

Partial Productivity and Technical Efficiency of Small and Medium Enterprises in the Malaysian Food Processing Industry

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ABSTRACT

The objective of this study is to investigate the partial productivity and technical efficiency (TE) of small and medium enterprises (SMEs) in the Malaysian food processing industry. A non-parametric approach data envelopment analysis (DEA) was employed on panel data of 35 sub-industries during the period 2000 to 2006. The result shows that capital productivity was relatively unchanged and material productivity shows a declining trend during the period of observation. In 2000, material productivity (value added per material) was recorded at 0.22, and it stood at 0.18 in 2006. Higher cost of labor was found in the manufacturing of alcohol, palm oil, refined palm oil, palm kernel oil, and sauce. Five sub-industries were technically efficient (TE is equal to unity) during the estimation periods. These industries are refined palm oil, kernel palm oil, feed, alcohol and soft drink. In contrast, five sub-industries experienced lower TE: canning of pineapple, sugar, glucose, coconuts and other flour, with the TE scores varying between 35.9 percent up to 48.1 percent. Labor cost and labor productivity increased from 13.65 to 13.95.

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INTRODUCTION

Malaysia is one of the fastest growing consumer markets in the Southeast Asia region. The population from middle to upper-income groups constitutes 61 percent

of these consumers. During 2000-2008, the country showed an impressive and consistent economic growth at an average of 6.7 percent per annum. Financial crisis in 1997-1998 which swept many Asian countries impacted on many industrial sectors including banking, tourism, textile and heavy industry. Food processing industry (FPI) may be one of the least affected sectors during the economic crisis. Despite the economic downturn, the demand for processed food is relatively stable.

Demand for food has increased over the last two decades in Malaysia in view of the growth of population, higher income, higher education level of consumers, and information about health nutrition. The phenomenon brings the country to become a net importer of food products. Value of importing food grew from RM8.2 billion in 1996 to RM17.9 billion in 2005, which in turn spawned a larger trade deficit of RM7.2 billion, compared with RM4.2 billion in 1996 (MIDA, 2007). To reduce this deficit, in the Ninth Malaysia Plan, the government has introduced new programs and policies for the agricultural sector. One of the most prominent agendas of this plan is the transformation of the agricultural sector into a modern and vibrant industry. Modern agriculture is capitalized on the adoption of advanced technologies and highly-tuned production processes.

With the help of this new policy, the agricultural development is aimed at balancing agricultural growth in relation to the industrial growth; specifically, to maximize the agricultural value addition

by utilizing national resources efficiently. In this context, the higher value added of agricultural commodities is obtained by processing the products to be a closer to consumers needs and wants. Through food processing industry, raw materials from the agricultural sector are transformed into more appetizing food products that satisfy consumer needs and desires. The products should also be marketable and transportable to remote places, and most importantly they should be able to have longer expiration date. Many developed countries have benefited from their modern food industry. The consumers are willing to pay more for their satisfaction leading to a positive growth for the demand of processed foods. The linkage of the agricultural and the manufacturing sector is crucial in the food chain and in the agribusiness system.

Small and medium enterprises (SMEs) play an important role in the Malaysian food processing industries and the nations' economic growth as well. This industry provides jobs, generates value added for primary agricultural commodities, and produces more edible foods for inhabitants, both in rural and urban areas. This study aims to investigate the partial productivity and technical efficiency (TE) of SMEs in the Malaysian food processing industry. Detail of sub industries in the Malaysian FPI is presented in the Appendix.

LITERATURE REVIEW

Generally, FPI is classified into two types of industries. Firstly, there are the traditional food industries. These are dominant in

most developing countries and constitute as high as 70 percent or more of the total FPI companies and family owned industries, employing approximately 50 or fewer workers in each company to cater to domestic consumers. This type of industry is characterized by manual and batch type processes or labor-intensive with minimal complexity. Such companies usually utilize equipments which are manufactured locally and have low productivity and efficiency. Moreover, there is limited quality control and little research and development executed on the efficiency of such companies . The second type is large scale food industry, which constitutes about 10 percent or less of the total establishment. However, this type is more capital intensive, uses modern technology and often operates as a multinational corporation (Hicks, 2004).

Data released by the Department of Statistics Malaysia reveals that small and medium scale enterprise encompass 97 percent of total food companies in the country. The top five sub-industries with the larger number of firms are those which manufacture bread, cake and other bakery products (1132 establishments), crude palm oil (344), snacks and chips (323) other food categories (361) and processing/preserving fish and fish products (262 establishment).

National Productivity Corp. (NPC) reports that during 1987 and up to 2007 the FPI in Malaysia has an average productivity growth of 10.4 percent, value added growth of 16.6 percent, labor cost growth of 4.9 percent and its contribution of value added to GDP has a growth progress of 3.5 percent per annum (Table 1).

The FPI is important to the Malaysian economy, firstly as the engine of economic growth and secondly as substitution of some imported food products. Hence intensive research to increase the performance of the industry has been widely conducted. Two important indicators to evaluate the performance of an industry are partial productivity and technical efficiency.

Consumers in the countries that have rapid economic growth, tend to transform their dietary behavior from primary cereal meals to more animal protein, fruit and vegetables. For instance China, with an average growth of 10.8 percent a year within the last five years, has increased its meat consumption, mostly pork, by as much as 50.63 percent (Ortega *et al.*, 2009). In the Netherlands, Reijnders (2004) noted the same conclusion that the higher the income level of consumers, the higher the demand and willingness to pay for health, functional and processed foods. As

TABLE 1
Performance of the Malaysian Food Processing Industry 1998-2007

Performance	Percentage growth
Productivity growth	10.4
Value added growth	16.6
Growth in labor cost/worker	4.9
Contribution to total manufacturing value added	3.5

Sources : NPC, 2008

the population increases and the country becomes more affluent, the demand for processed food grows, as well. Abott *et al.* (2008) concurred that this transformation eventually contributes to higher global demand on agricultural commodities than ever before. A rising world income causes higher consumption of primary-food products including cereal, vegetables and animal protein. Meanwhile, with the emergence of bio-fuel as a source of energy, grains and vegetable oil consumption has been increasing since 2004. Currently, Malaysia is on its path to reach the new status of an industrial country, with its GDP of over US\$12,000.00 per capita in 2010, thus having a direct impact on the dietary pattern of its inhabitants that correspond to economic changes.

The present study estimates partial productivity and technical efficiency of the SMEs in the Malaysian FPI for the period of 2000-2006. The partial productivity includes labor, capital and material productivity. Empirical study about partial productivity in the manufacturing industry has been broadly reported in the literatures. For instance, Ismail and Jajri's (2000) study on large scale industry in Malaysia, highlighted labor productivity growth using OLS method. They calculated the contribution of physical input and efficiency to labor productivity growth rate. To measure the labor productivity, they divided total value added by the number of laborers.

In the industrial economic and statistical analysis, labor productivity is important as one pointer for performance evaluation. At a firm level, labor productivity is essential

when labor cost represents a large proportion of the total cost (Freeman, 2008). Most of the food processing industries are labor intensive, thus making the observation of the labor productivity a vital task. At the industrial level, Smith (1973) argues that it is rather difficult to define labor productivity because its relationship with the output is obscured by other factors. Increased labor productivity may not automatically reflect the more productive labor in that industry, but it is possible that it is generated by higher productivity of other inputs.

Labor productivity in the U.S. industrial sector has been studied by Holman *et al.* (2008), and reveals that the information, manufacturing and retail business sectors are those with higher labor productivity. Meanwhile the lower labor productivity sectors are found in the mining and food services. During the period of 2000-2005, labor productivity increased as high as three percent per annum and most of the sectors were challenged with weaker output growth, yet they continued to improve efficiency and maintain productivity growth. Mahmood (2008) investigates partial productivity (labor productivity) of SMEs manufacturing in Australia during the period of 1994-2000 and reports that there was a significant independent effect of labor productivity to the business cycle. Labor productivity of SMEs varies among each sub sector; food, beverage and tobacco showing lower labor productivity than other sectors. However, the study cannot establish any definite relationship between labor productivity growth and employment.

An empirical study on 30 food enterprises in Guangdong province China (?), Mok (2002) identified the proportion of temporary workers as the important variables affecting productivity in the total labor force. He also found that flexibility in the use of temporary workers can produce a positive effect on enterprise productivity. This finding strongly supports the need for flexibility in employment policies. Meanwhile, Morrison (1997) analyzed capital investment and productivity in the US food processing industry, and concludes that rapid investment in high-tech capital observed in the food processing industry has a clear motivation in terms of cost savings. One capital source in the industrial sector is foreign direct investment (FDI). Multinational food industries tend to make a joint venture operation to process the local raw materials and establish marketing under their brand. Through FDI, local firm is benefited by capital and technology spillover (Khalifah & Adam, 2009).

Besides labor and capital, in the FPI, material has the greater proportion of input factors. About 60 percents of production cost go to material purchasing, 30 percent for cost of energy, and the remainder for labor and other costs. Adelaja (1997) investigated the productivity growth and input mix changes of New Jersey food processing, and finds that material productivity growth is probably more relevant than labor productivity growth, and higher efficient materials are likely to have a greater effect on total factor productivity growth than do gains in labor efficiency.

Studies on efficiency level of the Malaysian FPI has been widely reported. Most of the studies reveal similar findings that the efficiency of the industry are low. Kalirajan and Tse (1989) report that the average technical efficiency of the Malaysian FPI stand at 0.73, which means the industry is only producing about 73 percent of its potential output. Mahadevan (2002) and Isa (2005) calculated the total factor productivity (TFP) of the Malaysian manufacturing sector and found that the TFP in the food processing industry was declining from 0.78 to 0.69 during the period of 1987-1996. Radam (2007) shows a consistent conclusion that the food industry in Malaysia has operated at 0.74 of TE level.

DATA AND METHOD

Data Envelopment Analysis

Modern method of efficiency measurement in the manufacturing and services sector has been inspired by Farrell's idea (, 1957) in his article entitled "Measurement of productive efficiency". Lately, the idea has developed into two distinguished methods namely Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA). A primary assumption in the concept is, if a given firm, A, is capable of producing $Y(A)$ units of output with $X(A)$ unit inputs, then other producers should also be able to do the same if they are operating efficiently. Similarly, if another firm, B is capable of producing $Y(B)$ units of output with $X(B)$ inputs, other firms should also be capable of the same production schedule. Firms A, B, and others can then be merged to

form a firm with a combination of inputs and a combination of outputs. Since this combined firm does not necessarily exist, it is sometimes called as a virtual firm. Avkiran and Thoraneenitiyan (2010) use d a non-oriented DEA to purge the inefficiency attributable to measurement error, and simultaneous adjustment of data for input and output slacks.

Charnes, Cooper and Rhodes (1978) have developed a basic model of DEA, known as CCR model. There are n decision making unit (DMU) each producing s different outputs by consuming varying amount of m different inputs. A particular DMU _{j} using x_{ij} of input i to produce y_{rj} of output r , x_{ij} and y_{rj} is greater than one. Each DMU at least has one input and one output respectively. Based on this assumption, we can go to CCR DEA model by the ratio of outputs and inputs to measure a relative efficiency of DMU _{j} . DMU _{o} to be evaluated relative to the ratios of all n DMU, $j = 1, 2, \dots, n$. The CCR model is constructed as reduction of multiple outputs divided by multiple inputs to a single virtual output and virtual input. According to Fare, Grosskopf and Lovell (1994), a maximization mathematical equation will form the objective function for the particular DMU:

$$\begin{aligned} \max h_o(u, v) \\ = \sum_r u_r y_{ro} / \sum_i v_i x_{io} \end{aligned} \tag{1}$$

Where u_r 's, v_i 's and x_{io} 's are observed as outputs and inputs of DMU that will be evaluated. This equation's constraint is that the virtual outputs to the virtual inputs ratio

is less than or equal to one, so that (1) can be re-written:

$$\begin{aligned} \max h_o(u, v) \\ = \sum_r u_r y_{ro} / \sum_i v_i x_{io} \\ \text{Subject to} \\ \sum_r u_r y_{rj} / \sum_i v_i x_{ij} < 1 \text{ for } j = 1, \dots, n \\ u_r, v_i \geq 0 \text{ for all } i \text{ and } r. \end{aligned} \tag{2}$$

Dual problem of this linear programming is:

$$\begin{aligned} \theta^* = \min \theta \\ \text{Subject to} \\ \sum_{j=1}^n x_{ij} \lambda_j < \theta x_{io}, \dots, i = 1, 2, \dots, m \\ \sum_{j=1}^n y_{rj} \lambda_j \geq y_{ro}, \dots, r = 1, 2, \dots, s \\ \lambda_j \geq 0, \dots, j = 1, 2, \dots, n \end{aligned} \tag{3}$$

The implicit in dual theorem of a linear program enables one to measure the efficiency by (3) because it can be set $\theta = 1$ and $\lambda_k^* = 1$ with $\lambda_k^* = \lambda_o^*$ and all other $\lambda_j^* = 0$, however, this solution implies that $\theta \leq 1$. The θ is an efficiency score (the optimal solution) for a particular DMU and the process to (transform) to each DMU. If the value is close to unity it means more efficient DMU, vice versa, if equal to unity it means that the DMU is operated at its bound efficiency.

In the efficiency literatures, the nonparametric nature of DEA allows it to concentrate on revealed best-practice frontiers rather than on central-tendency properties frontiers. DEA can provide information on technical efficiency without the need for price data (Mahadevan, 2002).

Data envelopment analysis (DEA) measures the relative efficiencies of a decision making unit (DMU) with multiple inputs and multiple outputs. DEA can analyze a DMU without the requirement of relating the inputs to outputs and the comparisons are directly against the peers. However, there are some drawbacks in the use of DEA where the measurement error can cause significant problems, DEA does not measure a real efficiency of the DMU and there is no statistical test (Coelli, 2003).

Partial Factor Productivity

Partial productivity is defined as the ratio of output to one selected factor input. This concept is simple and easy to be implemented if the quantitative data is available. Although the modern productivity analysis focuses on total factor productivity, in particular, partial productivity is popular to describe the firm's performance. Commonly, the three input factors selected for partial productivity analysis in the manufacturing sector are labor, capital and material. The model of traditional productivity measurement is constructed on these three factor inputs. Value added is usually proxy to the output rather than the gross output.

Data

Data is obtained from the Department of Statistics Malaysia in five-digit level data for the period of 2000-2006. The data refer to the Malaysian Standard Industrial Classification (MISC). One output and nine inputs have extracted from the data to be used as variables for the analysis. Output is

total value added in Ringgit Malaysia (RM) for each sub industry for one year, and inputs consist of labor (number of worker), wages, total labor working hours, total over time working hours, capital, material and energy (including water, electricity, fuel and gas).

According to the Malaysia SMEs Corp., a general definition of SMEs in manufacturing sector (including agro-based) is an enterprise with full-time employees not exceeding 150 or with an annual sales turnover not exceeding RM 25 million. Meanwhile the large scale enterprise is defined as a firm which has more than 150 employees and or annual sales turnover of more than RM 25 million.

RESULTS AND DISCUSSION

Partial Productivity

Partial productivity discloses information about how a single input contributes to generate the output while it takes no notice of the contribution by other inputs. The measurement of partial productivity is simple. However, it can distinguish how each input contributes to gain the output in production. This concept is identical to the concept of marginal physical products that is the change of the output by hiring one additional input.

Traditionally, in the manufacturing sector there are three factors of inputs used for partial productivity analysis namely labor, capital and material. Labor productivity usually is defined by valued added per worker (VA/L) and cost of labor is defined by wage per worker. Labor productivity explains the contribution of

one unit of labor to generate output; it can be measured on a company level, for a processing on the production level or on a national level. However, it may possibly rise the labor productivity pursuant through a more intensive use of other inputs such as capital and material. For example, new investment in automation will increase output, and then the measuring output per unit labor is also increasing, where as it is in fact an effect of capital intensity rather than higher labor productivity.

Therefore, it could be implied that labor productivity is really a productivity of one specific input and does not provide a complete evaluation of the overall productivity in the production process. However, the partial productivity measurement has its advantages; it helps to see the trend of time variant input, it is easy to understand and simple to interpret.

Table 2 presents labor cost and partial productivity in the SMEs of Malaysian food processing industry during 2000-2006. The mean of annual partial productivity of the SMEs Malaysian FPI varies over time

except for the capital productivity. During the period of 2000-2006, labor cost and labor productivity increased from 13.65 to 14.03 with a mean of 14.03. Increasing labor cost means that the company pays a higher amount to the employees, and it reveals better welfare for the workers. In contrast to the decreasing labor force, the labor productivity seems to increase over the years. Overall, our result shows that labor productivity is higher than the result of Radam (2007) that reports labor cost and labor productivity of Malaysian FPI as much as 11.6 and 46.65, respectively.

Capital productivity stays relatively unchanged during the period of observation. This capital productivity is congruent with the average growth (4.05 percent) of the total amount of capital as much as RM 7.045 billion in 2000 to RM 8.895 billion in 2006. Meanwhile a declining productivity trend appears in the material used. In 2000 the material productivity (value added per material) was 0.22 and stands at 0.18 in 2006. Low material productivity may indicate a low material efficiency or that a

TABLE 2
Labor Cost and Partial Factor Productivity in the SMEs

Year	Labor cost (W/L)	Labor productivity (VA/L)	Capital Productivity (VA/K)	Material Productivity (VA/M)
2000	13.65	47.05	0.60	0.22
2001	13.42	45.03	0.59	0.22
2002	13.68	50.31	0.61	0.17
2003	14.52	52.67	0.70	0.16
2004	14.67	54.83	0.63	0.17
2005	14.30	50.59	0.61	0.17
2006	13.95	54.48	0.67	0.16
Mean	14.03	50.71	0.63	0.18

Source: calculated data from the Department of Statistics, Malaysia

high proportion of the material goes quietly to waste.

Fig.1 and Fig.2 show labor cost, partial productivity of labor, capital and material for each sub industry in the SMEs Malaysian food processing industry. Figure 1 enlightens that there is not a significant difference for the cost of labor (W/L) among sub industries in the SMEs. Higher cost of labor is found in the manufacturing of alcohol, palm oil, refined palm oil, palm kernel oil and in the manufacturing of sauces. In contrast to the labor productivity (VA/L), it is more varying among the sub industries. The sub industries with higher labor productivity are those manufacturing of alcohol, palm kernel oil, refined palm oil, flour and the ones manufacturing other vegetable oils. The manufacturing of alcohol shows remarkable labor productivity, presumably due to the industry employing a small number of workers but the products achieve higher value added by using advanced biotechnology.

One phenomenon disclosed from the Fig.1 is that the industries with higher labor

productivity tend to show a higher cost of labor. This phenomenon may be due to the firms enjoying a higher production per worker, leading to better revenues, which are distributable to all stakeholders, including their worker. This happens in the industry of refined palm and kernel palm oil, alcohol and sauces.

Technical Efficiency in the SMEs

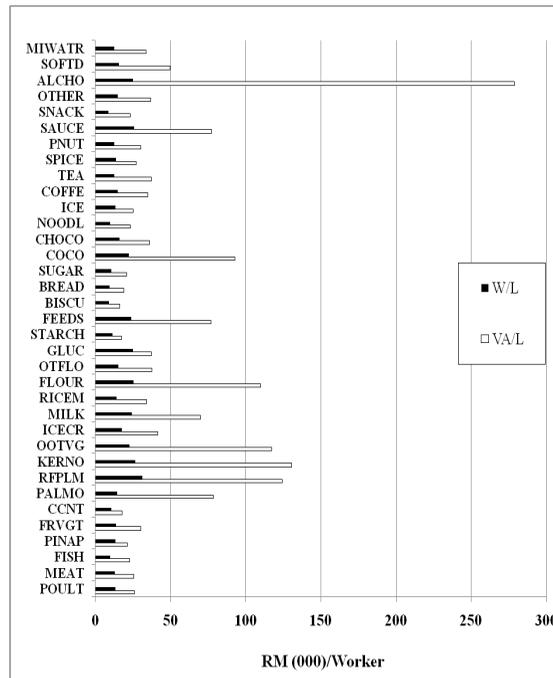
Efficiency is important as an indicator for the management to evaluate the firm or organization's performance. Companies having higher efficiency find it easier to achieve the management goals because the firm creates competitive products, cheaper production costs as well as stronger brand equity and higher profits. A better performance creates better sustainaince and competitive edge for such companies. Table 3 shows the score and the growth of technical efficiency (TE) in the SMEs of the Malaysian FPI from the DEA method.

Based on constant return to scale (CRS), TE in the SMEs shows an average score as

TABLE 3
Technical Efficiency in the SMEs of Malaysian Food Processing Industries, 2000 - 2006

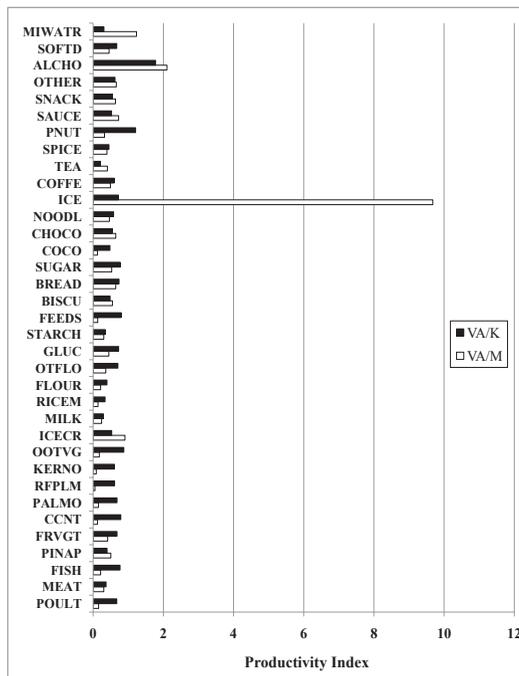
Year	CRS		VRTS	
	TE	Growth	TE	Growth
2000	0.725	-	0.970	-
2001	0.795	9.655	0.938	-3.299
2002	0.779	-2.013	0.959	2.239
2003	0.690	-11.425	0.919	-4.171
2004	0.794	15.072	0.935	1.741
2005	0.777	-2.141	0.960	2.674
2006	0.734	-5.534	0.935	-2.604
Mean	0.756	0.602	0.945	-0.570

Source: Results from DEA method



Note: VA/L = value added per labor, W/L = wage per labor

Fig.1: Labor Productivity and Cost of Labor per Employee in the SMEs



Note: VA/M = added per material, VA/K = value added per capital

Fig.2: Material and Capital Factor Productivity in the SMEs

much as 0.756 (75.6 percent). This score is higher than TE of the food manufacturing sector in Spain as reported by Marcos and Gavez (2000), by as much as 0.44 percent. TE of SMEs in Chile was as much as 65 percent, reported by Alvarez and Crespi (2003). Meanwhile TE based on variable return to scale (VRS) shows a higher score at average 0.945 (94.5 percent) during the period of observation. The CRS efficiency measurement is weighed against the linear possibility production function (PPF) of a decision making unit which may form a longer distance to the PPF. Meanwhile the VRS is weighed against a non linear PPF which forms a closer distance to the function. Referring to the TE score of CRS, the SMEs Malaysian food processing industries have the potential ability to increase their outputs by almost 24 percent.

Growth of the TE fluctuates over the year. CRS technical efficiency has a positive average growth at the rate of 0.602 percent and VRS technical efficiency has a negative growth rate of -0.570 percent per annum. Looking by time trend, the TE trend is declining from 2001 and reaches the lowest score in 2003 at 69 percent. Amazing improvement occurs from 2003 to 2004 to reach 79.4 percent and again there is a decline in the following period to record a TE score of 73.4 percent in 2006.

Our finding is consistent with the TE score found by Zahid and Mokhtar (2007) at 72.9 percent for the SMEs Malaysian food industries. The question to ask is why the TE score shows a non linear trend over the year. To answer this, it is necessary to look

at the theoretical framework of the TE where its ability to catch up with the production frontier is influenced by the management practice (controllable factor) and exogenous factor (uncontrollable factor).

Organization practices such as fewer rejected products, low quantity of waste, on time delivery, good quality of input, effective promotion and employing more skilled workers are factors that can be controlled by the management. Meanwhile economic downturn, demand trend, interest rate and inflation are factors which uncontrollable by the management. These factors jointly influence the ability of a firm to catch up with its out boundary of production function being where the TE is calculated.

CONCLUSION AND IMPLICATIONS

This article analyzes partial productivity and technical efficiency of the SMEs in the Malaysian food processing industry during 2000-2006. One phenomenon which is disclosed from the partial productivity analysis is that industries with higher labor productivity tend to show a higher cost of labor. During the period of observation, labor productivity shows an increasing trend, meanwhile capital and material productivity remain relatively unchanged.

Technical efficiency is estimated by using the non parametric method data envelopment analysis (DEA). The SMEs in the Malaysian food processing industry has a technical efficiency score of 75.6 percent. It means that the industry can increase its output by as much as 24.4

percent using the same amount of input. This information reveals that there is no significant improvement of the technical efficiency level compared to the results reported by the previous study that the TE of the Malaysian FPI was 73%.

Therefore, the SMEs need to focus on how to manage all organizational resources, including the tangible and intangible assets such as increasing labor skill, maintain the supply of raw material and use a modern production technology. Competition in the domestic and global market forces has led policy makers to focus on encouraging SMEs to operate efficiently. Merger among firms of the same products is a possible choice in order to obtain economies of scale.

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APPENDIX

SUB INDUSTRIES IN THE SMES OF MALAYSIAN FOOD PROCESSING INDUSTRIES

Code	Sub Industries	Abbre
15111	Processing and preserving poultry & poultry products	POULT
15119	Processing and preserving meat & other meat products	MEAT
15120	Processing and preserving fish and fish products	FISH
15131	Canning of pineapples	PINAP
15139	Canning and preserving fruits and other vegetables	FRVGT
15141	Manufacturing of coconut oil	CCNT
15142	Manufacturing of crude palms oil	PALMO
15143	Manufacturing of refined palm oil	RFPLM
15144	Manufacturing of palm kernel oil	KERNO
15149	Manufacturing of oil and fat from other vegetables	OOTVG
15201	Manufacturing of ice cream	ICECR
15202	Mfg. of condensed, flour milk, other milk products	MILK
15311	Rice milling	RICEM
15312	Flour milling (excluding sago and tapioca)	FLOUR
15319	Manufacturing of flour products of other beans	OTFLO
15322	Manufacturing of glucose, syrup and maltose	GLUC
15323	Manufacturing of sago, tapioca and others starch	STARCH
15330	Manufacturing of animal feed	FEEDS
15411	Manufacturing of biscuit and cakes	BISCU
15412	Manufac. of bread, cake and other bakery products	BREAD
15420	Sugar refinery	SUGAR
15431	Manufacturing of coco products	COCO
15432	Manufacturing of chocolate and sugar confectionary	CHOCO
15440	Mfg of macaroni, noodle and similar products	NOODL
15491	Manufacturing of Ice (excluding dry ice)	ICE
15492	Manufacturing of coffee	COFFE
15493	Manufacturing of tea	TEA
15494	Manufacturing of spice and curry powder	SPICE
15495	Manufacturing of peanut and peanut products	PNUT
15496	Manufacturing of sauce and flavor include MSG	SAUCE
15497	Manufacturing of Snack	SNACK
15499	Manufacturing of food other category	OTHER
15510	Alcohol from fermentation, drugs and wine	ALCHO
15541	Manufacturing of soft drink	SOFTD
15542	Processing of mineral water	MWTR

Adapted from: Department of Statistics Malaysia