The Relationship Using High Technology and the Success of Entrepreneurs in Malaysia

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Abstract

The research objective is to establish the most likely factors responsible for the aquaculture entrepreneurs' success in catching of fresh water fish. The research design refers to quantitative research that addresses research objective through empirical assessments. Data for assessing the success factors were collected via a random sampling survey of 105 respondents through site visits in the state of Selangor, Malaysia. Findings from the survey revealed that majority of the entrepreneurs are Malays and technology is an important factor in increasing the production and enhancing the success in catching fresh water fish.

Key Words: Success factors, production, technology, enhancing, entrepreneurs

1.0 Introduction

Malaysia moves towards becoming a highly industrialized economy, this changing in economic scenario and structure would make it necessary to evaluate the role and contribution of the agricultural sector in the economic development of the country. It is now required not only to play its role as supplier of raw materials to the manufacturing sector to support the agro-based industry, it should also be producing good returns from increasing productivity on land. In order to make agriculture relevant it should be undertaken on a more commercial basis with greater private sector participation, using modern methods of employment and introducing new technologies in the management. This will help maintain the progress of crops, fisheries and livestock production to support the income and population growths as well as changes in lifestyle resulting from urbanization have increased the demand for food, also generated changes in food habits, food purchasing as well as consumption patterns. For decades, the Malaysian fisheries sector has played significant roles in alleviating poverty and in achieving food security. The incidence of poverty among fishing households has been reduced from 73 percent in 1970 to 63 percent in 1976 and 28 percent in 1984 (Government of Malaysia 1986).

Despite the widely acknowledged role of agriculture economic development, many policy makers, policy analysts and academicians in developing countries, international communities and donor communities appear to have lost interest in the agricultural sector, often relegating its role from engine of growth to sunset status (Siamwalla, 1996) arguing for its continuing relevance and importance because of its multifunctional role (Abd Rahman, 1992). According to Osborn (1995) in America as much as 90% of entrepreneurs failed in their business within the first ten years of operation. Similarly in Malaysia where only 10% of the enterprises are successful and survive for more than ten years (Rose et al, 2006). In fact in 2002 a total of 79,310 enterprises winded up (Companies Commission of Malaysia, 2002) because most of them are unable to change their business set up for the better due to lack of professionalism and cannot meet the challenge of bigger entrepreneurs.

2. Literature Review

The entrepreneur is defined as being the one who creates something new, something different, the one who changes or transforms values. Economics specialists use the term entrepreneur for a meaning of enterprising person. Intelligence, energy, far-sightedness, decision-making, capability, and initiative emotional balance, intellectual flexibility, intuition, passion for working with employees, receptivity towards technical and social progress, honesty, good intentions, integrity and justice. Panda (2001) reveals that entrepreneurial characteristics are not universal. They may depend on psychology like ability to take risk, desire to be successful and leadership skills which are associated with entrepreneurial success. Socio-economic features like race, parental background, technical and professional education including new technology, financial support, location advantage and easy access to market are found to have strong correlation with entrepreneurial success. Technology development is important.

The factors that lead to successful technology development and commercialization created interest in understanding and this has been increasing exponentially during the last decade. Seminal research done by Cooper's (1979) and Madique and Zirgir's (1984), a large body of empirical success studies has developed that attempt to capture the critical factors that are positively correlated with successful new product innovation and commercialization. A large body of empirical technology success studies has developed over the past two decades (Balachandra & Friar, 1997; Cooper, 2001; Jones (1982) and Emory and Cooper, (1991). Astebro (2004) suggests a general consensus around the dimensions of market, technology, environment, and organizational characteristic. Research falls into three perspectives: research on factors leading to success, research on factors leading to failures and research on factors that separate success from failure (Cooper, 1979; Wong, K. P. (1997).

Much of the technology used in aquaculture is relatively simple, often based on small modifications that improve the growth and survival rates of the target species, e.g. improving food, seeds, oxygen levels and protection from predators. Simple systems of small freshwater ponds, used for raising herbivorous and filter feeding fish, account for about half of global aquaculture production. The technologies in aquaculture research lead to genetic improvement of fish species and control of production, selective breeding and the production of single sex and sterile population are considered the present day high technology that benefit the farmer or the aquaculture entrepreneurs. The black nile talapia fish which was introduced in 1950 into Malaysia, did not augur well to its color compared with red hybrid talapia which was introduced from Thailand some time in 1979 (Ang, et al, 1989).

3.0 Research Objective

The main objectives of the study is:

1. To find the relationship between using high technology and success factors of aquaculture entrepreneurs in Malaysia.

4.0 Methodology

The survey methodology is consisting of questionnaire development, pilot study, population and sampling of the study, data collection, reliability and validity. The study is based on a sample size of 105 aquaculture entrepreneurs in small enterprise in the state of Selangor particularly in the semi-urban and rural areas. Simple Random Sampling was adopted so that every respondent in the population has equal chance of being chosen. Data for assessing the success factors are collected via a survey of aquaculture entrepreneurs in small enterprises in the state of Selangor. All the respondents are informed about the survey and they have confirmed their presence on the appointed time and date. Although the plan was to undertake a study of 150 entrepreneurs but only 105 are willing to be interviewed as the rest either do not respond or just not cooperative enough to volunteer as respondents.

The 105 entrepreneurs selected for the study were based on convenience sampling. A self-designed questionnaire is used to gather the research data. The questionnaire is divided into three parts. The first part (A) nine questions comprised of demographic characteristics and profile information of the respondents. The second part (B) ten questions comprised of the opinion and motivation of success factors of the entrepreneurs, lastly the third part (C) have twenty five questions on the motives for setting up or doing the business in small aquaculture enterprise. The measurement using 5-point Likert scale anchored by strongly disagree to strongly agree would enable the respondents to score the importance of business success. \

The piloting was carried out in Selangor early on February 2013 until the end of February 2013 in order to identify the clarity relevancy of the questions, clear meaning and terms normally used in the industry, time taken to answer all the questions, and to test the internal measurement reliability. The questionnaire must be completed by aquaculture entrepreneurs in small enterprise. The pilot study sample consists of 30 with an average response rate of 52%. This amount is accepted for the purpose of a pilot study by Emory and Cooper (1991) when they suggested that respondents ranging from 25 to 100 are appropriate.

Result of Reliability Analysis for Technology

Number of Item	Cronbach's Alpha Based on Standardized Items	Cronbach's Alpha
1	0.810	0.811

Data analysis for this research is based on descriptive statistic and Pearson correlation. Descriptive statistic is defined as a set of information that has been collected before. It used to identify the frequency and percentage, mean, median and mode, while measures of variability include the standard deviation, the minimum and maximum variables. However, for this research purpose, by using the SPSS, descriptive statistic would only show the frequency and percentage of the general background of respondents (e.g. the age, race, monthly income, education background, etc). The validity of the questionnaires was done by using face content validity through an expert opinion. The questionnaires were sent to three experts of different profession, such as University Pertanian Malaysia agricultural lecturer, official of the Ministry of agriculture Malaysia involved in agriculture and a successful aquaculture entrepreneur. The questionnaires were checked and approved by those experts.

5.0 Findings

Table 1 shows 22.9% of respondents were aged between 18-30 years, 23.8% were 31-40, 35.2% were 41-50, and 18.1% were aged between 51.

Table 1: Age Frequency

Age	Frequency	Percent
18-30	24	22.9
31-40	25	23.8
41-50	37	35.2
51 & Above	19	18.1
Total	105	100.0

Table 2 shows the majorities of the respondents are Malays (83.8%), followed by Chinese, (15.2%) , and 1.0% is India.

Table 2: Race

Race	Frequency	Percent
Malay	88	83.8
Indian	1	1.0
Chinese	16	15.2
Total	105	100.0

Table 3 shows the majorities of the respondents earning between RM1,001- RM1,500 (53.3%), followed by RM1,501 - RM2000 (30.5%), RM2,500 and above (10.5%) and lastly RM2,001 - RM2,500 (4.8%)

Table 3: Monthly Income

In come (RM)	Frequency	Percentage
1001-1500	56	53.3
1501-2000	32	30.5
2001-2500	5	4.8
2500 & Above	11	10.5
Total	105	100.0

Table 4 shows 64 (61.0%) of respondents held SPM certification, 19 (18.1%) of respondents held Diploma, 16 (15.2%) of respondents held STPM and only 6 (5.7%) of respondents held degree certification..

Table 4: Education Bacjground

Qualifications	Frequency	Percentage
SPM	64	61
STPM	16	15.2
Diploma	19	18.1
Degree	6	5.7
Total	105	100.0

Table 5 shows all the firms having 1-10 employees. This shows that majority of the aquaculture entrepreneurs was mostly a small size firm.

Table 5: Number of Employees

Number of Employees	Frequency	Percentage
1-10	105	100
Total	105	100.0

Table 6 shows 53 (50.5%) of the respondents have been involved in aquaculture industry for 6 to 10 years, followed by 31 (29.5%) with 1 to 5 years and lastly 21 (20%) respondents with 11-15 years.

Table 6: Experience

Years of Experience	Frequency	Percentage
1-5	31	29.5
6-10	53	50.5
11-15	21	20.0
Total	105	100.0

Table 7 shows all the respondents were fish farmers or fishermen.

Table 7: Type of Freshwater Aquaculture

Type of Freshwater Life	Frequency	Percentage
Fish Aquaculture	105	100.0
Total	105	100.0

According to the table 4.8, the respondents consist of 105 male. It shows that men dominate the aquaculture industry in Selangor. 61

Table 8: Gender

	Frequency	Percentage
Male	105	100.0
Female	0	0
Total	105	100.0

Based on Table 9, R square for this study is 0.712, which explained that the independent variable such as aquaculture technology contributed 71.2 percent of success factors for aquaculture entrepreneurs. Thus 0.712 for R-squares indicates a high relationship between technology and success of aquaculture entrepreneurs.

Table 9 : Summary of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.335a	.712	.076	.59520	.712	3.150	4	100	.017

a. Predictors: (Constant), aquaculture technology.

Table 10.0 shows the relationship between aquaculture technology (AT) and success factors (SF) of aquaculture entrepreneurs. Based on the table 10.0, p value = 0.00 less than significant level 0.05 and positive correlation, r = 0.757 (strong relationship). It means there is a strong correlation between aquaculture technology and success factors of aquaculture entrepreneurs.

Table 10: The Relationship Between Aquaculture Technology and Success Factors of Aquaculture Entrepreneurs

		CORRELATIONS	
		T	BP
AT	Pearson Correlation	1	.757**
	Sig.(2-tailed)		.000
	N	105	105
SF	Pearson Correlation	.757	1
	Sig.(2-tailed)	.000	
	N	105	105

**Correlation is significant at the 0.01 level (2-tailed)

4.6 Summary

As a conclusion, technology is very important factor and has a strong correlation in enhancing the success of aquaculture entrepreneurs. In order to be more successful in equaculture businesses, entrepreneurs should used high technology equipments in increasing their productivity and to enhance the efficiency of the catching of fresh water fish in Malaysia.

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