

# E-Business Innovation Model of Setiu Wetland Resources for Women Entrepreneurship Program

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**Abstract:** *Setiu Wetland (SW) is located in Terengganu, Malaysia where it is enriched with vast variety of natural resources. Most SW rural women are doing small medium business with own special skills to help family in their living. They do have skills in utilizing SW resources but lack in proper marketing strategy for their business growth. The paper presents the results of Niche Research Grant Scheme (NRGS) project of UMT for improving the livelihood of Setiu Wetland (SW) rural women entrepreneurship skills through an e-business social innovation model. This project undertakes selected women respondents in giving assistance through the use of social media networking application in marketing of their local products, thus improving their financial stability. The results on income projection in pre and post implementation of the e-business model among SW women shows a significant improvement to their financial growth. It proves that the model has achieved the objective of improving the livelihood of Setiu Wetland (SW) women entrepreneurship program.*

**Index Terms:** *e-business framework, Push and Pull, Setiu Wetland (SW), social media, Women entrepreneur*

## I. INTRODUCTION

Women entrepreneurship is trending in boosting the economic growth of urban and rural community. Equipped with the blended information and communication (ICT) technology infrastructure, entrepreneurship skill among women will continue to be developed and enriched to increase in market growth income. The role of social media in business marketing is considered a contributing factor to entrepreneurs as a whole. Social media refers to a group of interactive internet-based applications, uses internet and mobile platforms to support the creation and exchange of

user-generated content [1-2]. Social media platforms such as blog, micro-blog, social network, text message and posted status or shared photos such as Facebook, Twitter, YouTube, Telegram and Instagram (IG) operate across these various platforms [3]. Social media is becoming vital to the new generation of gender based ventures that are digitally data driven through the use of technology. Social media is an online tool that enables users to create profiles that communicate with other users and share information or multimedia content with them. Companies that use social media have their own user profiles, accounts or licenses based on one of the types of social media.

This study is about of women entrepreneurial skill in Setiu Wetlands, Terengganu, Malaysia that focus on utilizing the entrepreneurship skill of the rural women using social media platform. The study duration is from 2015 to 2018 [10]. The aims to improve the livelihood of local communities using the niche Setiu Wetland natural resources. The area of study involves villages in Setiu Wetlands comprises of 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 [4,10-11]. Setiu Wetland ecosystems provide provisioning, regulating, cultural and supporting services that generate economic values and livelihood to the local communities. The value can be partly assessed in terms of their direct and indirect use values, as well as for the non-use values. The results for the direct use values are estimated at RM 2.9 million yearly, generated using a market price-based approach.

The pull and push methodology [10-11, 13] as in Fig. 1 is applied in Setiu Wetland women entrepreneur project through a social media product marketing i.e. Usahawan Setiu Facebook Mainpage [5]. A push strategy is to push a product at a customer, while a pull strategy pulls a customer towards a product. In e-business concept, a push strategy is a quick way to move a customer from awareness to purchase, whereas pull strategy is to create a prolong relationship with the brand. But, both strategies aim in moving the customer along the journey from awareness to purchase, however pull strategies tend to be more successful at building brand ambassadors [6, 14].

The push method applies when the women entrepreneurs or sellers post or market her product in Facebook timeline or status updates. They also may share attracting videos, animation or pictures on the product, how to use it or what is the benefits of using the product.

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This kind of promotion may invite “Like” among users, surfers, browsers or customers. When the customers clicked on “Like”, then this may trigger more views and likes by the other customers. Then they may ask for more updates on the same or even new products such that it requires for pull method from the sellers. The whole scenario is about the triggering process that is very much useful in e-business marketing strategies concept.

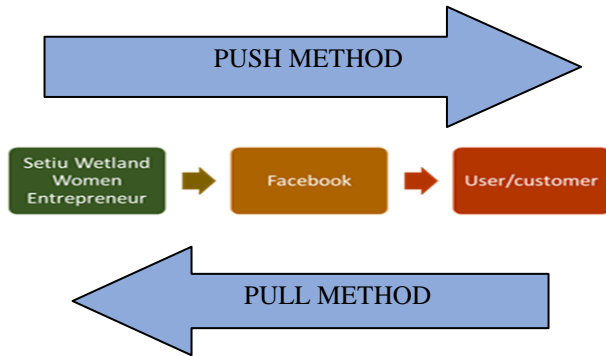


Figure 1. Push and Pull methodology in Setiu Wetland Project.

This study involves the total number of thirty (30) women respondents. The result shows that entrepreneurship skill among Setiu women is proportionately influenced by their academic background, their spouse’s financial stability and also the push and pull business methodology in their marketing strategy.

II. SETIU WETLAND GEOGRAPHICAL CHARACTERISTICS

Setiu is approximately 50km north of Kuala Terengganu as depicted in Fig. 2, with all coastlines bordering the South China Sea. The beaches in the area are subjected to annual northeast monsoon. The district of Setiu is the youngest among seven other districts in Terengganu, where it was established based on the recommendation of the Manpower and Administrative Modernising Planning Unit (MAMPU). This district, created in 1985 as an area of 135,905.80 hectares which composites of 10.49% total of the State of Terengganu [5-7].

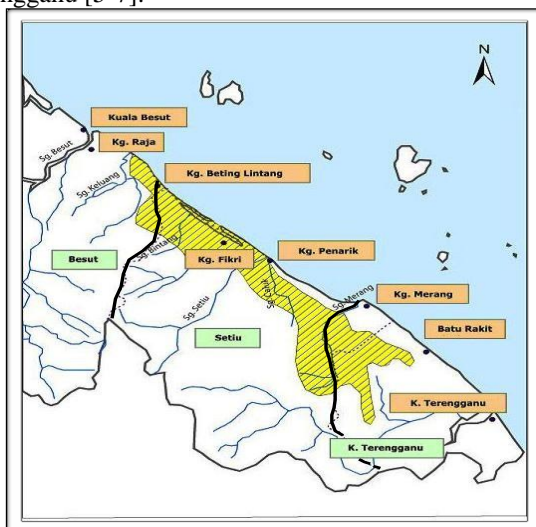


Figure 2. Map of Setiu (Source: WWFM, 1996 and [7])

Setiu Wetland is a unique habitat in Malaysia that has nine interconnected ecosystems. This would include sea, beach,

mudflat, lagoon, estuary, river, island, coastal forest and mangrove forest. The wetland is part of the Setiu River Basin, having a span of 23,000 hectares, is easily accessible by road from Merang and Kuala Besut [7]. Another study of mud crabs [8, 9] is done to forecast on mud crabs potential market.

III. MATERIALS AND METHODS: E-BUSINESS INNOVATION MODEL

The Setiu Wetland women entrepreneurs project adopts the proposed e-Business Innovation Framework as depicted in Fig. 3. It shows three (3) distinct phases i.e. Requirement, Development and Analysis phases.

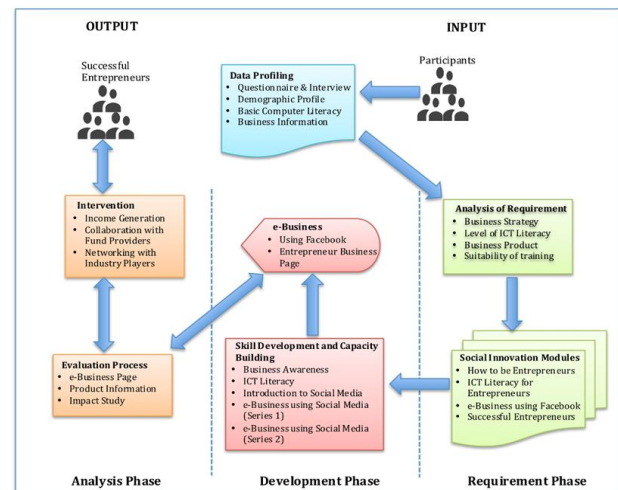


Figure 3. Framework of social innovation for e-business

The study began with the selection of respondents based the purposive sampling method. 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 prospective sample [10]. It is a suitable approach for obtaining primary data from a very particular group of respondents. Apart from the sampling, interviews were also conducted. The e-business model starts with Data Profiling that includes data on demographic profile of thirty (30) women respondents, their basic computer literacy and business information. The number of respondents sufficed for the community project because the objective of this study was to train respondents to become entrepreneurs in e-business involving several modules. Hence, a small sized sample, as in this study, is deemed appropriate. In a similar vein, it is not the size of the sample that matters but rather how cases are used to interpret and explain these samples.

The first phase, Requirement Phase involves Level 1 (Analysis of Requirement) that indicates the results on their business strategy, level of ICT literacy, their business product and suitability training needed. Then followed by Level 2 (Social Innovation Modules) that involves sharing sessions on “How to be Entrepreneur”, “ICT Literacy for Entrepreneurs”, “e-Business using Facebook” and “Successful Entrepreneurs”. The second phase, Development involves two (2) levels i.e. Level 3 (Skill Development and Capacity Building) and Level 4 (e-Business).

Level 3 includes five (5) modules. i.e. The modules are designed to equip participants with skills in e-business with the aim to enhance all the participants with entrepreneurial skills in e-business. The first module, Business Awareness that to expose to the process of becoming an entrepreneur. Among the contents of the first module were an introduction to entrepreneurship, challenges and threats in the field of entrepreneurship and developing self-esteem at the personal level. The second module, entitled 'ICT Literacy' aimed to train participants to use ICT in entrepreneurship. Majority of participants had no basic computer skills, so they had to learn how to use computers and the Internet. As a result, participants had to 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-business were invited to share their experience in the field of entrepreneurship. The fourth module is the development of an e-business blog (Series 1 and Series 2). This module provides skills for participants to enable them to build their business blog through appropriate applications and promote their products globally. Through the blog, participants can interact with customers. The development of the e-business blog would enable participants to promote their products very well. Finally, some evaluations are required by assessing participants' performance. The expected outcome regarding the skills and input (ICT literacy and application of the e-business blog in entrepreneurial activity) are successfully applied.

#### IV. RESULT AND DISCUSSION

The demographic profiles of thirty (30) respondents is tabulated in Table 1. The percentage of respondents under 50 years of age is greater than 80% and married (53%). About 47% possessed the Malaysian School Certificate (SPM). Unemployment percentage is high with 47% unemployed, 10% were part-timers, and 6% worked on a full-time basis. Based on these four profiles, majority of the respondents earned low incomes since they had low educational qualification levels. Data on monthly household expenditure revealed that almost 90% of respondent's monthly household expenditure is less than RM500 while none of the respondents had monetary savings and fully depending upon their spouses on financial support.

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)	Malaysian Certificate of Education (SPM)	14	46	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

Table 2 illustrates the demographic profiles of spouses relating to Table 1. About 37% of respondents' spouses were 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 [12]. The results of low household income that contributes to low purchasing power as well as motivation to save.

TABLE 2. Demographic profile of spouses

Variables	Category	Frequency	Percent (%)	Cumulative Percent (%)
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
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

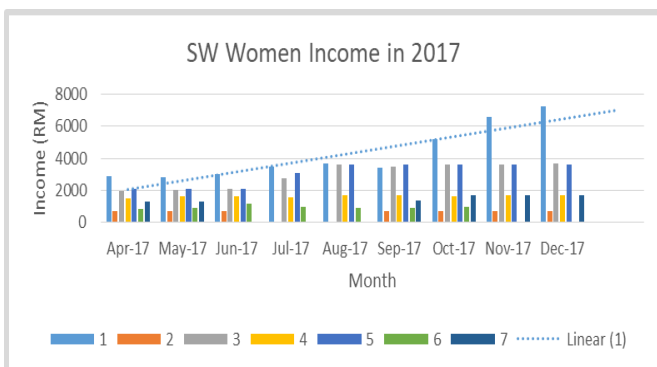
Married women	16	53	100
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The second analysis was related to the level of ICT literacy in respondents as given in Table 3. This information is necessary to ensure that the selected participants to undergo the e-business modules.

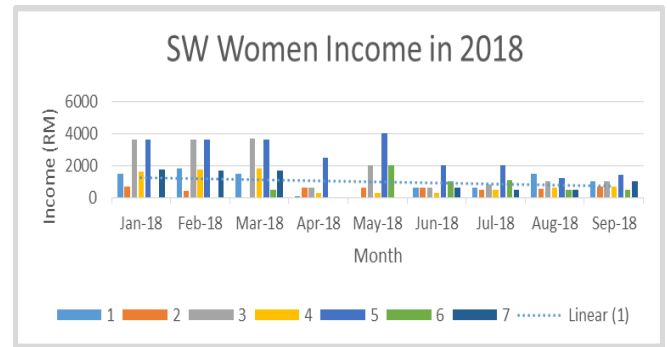
**TABLE 3. Usage of ICT tools**

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

From Table 3, the use of ICT infrastructure is quite high, with 26 out of 30 respondents owning ICT gadgets and equipment. The percentage of 70% own a smartphone and use it to access the Internet. Facebook and WhatsApp are among the most widely used applications; however, WeChat and Instagram are not very popular. Based on the interview, most of the respondents used Facebook to communicate with friends, search for information about new products and dining outlets as well as other sorts of information. Purchasing products through Facebook is favoured as compared to other media. Fig. 4 and Fig. 5 illustrate the income projection in 2017 and 2018 respectively among selected seven (7) Setiu women respondents.



**Figure 4. Income Projection in 2017**



**Figure 5. Income Projection in 2018**

Based on Fig. 4, the income projection from April to December 2017 shows a linear improvement among seven (7) respondents. This linear pattern (by dotted line) indicates that the income is increased proportionately in between the months. However, their income decreases proportionately in year 2018 as shown in Fig. 5. The decrease trending is due to several discrepancies such as personal family problems, health conditions, malfunction of the materials and instruments (machine) and insufficient of raw resources i.e. prawns and anchovies as the main ‘budu’ ingredients.

**V. CONCLUSION AND RECOMMENDATION**

This project is a flagship community project under Niche Research Grant Scheme (NRGS) of UMT. This three-year project (2015–2018) is considered to produce successful e-business entrepreneurs among women in SW. Through the proposed e-business innovation model, SW women entrepreneur has fully utilized the use of social media application for their social and business networking strategies. Only they should focus on their sustainability to prolong on their livelihood improvement. To sustain in global social media marketing, the pull-push methodology is to be imparted in their marketing channel. They need to always update their products with ‘WOW’ factor and control and monitor any global issues pertaining to market price, innovative ingredients or any substances that could boost their product upfront and invite for more sales. Overall, the e-business innovation model has improved the livelihood of Setiu Wetland women entrepreneurs.

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