Environmental Management Accounting Adoption Barriers Among Malaysian Hotel Companies

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Abstract

Environmental management has become a main concern to the hotel industry with regards to waste reduction, energy savings and water conservation. The hotel industry is frequently accompanied by many adverse environmental impacts as hotel companies extensively consume large amounts of energy, water and non-durable products. Environmental Management Accounting (EMA) is tools that can be used to assist these companies to trace, collect, and analyse physical and monetary environmental information for decision-making purpose and consequently, improves financial and environmental performances. However, there are barriers to EMA adoption. This study aims to examine level of EMA adoption among the hotel companies and the barriers influencing EMA adoption. This study utilises the quantitative research design; using questionnaire survey. A total of 212 usable questionnaires were collected from the hotel companies in Selangor and Kuala Lumpur. Multiple regression analysis was conducted for hypotheses testing. The results of this study show that EMA has yet to be extensively adopted among the hotel companies in Malaysia. The result also shows that the adoption level of both Physical EMA (PEMA) and Monetary EMA (MEMA) are still low. The result further indicates that the low adoption of EMA is caused by the lack of institutional pressures. Specifically, this study shows that financial barrier, informational barrier and institutional barrier significantly influence EMA adoption among the hotel companies in Malaysia. This study is significant to the hotel managers, government authorities and environmental regulatory agencies in understanding the level of EMA adoption in the Malaysian hotel industry. In addition, this study provides valuable contributions to the existing literature by providing useful insights on the barriers influencing EMA adoption in the hotel industry in developing countries.

Keywords: Environmental Management Accounting (EMA), physical EMA, monetary EMA, adoption barriers, hotel industry

1. Introduction

The role of management accounting has expanded from merely recording and reporting of financial information to environmental accounting (Hopwood, 2009). The failures of the conventional management accounting systems in providing environmental information such as the environmental impacts and its related costs have led to the introduction of EMA (Gale, 2006; Jasch, 2006). The United Nations Division for Sustainable Development (UNDSD) stated that EMA adoption is crucial for an organisation to apply a cleaner and more productive method, thus reducing pollutions such as carbon emissions and effective usage of physical resources such as energy and water (UNDSD, 2001).

According to Ditz, Ranganathan, Bank and Beloff (1995), the conventional accounting system is no longer inadequate as most environmental costs often known as overhead costs are invisible and cannot be identified. ACCA (2018) stated that many existing conventional accounting systems cannot adequately deal with the environmental costs. In addition, Chang (2007) also noted the lost opportunities in reducing environmental costs caused by inadequate conventional accounting system. EMA is said to be able to help companies in revealing actual costs related to their activities on the environmental impacts and to identify opportunities for cost reduction. According to Jalaludin, Sulaiman and Ahmad (2011), the EMA adoption provides the advantage in handling environmental impacts and costs as well as enhancing managerial decision-making and improves profitability.

Nevertheless, despite the importance and benefits of EMA, the adoption level of EMA is still low particularly in developing countries such as in Malaysia (Jamil, Mohamed, Muhammad & Ali, 2015). In Malaysia, studies on EMA have focused more on the manufacturing industry, leaving the hotel industry which is part of the service organisation largely unexplored. Even though the service industry has created a less negative environmental impacts compared to the manufacturing industry, Bennett, Hopkinson and James (2006) have argued that this industry also provides significant adverse impacts on the environment.

The green practice among the hotel companies has not received much attention from the researchers (Ki-Hoon Lee, 2009) despite the hype that EMA could assist companies to improve their environmental performance (Schaltegger & Burritt, 2000). Such lack of attention provides a significant gap in the management accounting literature on the environmental activities in the hotel industry. Thus, the main objective of this study is to examine the EMA adoption among the hotel companies in Malaysia. Specifically, this study examines:

1. The adoption level of EMA among the hotel companies in Malaysia.
2. The barriers of EMA adoption among the hotel companies in Malaysia.

2. Literature Review

2.1 Environmental Management Accounting (EMA)

Environmental management accounting is an extension of the conventional management accounting. Often, the conventional management accounting does not provide accurate information on the environmental management and environment-related cost management (Vasile & Man, 2012). Schaltegger and Burritt (2000) defined EMA as a system which enables an organisation to trace, collect, and analyse physical and monetary environmental information to support decision-making and performance management. Based on a study by Chang (2007), EMA is defined as the analysis of monetary (financial) and physical (non-financial) environment related costs in order to improve organisational financial and environmental performances. These definitions revealed that the development of EMA is set within the environmental management context.

According to Jamil et al. (2015), EMA can be categorised into two terms namely, Monetary Environmental Management Accounting (MEMA) and Physical Environmental Management Accounting (PEMA). Monetary environmental information relates to accounting for environmental costs and earnings that been expressed in monetary units such as material product costs, waste and emission control costs (IFAC, 2005; Burritt et al., 2002). Physical environmental information on the other hand, relates to the flow of natural resources that are expressed in physical unit such as the total amount of fresh water consumed and the total volume of wastes and energy consumed (IFAC, 2005; Burritt et al., 2002).

There are various EMA tools that allow well-organised decision-making as these tools focus on environmental costs and the allocation of these costs (Burritt, 2004; Deegan, 2003). In term of the benefits of adopting EMA, Agan, Acar and Borodin (2013) stated that EMA improves environmental performance as well as enhances organisational performance. Thus, this current study argues that EMA adoption provides benefits to an organisation not only in the financial aspects through reduction in energy costs and other resources, but also in enhancing reputation with the general public and other stakeholders.

2.2 EMA Adoption in Hotel Industry

Most of the studies on EMA have focused on the manufacturing industry due to its significant environmental impacts (Jalaludin et al., 2011; Lee, 2011; Koefoed, 2010; Setthasakko, 2010). In the manufacturing industry, the use and application of EMA has been extensively researched into and leaving inadequate attention on the impact of EMA adoption in the service industry. Despite the effectiveness of EMA, little has been known on the adoption level of EMA in the service industry (Kasim, 2009; Bouma & Van der Veen, 2002).

From the perspective of resource consumption, the hotel industry impacts the environment which needs to be managed (Erdogan & Baris, 2007). This is because the hotel industry consumes significant quantities of resources such as energy, water, and non-durable products due to its characteristics and services. This argument is supported by Siti Nabiha et al. (2010) that suggested excessive consumption of water, energy and non-durable goods either local or imported bring negative environmental impacts. According to Jankovic and Krivacic (2014), hotel companies have to develop and adopt EMA in order to provide environmental reporting since this reporting becomes an evidence for the hotel companies to show their environmental responsibility.

However, Nyide and Lekhanya (2016) found that EMA adoption is not consistent across the board and not all hotels in South Africa have installed such systems to reduce major environmental costs. There is a lack of understanding on

the factors influencing EMA adoption within the hotel companies. A review of the tourism literature has shown that the service sector has not focused on EMA-related research and case studies and the possible contributions that EMA can deliver to the hotel industry (Klassen, 2000). Of consequence, there is a lack of understanding on the EMA adoption within the hotel industry. In addition, there is a limited number of studies on green operation barriers among the hotel companies in Malaysia (Kamalulariffin, SitiNabiha & Wahid, 2013). Nevertheless, it is believed that additional research in the service sector on EMA adoption is necessitate to provide different insights into the potential uses and applications of EMA.

2.3 EMA Adoption Barriers

Empirical studies have suggested various barriers on the adoption of environmental initiatives in the hotel industry. Earlier studies such as by Creighton (1998) have identified several significant adoption barriers such as fundamental lack of interest and commitment among the stakeholders, long payback periods and lack of incentives and information on environmental issues. Sammalisto and Arvidsson (2005) also found that problems in collecting required environmental data constitute a barrier to adopt EMA. Furthermore, Qian, Burrit and Chen (2015) noted that normative barrier include lack of regular local government support, lack of assurance in regulatory power and lack of environmental awareness and skills among employees may influence EMA adoption.

A group of studies have identified the barriers towards EMA adoption. For example: the argument that environmental costs are not important was also found to be part of the financial barrier to EMA adoption (Chang, 2013). Nicolaides (2006) stated that resistance to change is a key obstacle to adopt environmental initiatives. On the other hand, Doody (2010) noted that the lack of EMA adoption is due to lack of knowledge and training, and also on the huge investment in time, money and resources that is required to comply with the standards and procedures related to EMA.

In addition, Karimi, Dastgir and Saleh (2017) stated that there are several internal and external barriers that influence EMA adoption such as resistance to change, lack of standards and methods for gathering and allocation of environmental costs, competitive environment and society culture in dealing with environmental issues. Chang (2007) also found five key barriers that influence EMA adoption namely, attitudinal barrier, financial barrier, informational barrier, institutional barrier and management barrier.

2.4 Institutional Theory

This study utilises the institutional theory to further identify the possible reasons for EMA adoption among the hotel companies. The institutional theory perspective is based on the social and economic theoretical observations (DiMaggio & Powell, 1983). This theory explains how the organisational structure and actions are formed by the institutional forces such as the government, the professional bodies and society that surround the organisations. Institutional theory suggests three forms of pressures namely, the coercive pressure, normative pressure and mimetic pressure.

According to the institutional theory, social pressure from other actors in the market such as the government and general public are essential in determining an organisation's plan to adopt or not to adopt environmentally friendly programs (Rivera, Oetzel, Deleon & Starik, 2009). EMA adoption is mainly directed and guided by the government. For example: In Japan, most companies provide information in their environmental reporting by complying with the guidelines issued by the Japanese government (Kokubu & Kurasaka, 2002). Thus, institutional theory seems to be the most suitable theory to clarify the factors influencing EMA adoption among the hotel companies in the Malaysia. The use of institutional theory is supported by other EMA researchers such as Jamil et al. (2015), Jalaludin et al. (2011) and Bouma and Van der Veen (2002).

3. Methodology

The research framework shows the relationship between the independent variables and the dependent variable. The research framework for this study depicts that five adoption barriers proposed by Jamil et al. (2015) may influence EMA adoption among the hotel companies. The independent variables are attitudinal barrier, financial barrier, informational barrier, institutional barrier and management barrier while the dependent variable is EMA adoption. Figure 1.1 shows the research framework for this study.
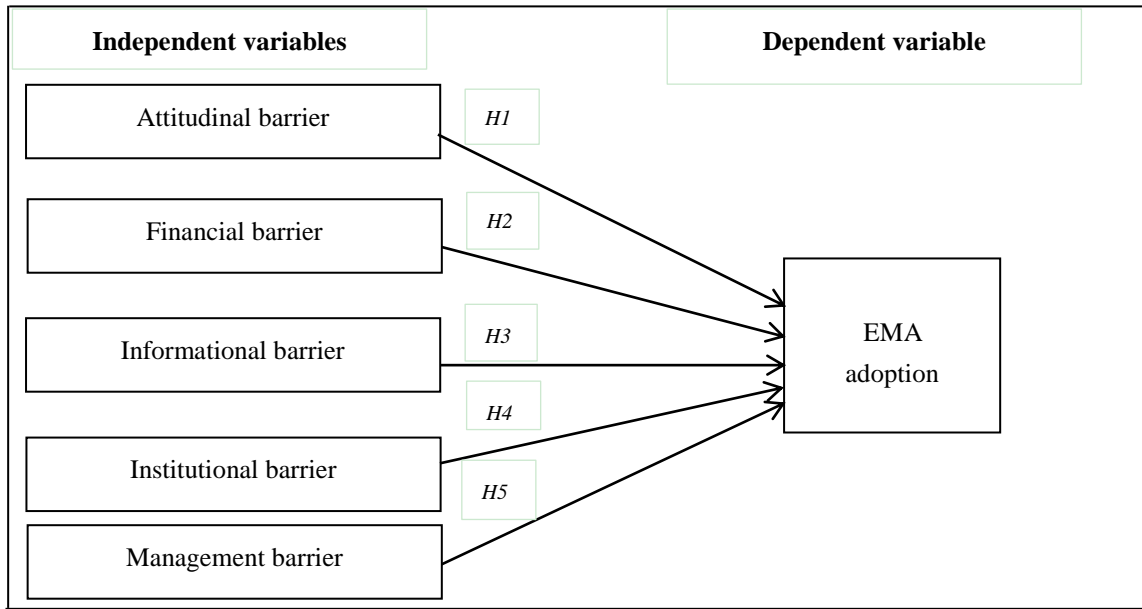
Figure 1. Research framework

This study utilises the adoption barriers proposed by Jamil et al. (2015). Subsequently, five research hypotheses were developed to examine the adoption barriers influencing EMA adoption among the hotel companies in Malaysia.

    H1:   *Attitudinal barrier influences EMA adoption among the hotel companies in Malaysia.*

    H2:   *Financial barrier influences EMA adoption among the hotel companies in Malaysia.*

    H3:   *Informational barrier influences EMA adoption among the hotel companies in Malaysia.*

    H4:   *Institutional barrier influences EMA adoption among the hotel companies in Malaysia.*

    H5:   *Management barrier influences EMA adoption among the hotel companies in Malaysia.*

4. Methodology

This study adopts the quantitative approach that used descriptive and research hypotheses testing in examining the EMA adoption among the hotel companies in Malaysia. The sample companies are selected mainly from the list of hotel companies registered with the Malaysian Association of Hotels (MAH). This study chooses the companies in the hotel industry located in Selangor and Kuala Lumpur as the sample study. According to the 2018 Malaysian Association of Hotels (MAH) list of companies, there are 257 hotel companies in Selangor and Kuala Lumpur registered as members which made out the total number for entire population for this study.

This study selects two respondents from each hotel company. The respondents comprise of the finance executives, accountants and hotel managers. However, there are other respondents such as the human resource managers that have also participated in this study. Out of 400 questionnaire surveys distributed, 212 completed questionnaires were returned, resulting in a response rate of 53%. Richardson (2005) stated that 50% response rate is regarded as an acceptable response rate in the social research questionnaire survey. The data in this study was recorded and analysed using the Statistical Package for the Social Sciences (SPSS) Version 23. This study uses descriptive analysis and regression analysis to analyze the data.

5. Data Analysis

5.1 Respondent's Profile

The finding shows that the majority of the respondents are from the hotel companies that have been operated in the range of between 6 to 10 years (44.8%) and 68.9% (see table 1) of the respondents are hotel companies of medium age since its establishment is in the range of between 5 to 20 years. The result also reveals that most of the respondent comes from the small and medium hotel companies due to the small number of employees. In terms of the type of ownership, these companies are owned by Malaysian residents and most of them do not have any EMS certificate (65.6%). The result also shows that 87.7% of the respondents stated that their hotel companies' current

practice do not have any budget for environmental related activities. It seems that the accounting for environmental costs has attracted little interest among the hotel companies as they tend to focus more on profit-making rather than adopting environmental management practices (Cotton, 2007).

Table 1. Demographic information of respondents (N=212)

	Variables	Frequency	Percentage (%)
Years of operation	5 years or less	66	31.1
	6 to 10 years	95	44.8
	11 to 15 years	35	16.5
	More than 15 years	16	7.5
Number of employees	10 and less	47	22.2
	11 – 20	77	36.3
	21 – 30	38	17.9
	31 – 40	22	10.4
	41 – 50	22	10.4
	More than 50	6	2.8
Ownership	100% local	212	100
EMS certificate	ISO 14001	29	13.7
	Planning to have	44	20.8
	None	139	65.6
Position	Finance Executive	100	47.2
	Accountant	61	28.8
	Hotel Manager	39	18.4
	Admin/ Human Resource Manager	12	5.7
Years of experience	Less than 1 year	9	4.2
	1 to 3 years	140	66
	4 to 6 years	48	22.6
	More than 6 years	15	7.1
Allocation of environmental cost	Yes	26	12.3
	No	186	87.7

5.2 Descriptive Statistics

Following Jamil et al. (2015), respondents were asked to measure on a scale of 1 (not at all) to 5 (to great extent) the extent of EMA adoption. The closest the mean score to 5 indicates that EMA is extensively adopted in the hotel companies. The ranking represents the mean scores for EMA in descending orders according to the most extensively adopted to the least adopted by the hotel companies. In Table 2, the finding shows that physical EMA (PEMA) has the highest mean (1.86) compared to monetary EMA (MEMA) (1.70). This result implies that most of the hotel companies tend to adopt PEMA practice than MEMA practice. This result is consistent with Jamil et al. (2015) that most SME manufacturing companies in Malaysia tend to practice PEMA as compared to MEMA.

Table 2. Overall mean for EMA adoption (N=212)

EMA Adoption	Overall Mean	Ranking
Physical EMA (PEMA)	2.23	1
Monetary EMA (MEMA)	1.65	3

Table 3 and Table 4 show the result of each item of MEMA and PEMA, where the highest four scores in MEMA are on the practice of environmental cost accounting (2.07); environmental lifecycle costing (1.77); relevant environmental costing (1.76) and environmental target costing (1.75). The highest scores in PEMA are on the lifecycle inventories (2.35); energy flow assessment (2.18); material flow assessment (2.14) and lifecycle analysis (2.04).

Table 3. Descriptive statistics of MEMA adoption (N=212)

	Mean	Std. Deviation	Ranking
Environmental cost accounting	2.07	0.59	1
Environmental lifecycle costing	1.77	0.60	2
Relevant environmental costing	1.76	0.55	3
Environmental target costing	1.75	0.58	4
Environmentally induced capital expenditure and revenue	1.73	0.56	5
Environmental lifecycle budgeting	1.68	0.61	6
Environmental long-term financial planning	1.66	0.67	7
Post assessment of relevant environmental costing decisions	1.65	0.63	8
Environmental lifecycle target pricing	1.64	0.59	9
Monetary environmental operational budgeting	1.63	0.62	10
Monetary environmental capital budgeting	1.58	0.59	11
Monetary environmental project investment appraisal	1.58	0.61	12
Post investment of individual environmental projects	1.55	0.61	13
OVERALL MEAN	**1.70**		

Table 4. Descriptive statistics of PEMA adoption (N=212)

	Mean	Std. Deviation	Ranking
Lifecycle inventories	2.35	0.72	1
Energy flow assessment	2.18	0.91	2
Material flow assessment	2.14	0.77	3
Lifecycle analysis	2.04	0.66	4
Relevant environmental impact	1.81	0.49	5
Post assessment of short-term environmental impact	1.75	0.56	6
Physical environmental investment appraisal	1.67	0.55	7
Physical environmental budgeting	1.65	0.55	8
Long term physical environmental planning	1.63	0.58	9
Environmental capital impact assessment	1.63	0.56	10
Post investment assessment of physical environmental investment	1.63	0.55	11
OVERALL MEAN	**1.86**		

Overall, the mean scores for both MEMA adoption and PEMA adoption show a low EMA adoption among the hotel companies. Even though some of the respondents have allocated some budget for environmental activities, the result suggests that the adoption of EMA is not at an encouraging level. This statement is strongly supported by the result that shows the mean scores for all EMA adoption are less than three, indicating low adoption level within the

organisation. Low adoption level of EMA can be explained as 87.7% respondents have stated that their hotel companies do not have any budget for environmental costs in demographic result.

5.3 EMA Adoption Barriers

Adapting from Chang (2007), respondents were asked to measure on a scale of 1 (strongly disagree) to 5 (strongly agree) on EMA adoption barriers among the hotel companies. Based on overall mean score, the EMA adoption in Malaysian hotel industry is mainly hindered by the financial barrier. This result is consistent with Jamil et al. (2015) that found the financial barrier as a factor that hinders EMA adoption among the Malaysian manufacturing SMEs. A recent research done by Olalekan and Jumoke (2017) also found that EMA adoption in South Africa is mainly hindered by financial barriers.

Table 5. Overall mean for adoption barriers (N=212)

Adoption Barriers	Overall Mean	Ranking
Financial Barrier	4.23	1
Informational Barrier	4.17	2
Institutional Barrier	4.03	3
Attitudinal Barrier	4.02	4
Management Barrier	3.44	5

Resource constraint with a mean score of 4.50 becomes the major barrier that hinders EMA adoption in the Malaysian hotel industry. Furthermore, Yusof and Jamaludin (2014) noted that the first barrier in EMA adoption is high implementation and maintenance costs, which is generally expensive. The result shows that the difficulties in collection and allocation of environmental costs (4.33) also lead to decision not to adopt EMA practices. This finding is consistent with Jamil et al. (2015), Setthasakko (2010) and Johnson (1993) that indicated the lack of guidance on EMA, lack of information framework leading to the difficulties in effectively collecting, identifying and evaluating environmental-related data, especially in pollution prevention, waste management decisions and performance evaluation deter EMA adoption among companies.

Table 6. EMA adoption barriers (N=212)

	Mean	Std. Deviation	Ranking
Attitudinal Barrier			
Resistance to change	4.14	0.71	1
Low priority of accounting for environmental costs	3.90	0.85	2
Financial Barrier			
Resource constraints	4.50	0.59	1
Efficiency or financial considerations	4.21	0.72	2
Environmental costs are not considered significant	3.99	0.73	3
Informational Barrier			
Difficulties in collecting or allocating environmental costs	4.33	0.55	1
Low physical environmental uncertainty	4.00	0.71	2
Institutional Barrier			
Lack of institutional pressure	4.25	0.57	1
Lack of shareholder power	3.93	0.65	2
Lack of stakeholder power	3.91	0.66	3
Management Barrier			
Few incentives provided to manage environmental costs	3.69	0.70	1
Lack of integrating the environment into strategic planning	3.50	0.69	2
Lack of advocacy from the hotel leadership	3.33	0.75	3
Lack of environmental responsibility & accountability	3.24	0.74	4

5.4 The Influence of Barriers on EMA Adoption

The results of the regression analysis in Table 7 show that the regression model is significant and R²is 0.15. This indicates that 15% of the variation in EMA adoption (dependent variable) can be described by the five independent variables which are attitudinal barrier, financial barrier, informational barrier, institutional barrier and management barrier. According to Pallant (2011), the largest beta value portrays the strongest unique contribution made by the independent variables to the dependent variable. The negative value of the beta explained the inverse relationship between the independent and dependent variable. The results from the multiple regression analysis show that financial barrier, informational barrier and institutional barrier have a significant influence towards low EMA adoption in Malaysian hotel industry.

Table 7. Regression Analysis Result

Variable	Beta	T – Value	Significant
Attitudinal Barrier	0.03	0.61	0.53
Financial Barrier	-0.29	-4.41	0.00**
Informational Barrier	0.14	1.92	0.05*
Institutional Barrier	-0.15	-2.18	0.03*
Management Barrier	-0.02	-0.55	0.57
R – Square		0.15	
Adjusted R – Square		0.13	

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

$\quad$ * Correlation is significant at the 0.05 level (2-tailed)

Based on Table 8, both research hypotheses, *H1* and *H5,* are not supported. Such results indicate that attitudinal barrier and management barrier do not significantly influence EMA adoption among the hotel companies in Malaysia. These results are consistent with Olalekan and Jumoke (2017) that found attitudinal barrier which can be in form of low priority of accounting for environmental costs and reluctance to change is not a significant barrier to the EMA adoption. This is because resistance to change can be mitigated by providing sufficient environmental awareness among the employees in the organisation. The findings of this study are also consistent with Jamil et al. (2015) and Yusof and Jamaludin (2014) that noted management barrier is the least factor to EMA adoption among the hotel companies in Malaysia. Incentives could be given in order to motivate the hotel managers or administrative divisions to manage and reduce environmental costs.

Table 8. Result of hypotheses testing

Hypotheses	Findings
H1: Attitudinal barrier influences EMA adoption among the hotel companies in Malaysia.	Not supported
H2: Financial barrier influences EMA adoption among the hotel companies in Malaysia.	Supported
H3: Informational barrier influences EMA adoption among the hotel companies in Malaysia.	Supported
H4: Institutional barrier influences EMA adoption among the hotel companies in Malaysia.	Supported
H5: Management barrier influences EMA adoption among the hotel companies in Malaysia.	Not supported

However, financial barrier, informational barrier and institutional barrier significantly influence EMA adoption among the hotel companies in Malaysia. Financial barrier influences EMA adoption among the hotel companies in Malaysia, thus supporting H2. Such finding is consistent with Salim and Padfield (2017), Olalekan and Jumoke

(2017), Jamil et al. (2015) and Yusof and Jamaludin (2014) that observed the adoption of EMA are hindered due to high implementation and maintenance cost. Many hotel companies are facing problem of resource constraint (Chan, 2008). Of consequence, huge funds are required to incorporate EMA into business processes and systems.

This study also shows informational barrier significantly influences EMA adoption among the hotel companies in Malaysia, thus supporting *H3*. This finding is consistent with Jamil et al. (2015), Setthasakko (2010), Erdogan and Baris (2007) and Johnson (1993) that found lack of guidance on environmental standard may hinder EMA adoption among the organisations. Thus, a company must often send its accounting staff for training with regards to environmental practices.

Furthermore, this study also shows that lack of government and legislative pressures led to the institutional barrier on EMA adoption among the hotel companies. Thus, *H4* is supported. This finding is consistent with Olalekan and Jumoke (2017), Qian et al. (2015), Jalaludin et al. (2011) and Zeng et al. (2003). Therefore, local government and environmental regulatory agencies may find this study useful as it can assists them in strengthening the regulations governing adoption of EMA. Besides that, the Malaysian government should strengthen the stringency of their environmental regulation and enforce hotels to participate in the adoption of EMA and charge penalties for environmental offenders.

5.5 Reasons for EMA Adoption

Further analysis on the possible adoption reasons was carried out in order to identify why the hotel companies have adopted EMA. Institutional theory suggests that, institutional preasures (consist of coercive, mimetic and normative pressure) will influence the organization to adopt new practice. In Table 9, the result shows that the coercive pressure has the highest mean (2.23), followed by the mimetic pressure (1.91) and normative pressure (1.65). Such result is consistent with Jamil et al. (2015) that found coercive pressure as the most influential pressure to influence EMA adoption.

Table 9. Overall mean for institutional pressures (N=212)

Institutional Pressures	Overall Mean	Ranking
Coercive Pressure	2.23	1
Mimetic Pressure	1.91	2
Normative Pressure	1.65	3

According to Jalaludin et al. (2011), the institutional theory suits well to explain the influence of institutional factors on EMA adoption. The results of the descriptive statistics for each of the pressure influencing EMA practices are reported in Table 10. The highest mean is for pollution incidents law (2.83) and company's customers (2.67). These two items are related to coercive pressure and the result shows that EMA has not been extensively adopted among the hotel companies in Malaysia are consistent with the view of institutional theory.

Table 10. Reasons for EMA adoption (N=212)

	Mean	Std. Deviation	Ranking
Coercive pressure			
Pollution incidents law	2.83	0.81	1
Company's customers	2.67	0.80	2
Newspaper and TV	2.65	0.65	3
Government pollutions standard	2.52	0.66	4
Government regulations	2.32	0.74	5
Environmental laws	2.31	0.92	6
Financial institutions	2.12	0.70	7
Local communities	2.05	0.61	8
Environmental groups	2.02	0.62	9

Company's head office	1.88	0.84	10
Company's labor union	1.73	0.67	11
Company's shareholders	1.73	0.66	12
Mimetic pressure			
Competitors	2.35	0.69	1
Other leaders in the industry	1.86	0.53	2
Other industrial organizations	1.78	0.56	3
Multinational organizations	1.63	0.54	4
Normative pressure			
Motivation from staff training	1.67	0.70	1
Membership of an accounting body	1.63	0.73	2

6. Discussion and Conclusion

This study implicates that majority of the hotel companies in Malaysia have low adoption of EMA. This is consistent with Jamil et al. (2015) that found that EMA adoption among SMEs manufacturing companies in Malaysia is low. Most of the companies in this study also do not have any budgets for environmental related activities. Furthermore, the reason of low level of EMA adoption among the companies could be explained by the lack of institutional pressures. Lack of pressures from shareholders, labour unions, head offices, environmental groups and regulatory body may hinder EMA adoption among the hotel companies in Malaysia. This study also shows informational barrier significantly influences EMA adoption among the hotel companies in Malaysia.

Even though the main research hypotheses on the adoption barriers which are attitudinal barrier and management barrier on EMA adoption cannot be accepted, the results show the possibility of these barriers on EMA adoption among the hotel companies. Both academics and practitioners of the management accounting can notice that these barriers may influence EMA adoption. These findings provide important value to them as this can facilitate them to make better decision with regard to EMA adoption. Effective and efficient internal communication from top management would be able to overcome resistance to change (Zvezdov, 2012), thus employees would accept formal environmental management system.

The hotel industry in Malaysia may also use the information that the level of EMA adoption which were still weak and not at an encouraging level. Therefore, the government should update and enforce environmental laws so that able to control hotel companies from causing any negative environmental impacts. The findings are consistent with previous studies that showed finance executives, accountants and hotel managers are encouraged to participate in training related to environmental activities. They also need to be updated with the latest development of EMA so that this tool could be applied in hotel industry. This study also suggests that respective bodies need to create awareness on the importance of environmental measurement through environmental education programs. These could help the hotel companies to improve their environmental responsibility in order to reduce the environmental impact due to excessive consumption of energy and natural resources. Thus, become a competitive advantage to the organisation.

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