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Factors affecting the use of advisory services among small scale food processors in Selangor

(Faktor yang mempengaruhi penggunaan khidmat nasihat di kalangan pemproses makanan berskala kecil di Selangor)

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Keywords: advisory services, food processors, factor analysis

Abstract

The main objective of this study was to examine factors affecting the use of advisory services by small scale food processors. The primary data were collected from 93 firms involved in food processing activities operating in Selangor. The structured questionnaire was used to collect the data. Both descriptive and factor analysis were used to analyze the data. The results of the analysis showed that the majority of respondents (30.1%) used two types of advisory services. MARDI and DOA were the two agencies which had the highest number of clients served. The findings showed that use of advisory services among the firms surveyed were affected by three factors. The variables found in the first factor were number of employees, being an exporter and firm's age followed by the second (age and experience of owner-manager) and third (firm size and ownership structure) factors. This study suggests that the advisory services offered need to be specialized according to the firm and owner-manager characteristics.

Introduction

Changes in consumers lifestyle, taste and preferences simultaneously will shift the pattern of food consumed. As their income grows, consumers have more purchasing power and therefore, their behaviour towards food spending has changed over the years. They can afford to buy and are willing to pay for the price of convenience and better quality food (Mad Nasir and Jinap 2005). Increase in the number of working women have increased the demand for food that is easy and takes less time to prepare. Thus, most of them would prefer semi-prepared or ready-made food. Therefore, processed food has gained much attention. Continuous changes in the consumer food market with rapid growth of supermarket chains helps to provide consumers with easy access to shop for such foods (Mad Nasir and Jinap 2005). Growing and continuous demand from the consumers has been recognized as a major contributor towards the development of the food processing industry in Malaysia.

The Malaysian food processing industry is dominated by SMEs which represent more than 80% of total establishment in processed food segment. This industry comprises a variety of processing activities covering cocoa and cocoa preparations, prepared cereals and flour preparations, fisheries, livestock and

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dairy products, vegetables and fruits and other segments. The food processing sector itself accounted for 9% or RM14 billion of Malaysian manufacturing output for 2008 (FMM-MATRADE Industry Directory, 2009 – 2010).

During 2009, the total number of SMEs involved in the manufacturing sector was 28,840 firms. From this figure, about 4,160 or 14.4% firms were food processors. The number of employees engaged by SMEs in manufacturing of food products was the highest with 100,309 workers or 15.5% followed by manufacturing of rubber and plastic products (80,143 workers or 12.4%) and manufacturing of furniture (62,006 workers or 9.6%). In terms of the salaries and wages paid, the manufacturing of food products received the highest payment amounting to RM1.7 billion. During the same year, the gross output value recorded for the food manufacturing sub-sector was RM104,218.7 million (Department of Statistics 2010)

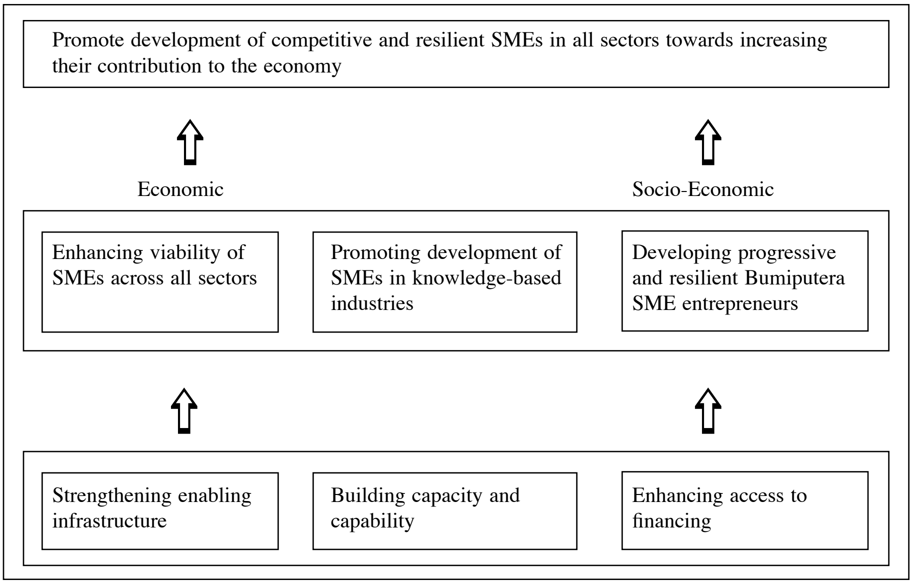
Government Policy

SMEs are a backbone of Malaysian economy. The role of the SMEs in terms of providing employment for the nation, improving skills among the workforce, increase national savings and reducing an imbalanced industrial structure are well documented (Mohd Akbal and Rafiudin 2011). Currently, SMEs shares to total GDP and total export are 32% and 19% respectively. Through the announcement of the latest SME Masterplan 2012 – 2020, the government sounded to increase the contribution of the SMEs to the national economy by adopting an outcome based approach. This new approach outlined that the programmes will be demand-driven and emphasizing on market and public-private partnership.

Previously, the government focused on competitiveness. Thus, transformation of the SMEs into a dynamic sector was the main agenda. In this regard, the SMEs were encouraged to participate in high value-added activities outsourced by multinational corporations, to adopt customer-driven approach, to explore outward investment opportunities, to apply advanced technologies and to improve skills as well as human resource capabilities. Thus, the implementation of the programmes were based on the three strategic trusts, namely, strengthening enabling infrastructure, building capacity and capability and enhancing access to financing (*Figure 1*).

It is necessary to note that during the Ninth Malaysia Plan (2006 – 2010), the government spent about RM26 billion for SME development programmes, representing 11.6% of the total development expenditure during that time (SME Master Plan 2012 – 2020) (Anon. 2012). Advisory services is one of the programmes implemented to build capacity and capability of the SMEs. Specifically, there are two types of advisory services, namely, business and management advisory and technical advisory. Business and management advisory service is usually related to the provision of supervised credit and training including the preparation of business plan, establishment of an accounting system, cash budget and financial viability for loan application (Moha 1999). Research and development (R&D) on production technology, technical information on intellectual property, product innovation, design improvement, processing techniques, plant layout, equipment selection and quality control are more related to technical advisory services (Ndubisi 2008; Moha 1999).

There are many government institutions that are responsible in providing advisory services. Some of them are the Central Bank of Malaysia, Credit Guarantee Corporation Malaysia Berhad (CGC), Small and Medium Enterprise Corporation (SME Corp which was formerly know as SMIDEC), Farmers Association Marketing Authority (FAMA), Malaysia External Trade Development Corporation (MATRADE), Malaysian Agriculture Research and Development



Source: SME Corp (2010)

Figure 1. SME development framework

Institute (MARDI), Standards and Industrial Research Institute of Malaysia (SIRIM), Department of Veterinary Health (DVH), Malaysian Palm Oil Board (MPOB) and other agencies like the Department of Agriculture (DOA), Majlis Amanah Rakyat (MARA), Malaysian Productivity Council (MPC) and many more.

Despite the number of SMEs which accounted for 518,996, the total SMEs which received advisory services from various government institutions during 2006 were only 34,000 firms. This figure indicated that only 6.6% firms had received advisory services provided by the government while majority of them relied on other resources (SME Annual Report 2006) (Anon. 2006). Some previous studies showed that the underutilization rate is associated with unawareness about the advisory services provided (Foziah et al. 2006; Mohd Nor Hakimin et al. 2010). In order to enhance the level of awareness pertaining to the government supports available among the SMEs, SME Corp had published and disseminated the SME handbook on policies, incentives, programmes and financial assistance for SMEs. Furthermore, the types of advice required by the SMEs were also identified (*Figure 2*).

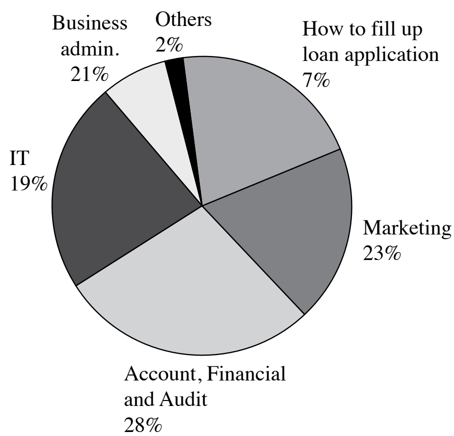


Figure 2. Types of advice required by SMEs

The use of advisory services

There are many factors that influence the use of advisory services among the SMEs. Most of the factors that have been discussed previously were related to firm and owner-manager. For instance, firm size, firm age, growth rate and type of production system used by firms (O'Farrell et al. 1993). The use of advisory services was also affected by education level and experience of the owner-manager (Jianzhong and Hong 2009; Lambrecht and Pirnay 2005; Donckels and Lambrecht 1997). Furthermore, Robson and Bennett (2000) reported that skill and expertise, rate of growth, type of sector that the firm was involved with and the type of market served were the factors that would influence the utilization rate. Through a study conducted towards SMEs in Australia, Jay and Schaper (2003) revealed that gender and age of the owner-manager are also important in affecting advisory service usage. In Malaysia, the use of advisory services among SMEs is still low. Thus, this study aimed to examine the critical factors that influence the use of advisory services among SMEs. Specifically, this study focuses on small scale food processors located in Selangor.

Methodology

This study used data collected from a survey which was conducted in Selangor from February to May 2011. Based on the samples selected, a total of 93 firms involved in food processing activities were interviewed. Questions asked were related to the information on advisory services used besides socio-economic factors and firm characteristics. A set of structured questionnaires comprised of close ended questions was used during the interview sessions.

Factors affecting the use of advisory services among the respondents were determined using factor analysis. Factor analysis is a collection of methods used to examine the underlying patterns or relationships for a large number of variables and grouping them into a smaller set of factors. With factor analysis, the pattern of correlations between the observed variables and the underlying factors can be examined. Variables that were highly correlated were extracted into the same factors while uncorrelated variables were extracted into different factors (DeCoster 1998). These factors were independent where the first factor represented the largest portion of the total variance explained.

Factor analysis conducted involved three main steps. The first step was identification of the correlation matrix. The second step was extracting the factor using principal component analysis. The decision to choose the number of factors which were extracted from the component analysis was based on the eigenvalue. Factors with the eigenvalue greater than 1.0 will be chosen for interpretation while factors with eigenvalue less than 1.0 will be disregarded. Variables with a factor loading of 0.6 and above were considered as significant because it was indicated that the factor and the variable are closely related (Muhamad Setefarzi and Tengku Mohd Ariff 2006). Thus, factor loading with 0.6 and above will be used as the cut-off criteria in selecting the variables for each factor.

The third step was factor rotation. Initial factor matrix will be rotated using orthogonal (varimax) rotation method in order to simplify the factor structure. This procedure was desirable because the initial factor solution may not provide a meaningful pattern of variables loadings. According to Hair et al. (1998), rotation can lead to better interpretation as the ambiguities that accompany the initial factor solutions were reduced.

Additionally, Kaiser-Meyer-Olkin (KMO) test and Bartlett Test of Sphericity were used to confirm the data appropriateness. The KMO test was used to measure sampling adequacy while Bartlett Test of Sphericity was used to assess the presence of correlation between variables. Factor analysis was considered appropriate if the KMO value was greater than 0.5 and result of the Barlett's Test of Sphericity was significant (p <0.000).

Results and discussion

Socio-economic profile

Majority of the respondents surveyed were Malays (93.5%) while the rest were Chinese (*Table 1*). About 53.8% of the respondents were female and majority of them (38.7%) were 46 years and above. More than half of the respondents (65.6%) were involved in food processing activities for less than five years while some of them (3.2%) exceeded 26 years. This indicated that majority of the respondents were new producers and having less experience. In terms of the educational level, about 51.6 % claimed that they had tertiary education followed by secondary education (43%) and primary education (5.4%). Most of the respondents (71%) categorized themselves as owners of the business, 17.2% were business partners while the remaining 11.8% belonged to other categories.

Table 1. Socio-economic profile of respondents (n = 93)

Gender	Percentage
Male	46.2
Female	53.8
Race	
Malay	93.5
Chinese	6.5
Age	
Below 25	11.8
26 – 35	25.8
36 – 45	23.7
46 and above	38.7
Education level	
Primary	5.4
Secondary	43.0
Tertiary	51.6
Experience	
Less than 5 years	65.6
6 – 15 years	26.9
16 – 25 years	4.3
26 years and above	3.2
Ownership status	
Owner	71.0
Business partner	17.2
Others	11.8

Firm's characteristics

In term of the firms' characteristic, this study revealed that most of the firms (52.7%) were operated for less than five years, 18.3% between 6 and 10 years, 12.9% between 11 and 15 years and the remaining 16.1% for six-teen years and above. The annual sales value of the firms ranged between RM5,500 and RM8.9 million, with an average of RM646,827. However, the annual sales value for most of the firms (40.9%) was less than RM100,000. Only 17.2% of the firms recorded annual sales value for more than RM1,000,000. Based on the annual sales value, firms involved in food processing activities were categorized as micro-scale (61.3%) and small-scale (38.7%). This study also revealed that majority of the firms (77.4%) had less than 10 workers while 7.4% employed more than 30 workers. Sole proprietorship was common types of entity where this form of business accounted for 51.6% followed by private limited company (32.3%) and partnership (16.1%). Due to the firm's capacity, most of them (87.1%) are focusing on the domestic market while only 12.9% served both domestic and export market. This showed that majority of the firms were locally oriented in term of the market leverage. Bakery was a popular product cluster where 16.1% of the respondents were bakery producers, followed by frozen food (15.1%), snacks (14%) and other food clusters accounted for less than 10% each (*Table 2*).

Type and number of advisory services used

From a total of 93 firms surveyed, only 21.5% used all types of advisory services provided by government agencies (*Table 3*). Of those respondents who used three fields of advices, 12.9% used marketing, financial and technical advices followed by management, financial and technical advices (7.4%), marketing, management and technical advices (5.4%) and marketing, management and financial advices (2.2%). For the single advice user, technical advice was very crucial because 11.8% used this

Table 2. Summary of firm characteristics

	Percentage
Firm age	
Less than 5 years	52.7
6 – 10 years	18.3
11 – 15 years	12.9
16 years and above	16.1
Firm size	
Micro	61.3
Small	38.7
Form of business	
Sole proprietorship	51.6
Partnership	16.1
Private limited	32.3
Product cluster	
Bakery	16.1
Frozen food	15.1
Snack food	14.0
Meat based product	9.7
Drink	8.6
Spices	6.5
Fish-based product	5.4
Confectionery	5.4
Sauce	5.4
Pasta and noodle	4.3
Jam and spread	2.2
Others	7.5
Annual sale	
Less than RM100,000	40.9
RM100,001 – RM500,000	37.6
RM500,001 – RM1,000,000	4.3
RM1,000,001 and above	17.2
Number of workers	
10 and below	77.4
11 – 20	12.9
21 – 30	2.2
31 and above	7.5
Market served	
Domestic	87.1
Domestic and export	12.9

advice, followed by financial advice (6.5%) and marketing as well as management advice which accounted for 1.1% each. As for the respondents who used only two types of advices, about 10.8% used financial and technical advice. Most of the respondents acquired advisory services from MARDI (59.1%) and DOA (59.1%) (*Table 4*). The use of advisory services from other agencies was not much different except for MATRADE and AGROBANK where the users accounted for below than 15% for each agency.

Table 3. Types of advice used

	Percentage
Financial	6.5
Marketing	1.1
Management	1.1
Technical	11.8
Financial and marketing	4.3
Financial and management	3.2
Financial and technical	10.8
Marketing and management	1.1
Marketing and technical	7.5
Management and technical	3.2
Marketing, management and financial	2.2
Marketing, financial and technical	12.9
Marketing, management and technical	5.4
Management, financial and technical	7.4
Marketing, financial, management and technical	21.5
Total	100%

Factors affecting the use of advisory services

As shown in *Table 5*, the use of advisory services among the firms surveyed was affected by three factors. These factors have the eigenvalues greater than unity while total variance accounted was 68.719%. The first factor had a significant loading on the number of employees (0.886), exporters (0.854) and firm age (0.773). Total variance explained for this factor was 34.681%. The second factor consisted of two variables, namely, age (0.850) and experience (0.765) of owner-manager while firm's size (0.753) and ownership structure (–0.735) were the significant variables loaded in the third factor. Besides that, value of the KMO test was found to be 0.571 and Barlett's Test of Sphericity was significant ($\alpha = 1\%$), indicating that the use of factor analysis was an appropriate technique for analyzing the data. The results of this study confirmed that firm and owner-manager characteristics were the main factors that affected the firms to use advisory services. It is crucial to note

Table 4. Source of advice used

Agency	MARDI	MARA	DOA	FAMA	SME Corp	MATRADE	AGROBANK	SIRIM	Others
User (%)	59.1	33.3	59.1	48.4	29.0	12.9	10.8	30.1	21.5
Non-user (%)	40.9	66.7	40.9	51.6	71.0	87.1	89.2	69.9	78.5
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 5. Results of the factor analysis

Variable	Factor 1	Factor 2	Factor 3
Number of employees	0.886		
Being an exporter	0.854		
Firm age	0.773		
% of variance explained	34.681		
Age of owner-manager		0.850	
Experience of owner-manager		0.765	
% of variance explained		20.035	
Firm size			0.753
Ownership structure			–0.735
% of variance explained			14.003
Total variance explained			68.719

that the findings of this study were similar to some of the previous studies that were discussed earlier.

Conclusion

The exploratory factor analysis helps to identify the possible factors in affecting the use of advisory services among small scale food processors. From the analysis, it can be concluded that the first factors that affected the advisory services usage were number of employees, being an exporter and firm age, followed by the second factors (age and experience of owner-manager) and third factors (firm size and ownership structure). It is necessary to note that the advisory services offered need to be specialized. Different firms (in terms of workers, market, sizes and ownership structure) may require different types of advices. This is similar with owner-manager where the younger and less experienced may seek advisory services more frequently than their counterparts.

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Abstrak

Objektif utama kajian ini adalah untuk mengkaji faktor yang mempengaruhi penggunaan khidmat nasihat oleh pemproses makanan berskala kecil. Data primer dikumpul daripada 93 firma yang terlibat dalam aktiviti pemprosesan makanan yang beroperasi di Selangor. Data dikumpulkan dengan menggunakan soal selidik berstruktur. Analisis deskriptif dan analisis faktor digunakan untuk menganalisis data. Hasil analisis menunjukkan majoriti responden (30.1%) menggunakan dua jenis khidmat nasihat. MARDI dan DOA adalah dua agensi yang merekodkan jumlah pelanggan yang tertinggi. Kajian juga menunjukkan penggunaan khidmat nasihat dalam kalangan firma yang dikaji adalah dipengaruhi oleh tiga faktor. Faktor pertama terdiri daripada jumlah pekerja, pengeksport dan umur firma diikuti oleh faktor kedua iaitu umur dan pengalaman pemilik-pengurus manakala faktor ketiga ialah saiz firma dan struktur pemilikan. Kajian ini mencadangkan bahawa khidmat nasihat yang ditawarkan perlu dibuat pengkhususan berdasarkan ciri-ciri firma dan pemilik-pengurus.