The Impact of Firm factors on Management Accounting Practices in The Context of Large Manufacturing Firms in Thailand

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Abstract

This research aimed to explain the differences in the use of management accounting practices in large manufacturing firms with total assets, as of December 31, 2016, larger than 500 million baht. In particular, we focused on the contextual factors of the firm, such as the business structure, main business strategy, and the causes for different practices. It is the extension of the previous study (Terdpaopong, Visedsun, Nitirojntanad, & Sandhu, 2018) that explored the progress in management accounting practices and found the different progress levels in them. The 1,500 postal questionnaire surveys were sent to companies. The 205 of useable complete responses were returned or 13.67 % of response rate. The descriptive statistical analysis and analysis of variance were used to describe the different management accounting usage progress. The results showed that the business structure and main business strategy are the contextual factors of firms that resulting in the differences in the use of management accounting practices.

Keywords**:** *Management accounting practices, manufacturing firm, Thailand*

1. Introduction

After IFAC (1998) issued the IFAC's concept, which described the management evolution in four different stages (see Figure 1 below); Stage 1 – cost determination and financial control (pre-1950); Stage 2 – n information for management planning and control (by 1965); Stage 3 – reduction of resource waste in business processes (by 1985); Stage 4 – creation of value through effective resource use (by 1995), We have found great studies on the management accounting practices (MA practices hereafter) advancement, not only in other countries but also in Thailand, such as, activity-based accounting and management balance scores card, just in time, target costing, (Phadoongsitthi, 2003; Komaratat and Boonyanet, 2008; Chongruksut 2009; Yongvanich and Guthrie 2009; Shutibhinyo, 2011; Sumkaew and McLaren, 2012; Shoommuangpak, 2014; Wajeetongratana, 2016; Terdpaopong and Visedsun 2014). The results showed that new MA practices have been mostly used in listed manufactured companies. In the present day, the research on the differences in the use of MA are very limited. Under the current business environment and economic, there are many uncertain factors that can significantly influence the firm's chances of goals achievement. (Gul and Chai, 1994; Chenhall and Langfield-Smith, 1998; Kaplan and Norton, 2001). The managers must be very demanding in their management in order to anticipate the business environment and manage its uncertainties. Therefore, they are forced to decide on the management of an accounting system that is compatible with the situation to deal with competitiveness. To be able to generalize about the differences of using MA practices, we need more information regarding the stages of MA evolution and the firm's factors, such as business structure and business strategies to explain their impact on MA practices in company. In this research, we categories MA practices into 5 groups: a costing system; budgeting ; performance evaluation; information for decision making; strategic analysis, the same as Alleyne & Weekes-Marshall (2011), and classified each MA practice by the stages of MA evolution, to be used to compare differences of MA practices in the company .

The ability of executives to quickly change strategies in order to keep up with the needs of the market or customers that change rapidly is an indicator of business success and survival. These are depended on the internal organization's environment, such as business structure, business goals, and the role of managerial accountants other than external organization's environment (Ayadi and Affes, 2014).

They are called contingency factors that make MA practices different in each organization. This study has examined the impact of the nature and characteristics of organizations on management accounting practices.

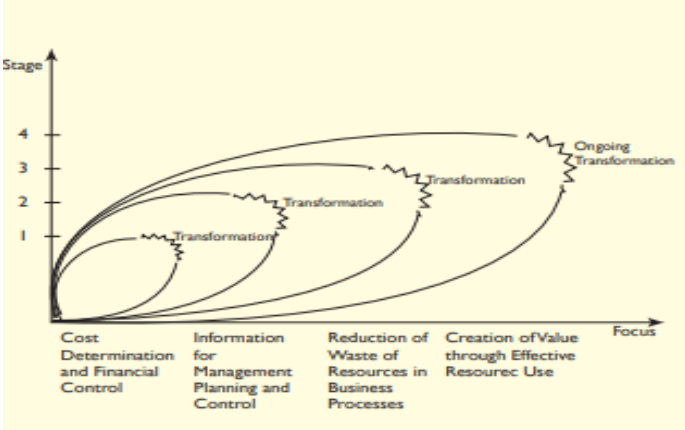

Figure 1 Evolution of management accounting
Note: From "Evolution of the focus of management accounting" by IFAC (1998)

2. Objectives

1. To investigate the management accounting practices in Thai large manufacturing firms.
2. To examine the impact of firm factors on management accounting practices in Thai large manufacturing firms.

3. Materials and Methods

3.1 The research conceptual framework

The advancement of MA practices usage in the company was up to the external environment and the contextual factors of the company. Ayadi and Affes (2014) found the contextual factors such as the firm size, organizational structure, and strategy of cost domination, impact on the new MA practices. They argued the variables "organizational structure" and "generic strategy of cost domination" have only little influence on "the use of new management accounting practices," meanwhile other studies showed the strategic priorities need to be supported by an appropriate control and accounting management systems (Chenhall and Langfield-Smith, 1998; Jermias and Gani, 2004). In addition, there is a summary of other findings that were consistent with the impact of factors on differences in use of MA practices, such as Cadez and Guilding (2008) found the strategic management accounting usage was positively associated with firm size. And Kamilah (2012) concluded that the Malaysian SMEs make more use of MA practices when their firms face environmental complexity either internally or externally or when the owner/manager is committed to their use. So the research conceptual framework is as follow.

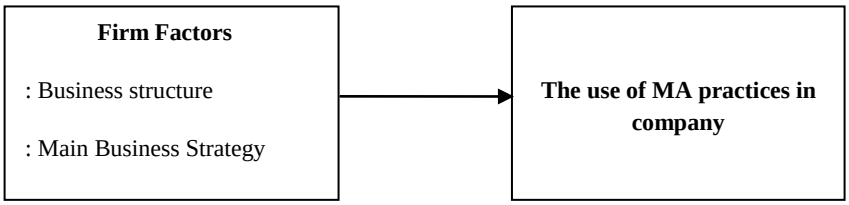

Figure 2 The research conceptual framework

3.2 Target population and Samples

We used the large manufacturing companies with total assets as of December 31, 2016, larger than 500 million baht from the Business Data Warehouse, Department of Business Development, Ministry of Commerce to be our population group, from 15 provinces in the manufacturing sector located in Ayutthaya, Ang Thong, Bangkok, Chachoengsao, Kanchanaburi, Nakhon Nayok, Nakhon Pathom, Pathumthani, Ratchaburi, Rayong, Saraburi, Samut Prakan, Samut Songkhram, and Suphan Buri provinces. There were 2,848 companies in total and by using a quota sampling, we have 1,500 companies selected as our sample group.

3.3 Data collection

The questionnaire used in collecting data, was modified from the questionnaires that are widely used in prior management accounting studies (for example, Alleyne & Weekes-Marshall, 2011; Ahmad & Leftesi, 2014; Ayadi and Affes, 2014) in order to meet the purpose of this research. A total of 1,500 of postal questionnaires were sent to the executive of the company in the sample group, 205 of them were mailed back and usable. (13.67 % response rate).

3.4 The research hypothesis

With the contingency theory, many studies stated that the differences in the use of MA practices were the results from the business's environment (Gul and Chia, 1994; Moores and Chenhall, 1991; Kamilah, 2012; Ayadi and Affes, 2014; Zainun, Mat, & Smith, 2014). However, our research focused on the internal business's environment. Particularly, these factors are business structure and business strategy. To what the literature review has shown, brings us to form the hypothesis: *The use of MA practices is different between companies with different business structures, Business strategy, and business goals*.

3.5 Research methodology

All companies in the sample group were separated into the subsample group based on the category of business structure and main business strategy in order to compare the difference in the MA usage. For the business structure, they were either the parent company which have subsidiaries in the country (1), or in the foreign country (2), the subsidiary company which is under controlled by parent company in the country (3), or the foreign country (4), venture capital or joint venture (5), and others (6). For the business strategy, they were either cost leadership strategy (1), differentiation strategy (2), and focus strategy (3). Lastly, we used the IFAC's concept of MA evolution to classify MA practices into each stage.

Table 1 The number of companies in each subsample groups

Business structure						Business strategy		
P with ST (1)	**P with SF (2)**	**S with PT (3)**	**S with PF (4)**	**VC/JV (5)**	**Other (6)**	**Cost leadership (1)**	**Differentiation (2)**	**Focus (3)**
51	13	48	62	17	14	132	76	97
24.9%	6.3%	23.4%	30.2%	8.3%	6.8%	64.4%	37.1%	47.3%

3.6 Data analysis

The inference statistics: Analysis of variance were used to test the difference in the use of MA practices in companies among subsample groups, at 95% of the confidence interval.

4. Results and Discussion

The classification of MA practices in each evolution stage was the year that each concept of MA practices has been established and became adopted. In addition, they can be classified as a set of MA practices according to the purpose of use (Alleyne and Weekes-Marshall, 2011). As shown in Table 2, the use of MA practices in each group of company, which was separated by the business structure and business strategy, was different. In particular, we found the low adoption of MA practices in stages 3.

Table 2 Summary of the number of the company that used MA practices

Evolution Stage	Management Accounting practices	Business structure Group						Business strategy Group		
		1	2	3	4	5	6	1	2	3
Stage1 1760-1950	Job-process or Job-order Techniques	29	9	34	23	4	4	60	44	54
	Product cost: variable cost, incremental costs & fixed costs	33	11	23	44	13	10	99	62	55
	Use of plant- wide overhead rate or Department or multiple plant-wide overhead rates)	28	9	15	39	10	10	79	54	51
	Standard costing and cost variance analysis	33	9	20	37	10	8	89	54	49
	Budgeting for product cost controlling	39	11	44	50	14	8	112	63	78
	Budgeting for cash flow planning	34	11	43	54	12	10	109	61	78
	Performa Financial Statement	27	8	35	41	14	8	87	55	67
	Flexible budget	23	6	11	26	4	4	49	39	34
	Financial measurements	30	11	41	39	12	9	92	57	72
	Profitability analysis	39	12	43	53	9	9	109	65	81
Stage2 1950-1965	Sensitivity analysis of cost	23	6	9	25	6	2	55	36	35
	Break Even Point Analysis	37	12	21	44	11	9	99	43	57
	Stock control models	33	8	12	33	6	9	78	45	37
	Evaluation of capital investments based on payback period and/or accounting rate of return	33	11	39	34	11	8	91	54	66
	Sensitivity analysis of cost model	25	6	11	27	7	4	63	36	35
	Incremental analysis	27	9	17	30	8	5	76	44	40
	Profit analysis of product	38	9	22	53	12	9	106	67	59
	Transfer Prices Technique	18	4	7	20	6	0	45	29	28
	Long-range forecasting	24	8	34	35	9	7	74	40	64
Stage3 1965-1985	Activity based costing	18	6	10	22	8	6	56	34	36
	Quality cost analysis	24	7	8	26	8	6	61	31	36
	Learning curve technique	12	4	6	11	3	4	31	18	20
	Activity- based budgeting	23	5	9	28	7	6	59	34	36
	Zero-based budgeting	14	3	7	14	3	2	31	20	19
	Residual income	24	7	17	31	6	8	68	42	40
	Economic value added	19	6	10	26	5	4	56	28	33
	Evaluation of major capital investment based on discounted cash flow method	33	8	21	47	13	8	99	58	53
	Product life cycle analysis	24	6	9	22	7	2	55	36	32
	Just in time	33	7	13	40	10	6	87	47	41

Table 2 Summary of the number of company that used MA practices (Cont.)

Evolution Stage	Management Accounting practices	Business structure Group						Business strategy Group		
		1	2	3	4	5	6	1	2	3
Stage4 1985-2000	Balanced scorecard	22	4	12	23	4	7	57	32	30
	Non-financial measurements related to customers – customer satisfaction	28	11	20	35	9	10	86	54	46
	Non-financial measurements related to operation and innovation such as patent, certificates, awards	22	6	34	27	8	8	64	39	56
	Non- financial measurements related to employees such as employee satisfaction, staff – turnover	19	9	15	28	9	5	65	39	37
	Benchmarking	27	9	14	33	10	6	78	48	40
	Customer profitability analysis	24	6	9	29	7	4	61	38	36
	Value chain analysis	18	4	6	17	6	1	43	27	26
	Shareholder value analysis	20	5	30	20	6	3	48	29	52
	Industry analysis	28	8	15	30	9	2	68	44	41
	Analysis of competitive position	32	9	20	29	9	3	78	53	48
	The possibilities of integration with suppliers and/or customers value chains	19	6	8	16	3	1	42	28	23
	Analysis of competitors strengths and weaknesses	32	10	19	31	6	6	77	53	46
	Activity based management	23	5	10	20	6	4	56	33	29
	Total quality management	33	10	20	40	13	7	89	58	56
	Target Costing Management	37	9	22	38	13	7	98	53	52
	Lean Management	40	13	20	46	13	6	104	60	58

From the previous research about the advancement of MA practices in Thailand of Terdpaopong et al. (2018), they found the empirical results that showed that the large Thai manufacturing still uses traditional MA which falls into stage 1-stage 2 for their cost determination and financial control, while some used it for management planning and control. There were 60% of companies that used MA practices which falls in stage 3 (for example: discounted cash flows, JIT, and quality cost analysis) and stage 4 using Lean, Target costing and Total quality management.

The difference in using such MA practices may be a result of different business environment factors, which our research focused on the internal environment factors. Table 3 and 4 showed the results of different testing that came from different business structure

Table 3 The difference of the use of MA practices in companies which have difference business structure

		Sum of Squares	df	Mean Square	F	Sig.
MA stage 1	Between Groups	28.277	5	5.655	1.013	.411
	Within Groups	1110.680	199	5.581		
	Total	1138.956	204			
MA stage 2	Between Groups	126.094	5	25.219	2.374	.040
	Within Groups	2113.984	199	10.623		
	Total	2240.078	204			
MA stage 3	Between Groups	134.339	5	26.868	3.742	.003
	Within Groups	1428.949	199	7.181		
	Total	1563.288	204			
MA stage 4	Between Groups	295.626	5	59.125	2.625	.025
	Within Groups	4459.369	198	22.522		
	Total	4754.995	203			

Table 4 The result of comparison of differences between groups in pairs

Dependent Variable	(I) business structure	(J) business structure	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
MA stage 2	S with PT (3)	P with SF(2)	-2.492*	1.019	.015	-4.50	-.48
		P with ST(1)	-1.822*	.655	.006	-3.11	-.53
		S with PF(4)	-1.597*	.627	.012	-2.83	-.36
MA stage 3	S with PT (3)	P with SF(2)	-2.063*	.838	.015	-3.71	-.41
		P with ST(1)	-1.984*	.539	.000	-3.05	-.92
		S with PF(4)	-1.869*	.515	.000	-2.88	-.85
		JV JC(5)	-1.827*	.756	.017	-3.32	-.34
MA stage 4	S with PT (3)	P with SF(2)	-3.830*	1.484	.011	-6.76	-.90
		P with ST(1)	-2.772*	.959	.004	-4.66	-.88

MA practices which fall in stage 2-4 were different uses significantly. The result of the comparison of the difference between groups in pairs using the Post Hoc method (Table 2) showed that the use of MA practices in stages 2 through stage 4 are different between the subsidiary companies that have parent companies in the country and in abroad and the parent companies that have subsidiaries located in the country and in abroad.

We compared the differences of using the MA practices between companies with different main business strategies by classifying companies into used strategy and non-used strategy group. The results show in Table 5. The use of MA practices in stages 2 through 4 of companies between cost leadership strategies group and non-cost leadership strategies group were significantly different. For the differentiation strategy, the result showed that the use of MA practices in stages 1 through 4 of the company between differentiation strategy group and non-differentiation strategy group were significantly different. For the focus strategy, the result showed a significant difference in the use of MA practices between the focus strategy group and non-focus strategy group only in stage 4.

Table 5 The difference of the use of MA practices in company with different main strategy

		Levene's Test of variance		t-test for Equality of Means						
Cost leadership strategy		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
MA stage 1	Equal variances assumed	.56	.46	-1.77	203.00	.08	-.61	.34	-1.28	.07
	Equal variances not assumed			-1.75	144.35	.08	-.61	.34	-1.29	.08
MA stage 2	Equal variances assumed	.32	.57	-5.03	203.00	.00	-2.29	.46	-3.20	-1.40
	Equal variances not assumed			-5.10	154.37	.00	-2.29	.45	-3.20	-1.40
MA stage 3	Equal variances assumed	3.36	.07	-5.16	203.00	.00	-1.97	.38	-2.72	-1.21
	Equal variances not assumed			-5.33	163.04	.00	-1.965	.37	-2.69	-1.24
MA stage 4	Equal variances assumed	.00	.97	-4.90	202.00	.00	-3.29	.67	-4.61	-1.96
	Equal variances not assumed			-4.97	154.82	.00	-3.29	.66	-4.59	-1.98
Differentiation strategy										
MA stage 1	Equal variances assumed	1.10	.30	-3.66	203.00	.00	-1.22	.33	-1.87	-.56
	Equal variances not assumed			-3.76	170.65	.00	-1.22	.32	-1.85	-.58
MA stage 2	Equal variances assumed	2.05	.15	-3.41	203.00	.00	-1.59	.47	-2.52	-.67
	Equal variances not assumed			-3.52	172.37	.00	-1.59	.45	-2.49	-.70
MA stage 3	Equal variances assumed	.15	.70	-2.68	203	.00	-1.06	.39	-1.84	-.28
	Equal variances not assumed			-2.70	160.65	.00	-1.06	.39	-1.83	-.28
MA stage 4	Equal variances assumed	.89	.35	-4.07	202.00	.00	-2.75	.68	-4.08	-1.42
	Equal variances not assumed			-4.12	164.19	.00	-2.75	.67	-4.06	-1.43

Table 5 The difference of the use of MA practices in company with different main strategy (Cont.)

Cost leadership strategy		Levene's Test of variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Focus strategy										
MA stage 1	Equal variances assumed	.93	.30	-0.35	203	.72	12.00	.33	-0.77	0.54
	Equal variances not assumed			-0.35	202.38	.72	12.00	.33	-0.77	0.53
MA stage 2	Equal variances assumed	1.11	.29	1.30	203.00	.19	.60	.46	-0.31	1.52
	Equal variances not assumed			1.29	196.04	.20	.60	.47	-0.31	1.52
MA stage 3	Equal variances assumed	6.02	.02	1.01	203.00	.31	.39	.39	-0.37	1.16
	Equal variances not assumed			1.00	188.84	.32	.39	.39	-0.38	1.16
MA stage 4	Equal variances assumed	.89	.35	-4.07	202.00	.00	-2.75	.68	-4.08	-1.42
	Equal variances not assumed			-4.12	164.19	.00	-2.75	.67	-4.06	-1.43

From the results, it is possible to say that the uses of MA practices in Thai large manufacturing firm are different, based on the context of the business structure and the main business strategy of the company. The results have also confirmed us that they are in agreement with the previous results done by many researchers such as Wallace (1990), Yazdifar, Askarany, and Askary (2008), James (2012), Ayadi and Affes (2014), Šiška (2016). These researchers said that the contingency factors, which came from the business environment and the contextual inside of organization such as related company, have an impact on the use of MA practices in the company.

5. Conclusion

In the context of Thai large manufacturing companies, the business structure and the main business strategy are the impact factors to the different practicalities of accounting management which may be different from other countries. By nature of the production base for foreign industries, causing many companies in the manufacturing sector were mostly a group of business. The use of MA practices varies depending on the business structure that means to group or separate company, and main business strategy, as we mentioned above. This finding can enhance the MA practices understanding and extending the knowledge gained from previous studies.

6. Acknowledgements

This research can be done completely with financial support from Rangsit Research Institute, Rangsit University and the respondent from all companies which provided us with the information. We would like to thank all of them with my pleasure.

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