

A SUSTAINABLE E-BUSINESS MODEL FOR RURAL WOMEN: A CASE STUDY

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Abstract: Empowering rural women by promoting entrepreneurship is an effective approach to improve the living standard of the rural communities. This paper describes a case study in Setiu Wetlands located in Terengganu, Malaysia that aims at empowering rural women by imparting ICT skills through E-business. Data was collected through 30 conversational interviews of rural women in Setiu Wetlands. The framework of E-business model for rural women was proposed. The preliminary findings of this study conclude that there are substantial interests among rural women to become entrepreneurs through E-business applications. On a wider basis, the implications of this study are pertinent in efforts towards ensuring sustainability of livelihood in the rural areas for women as well as the community.

Keywords: E-Business, empowerment, entrepreneurship, rural, women

Introduction

Women play a significant role in economic development, and the participation of women in the workforce will certainly enhance economic growth of a particular country. Women work in almost all sectors of the economy, including agriculture, manufacturing, education, health, tourism and many others. Prior studies on women's participation in the economy have focused mainly on specific job-related activities (Hirschman, 1980; Ismail & Nachum, 2016). In Malaysia, women have played a significant role in the national economy since the early stages of the country's economic growth. As the country became industrialised in the 1970s, the participation of women became more intense. However, women's involvement in rural settings has not received adequate attention, although many would agree that women have contributed to Malaysia's economic growth. Women in rural areas are among those considered least potent in securing employment as compared to urban-dwelling women. Environmental conditions

and limited facilities in rural areas prevent rural women from competing in the employment sector. Manjunatha (2013) stated that the involvement of rural women in economic activities is very limited. A lack of facilities and limited job opportunities cause women only to engage in small-scale subsistence economic activities. Rashid (2008) described the poverty situation in the rural areas in Malaysia as severe. The populace including women, want to work, but the opportunities are limited. These ecologically based communities have natural resources at their disposal; however, other factors such as human capital, social capital and financial resources are poor, which relegates them to poverty.

Rural women need to be empowered to sustain a better livelihood for their families. Due to their significant role as a family 'planner,' they need to be empowered economically. In promoting economic empowerment, an important strategy is to enhance the capacity of women to participate in many economic

activities. They would certainly benefit from such ventures and, at the same time, contribute to the economic growth process. Their contribution to the national economy would be recognised, and their dignity restored. Ultimately, women will have a fairer distribution of the benefits of growth (Eyben *et al.*, 2008). An important aspect of economic empowerment is the potential increase in women's access to economic resources and opportunities. These include greater employment opportunities, improved financial services, increased property holding and other productive assets, skills development and access to market information. The economic empowerment of women is indeed a requirement for sustainable growth. It is also in tandem with the pro-poor growth strategy as stated in the Millenium Development Goals (MDGs) (OECD, 2011). Empowering women in rural areas is undoubtedly a new movement. One of the many approaches to

improve the economic status of rural women is through entrepreneurship. Entrepreneurship is recognised as a contributor to change and improve the living standards of society (Talib *et al.*, 2012). Participation in entrepreneurship is a source of income that can improve the standard of living of women in rural areas. Behara and Niranjan (2012) stated that the increasing dependence of societies on the service sector had created many opportunities for entrepreneurship, including those for women. The involvement of women in entrepreneurship contributes to economic development and, at the same time, benefits the well-being of families, communities and the nation (Mishra & Kiran, 2012). Throughout the world, rural women entrepreneurs significantly contribute to the national economy through their participation in informal businesses. Box 1 shows how women's economic empowerment accelerates growth and underpins MDG achievement.

Box 1. Why women's economic empowerment matters for pro-poor growth

- Higher female earnings and bargaining translate into greater investment in children's education, health and nutrition, which leads to economic growth in the long-term. The share of women in waged and salaried work grew from 42% in 1997 to 46% in 2007.
- In India, GDP could rise by 8% if the female/male ratio of workers were to rise by 10%.
- Total agricultural outputs in Africa could increase by up to 20% if women's access to agricultural inputs were equal to men's.
- Women-owned businesses comprise up to 38% of all registered small businesses worldwide. The number of women-owned businesses in Africa, Asia, Eastern Europe and Latin America is growing rapidly and, with such growth, direct impacts on job creation and poverty reduction are produced.

Source: Adapted from OECD (2011).

However, women entrepreneurs who engage in traditional businesses often face high competition (United Nations, 2006). Primarily, they have limited access to information. Therefore, ICT presents an opportunity to help people use these technologies to develop their businesses. Rural women should not miss this opportunity for conducting e-business.

Meenakshi (2015) stated that the 21st century is the best time for women to participate in business and entrepreneurship actively. E-business is one medium of business functions; it provides reliable information. Parnami and Bisawa (2015) stated that e-commerce could also assist women entrepreneurs to generate new ideas while having the luxury of working

at home. The issue of women entrepreneurship in Malaysia is not new. Rural communities, especially the women, are often associated with the problems of living in deprivation and isolation. The use of ICT in entrepreneurship is growing in Malaysia and should also be adopted by women. Several researchers have studied the participation of rural women in entrepreneurship through e-business. Razak *et al.* (2010) focused on e-business applications by single mothers. Moreover, Omar *et al.* (2015) studied the empowerment of women entrepreneurs through online digital entrepreneurship. Use of the Internet in business has contributed to the success of women entrepreneurs.

The use of Internet technology provides better opportunities for entrepreneurs to develop their business strategy and thereby create a good business reputation. E-business could grow more than 100% if the right strategy and business model are used (Razak *et al.*, 2010). Entrepreneurs who want to venture into e-businesses need to review their business models to position the requirements in the e-business protocol. However, past studies of women's participation in ICT-based business activities have focused on urban-dwelling women (Ismail, 2004; Ali *et al.*, 2005; Mohammed *et al.*, 2009; Muda, 2011)

This study focuses on empowering rural women to become entrepreneurs. An e-business model is proposed as a mechanism to empower rural women in Setiu Wetland to become entrepreneurs. Women in these communities are being trained in e-business applications. This project is designed to improve the capabilities of a group of women to set up e-business enterprises. The business may be small; however, the impact on the lives of women in the rural areas will be significant. Ultimately, their standard of living will be enhanced. The research question as follows: What is the most appropriate E-Business application for rural women? As this project is still ongoing, the focus of the discussion is based on a preliminary survey of their literacy in ICT and interest in

conducting business. In other words, it is the first step to identify the readiness of rural women in Setiu Wetland to participate in the project. From this preliminary study, respondents will be exposed to specific modules on E-business as highlighted in Figure 1. In general, this study is imperative as a baseline under the community project particularly in achieving the target to empower rural women. The proposed modules are designed to be applied in another place and targeted as one of the 'sustainable model' for rural communities in distress.

Materials and Methods

This study involves villages in the Setiu Wetlands; Kg Mangkok, Kg Fikri, Kg Saujana and Kuala Setiu. Setiu wetland is situated in the Northeast of Terengganu, 1 hour 30 minutes' drive from the state capital, Kuala Terengganu. The wetlands of Setiu begins in Kampung Penarik at about 300m from the shoreline, Sungai Setiu flows northward, parallel to the beach and reaches a narrow river mouth at Kuala Setiu Baharu (Amin & Hasan, 2003).

This project is a community engagement through the flagship of social innovation and with the participation of academicians from Universiti Malaysia Terengganu. Relevant agencies, such as Yayasan Pembangunan Usahawan (YPU), Payang.my and the state planning unit, are also involved. Figure 1 shows the framework of e-business model for rural women in Setiu Wetlands. The modules and programmes above are designed to equip the participants with skills in doing e-business. The aim is to enhance entrepreneurial skills in e-business among participants. The modules developed for this study focus on developing entrepreneurship skills among the participants. Basic information technology and Internet access provided to the participants. The first module is on business awareness. Participants are exposed to the process of becoming an entrepreneur. Among the contents of the first module is an introduction to entrepreneurship, challenges

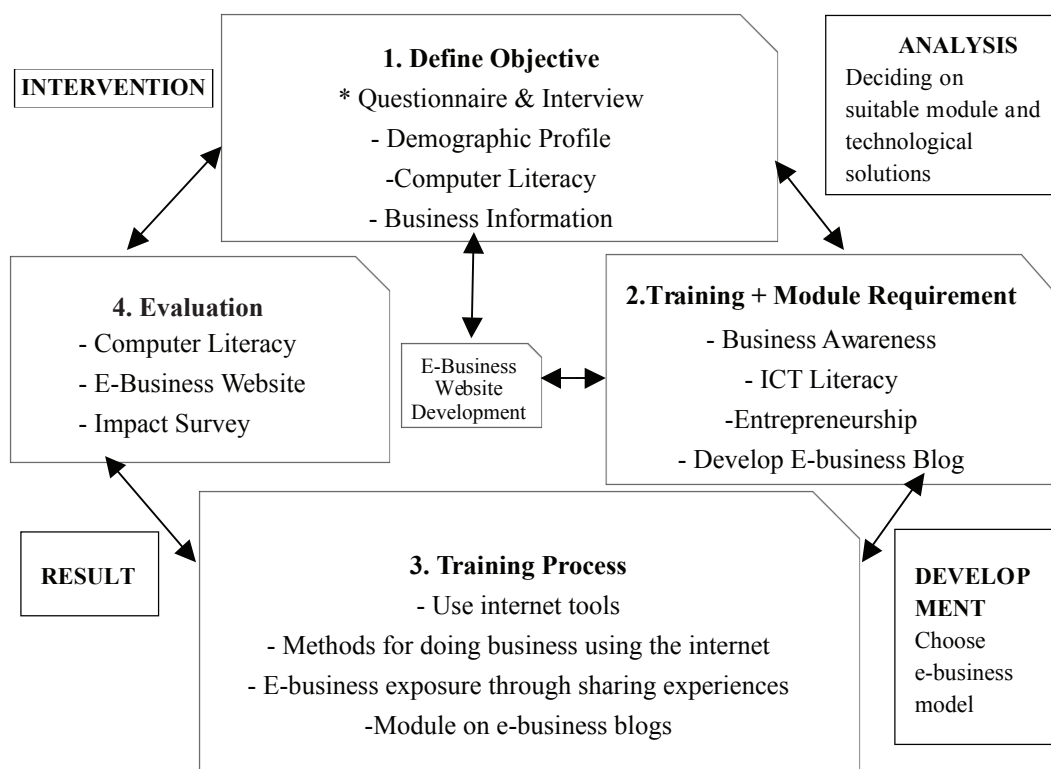


Figure 1: Framework of social innovation for e-business (Source: Modified model from Razak *et al.*, 2010)

and threats in the field of entrepreneurship and developing self-esteem at the personal level. The second module, entitled 'ICT Literacy' is aimed to train participants in the use of ICT in entrepreneurship. The majority of participants have no basic computer skills. Therefore, learning how to use computers and the Internet is necessary. Participants will find out how to register e-mail accounts and know the functions of electronic mail. The third module is entitled 'Entrepreneurship Preparedness'. This module exposes participants to market surveys. Successful women in entrepreneurship and e-businesses are invited to share their experiences in the field of entrepreneurship.

The fourth module is the development of an e-business blog. This module provides skills to participants to build their business blog through appropriate applications. The objective

is to promote their products globally. Through this blog, participants can also interact with customers. The development of e-business blog is expected to help participants market their products more widely.

The final stage of this study is the programme evaluation. A thorough assessment of participants' performance conducted. The expected outcome is that the skills and input (ICT literacy and application of the e-business blog in entrepreneurial activity) provided is successfully applied.

The study began with the selection of respondents based on purposive sampling. Purposive sampling is a non-probability sampling method considered as a deliberate effort to gain representative samples by including groups or common areas in the

Table 1: Demographic profile

Variables	Category	Frequency	Percent (%)	Cumulative Percent (%)
Age (years)	20 and below	6	20	20
	21–30	3	10	30
	31–40	3	10	40
	41–50	14	47	87
	50 and above	4	13	100
Marital status	Single	9	30	30
	Married	16	53	83
	Widowed	5	17	100
Education Level	Primary school	5	17	17
	Lower Secondary Assessment (SRP/PMR)	9	30	46.7
	Malaysian Certificate of Education (SPM)	14	47	93
	Malaysian Higher School Certificate (STPM)	2	7	100
	Occupation	Part-time	10	33
Full-time		6	20	53
Unemployed		14	47	100
Income	No income	14	47	47
	RM 500 and below	7	23	70
	RM 501–RM1000	7	23	93
	RM 1001–RM 1500	2	7	100

*Source: Present study

prospective sample (Research Methodology, 2016). It is a suitable approach as the primary data need to obtain from a very particular group of respondents (ibid). Apart from the sampling, the interviews processes were also conducted. The participants were selected according to the criteria; literate (able to read and write), willingness and availability to participate and have an interest in the research matters. Thirty rural women in Setiu Wetland were chosen as respondents, which is sufficient for the community project. It is because the objective of this study is to train respondents to become entrepreneurs in e –business and it involves several modules. Hence, the small size of the

sample is better. It is parallel with Emmel (2013) highlighted that it is not the size of the sample that matters; it is how cases are used to interpret and explain that counts.

The first preliminary step under this research is to get information related to the demographic profile of the respondents, levels of ICT literacy and their interest and intention to become entrepreneurs. Based on this preliminary analysis, the respondents will undergo the proposed e-business model as highlighted in Figure 1. However, the remaining steps from 2 to 4 are still ongoing, and it is not discussed in this paper.

Table 2: Demographic profile of spouses

Variables	Category	Frequency	Percent (%)	Cumulative (%)
Occupation (Husband)	Private sector	2	7	7
	Self-employed	11	36	43
	Retired	1	3	46
	Unemployed	2	7	53
	Unmarried women	14	47	100
Income (Husband)	No income	2	7	7
	RM500 and below	1	3	10
	RM 501–RM 1000	8	27	37
	RM 1001–RM 1500	2	7	44
	RM 1501–RM 2000	2	7	51
	RM 2000 and above	1	3	54
	Unmarried women	14	46	100
Occupation (Head of household)	Private sector	1	3	3
	Self-employed	12	40	43
	Unemployed	1	3	46
	Married women	16	54	100
Income (Head of household)	RM 500 and below	6	20	20
	RM 501–RM 1000	5	17	37
	RM 1001–RM 1500	2	7	44
	RM1501–RM 2000	1	3	47
	Married women	16	53	100

*Source: Present study

Results and Discussion

This section highlights the results and analysis based on Step 1 (Figure 1). Table 1 outlines the demographic profile of the 30 respondents. More than 80% of respondents are under 50 years of age, and most are married (53%). Around 47% have qualifications in Malaysian School Certificate (SPM). Unemployment is high with 47% unemployed, 33% work part-

time, and only 20% work on a full-time basis. Based on these four profiles, the majority of the respondents earn low incomes and have low education levels. Data on monthly household expenditure revealed that about 90% of respondents stated that monthly household expenditure was less than RM500. All of the respondents do not save. Awareness in saving is low, and they are dependent on their husband.

The above data is meaningful if we

Table 3: Usage of ICT tools

Items	Category	Frequency	Percent (%)	Cumulative Percent (%)
Own wireless technology equipment	Yes	26	87	87
	No	4	13	100
Use own computer	Yes	1	3	3
	No	29	97	100
Use own laptop	Yes	7	23	23
	No	23	77	100
Use own handphone	Yes	12	40	40
	No	18	60	100
Use own smartphone	Yes	21	70	70
	No	9	30	100
Smartphone application - Facebook	Yes	20	67	67
	No	10	33	100
Smartphone application - Instagram	Yes	4	13	13
	No	26	87	100
Smartphone application - WeChat	Yes	7	23	23
	No	23	77	100
Smartphone application - WhatsApp	Yes	19	63	63
	No	11	37	100
Use smartphone to access the internet	Yes	21	70	70
	No	9	30	100

*Source: Present study

connect them with those in Table 2, which shows that 37% of respondents' spouses are self-employed, with most earning between RM501 and RM1000 per month. This income range falls close to the 'poverty line', which is RM870 for rural areas (EPU, 2014). Due to the low household incomes, purchasing power and the motivation to save are low.

The current socioeconomic status of the respondents indicates that women have no

source of earnings and are dependent on their spouses' income. Since the spouses' income is within the poverty range, women should be empowered to generate their income. These findings are similar to studies which focus on rural women concerning livelihood. Most of the studies indicated the hardship of rural women in managing the household, particularly regarding the financial aspect (Hay & Pearce, 2014; Ganle *et al.*, 2015; Cadzow & Binns, 2016; Zirham & Palomba, 2016). It is pertinent

Table 2: Intention and related factors to become an entrepreneur

Items	Category		Frequency		Percent (%)		Cumulative Percent (%)			
Interested in doing business	Yes		29		97		97			
	No		1		3		100			
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree					
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
I was exposed to business since childhood	10	33	7	23	4	13	5	17	4	14
I am interested in jobs that give great opportunities to profit	1	3	2	7	4	13	17	57	6	20
The success of my friends encouraged me to get involved in business	2	7	5	17	2	6	18	60	3	10
I am confident in my ability	1	3	1	3	4	13	20	67	4	14
I aspire to become a successful entrepreneur	0	0	3	10	3	10	16	53	8	27
I am serious about becoming an entrepreneur	0	0	3	10	3	10	23	77	1	3

*Source: Present study

to ensure that rural women have their income and less dependent on others. A study in Brazil showed that the likelihood of a child's survival was increased by 20% when the mother managed household income (OECD, 2011). The demographic profile of the thirty respondents fits with the objective of this project which is to empower rural women, through an application of E-business model. The second analysis is on

the level of information and communication technology (ICT) literacy of the respondents. This information is necessary to ensure that the selected participants' can undergo the e-business modules. The findings are reported in Tables 3. As highlighted in Figure 1, the project is to train rural women in Setiu Wetland on e-business application. In ensuring success, information on interest, attitude and motivation to operate a

business gathered. Almost all (97%) respondents are interested in doing business (Table 4). The majority (67%) of the respondents come from low-income families. Only a few exposed to business during childhood. The motivational factors for doing business are good. Overall, the majority of respondents are highly motivated to succeed in business. Based on the observation, most of the respondents were eager to learn e-business application. Many said that the opportunity to do business and generate income was absent. Therefore, this project fits the current interest of the community. Community engagement with UMT will more likely lead to success with guidance provided by the academicians.

In summary, the socioeconomic status of the respondents indicated that they need to be given an opportunity to generate their income. The results showed that most of the respondents are unemployed and their household income falls under the poverty line. This scenario needs to change. The introduction of new skills and knowledge such as e-business model is timely. The implementation of e-business model will not be successful without their interest and motivation to improve their standard of living. Based on the analysis in Tables 3 and 4, the current level of ICT literacy, as well as their interest to do e-business, it shows the positive indicator for the project, and it will ensure sustainability of proposed e-business modules.

Conclusion

Rural women in Malaysia face difficulties in many respects. They face pressure in housekeeping; educating and feeding the children and inadequacy in facilities that could lessen hardship in life. Nevertheless, rural women have great potential in generating their income if the household chores can be managed properly. Rural women are more prudent and thrifty in their spending. To give opportunities for rural women to have financially independent, effective programs must be formulated, and institutional support must be given on provision

of easy credit and training in basic business skills.

Due to the disadvantaged position of women in rural areas, they have to find ways to improve their livelihood. The participation of women in entrepreneurship is the most viable approach. The issue of rural women's participation in entrepreneurship, specifically e-business, should be appropriately addressed given the availability of ICT. This study is a flagship of a community project under UMT. An E-business model has been proposed (Figure 1).

The focus of the project is empowering of rural women in Setiu Wetland. The target group comprises of women who are unemployed as well as those who are motivated to generate their income. Modules and programmes are designed to identify opportunities that can positively impact their lives. This project is a three-year project (2015–2018). Based on the framework shown in Figure 1, the objective is to develop women who are successful in using e-business to generate income. Based on the preliminary analysis of ICT skills and literacy, as well as their intention to do business, this project is expected to produce successful women e-business entrepreneurs in Setiu Wetlands.

At the national level, investing in rural women is one of the solutions for promoting food security, fighting against poverty and promoting well-being. Promoting rural entrepreneurship, empowering women's collective activities, training on agriculture techniques and environment protection, training on marketing, improving women participation in value chain system and promotion of small's rural processing units would change the rural setting in Malaysia. Nevertheless, access to credit and saving are important as well as the availability of infrastructure to impact the participation of rural women in business positively.

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