International Journal of Research in Social Sciences
Vol. 8 Issue 3, March 2018,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

PRACTISING MANAGEMENT ACCOUNTING (MA) TECHNIQUES IN HALAL FOOD PROCESSING

Mohd Rizuan Abdul Kadir*

ABSTRACT

The Qur'an has defined the basic concepts of food for human consumption, which are halal and *toyyib*. Halal denotes that which is permitted in Islam, while *toyyib* connotes purity. In brief, halal food in Islam must only comprise permitted ingredients (halal) and needs to submit to a good processing system to ensure that food is hygienic and safe (*toyyib*). In order to secure a good processing, Islamic values such as avoidance of wastage and effectively use resources are incorporated as part of the halal food processing. In Malaysia, this process is governed by the MS 1500:2009. This system is expected to guide food producers into a good manufacturing system. Hence, this study was designed to investigate the practices of Management Accounting (MA) techniques in halal food processing. A questionnaire survey was used and being distributed to the respondents in halal food industries. The results of the study revealed that there were some elements of MA techniques had been incorporated into the halal food processing. Thus, it could be concluded that the food producers had indirectly practised some of the MA techniques in processing the halal food.

Keywords: Halal Processing, Material Flow Cost Accounting, Environmental Management Accounting, Management Accounting

* **Noraina Mazuin Bte. Sapuan, Salina Bte. Daud, College of Business Administration and Accounting, Universiti Tenaga Nasional, Bandar Muadzam Shah, Pahang, Malaysia.**

1. Introduction

Islam has mention two basic principles of food to be consumed by human, which are *Halalan* and *Toyyibban*. This is stated in Quran, as God says:

يَٰٓأَيُّهَا ٱلنَّاسُ كُلُواْ مِمَّا فِي ٱلۡأَرۡضِ حَلَٰلٗا طَيِّبٗا وَلَا تَتَّبِعُواْ خُطُوَٰتِ ٱلشَّيۡطَٰنِۚ إِنَّهُۥ لَكُمۡ عَدُوّٞ مُّبِينٌ ١٦٨

"*O people, eat permissiblegood things out of what lies in the earth, and do not follow the footsteps of Satan; indeed, he is an open enemy for you*". (Quran 2:168)

Halalan is defined as permitted or acceptable by Shariah law (Saifuddeen, 2006). It has been specifically mentioned and determined such as on the prohibition of pork and liquor. Whereas, *toyyibban* is a universal notion which can be referred to the food which is nutritious, good quality, hygiene, authentic and safe (Saadan & Zainal Abidin, 2014; Saifuddeen, 2006). *Toyyib* in halal food processing can also be referred to the good method used in ensuring the quality and safety of food (Mohamad & Backhouse, 2014). As it is concerned, this concept fits with the UK food law and EU General Food Law in terms of the health risk associated to consumptions, and it is also associated also with the hazard analysis and critical control points (HACCP) requirements (Mohamad & Backhouse, 2014).

In Malaysia, the halal food processing standard is governed by MS1500:2009. This standard is a set of guideline, covered largely on the element of food processes to ensure the quality and safety of good, rather than halal element as it has been specified by Shariah. Currently, Malaysia's halal Certification is globally recognised (Bohari, Hin, & Fuad, 2013). In ensuring the good processes to guarantee the food quality and safety, it involved a lot of discretion on the best practices. The discretionary in halal food processing consequently relates with other good concepts such as waste management and use of resources effectively (Mohd Rizuan, Zaifudin, Salina, & Noraina Mazuin, 2015).

Therefore, the *toyyib* concept in halal processing, which is also emphasis on the use resources effectively might have certain Management Accounting (MA) features, although the standard do not mentioned specifically about the cost. Currently, there are a lot of studies done on used of

MA techniques by business organisation, but none was done to relate it's with halal food processing (*toyyib*).

2. Statement of Problem

Currently, the halal industry is no longer considered an industry merely to complies with religious requirements, but is also becoming an economic force in its own right (Mohamad & Backhouse, 2014). The global halal food market is worth US1.1tn in 2013 and is expected to hit US$1.8tn in 2018 (Beer, 2014). Many countries are competing to take advantages on the huge halal market. Malaysia, Indonesia and Pakistan are among the Muslim countries aspired to become the halal hub. They are aggressively working towards becoming the key players in delivering halal products (Mohamad & Backhouse, 2014).

The non-Muslim countries are also actively taking part in this market. China for example, a country with minority Muslims, managed to export $500 billion of halal food (Dasgupta, 2011). Therefore, Malaysian halal food manufacturers should take positive actions in sustaining the halal food quality. This, in return will help Malaysia become the halal hub and grab the global market opportunity (Habibah, Talib, Anuar, Ali, & Jamaludin, 2008).

It should be noted that halal does not only relate to permissible foods for Muslim but it also has other dimensions within Islam itself. Halal and *Toyyib* themselves, portray the symbol of intolerance in the hygiene, safety and quality (Noordin, Md Noor, Hashim, & Samicho, 2009). Halal does not only required the food producers to use permitted materials, but also having good processes as outline in Islam teaching. Halal processing highly requires cleanness in the process and to use resources effectively. Thus, MS1500:2009 has specific requirement mentioned about minimising wastage and ensuring smooth process flow to avoid contamination. These practices indirectly relates to MA.

MA is part of accounting involves with the techniques of decision making, formulate planning and performance management systems (UNDSD, 2001). It is used to help the organisation operate in correct way (Michael Anastas, 1997). Among the MA techniques that are proven helped companies to operates effectively are; Material Flow Cost Accounting (MFCA)

(Chompu-inwai, Jaimjit, & Premsuriyanunt, 2014; Kokubu & Kitada, 2014), Kaizen Management Accounting (Kaizen) (Jayeola, Sokefun, & Oginni, 2012; Monden & Hamada, 1991; Poretsky, 2012), Variance Analysis and Benchmarking (Lankford, 1996).

Therefore, this study is designed to examine the halal food processing and its relation with the used of MA techniques. The specific research questions to be answered in this study are:

1. Do halal food producers follow the cleanness and food safety processing requirement as outline in MS1500:2009?
2. Do halal food producers inherently practice MA techniques in their processing?
3. Is there any significant relationship between the clean and safety process (*toyyib*) in halal processing and MA techniques?

Since this is the first study to relate halal processing and MA techniques, it is expected that a very useful theoretical implications can be derived for further deliberation. This study will expand the existing literature about the usage of MA techniques in a new area, which is halal food processing.

3. Islamic Concepts on Halal Foods and Malaysian Halal Food Standard

The basic principle of Islamic law is from Holy Qur'an and Hadith. For the food to be consumed by human, God says that:

"O you who believe! Eat all the lawful things that We have provided you with. And be grateful to God, if it is indeed He whom you worship. He has only forbidden you only for the dead animal, and blood, and the flesh of swine, and that which is slaughtered as a sacrifice for others than God (or been slaughtered for idols, in which God's name has not been mentioned while slaughtering)" Al-Baqarah 2:172-173. (Quran 2:172-173)

Also, there are specific prohibitions mentioned by Prophet Muhammad PBUH, such as reported by Muslim, "*Every intoxicant is khamr*(liquor), *and every khamr is haram*.", and in another hadith, Prophet Muhammad PBUH said, "*Every fanged beast is forbidden to eat*". The concept of food prohibition is expanded by the Jurists using *'illah* (legal reason). For example from the pulpit of the Prophet Muhammad PBU, Umar al-Khatab had declared, "*Khamr* is that which

befogs the mind" (Al-Qaradawi, 2001), and jurists agreed that anything belongs to this group is also prohibited.

These foods are prohibited because its bring harm to human. Although some would argued that these foods also have benefits, but its harms outweigh the benefits, makes it's not good for human (Al-Qaradawi, 2001). Thus, Islam highly encourage human to eat good foods. The food to be consumed must be halal and pure, from the aspects of quality, safety, hygiene and sanitation (Mohamad & Backhouse, 2014).Yaakobet al. (2007) concluded are three important guidelines in the selection of food and drinks in Islam, which are; (i) whether the consumption of the foodstuff is prohibited by God; (ii) whether the foodstuff is obtained through halal or haram means, and (iii) whether or not the material is harmful to health.

In Malaysia, the standard guide to the certified halal food is governed by MS1500:2009, a policy in managing a halal food production, preparation, handling and storage. This standard also covers the guidelines of Food Safety Principle (MS1514), Hazard Analysis Critical Control Point (HACCP-MS1480) as well as the guidelines for good hygienic practice (GNP) and Sanitation Standard Operating Procedures (SOPs). The guidelines not only fulfil the halal requirement, but also maintain standards that meet global benchmark such as ISO 9000 and Codex Alimentarius and Hazard Analysis Critical Control Point (HACCP). This standard very concern about safety and hygiene in extend that the food produce is not just only safe but also halal to consume.

The elements described in the halal guidelines are largely on how to process and produce the halal products. Barely, little attention was given on the cost management. However, by upholding the Islamic concepts during the process, such as avoid wastage, used resources effectively and *istiqamah* (consistent), may lead to a good manufacturing system. Therefore, it is expected that the current halal food processing system is a very good system and shall have embedded some of MA techniques within it.

4. Management Accounting (MA) and Its Roles in Managing Operations

MA is used to help the organization operate in correct way to be success or to be happened faces revenue more than loses (Anastas, 1997). The used of MA shall contribute or generate idea for

managers to make better decision that will benefit the company. Among the MA techniques that are proven had help companies to operate efficiency are MFCA, Kaizen, VA and BM. The elements of these techniques are used in this study.

MFCA is an environmental management accounting (EMA) tool developed in Germany. It is focusing on tracing waste, emissions and non-product, and can help to improve economic and environmental performance of the organization. MFCA tracks all input materials that flow through the production process, and measure the output of finished products and waste (Kokubu, Kos, & Campos, 2009). Halal processing has some elements of MFCA when it requires traceability of material consumed as critical point to be look out. Traceability is very important for halal certification to ensure every resources used in the processing is halal and from the good sources. The knowledge about the composition in the process is also important to ensure the food produced is safe and good.

VA is a set of norms, something which was founded and established by authority as a rule for the measure of quantity, weight, extent, value, or quality. Accordingly, VA used standard cost for predetermined costs. VA practice replaces the actual cost to the expected cost in the accounting records, and periodically recording the variance shows the difference between the expected costs and actual (Carl-Joachim Wiberg, 2002). Halal processing do not requires a specifically comparative analysis like VA, but requires the food produces' to have a set of standard materials and its composition to be used in their production. To maintain the quality, the food producers are required to constantly follow the standard set-up in their operation that has been used for halal certification.

KC is the process of continual cost reduction that occurs after a product design has been completed and is now in production. The Japanese word 'kaizen' in kaizen costing may be somewhat different concept from the English word 'improvement' (Monden & Hamada, 1991). The important feature of kaizen is continuous, which is used to signify the embedded nature of the practice and a never-ending journey towards quality and efficiency (Brunet & New, 2003). In Islam, the followers are demanded to be *istiqamah*, which is described as consistency and passion for excellence (Kamaluddin & Abdul Manan, 2010). *Istiqamah* requires the followers to

excel in everything they do (Kamaluddin & Abdul Manan, 2010). Islam requires the followers to do more than what is minimally required as Prophet Muhammass.a.w. advised: "*God loves that when anyone does a job, he does it perfectly*", and, to be efficient and proficient as God mentions: "*Verily Allah command that you establish justice and be efficient and proficient.*" (Quran 16:90). Thus in halal processing, consistent is something demanded from the food producers, while continuous improvement is highly encourage in their processing.

BM is the process of measuring the performance of one's company against the best in the same or another industry. It used the knowledge and the experience of others to improve the organization and analysing the performance (Lankford, 1996). This is done through discover and incorporate the best practice by identified and understand the practice of a superior or world class performance in a particular work process (Demillio, 1995). Benchmarking is not a complex concept but it should not be taken too lightly it's basically learning from others. In fact, benchmark with the upmost quality it is highly encourage in Islam as God says:"*Indeed in the Messenger of Allah you have an excellent example (best practice) to follow for whoever hopes in Allah and the Last Day and remembers Allah much (best performance)."* (Quran 33:21).

By considering the relationship between MA techniques and halal processing, the following hypotheses are developed to be tested in this study.

H1: *There is a significant relationship between halal Food Processing and MFCA*

H2: *There is a significant relationship between halal Food Processing and VA*

H3: *There is a significant relationship between halal Food Processing and KC*

H4: *There is a significant relationship between halal Food Processing and BM*

5. Methodology

This study is a descriptive study, to examine the elements of MA techniques practices in halal food processing and its relationship. This is the first ever study on the relationship between halal food processing with MA techniques. Currently, based on halal directory at Daganghalal website[1], there are 3,597 registered sellers with 18,187 qualified compliance halal products in Malaysia. For the purpose of this study, the sample is randomly taken from the exhibitors at

[1] Available at http://www.daganghalal.com/

Malaysian International Halal Showcase (MIHAS). At MIHAS, there are 528 exhibitors from 21 countries taken part. Only Malaysian exhibitors are taken as samples for this study as they are the one who need to comply with MS1500:2009.

Since MIHAS is a well-known venue for halal showcase throughout the world, it can be assumed that all the exhibitors involved in MIHAS are established halal food companies. These companies are ready to penetrate the international market. They have followed the requirement on halal processing stipulate in MS1500:2009 and Good Manufacturing Process[2] (GMP). Therefore, there are the best respondents to answer about halal food processing and it relation with MA techniques.

The questionnaire is taken from Jalaludin, Sulaiman, & Nik Ahmad (2010), Salina, Rohayati, Suzaida, Mohd Rizuan, & Noraina Mazuin (2011) andMohd Rizuan (2015). These questions are being amended to fit with MS1500:2009, Manual Procedure of Halal and Halal Assurance System (HAS), and also with certain elements of MFCA, VA, KC and BM. The likert scale is used in the questionnaire ranging from 1 as strongly disagreed to 5 as strongly agreed. It is a self-administered questionnaire.

The descriptive analysis is employed to analyse the MS1900:2005 compliance and its practicality. The descriptive statistics is important as it would report a clear, specific and measurable condition in question (Grimes and Schulz 2012). The spearman rho correlation is conducted to assess the relationship between the halal processing and optimally use of resources.

6. Results and Discussion

During the data collection, more than 400 questionnaires were distributed. The returned and useable questionnaires were 303. The questionnaire distributed is not based on the company, but rather to the person in charge. Therefore, there are companies that filled more than one questionnaire as there are several people are in charge for those companies, especially the Multi-national companies.

[2] Refers to set of regulations, codes and guidelines to control the operational conditions within a foods producing establishment allowing for the production of safe food

Majority of the respondents (70.6%) are employee of halal food's company, while other are either the owner or key management of the company. 50.8% of respondents said their company has obtained halal certification for 5 years and below, 20.1% between 6 – 8 years and 29% more than 8 years. On the number of employees, 26.4% said they have 10 employees or less, 38.6% have between 11 to 50 employees and 35% have more than 50 employees. Majority of the respondents (60.1%) said their company employed 100% Muslim, 33% employed more than 50% Muslim and 6.9% employed less than 50% Muslim. Majority of the respondents (83.2%) are from private company (SdnBhd), 12.5% from unincorporated business (Enterprise) and 4.3% from other types of business. 69% of the respondents have attended the halal course. The demographic profile of respondents is tabulated as in Table 1.

Table 1: Demographic Profile of Respondents

	Frequency	**Percent**			**Frequency**	**Percent**
Position				**Classification of Business**		
Owner / Key Management	89	29.4%		SdnBhd	252	83.2%
Employee	214	70.6%		Enterprise	38	12.5%
				Other	13	4.3%
Years obtained Halal						
5 years and below	154	50.8%		**Percentage of Muslim Employees**		
6 - 8 years	61	20.1%		100% Muslim	182	60.1%
More than 8 years	88	29.0%		> 50% Muslim	100	33.0%
				< 50% Muslim	21	6.9%
Number of Employees						
10 employees and below	80	26.4%		**Attend Halal Course**		
11- 50 employees	117	38.6%		Yes	209	69.0%
More than 50 employees	106	35.0%		No	94	31.0%

The reliability of the data was verified using Cronbach alpha, where the closer the Cronbach alpha to 1, the higher the internal consistency reliability (Sekaran, 2000). The alpha coefficients for all factors in this study are 0.90 and above, which can be concluded as being reliable (Nunnally, 1978). Table 2 presents the Cronbach alpha coefficient for each factor.

Table 2: Reliability Statistics

	Cronbach's Alpha	N of Items
Halal Clean and Safety (*Toyyib*) Processes	.900	16
Elements of material flows cost accounting	.952	10
Elements of variance analysis	.956	5
Elements of kaizen costing	.950	6
Elements of benchmarking	.924	4

To answer the first research question, does halal food processor follow the clean and safety process (*toyyib*) as outline in MS1500:2009, a descriptive analysis is conducted. The result is very encouraging. Majority of respondents are strongly agreed that they have followed strictly the requirement of MS1500:2009. They have agreed that in processing the halal food, they always ensure that the processes is clean, equipment used is clean, smooth flow of materials to avoid contamination and known the material used in the processes. The result on halal clean and safety (toyyib) processes is tabulated in Table 3 as below:

Table 3: Descriptive Statistic of Halal Clean and Safety (toyyib) Processes - MS1500:2009 requirement

No	Items	Mean	SD	No	Items	Mean	SD
1.	Clean processing equipment in accordance with standards	4.4785	.76689	9.	Well-maintained sanitation facilities	4.4884	.69936
2.	Processed products are clean as outlined	4.4587	.69823	10.	Avoid any contamination by foreign substances	4.5512	.69758
3.	Premise layout is suitable for a good workflow	4.5347	.80845	11.	Use minimal permitted food additive in food processing	4.5578	.73858

4.	The premise is designed to facilitate supervision of hygiene	4.5050	.78425	12.	No pest species can enter	4.5149	.70402
5.	The premise is always clean	4.5644	.68690	13.	Premise is not entered by all types of animals	4.5347	.78349
6.	Premise is maintained regularly to clean	4.5743	.65630	14.	Knowing the source of the raw materials used	4.5083	.74079
7.	The products flow in each process it not contaminated	4.4389	.80277	15.	Knowing the process flow for materials in used	4.5281	.68453
8.	Sanitation facilities are sufficient	4.4191	.76290	16.	Has a structured system for disposal of waste	4.4686	.74017

For the second research question, does halal food producers inherently practices some of MA techniques in their processing. Again, the result is very inspiring. It can resolve that the halal food processing in Malaysia had embedded certain MA techniques in their practices. The respondents agreed that the resources are effectively used. The respondents claimed that they fully understand about the material process flow and expected output from the process. In order to maintain a good (*toyyib*) food processing, the respondents agreed that their organisation has a proper process flow chart. They also agreed, with a proper system they have, benchmarking can be done. Thus, majority of respondents have claimed that their organisation has benchmarked their products and processes with other halal products.

Since halal processing consider traceability of resources as critical point to be observed, a proper record about these need to be maintained. Through a proper record, any differences with actual practice can be identified. Thus, majority of the respondents agreed their organisation has identified the input cost, planned and controlled the cost. Moreover, they also look for differences on any variances occurred. Lastly, in ensuring a good processing is maintained, the organisation is required to be consistent (*istiqamah*). From the survey, the respondents have

agreed that their organisation always ensure the productions are at equivalent quality and make periodic reviews to improve the processes and products. The detailed descriptive statistic of elements of MA techniques used in halal food processing is tabulated in Table 4 as below.

Table 4: Descriptive Statistic of Elements of MA Techniques used in Halal Food Processing

No.	Items	Mean	SD
Elements of Material Flow Cost Accounting (MFCA)			
1.	Minimise the used of water during processing	4.3399	.78897
2.	Minimise the used of energy during processing	4.4191	.72278
3.	Effective use of labour during processing	4.5248	.62393
4.	Nothing is wasted during processing	4.4323	.71029
5.	Identify clearly the raw materials used	4.4983	.70417
6.	Identify clearly the workforce used	4.4686	.73117
7.	Identify the quantity produced from the use of resources	4.4422	.72500
8.	Identify the quality produced from the use of resources	4.4785	.69913

No.	Items	Mean	SD
Elements of Variance Analysis (VA)			
1.	Identified the input costs for materials processing	4.4686	.69875
2.	Planned costs for production	4.4455	.80736
3.	Controlled costs during product processing	4.3993	.83523
4.	Compare the actual cost and planned cost	4.3894	.77213
5.	Look for differences in processing costs	4.4224	.70927
Elements of Kaizen Costing (KC)			
1.	Ensure product processing are equivalent	4.3399	.75025

9.	Products manufactured are in line with targeted quantity	4.4752	.67492
10.	Products manufactured are in line with targeted quality	4.4389	.62142
Elements of Benchmarking (BM)			
1.	Benchmarking with other halal products	4.4092	.76178
2.	Creating marker levels with products that are domiciled	4.4884	.71342
3.	Benchmarking for processing	4.4686	.71283
4.	Has proper process flow chart	4.4983	.68510
2.	Make periodic products reviewed	4.4389	.79030
3.	Make periodic processing reviewed	4.4818	.74061
4.	Ensure the right working process at all times	4.4983	.68510
5.	Identify the advantages of products produced	4.4686	.71283
6.	Identify the weaknesses of products produced	4.4059	.72118

On the third research question, is there any significant relationship between the clean and safety process (*toyyib*) and MA techniques in halal food processing, a spearman's rho correlations is conducted. The analysis shows that there are significant relationships between the independent variables with all the dependents variables. Therefore all the hypotheses are accepted as there are significant relationship between halal clean and safety (*toyyib*) processes in halal food industries and the elements of MA techniques, which are (a) MFCA, (b) VA, (c) KC and (d) BM. The result of spearman's rho correlation is shown as in Table 6.

Table 6: Spearman's rho Correlations

	Halal Clean and Safety	MFCA	VA	KC	BM
Correlation Coefficient	1.000	.918**	.899**	.839**	.821*
Sig. (2-tailed)	.	.000	.000	.000	.000
N	303	303	303	303	303

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

7. Conclusions

The most important finding reveals in this study is that the halal food processing is beyond the Muslims food issue. The basic concepts of food in Islam are halal and *Toyyib*. This concepts emphasis on the pure food through a good processing system, starting from the source of the materials until it's become a consumable food. Thus, halal food can be said as good food produced through a good system, encompasses of material identifiable and traceable, cleanness processing, safety food and a good manufacturing system.

The finding of this study is very inspiring. In processing the halal food as being guided by the MS1500:2009, the food producers have indirectly practices some of the MA techniques. In ensuring the cleanness in processing and safety of food, the industry has embedded indirectly some of MA techniques that have proven benefited the businesses, such as MFCA, VA, KC and BM. However, this study does not assess the MA techniques in total, but rather some of elements.

Therefore, it is suggested that a thorough study on halal processing is done to introduce the cost management system in halal processing. By doing that, the halal food processing standard is further advance by include managing effectively the resources used in production. This study has proved that halal food is about a human food. The emphasis on the hygienic processing with a good manufacturing system is a universal issue that shall apply to all food industries. The belief about halal is a food for Muslims must be changed as halal also indicates a good food that is produces through a good manufacturing system.

Acknowledgement

The authors would like to acknowledge the financial support received from Malaysian Ministry of Education (FRGS Grant).

References:

- Al-Qaradawi, Y. (2001). The Lawful and Prohibited in Islam. Retrieved April 28, 2015, from http://www.dartmouth.edu/~dcare/pdfs/yusuf.pdf
- Anastas, M. (1997, October). The changing world of management accounting and financial management. *Management Accounting*, 48–51.
- Beer, E. (2014). Global Halal Market To Hit $1.6tn by 2018. *Foodnavigator.com*. Retrieved December 24, 2014, from http://www.foodnavigator.com/Regions/Middle-East/Global-Halal-market-to-hit-1.6tn-by-2018?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright
- Bohari, A. M., Hin, C. W., & Fuad, N. (2013). The competitiveness of halal food industry in Malaysia : A SWOT - ICT analysis. *Malaysia Journal of Society and Space*, *1*(1), 1–9.
- Brunet, A. P., & New, S. (2003). Kaizen in Japan: An Empirical Study. *International Journal of Operations & Production Management*, *23*(12), 1426–1446.
- Chompu-inwai, R., Jaimjit, B., & Premsuriyanunt, P. (2014). A combination of Material Flow Cost Accounting and design of experiments techniques in an SME : the case of a wood products manufacturing company in northern Thailand. *Journal of Cleaner Production*, 1–13. doi:10.1016/j.jclepro.2014.08.039
- Dasgupta, S. (2011). China makes dent in halal market with 1/8th of India's Muslim population http://articles.timesofindia.indiatimes.com/2011-09-21/china/30183710_1_halal-china- countries (accessed 23 Jan 2013). *The Times of India*. Retrieved July 30, 2015, from http://articles.timesofindia.indiatimes.com/2011-09-21/china/30183710_1_halal-china- countries
- Demillio, R. (1995). *The Basics of Benchmarking* (1st ed.). Portland: Productivity Press.
- Habibah, H., Talib, A., Anuar, K., Ali, M., & Jamaludin, K. R. (2008). Quality Assurance in Halal Food Manufacturing in Malaysia : A Preliminary Study. In *International Conference on Mechanical & Manufacturing Engineering (ICME2008)* (pp. 21–23).

- Jalaludin, D., Sulaiman, M., & Nik Ahmad, N. N. (2010). Environmental Management Accounting: An Empirical Investigation of Manufacturing Companies in Malaysia. *Asia Pasific Centre for Environmental Accountability*, *16*(3).
- Jayeola, O., Sokefun, a. O., & Oginni, B. O. (2012). Kaizen Cost Management Technique and Profitability of Small and Medium Scale Enterprises (SMEs) in Ogun State, Nigeria. *Pakistan Journal of Social Sciences*, *9*(3), 147–154. doi:10.3923/pjssci.2012.147.154
- Kamaluddin, N., & Abdul Manan, S. K. (2010). The conceptual framework of Islamic Work Ethic (IWE). *Malaysian Accounting Review*, *9*(2), 57–70.
- Kokubu, K., & Kitada, H. (2014). Material flow cost accounting and existing management perspectives. *Journal of Cleaner Production*, 1–10. doi:10.1016/j.jclepro.2014.08.037
- Kokubu, K., Kos, M., & Campos, S. (2009). Material Flow Cost Accounting with ISO 14051, (February), 15–18.
- Lankford, W. M. (1996). Benchmarking: Understanding the basics, *1*(1), 57–62.
- Michael Anastas, "The Changing World of Management Accounting and Financial Management," *Management Accounting*, October 1997.
- Mohamad, N., & Backhouse, C. (2014). A Framework for the Development of Halal Food Products in. In *International Conference on Industrial Engineering and Operations Management* (pp. 693–702).
- Mohd Rizuan, A. K. (2015). Environment Management Accounting (Ema) Practices in Halal Food Processing Ms1500:2009. *South East Asia Journal of Contemporary Business, Economics and Law*, *7*(1), 32–39.
- Mohd Rizuan, A. K., Zaifudin, Z., Salina, D., & Noraina Mazuin, S. (2015). Incorporating the Cost Management System in Halal Standard MS 1500 : 2009 Halal Food in Malaysia By : *International Research Journal of Education and Innovation (IRJEI)*, *1*(4), 1–13.
- Monden, Y., & Hamada, K. (1991). Target costing and kaizen costing in japanese automobile companies. *Journal of Management Accounting Research*, *3*, 16–34.
- Noordin, N., Md Noor, N. L., Hashim, M., & Samicho, Z. (2009). Value Chain of Halal Certification System: A Case of the Malaysia Halal Industry. In *European and Mediterranean Conference on Information Systems 2009 (EMCIS2009)* (pp. 1–14).

- Nunnally, J. C. (1978). *Psychometric Theory* (2nd ed.). Boston: McGraw Hill.
- Poretsky, S. (2012). What Does Kaizen Mean When Applied to Its Use in a Business? *Demand Media*.
- Saadan, M., & Zainal Abidin, Y. (2014). *Halalkah Makanan Kita?* (1st ed.). Batu Caves, Selangor: PTS Islamika.
- Saifuddeen, M. (2006). *Food and technological progress: an Islamic perspective* (p. 193). MPH Group Pub. in cooperation with the Institute of Islamic Understanding Malaysia (IKIM), Kuala Lumpur.
- Salina, D., Rohayati, C. D., Suzaida, B., Mohd Rizuan, A. K., & Noraina Mazuin, S. (2011). Implementation of MS1500: 2009: A Gap Analysis. *Communications of the IBIMA*, *2011*, 1–11. doi:10.5171/2011.360500
- Sekaran, U., & Bougie, R. (2013). *Research Method for Business*.
- UNDSD. (2001). *Environmental Management Accounting : Policies and Linkages*.
- YaakobChe Man, Jamil Bojei, AwisQurniSazili and Ahmad Nizam Abdullah, 2007. Halal Hub Opprotunities. *Proceeding in 4th Asian Livestock and Feed Industry Conference*. (Slide) 25 October 2007. Kuala Lumpur. http://www. livestockasia. com/ conference_paper/slide/yaakob.pdf .