longan industry	Prathat Ha Duang Temple Telecentre	Lee	1 Mayor (T) 1 Manager (T)	1 x 7 Officials (T)
Telecentre for young Buddhists	Prathat Hariphoonchai Temple	Lamphun	-	-

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Cases

The cases are categorized according to the type of telecentre and/or special interest that are served by the telecentre.

Multi-purpose telecentre

The researchers visited one decentralized example of such centre in the town of Lee in the North of Thailand. The visit was preceded by a meeting with the town council, chaired by the mayor. The mayor explained through an interpreter that the council is fully committed to an integrated approach where the telecentre will be directly linked to the OTOP model. The mayor not only took personal charge of the integrated process, he also featured as the face of the project in/on promotional material for the project. The researchers also visited a construction site where the building that will host the joint OTOP/telecentre activities is at present being constructed. The telecentre will serve as a marketing and liaison hub for the marketing and distribution of the OTOP products identified for this region. The region is famous for religious tourism as well as an exotic fruit known as the longan. A special brand of coffee and cacao is manufactured from this fruit. It is sold from an OTOP centre which is at present situated next to the main road but will form part of the integrated business centre that is at present under construction.

Numerous spectacular Buddhist temples stocked with meaningful artefacts are also situated in this area. The OTOP/telecentre model is ideally suited for marketing these temples by way of web sites and e-commerce. It can also serve as a training and gathering point for tourism guides.

This case study is the only one that the researchers encountered that was pre-designed according to the integrated business model. All the others required an intervention in the form of business process reengineering.

Religious telecentre

In the town of Lamphun that is also situated in the Northern part of Thailand the researchers were taken to a telecentre that was set up to train young monks. It is called “the Monk School”. This telecentre is situated in the educational zone of the temple.

Across from the telecentre in the temple is a large OTOP-facility that has a wide array of arts, crafts and dried food on sale however this facility lacks a telecentre connection. Since there is a large unused area in the facility, the researchers perceived this as a a major opportunity as well as a future challenge for the community to further empower more traders at this OTOP facility.

Training telecentre focusing on disadvantaged females

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The researchers attended a workshop for young entrepreneurs at a training centre in the outskirts of Chiang Mai. This training centre called the Foundation for Young Female Development had been established to offer training to disadvantaged young females including girls from the remote rural villages as well as the urban poor. The telecentre where the training took place is equipped with all the relevant ICTs. The workshop for 40 people between the ages of 15 and 25 was fully sponsored by Microsoft, ASEAN Foundation, TheThailand Research Center of Communication and Development Knowledge Management CCDKM, and the Asian-Pacific Telecentre Network (APTN). The course content for this week-long event consisted of a number of business and IT modules. Product selection, marketing, basic database development as well as website design formed part of this impressive initiative. A qualified systems designer from a local company took charge of the training.

School-based telecentre

During 2011 the researchers visited a school-based telecentre on the outskirts of Bangkok. During the week the computing facilities were used for formal scholastic activities but during weekends it were used for the provision of affordable ICT training for members of the communities. Volunteerism proved to be the most important variable in the model. A local lawyer who happens to be an ulumnus of the school heads up the training program. He made his services available at no cost whilst a local radio station announced the upcoming courses free of charge. “Word of mouth” plays an important role to inform the local communities of the activities of the telecentre with children attending the school acting as main message carriers. Members of the local community who attended the courses have to pay a nominal fee. A website administered at the school offers opportunities to the local business fraternity to get involved in e-commerece.

Culturally-driven telecentre

The researchers visited an example of such a telecentre in the centre of Bangkok. This centre, The Family Development Center is run under the auspices of the Ministry of Human Security and Welfare Development. The centre that is well supported by the aged focused and cultural activities like dancing, cooking, and the manufacturing of cultural artifacts. Dancing lessons in traditional as well as Western styles were offered as well as classes in traditional Thai cooking. The telecentre not only offered computer training to the local community, it also served as an information hub from which the centre’s activities were promoted. Cultural aritfacts which consisted mostly of handcrafts could be purchased at the centre.

Telecentre for the disabled

One of the best examples of the use of a telecentre for the empowerment of the disabled is situated in central Bangkok. The Foundation of Disability Empowerment which is only one of two whose main objective is the empowering of disabled people especially the physical disabled. This small telecentre offer ICT skills training on all levels. It also served a very effective marketing platform for the handcrafted articles that the disabled produce during working hours.

Telecentre for prisoners

During 2012 the researchers paid a visit to a telecentre that was situated within a prominent female prison in Bangkok, the Klongprem Jail. The telecentre served as an ICT training facility for all stakeholders and the prisoners who their terms is going to be over. The main function of this telecentre is acting as a marketing hub for handcrafts and other products that were produced by prisoners during their time of incarceration. The telecentre was unfortunately closed down soon after the researchers' visit when prison officials discovered that certain illegal activities (drug-trafficking) were co-ordinated from the telecentre. This telecentre has recently reinstated its fundamental functions such as ICT training and service as well as online marketing for all the prisoners' products and services (traditional massage, health care, etc.).

Manufacturing-driven telecentre

This type of telecentre supports an industrial cluster consisting of home-based workers, vocational groups, small and medium enterprises operating in a tambon or larger region. The researchers visited one in suburban Bangkok known as the Praditorakan Artisan Community. It is linked to the silverware industry. Silverware varying from small trinkets to large candelabras are manufactured in small plants and cottage industries. The telecentre act as a business centre from where manufacturing, marketing, order taking are co-ordinated. Representatives who serve the numerous flea markets in Thailand and surrounding countries gather at this telecentre to formulate and implement business plans. An interactive website serves as a platform for e-commerce. This model is also applied for the marketing of various medicinal, cosmetic and herbal products that are unique to the Thai society.

Community centre-based telecentre

Although most telecentres have been established to serve their community in one way or the other, some centres form part of general community centres. It is situated on the same premises as sports and other recreational facilities. It is during a visit to such a centre that the researchers came across a remarkable school-under-a-tree. The researchers conducted informal interviews with 8 girls who set up their own school at a table under a tree. Since the telecentre did not offer 24/7 connectivity, they used the downtime to discuss aspects of the curricula they followed. During the times that the telecentre did offer connectivity they accessed the Internet in order to download their course material. The girls even wore similar school uniforms in order to motivate them to take their project serious. All the girls came from backgrounds that did not allow them to enroll into the formal schooling system.

Findings

Curry and Sura (2007) reiterated the following caution that was issued in 2004 by the Office of the Prime Minister of Thailand:

Although it is becoming more successful, OTOP program is not a "silver bullet" that can eradicate completely rural poverty in Thailand. The program has four serious limitations and can succeed only if these basic conditions exist. First, local agriculture and forestry resource bases are substantial and readily accessible, second, communities are well organized and experienced and comfortable with cooperative activities, third, local people have strong workplace attributes, and fourth, communities are experienced in gaining "outside" financial and technical assistance from government and more advanced private companies.

It is against the backdrop of this sensible set of comments that the researchers considered their findings. After careful consideration they reached the following findings.

Telecentres linked to OTOP activities have a better chance to become sustainable. Such telecentres don't function as standalone business entities and therefore don't only rely on ICT activities to balance the books. The telecentre theoretically becomes a division of the OTOP business unit and is funded as such. It contributes to the marketing and promotion of the OTOP products that anchor that particular business unit.

Telecentres can play an important role in the empowerment of the disabled communities. The telecentre activities co-ordinated by the Foundation of Disability Empowerment in Bangkok support this finding.

Telecentres can also contribute a great deal to add value to the lives of disadvantaged communities. The case studies dealing with the telecentres for the aged as well as the one for female prisoners validate this finding.

Telecentres can be implemented to serve major social responsibility causes. By linking a telecentre to the recycling industry through The Garbage Bank, a major environmental cause is served.

Telecentres can serve as hubs for local development activities. Stakeholder partnerships negotiated within the local context provide solid platforms for addressing local needs and circumstances. The case study in Lee proved that co-ordination of local interests can work to the benefit of all the stakeholders involved.

Volunteerism plays an important role in successful telecentre utilization. Telecentre champions often have day time jobs. They dedicate their weekends to teach at telecentres. This phenomenon was detected at Kotharam Temple Telecentre on the outskirts of Bangkok.

The researchers are of the opinion that the Young Entrepreneur Program that was recently launched in North of Thailand and Bangkok has got huge potential to become one of the strong drivers of SME initiatives in Thailand. They found that the course content is ideally suited to serve as a launching pad for young people who want to enter the SME business environment. The mix of technology and business skills that are taught in the curriculum met all the requirements for sensible market entry while the sponsorship from Microsoft bodes well for the expansion of the training program.

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The researchers are of the opinion that this program, like the OTOP model, has got the potential to be exported to other developing countries.

Recommendations

The embedding of a telecentre in the OTOP-model will undoubtedly improve the chances of an OTOP-initiative to become sustainable. This feature, albeit present in a number of isolated cases, is by no means part of the present OTOP planning model. Since the Thai government is actively involved in the promotion of the OTOP brand, it will be to their benefit to incorporate telecentres in their promotional drives.

The Young Entrepreneur program can become the future bedrock of the OTOP initiative. The telecentre network can be used as a training platform for this program. The Young Entrepreneur program as well as the whole OTOP initiative has got huge potential to be exported to other countries.

Volunteerism proved to be one of the fundamental pillars of such an integrated approach. It is important to note that volunteerism doesn't always happen spontaneously. It needs to be stimulated and engineered. Competent individuals need to be informed of opportunities to contribute. Invitations to experience the activities in telecentres often trigger involvement in the form of volunteerism.

An integrated approach based on holistic contextualism and making provision for broad stakeholder involvement can serve as a platform for successful sustained economic development and growth initiatives. The political will to get involved in development initiatives as well as constructive involvement of the private sector and the local communities seem to be the variables that determine the ceilings of success. Stakeholder partnerships as well as volunteerism need to be actively promoted in order to maximize positive outcomes.

It is recommended that the OTOP/telecentre model as well as the Young Enrerpreneur program are used as flagship export models by the Thai government. If these intitiaves can be constructively integrated they offer a uniqueness that is well worth taking note of.

Conclusion

The findings of this study underscore the viewpoint of Park and Lejano (2013) that successful ICT4D implementation needs a wide range of requirements, and this can be only satisfied through strategic alliances.

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Pages 11-22

The researchers are of the opinion that the model in which a telecentre is linked to some form of market activity offers a highly sustainable option for economic empowerment of the disadvantaged communities. Although the researchers found little proof that this model has been formalized in the policy domain, it would be in the interest of Thai policymakers and politicians who are responsible for the stimulation of the Thai economy to develop and introduce this telecentre/OTOP model in their framework of development planning. OTOP activities not only relieve the economic burden on the linked telecentre to generate enough income to break even, it create the proverbial win/win or integrated platform of cooperation.

The Young Entrepreneur program, if introduced on a national scale, can play an important role in guaranteeing sustainability to the OTOP success story.

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