

The Factors Affecting Financial Effectiveness of Managerial Accounting Information of Small and Medium Enterprises of Para Rubber Industry in Thailand

Sukrita Pumkaew

School of Accountancy, Sripatum University, Thailand

E-mail: sukrita.r@yru.ac.th

Monvika Phadoongsitthi

Faculty of Commerce & Accountancy, Thammasat University, Thailand

E-mail: monvika.tu@gmail.com

Somboon Saraphat

Faculty of Management Sciences, Kasetsart University, Thailand

E-mail: somboonsaraphat@gmail.com

Titaporn Sincharoonsak

School of Accountancy, Sripatum University, Thailand

E-mail: titaporn.si@spu.ac.th

Montree Chuaychoo

School of Accountancy, Sripatum University, Thailand

E-mail: 2525@hotmail.com

Pravas Penvutikul

School of Accountancy, Sripatum University, Thailand

E-mail: pravasxyz248@gmail.com

Abstract

The purpose of this research was to study, develop, and investigate the concordance of the factor models affecting the financial effectiveness of managerial accounting information and empirical evidence. The mailing questionnaires method was used for collecting data between March and August 2017. The response rate was 388 questionnaires (50.72%). The analytical technique was the Structural Equation Model (SEM). The research result revealed that the Model was in accordance with the empirical evidence considered by the value of $\chi^2 = 363.10$, $df = 236$, $\chi^2/df = 1.54$, $P = 0.00$, $RMSEA = 0.037$, $GFI = 0.93$, $AGFI = 0.91$, $CFI = 0.98$, $RMR = 0.02$, and $SRMR = 0.024$. Moreover, the financial effectiveness was directly affected by the Perceived Environmental Uncertainty on Accounting, Managerial Accounting Information, and Job-Relevant Information. Furthermore, the financial effectiveness was indirectly affected by Ethics of Management Accountants, Accountant's Budget Participation, Perceived Environmental Uncertainty of Accounting, Job-Relevant Information, Accountant's Internal Confidence, and Accountant's Participation in Decision Making through Managerial Accounting Information

Keywords: Managerial Accounting Information, Financial Effectiveness, Small and Medium Enterprises, Para Rubber Industry

Introduction

According to the uncertainties of economy, politics, society, and technology, it causes the business organizations to be affected by the problem of global economy because of deflation and depressed state of commodities (The World Bank, 2016), therefore managers of organizations have to seek for strategies to increase competitive potentials and conform to government policies today, which is, "Thailand 4.0" to become the Smart Enterprises with high potentials (Maesincee, 2016). The Institute of Management Accounting mentioned as follows:

"Management accounting is a process of collecting and preparing past information to be analyzed for future prediction. The information is and is not in the form of money. It can be measured the evaluation and reported to the managers correctly and credibly. The information is beneficial for planning, controlling, evaluating the organization, and decision making. This will give the utmost benefits for using the organizational resources." (IMA, 1981 cited in Ahid & Augustine, 2012: 43)

In 1986, Chennall & Morris determined the concept about Management Accounting System into 4 dimensions. According to the saying of Bouwens & Abernethy (2000: 224), obviously, in each dimension, there was similar or overlapped information. Hence, the researcher emphasized only the dimension of timeline, a method which was able to give the information as requested quickly (Hammad, Jusoh, & Ghazali, 2012). Later, there were researchers tried to apply and adjust the management accounting more contemporarily to catch up with the changing situations today (Abdel-Kader & Luther, 2008; Cadez & Guilding, 2011): 1) Costing System, this was about a calculation, measurement, including a report of resources used for a specific purpose in order to acquire benefits in the form of assets or services (Noreen, Brewer, & Garrison, 2011: 36), 2) Budgeting, this was a financial plan which indicated the being of representatives to implement necessary resources to the activities and to be in accordance with the financial goals of each potential time of the organization (Abdel-Kader & Luther, 2008; Hansen, Otley, & Van der Stede, 2003), 3) Performance Evaluation, this was the evaluation of report of the business unit or performance measurement (Abdel-Kader & Luther, 2008; Chalermkanchana, 2014), 4) Information for decision-making, this was information collected by the managerial accountants. The information was about the past contributions and potential estimations in order for supporting the managers' decision making (Noreen, Brewer, & Garrison, 2011), and 5) Strategic Analysis, this was a work plan or a method for being the guidelines to the performances of organizations in order to reach competitive advantages in the market (Simons, 1987).

Therefore, regarding the utilization of managerial accounting information mentioned above, it affected the plan and decision making of the managers which led to the financial effectiveness (Gurendrawati, Murdayanti, & Putri, 2014; Cheng, 2012; Din & Habibullah, 2015; Ramdhani, 2014; Al-Mawali, 2013). This was a kind of the financial performance measurement indicated as an organizational strategies, performance, and participatory action of the performance in order to achieve profits (Kaplan & Norton, 2001). This measurement could be categorized into 1) Financial Ratio, this was a view of shareholders who realized the ability of making profits of the organization, and 2) Growth, this indicated the growth of the business such as, profits from selling or growth rate of sales volume, etc. (Allinson et al., 2015; Sirisuwat & Jindabot, 2012).

Contingency Theory, this was a management depending on authentic conditions for choosing the ways to solve the managerial problems. It is regarded as no any methods considered as the best for organizations but the situation happening at that time would determine that which strategy the managers should use for solving the problem appropriately and make the utmost benefits to the organization (Fiedler, 1966).

Concerning such theories, researchers from several areas studied the factors affecting the managerial accounting information which led to the effectiveness of organizational management. In Asia, it was found that the managers participated in budgets organizing, environmental change perceiving, and internal confidence to be concordant with the proactive management of performance evaluation, and decision making process with the roles of using beneficial managerial accounting information to the organization (Indriani, 2015; Moghaddam et al., 2014; Ramdhani, 2014; Al-Mawali, 2013; Sohrabi, Talebnia, & Nikjoo, 2014; Islam, Talukder, & Hu, 2011; Gurendrawati, 2014). In addition, in East Asia, the result was concordant that the managers participated in budget organizing and used correct and complete Job-Relevant Information (JRI) as the tools to support the use of Managerial Accounting Information which directly affect the management effectiveness really well (Cheng, 2012; Chung, 2009). In Europe, it was found that the organizations adjusted themselves according to the present situations in order to use the Managerial Accounting Information for more effective control. In Slovenia, the study was done on accounting executives in huge organizations, the result found that management accounting should be linked with the organizational strategies by letting the accounting executives participate in decision making to increase better performance results (Gerdin, 2005; Cadez, & Guilding, 2011).

This is in accordance with the study in Australia done on the production industries' executives. The study indicated that the management under high uncertainties of situations, the executives with internal confidence using the Managerial Accounting Information would achieve the effectiveness of management better than the executives with external confidence. Regarding the Social Learning Theory, Rotter (1966) added that "external" was about the persons who believed that their fortune would be controlled by luck or opportunity while "internal" was about the persons who believed in their self-confidence more than the fortune. In Egypt, it was found that the more the executives perceived the changing environments such as economic or political aspect, the more they could link with the perceived Managerial Accounting Information effectively, and it would affect higher effectiveness of management (Elnaby, Epps, & Said, 2003; Hammad, Jusoh, & Oon, 2010). Also, Stahl (2013) found that ethics related to relevant information in various matters. Ladda Hirunyava (2017) indicated that under the standard of the accounting profession, an accountant had to be knowledgeable of proposing correct, relevant, and up-to-date information, as well as useful for making decision full of professional ethics.

For rubber industry which is essential for an economic system of Thailand, it is regarded as a major mechanism of income reinforcement and employment. This can be considered from the production areas in 2013 in an amount of 4,170 tons, and in 2014 in an amount of 4,324 tons (increasing 3.69%). However, the rubber industry had to encounter various problems; for example, the export was in the form of minimal processing or price stability (Ministry of Industry, 2011). The problems can be considered from the export value in the first quarter of 2014 which was equal to 81 billion baht, and during the same time of 2015 equal to 54 billion baht, decreasing from the previous time at 33.33% (Customs Department, 2015).

Hence, according to the mentioned industrial problems, the researcher is interested to study the factors affecting the using of managerial accounting information to achieve the financial effectiveness of the rubber industry in order to be the guidelines for planning, promoting, and increasing the strategies of organization management to reach more potentials, as well as to catch up with the current change regarded as a relatively young academic field. Furthermore, there is no any Thai researcher appeared to be interested in this issue. Moreover, it is in accordance with the research of Cadez & Guilding (2011) in terms of the complete education of variables under the Contingency Theory. Also, it is the research in the form of Configuration Approach which rather few researchers have studied so far. Thus, it can be

considered that this research is really worthy to the academic field and beneficial to the further professions to increase the competitive potentials of the rubber industry and other industries further.

Research Objectives

The objectives of this research are (1) to study the factors affecting the financial effectiveness of managerial accounting information, (2) to develop the Causal Relationship Model of the factors affecting the financial effectiveness of managerial accounting information, and (3) to investigate the concordance between the Causal Relationship Model of the factors affecting the financial effectiveness by the developed managerial accounting information and empirical evidence.

Research Methodology

This research was carried out by using Quantitative Research type. The details are as follows: **The population and sample group**; the population included accounting and financial executives of the small and medium enterprises for rubber industries in Thailand registered to the Office of Small and Medium Enterprises Promotion in an amount of 2,306 persons (Office of Small and Medium Enterprises Promotion (SME), 2016). The sample group was determined by the method of Faul et al. (2007 cited in Suksawang, 2013: 16). The program used is G*Power3, and the minimum sample size was equal to 765 persons.

The research tool was questionnaires. The researcher used the theoretical concept to develop the variable measurement as follows: 1) Ethics of Management Accountants (EMA) developed by the concept of IMA (2008), 2) Accountant's Budget Participation (ABP) developed by Eker (2008) and Silpaporn Srianpatch (2012) according to the concept of Milani (1975), 3) Job-Relevant Information (JRI) developed by Kren (1992), 4) Accountant's Confidence (AC) developed by Srinivasan & Tikoo (1992) according to the Rotter's theory (1966), 5) Perceived Environmental Uncertainty on Accounting (PEUA) developed by Gordon & Narayanan (1984) according to the concept of Miles et al. (1978), 6) Accountant's participation in decision making (APD) developed by Wooldridge & Floyd's (1990), 7) Managerial Accounting Information (MAI) developed by the concept of Abdel-Kader (2008) and Chanhall & Morris (1986), and 8) financial effectiveness (FE) developed by the concept of Kaplan & Norton (1996). The 5 level of rating scale is used, which include, 5 = strongly agree, 4 = agree, 3 = not sure, 2 = disagree, and 1 = strongly disagree. This excepted the variable of Managerial Accounting Information, which is, 5 = benefits strongly perceived, 4 = benefits perceived, 3 = not sure, 2 = benefits non-perceived, and 1 = benefits strongly non-perceived. The content validity (Index of Item-Objective Congruence: IOC) was investigated by 5 experts, between 0.6-1.0 then tried out with the group nearly the same as the sample group for 30 questionnaires. The reliability was analyzed by Cronbach's Alpha Coefficient for all questionnaires equal to 0.98. The composite reliability (CR) was between 0.73-0.96, the average variance extracted (AVE) was between 0.58-0.89 (Hair et al., 2010)

The data collection it was carried out by 1,000 mailed questionnaires at the end of March 2017 (the first delivery), followed by post cards, and June 2017 (the second delivery) and cooperated with the networks of each area to collect the additional data of 400 questionnaires, and waited for the back response, 2 months approximately. The response was back for 435 questionnaires (20.1%), after that 388 questionnaires which were available were examined. The amount was considered as acceptable for the sample group in general, which was 10:1 (Hair et al., 2010: 102), and the response rate of back response was 18.47%.

The data analysis For the basic investigation of information, the variable had the Mean between 3.38-4.50, most of them were at a high level, the Standard Deviation was between 0.59-0.92, scattered nearly the average not more than 1, the Skewness was between -1.14--0.31 (between -3-3), and Kurtosis was between 0.09-2.6, which was between -10-10. This indicates that there was the nearly normal distribution (Kline, 2011). Furthermore, the Pearson's Product-Moment Correlation Coefficient was used for analyzing the variables between 0.10-0.84 at the statistical significance of 0.01, the value of KMO = 0.92, and Bartlett's Test of Sphericity had the significance of $p=0.000$, together with investigating the Multicollinearity by 2 statistical values, which were, Tolerance between 0.21-0.69, which indicated that every observable variable was valued more than 0.1, and Variance Inflation Factor (VIF) between 1.45-4.70, not more than 10, which indicated that such variables did not cause the problem of Multicollinearity (Hair et al., 2010), and the Structural Equation Model was used by LISREL 9.30 program using the analytical technique of Secondary Confirmatory Factor Analysis. The result found that all 8 measurement models were in accordance with the empirical evidence which could be analyzed and investigated the concordance of Causal Relationship Model by Path Analysis in a form of Latent Variables. The details will be shown in the next topic.

Research Results

According to the development of Relationship Model of factors affecting the financial effectiveness of managerial accounting information of the small and medium enterprises for rubber industrial group in Thailand, it was found that the Model had the relationship in accordance with the empirical data at the moderate level. It could be considered from the Index Value of $X^2 = 363.10$, $df = 236$, $X^2/df = 1.54$, $RMSEA = 0.037$, $SRMR = 0.024$, $CFI = 0.98$, $GFI = 0.93$, $AGFI = 0.91$. The details were shown in the Figure 1 as follows:

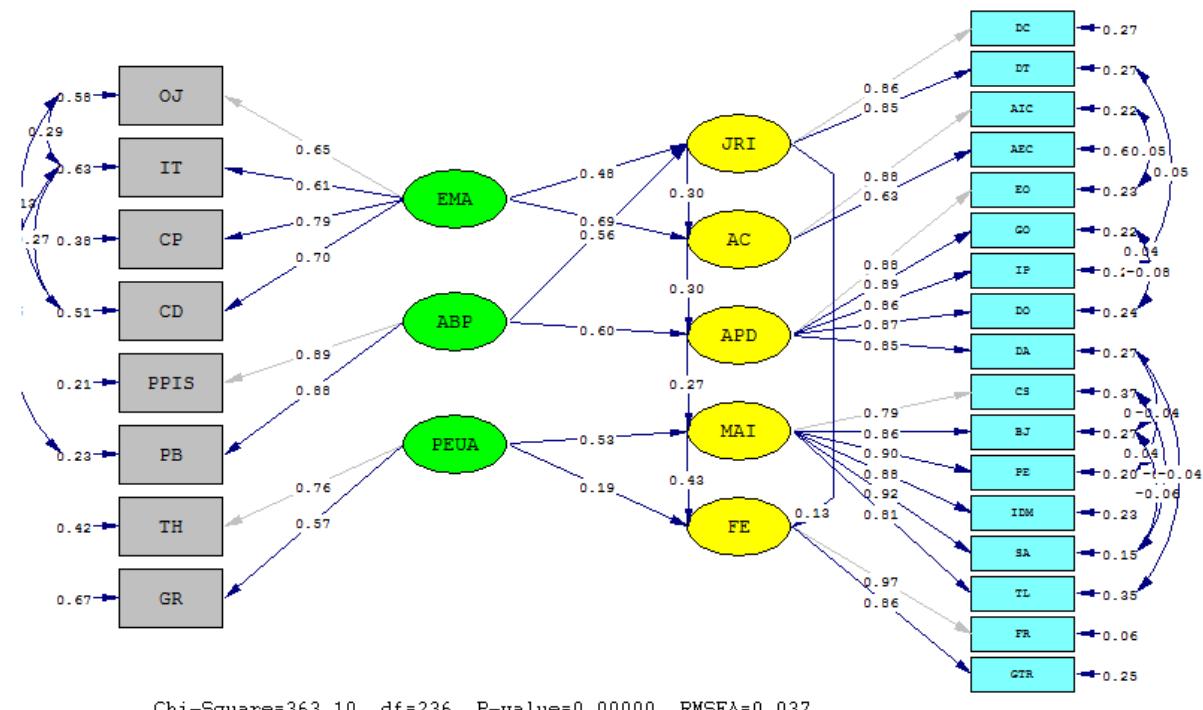


Figure 1 Analysis results of Structural Equation Modeling of factors affecting the financial effectiveness of managerial accounting information of the small and medium enterprises of the rubber industry in Thailand

Furthermore, there were the analysis results of effects of the variables in the Causal Model of the factors affecting the financial effectiveness of managerial accounting information of the small and medium enterprises of the rubber industry in Thailand which were found that when considering the validity of the observable variables, it was found that the observable variables had the validity between 0.33-0.79. The variable which had the highest validity was Planning Participation and Interaction to Supervisor in the budget (PPIS) and Generating Options (GO), the validity was equal to 0.79 equally. Secondly, the Accountant's Internal Confidence (AIC), the validity was equal to 0.78. And the variable which had the lowest validity was Government Regulation (GR). In terms of Prediction Coefficient (R^2) of the structural equation of endogenous latent variables, it revealed that the value was equal to 0.34, which indicated that the variable in the Model could describe the variance of financial effectiveness for 34%.

Regarding the direct and indirect influence affecting the variables of financial effectiveness (FE), it suggested that such variables got direct influences from the Perceived Environmental Uncertainty on Accounting (PEUA), Managerial Accounting Information (MAI), and Job-Relevant Information (JRI), by having the influence size equal to 0.19, 0.43, and 0.13, respectively. This was the effect with statistical significance at 0.01 and 0.05, respectively. Furthermore, the financial effectiveness (FE) was indirectly influenced by the Ethics of Management Accountants (EMA), Accountant's Budget Participation (ABP), Perceived Environmental Uncertainty of Accounting (PEUA), Job-Relevant Information (JRI), Accountant's Confidence (AC), and Accountant's Participation in Decision Making (APD) through Managerial Accounting Information (MAI), the effect size was equal to 0.09, 0.15, 0.23, 0.01, 0.04, and 0.12, respectively. These were the effects with statistical significance at 0.01.

Moreover, other variables affecting directly and indirectly included Job-Relevant Information (JRI) which was directly affected by the Ethics of Management Accountants (EMA), and Accountant's Budget Participation (ABP), which the effect size was equal to 0.48 and 0.56, respectively. This was the effect with statistical significance at 0.01 level. The Accountant's Confidence (AC) was directly affected by the Ethics of Management Accountants (EMA) and Managerial Accounting Information (JRI), with the effect size equal to 0.70 and 0.30, respectively. These were the effects which had the statistical significance at 0.01. The variable of Accountant's Participation in Decision Making (APD) was directly affected by the Accountant's Budget Participation (ABP) and Accountant's Confidence (AC) with the effect size equal to 0.60 and 0.30, respectively. The effect had the statistical significance at 0.01.

In addition, the variable of Managerial Accounting Information (MAI) was directly affected by the Perceived Environmental Uncertainty on Accounting (PEUA) and Accountant's Participation in Decision Making (APD), with the effect size equal to 0.53 and 0.27, with the effect of statistical significance was at 0.01.

Moreover, the Accountant's Confidence (AC) was indirectly affected by the Ethics of Management Accountants (EMA) and the Accountant's Budget Participation (ABP) through the Job-Relevant Information (JRI), with the effect size equal to 0.14 and 0.17, respectively, with the effect of statistical significance was at 0.01.

In terms of Accountant's Participation in Decision Making (APD), it was indirectly affected by the Ethics of Management Accountants (EMA), Accountant's Budget Participation (ABP), Job-Relevant Information (JRI) through the Accountant's Confidence (AC), with the effect size equal to 0.25, 0.05, and 0.09, respectively. This was the effect having the statistical significance at 0.01. This included the Managerial Accounting Information (MAI) which was indirectly affected by the Ethics of Management Accountants (EMA) and Accountant's Budget Participation (ABP), Job-Relevant Information (JRI), and Accountant's Internal

Confidence (AIC) through the Accountant's Participation in Decision Making (APD) with having the effect size equal to 0.07, 0.18, 0.02, and 0.08, respectively. This was the effect with the statistical significance at 0.01 level.

When considering the correlation matrix between latent variables, it was found that the correlation coefficient between the latent variables had a value between 0.37-0.90. Every pair of variables moved in the same direction, which is, positive relationship. The variables which had the correlation coefficient the most, which was, the correlation coefficient was equal to 0.90 included the variable of Ethics of Management Accountants (EMA) and Accountant's Confidence (AC). The details could be shown as the Table 1 below:

Table 1 Statistics value of the analysis results of the influence on the variables in Casual Model the factors affecting the financial effectiveness of managerial accounting information

Independent Variable	EMA			ABP			PEUA			JRI			AC			APD			MAI		
Output Variable	TE	IE	DE	TE	IE	DE	TE	IE	DE												
JRI	0.48** (0.09)	0.48** (0.09)	0.56** (0.04)			0.56** (0.04)															
AC	0.84** (0.11)	0.14** (0.05)	0.70** (0.12)	0.17** (0.03)	0.17** (0.03)					0.30** (0.06)	0.30** (0.06)										
APD	0.25** (0.07)	0.25** (0.07)	0.65** (0.04)	0.05** (0.01)	0.60** (0.04)					0.09** (0.03)	0.09** (0.03)	0.30** (0.05)	0.30** (0.05)								
MAI	0.07** (0.03)	0.07** (0.03)	0.18** (0.03)	0.18** (0.03)		0.53** (0.08)	0.53** (0.08)	0.02** (0.01)	0.02** (0.01)	0.08** (0.02)	0.08** (0.02)	0.27** (0.06)	0.27** (0.06)								
FE	0.09** (0.07)	0.09** (0.07)	0.15** (0.05)	0.15** (0.05)	0.42** (0.11)	0.23** (0.06)	0.19** (0.12)	0.14* (0.08)	0.01** (0.01)	0.13* (0.08)	0.04** (0.02)	0.04** (0.02)	0.12** (0.04)	0.12** (0.04)	0.43** (0.09)	0.43** (0.09)					
Statistical Value																					
$\chi^2 = 363.10$ df = 236 P = 0.00 GFI = 0.93 AGFI = 0.91 RMR = 0.02																					
Variable	OJ	IT	CP	CD	PPIS	PB	TH	GR													
Validity	0.42	0.37	0.62	0.49	0.79	0.77	0.58	0.33													
Variable	DC	DT	AIC	AEC	EO	GO	IP	DO	DA												
Validity	0.74	0.73	0.78	0.40	0.77	0.79	0.74	0.76	0.73												
Variable	CS	BJ	PE	IDM	SA	TL	FR	GTR													
Variable	0.63	0.73	0.80	0.77	0.85	0.65	0.94	0.75													
Correlation matrix between the variables																					
Latent Variable	JRI	AC	APD	MAI	FE	EMA	ABP	PEUA													
JRI	1.00																				
AC	0.77	1.00																			
APD	0.67	0.58	1.00																		
MAI	0.50	0.49	0.54	1.00																	
FE	0.46	0.43	0.42	0.63	1.00																
EMA	0.69	0.90	0.49	0.47	0.42	1.00															
ABP	0.73	0.47	0.74	0.48	0.41	0.37	1.00														
PEUA	0.61	0.62	0.51	0.67	0.56	0.64	0.53	1.00													

Remarks: *p<0.05 **p<0.01, TE= Total Effect, IE= Indirect Effect, DE= Direct Effect

Symbols of variables: EMA = Ethical of Management Accountants (CP=Competence, CD=Confidentiality, IT=Integrity, OJ=Objectivity), ABP= Accountant's Budget Participation (PPIS=planning participation and interaction to supervisor in budget, PB= participation in budget), JRI= Job-relevant information(DC= data clear, DT= data enough), AC= Accountant's confidence(AIC= Accountant's internal confidence, AEC= Accountant's external confidence), PEUA= Perceived environmental uncertainty of accounting(TH=Technology, GR= Government regulation), APD= Accountant's participation in decision making(IP=identifying problems, GO= generating options, EO= evaluating options, DO= developing options, DA= decisions and actions), MAI= Managerial Accounting Information(CS= Cost system, BJ= Budgeting, PE= Performance evaluation, IDM= Information for decision-making, SA= Strategic analysis, TL= Timeline), FE= Financial effectiveness(FR= financial ratios, GR= growth) Statistics Symbols: χ^2 = Chi-Square , df = degree of freedom, χ^2/df = Relative degree of freedom, RMSEA = Root Mean Square Error of Approximation, GFI = Goodness of Fit Index, AGFI = Adjusted Goodness-of-Fit Index, CFI = Comparative Fit Index and RMR = Standardized RMR

Discussion and Conclusion

According to the study of factors affecting the financial effectiveness of managerial accounting information of the small and medium enterprises of rubber industry in Thailand, the researcher would like to present the discussion according to the studied variables as follows:

The variable of financial effectiveness (FE) was directly affected by the Perceived Environmental Uncertainty on Accounting (PEUA). This indicated that when the small and medium enterprises of rubber industry perceived the environmental uncertainty of accounting and adjust strategies to catch up on the accounting changes, including various aspects, it would make the financial effectiveness of the organization better. This is in accordance with the study results of Ramdhani (2014). Moreover, it included the direct affect by the Managerial Accounting Information (MAI). Due to the organization management which had to use precise and credible information to support the planning and decision making concisely and utmost benefits to the organization. This is in accordance with the study results of Hammad, Jusoh & Ghazali (2010), Moghaddam, Behdadfar & Jalalifar (2014), Gurendrawati, Murdayanti & Putri (2014), Cheng (2012), Din & Habibullah (2015), Al-Mawali (2013), Sohrabi, Talebnia & Nikjoo (2014), Ramdhani (2014), Indriani (2015), and Cadez & Guilding (2011).

Moreover, it included the direct affect from the Job-Relevant Information (JRI). According to the decision making for strengthening the small and medium enterprises of rubber industry, the accounting and financial executives had to depend on other relevant information, such as marketing analysis, rivals, suppliers, etc., in order to place the strategies of organizational management to get the utmost benefits towards such decision making. This is in accordance with the research results of Eker (2008), Chung (2009).

In addition, this was indirectly affected by the Ethics of Management Accountants (EMA). It can be said that when the accountants of small and medium enterprises of rubber industry operated under the base of ethics, it would affect excellent performances. This is in accordance with the research result of Astuty (2015), Dararat Sukkaew, Wasukarn Ngamchom, and Thitimon Tanakituea-angkoon (2014). Furthermore, it was indirectly affected by the Accountant's Budget Participation (ABP). It can be said that for making the Managerial Accounting Information be in accordance with the requirement of the executives, the accountants had to participate in determining the budgets of the organization in order to acknowledge or mutually analyze, determine, and evaluate the budgets use of the organization whether they met the set goals, together with perceiving the causes of using or determining the budgets which were not meet the goals in order to be the base of data analysis, as well as recommending the executives to perceive those facts. This is in accordance with the research result of Indriani (2015), Eker (2008), Din & Habibullah (2015), Cheng (2012) which were indirectly affected by the Perceived Environmental Uncertainty on Accounting (PEUA). At the same time, for readiness preparation, of the Managerial Accounting Information, the accountants had to be knowledgeable, such as laws of new tax, in order to make the proposed data towards executives be completed and up-to-date since it affected the industry to be able to determine compact strategies further. This is in accordance with the research results of Ramdhani (2014), Chenhall & Morris (1986) which were indirectly affected by the Job-Relevant Information (JRI) because the accountants of the small and medium enterprises of rubber industry had to depend on the relevant information to support the data preparation to be complete, such as the sales information of the Sales Department, etc. This is in accordance with the study results of Eker (2008) and Chung (2009) which were indirectly affected by the Accountant's Confidence (AC). This is in accordance with the study results of Gurendrawati, Murdayanti & Putri (2014) and were indirectly affected by the Accountant's Participation in Decision Making (APD), in

accordance with the study results of Cadez & Guilding (2008), when the accountants had an internal confidence, it would affect the participation in decision making to be effective, for example, the accountants proposed the correct and reliable Managerial Accounting Information to the staff of industrial executives, they could answer the questions in each relevant issues with that information clearly. For the performance, it had to depend on the internal confidence of the accountants which would enhance and support the Managerial Accounting Information to be more reliable and make the participation of decision making be able to support the executive staff to make a plan and decision more concisely. This is in accordance with the statements about the primary objects of the managerial accounting, which included (1) giving information, and (2) participating in the management process and giving the information which had to be used for managerial accounting to select and give every level of management the (a) necessary information for planning, evaluating, and controlling the performance, (b) protection of organization' properties, and (c) communication with the interested external persons of the organization, such as the shareholders, etc., and supervision organizations participated in the managing process which had to use the managerial accounting at the appropriate level which would affect the participation of management to be more effective (CIMA, 2008).

Hence, it can be concluded that the factors model affecting the financial effectiveness of Managerial Accounting Information of small and medium enterprises of rubber industry in Thailand was in accordance with the empirical data, therefore the managers or entrepreneurs of rubber industry or other industries should emphasize the various factors under the contingency theory which would be ready to lead to the drive of industry to be able to compete both at a national level and international lever sustainably further.

Regarding the limits of this research, from data collection by mailed questionnaires which caused the response back to be unable to reach the criteria as determined by Aaker, Kumar & Day (2001), which was 20% as minimum rate, hence for the further data collection, the researchers should add the follow-up process, such as by telephone or by increasing mailed postcards, in order to reach the criteria of such response back rate.

For further research, it should take this Model to study with other industrial groups both in and out of the Stock Exchange, as well as to add the study of factors affecting the financial effectiveness of Managerial Accounting Information, such as the strategic factors or organizational policies, characteristic factors of managers, etc., and to add the study of indicators in terms of financial effectiveness, such as current ratio, Cash Flow Ratio towards the total debt, etc., to increase the dimension of knowledge base.

Acknowledgments

I would like to thank you the National Research Council of Thailand, the supporter of Graduate Research Scholarships Fiscal Year 2017.

References

Aaker, D., Kumar, V., & Day, G. 2001. **Marketing Research**. New York: John Wiley and Sons.

Abdel-Kader, M. & Luther, R. 2008. "The Impact of Firm Characteristics on Management Accounting Practices: A UK-Based Empirical Analysis." **British Accounting Review**: 1-39.

Ahid, M. & Augustine, A. 2012. "The Roles and Responsibilities of Management Accountants in the Era of Globalization." **Global Journal of Management and Business Research** 12 (15): 42-53.

Allinson, G., Braford, P., Houston, M., & Stone, I. 2015. **Understanding Growth in Small Businesses.** Retrieved from www.gov.uk/government/uploads/system/uploads/attachment_data/file/407846/bis-15-154-Understanding-growth-small-businesses.pdf.

Al-Mawali, H. 2013. "Performance Consequences of Management Accounting System Information Usage in Jordan." **BEH-Business and Economic Horizons** 9 (1): 22-31.

Astuty, W. 2015. "An Analysis of the Effects on Application of Management Accounting Information Systems and Quality Management Accounting Information." **Information Management and Business Review** 7 (3): 80-92.

Bouwens, J. & Abernethy, M. A. 2000. "The consequences of customization on management accounting system design." **Accounting, Organizations and Society** 25 (3): 221-241.

Cadez, S. & Guilding, C. 2008. "An Exploratory Investigation of an Integrated Contingency Model of Strategic Management Accounting." **Accounting, Organizations and Society** 33: 836-863.

Cadez, S. & Guilding, C. 2011. "Strategy, Strategic Management Accounting and Performance: A Configurational Analysis." **Industrial Management & Data Systems** 112 (3): 484-501.

Chalermkanchana, K. 2014. **Managerial Accounting.** 5th ed. Bangkok: V Print.

Chenhall, R. & Morris, D. 1986. "The Impact of Structure, Environment, and Interdependence on the Perceived Usefulness of Management Accounting System." **The Accounting Review** 61 (1): 16-35.

Cheng, M. 2012. "The Joint Effect of Budgetary Participation and Broad-Scope Management Accounting Systems on Management Performance." **Asian Review of Accounting** 20 (3): 184-197.

Chung, S. 2009. "The Impact of Strategy Type on the Relationships among Broad Scope Management Accounting System, Job Information Perceptions, and Managerial Performance." **Chiao Da Management Review** 29 (2): 47-82.

Sukkaew, D., Ngamchom, W., & Tanakitieuangkoon, T. 2014. **The Relationship Between Professional Ethics of Accountants and Business Performance of SMEs in Nakhonpathom Province.** Bangkok: Rajamangala University of Technology Rattanakosin.

Din, B. & Habibullah, M. 2015. "The Adoption of Performance Measures and Management Accounting System in Enhancing Managerial Performance in Malaysian Local Government." **Malaysian Journal of Society and Space** 11 (13): 24-35.

Eker, M. 2008. "The Effect of the Relationship Between Budget Participation and Job-Relevant Information on Managerial Performance." **Ege Academic Review** 8 (1): 183-198.

Elnaby, H., Epps, R., & Said, A. 2003. "The Impact of Environmental Factors on Accounting Development: An Egyptian Longitudinal Study." **Critical Perspectives on Accounting** 14 (3): 273-292.

Fiedler, F. 1966. "The Effect of Leadership and Cultural Heterogeneity on Group Performance: A Test of the Contingency Model". **Journal of Experimental Social Psychology** 2 (3): 237-264.

Gerdin, J. 2005. "Management Accounting System Design in Manufacturing Departments: An Empirical Investigation Using a Multiple Contingencies Approach." **Accounting, Organizations and Society** 30: 99-126.

Gordon, L. & Narayanan, V. 1984. "Management Accounting Systems, Perceived Environmental Uncertainty and Organization Structure: An Empirical Investigation." **Accounting Organizations Society** 9 (1): 33-47.

Gurendrawati, E., Murdayanti, Y., & Putri, A. 2014. "The Impact of Information Technology, Management Accounting System Characteristics, and Locus of Control to the Managerial Performance in the Telecommunication Service Companies." **Integrative Business Economic** 3 (3): 357-366.

Hair, J., Anderson, R., Tatham, R., & Black, W. 2010. **Multivariate Data Analysis**. Minnesota: Hall International.

Hammad, S. A., Jusoh, R. & Ghazali, I. 2012. "Decentralization, perceived environmental uncertainty, managerial performance and management accounting system information in Egyptian hospitals". **International Journal of Accounting**, 21(4): 314-330.

Hammad, S, Jusoh, R., & Oon, E. 2010. "Management Accounting System For Hospitals: A Research Framework." **Industrial Management & Data Systems** 110 (5): 762-784.

Hansen, S., Otley, D., & Van der Stede, W. 2003. "Practice Developments in Budgeting: An Overview and Research Perspective". **Journal of Management Accounting Research** 15: 95-116.

Hirunyava, L. 2017. "Standards of Accountants in Response to Demand from Business Sector under Framework of ASEAN Standards." **Research and Development Journal Suan Sunandha Rajabhat University** 9: 63-73.

Indriani, M. 2015. "Interaction effect of Budgetary Participation and Management Accounting System on Managerial Performance: Evidence from Indonesia." **Global Journal of Business Research** 9 (1): 1-13.

Islam, J., Talukder, M., & Hu, H. 2011. "The Impact of Technology, Job Complexity and Religious Orientation on Managerial Performance." **Australasian Accounting, Business and Finance Journal** 5 (4): 19-42.

Kaplan, R. & Norton, D. 1996. "Using the Balanced Scorecard as a Strategic Management System." **Harvard Business Review** 74 (1): 1-13.

Kaplan, R. & Norton, D. 2001. "Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I". **American Accounting Association**, 15 (1): 87-104.

Kline, R. 2011. **Principles and Practice of Structural Equation Modeling**. 3rd ed. New York: The Guilford Press.

Kren, L. 1992. "Budgetary Participation and Managerial Performance: The Impact Of Information and Environmental Volatility." **The Accounting Review** 67 (3): 511-526.

Milani, K. 1975. "The Relationship of Participation in Budget-Setting to Industrial Supervisor Performance and Attitudes: A Field Study." **The Accounting Review** 50: 274-284.

Miles, R., Snow, C., Meyer, A., & Coleman, H. 1978. "Organizational Strategy, Structure, and Process." **The Academy of Management Review** 3 (3): 546-562.

Moghaddam, A., Behdadfar, R., & Jalalifar, S. 2014. "The Impact of Culture on the Relationship Between Management Accounting Systems and Managerial Performance." **Report and Opinion** 6 (1): 13-17.

Noreen, E., Brewer, P., & Garrison, R. 2011. **Managerial Accounting for Manager**. New York: McGraw-Hill.

Ramdhani, D. 2014. "Contextual Factors, Management Accounting System of Design and Managerial Performance in Banten Province, Indonesia." **Jurnal Ekonomi** 23 (1): 63-93.

Rotter, J. 1966. "Generalized Expectancies for Internal versus External Control of Reinforcement." **Psychological Monographs: General and Applied** 80 (1): 1-28.

Simons, R. 1987. "Accounting Control Systems and Business Strategy: An Empirical Analysis." **Accounting Organizations and Society** 12 (4): 357-374.

Sirisuwat, P. & Jindabot, T. 2012. "The Rubber Export Industry in Thailand An Analysis of Export Performance." **PSAKU International Journal of Interdisciplinary Research** 1 (1): 195-202

Sohrabi, H., Talebnia, G., & Nikjoo M. 2014. "The Effectiveness of Management Accounting System on Management Performance." **DAMA International** 3 (3): 613-620.

Srijanpatch, S. 2012. "Measurement of Managerial Accounting Research." **Journal of Accounting Profession Thammasat University** 8 (23): 76-90.

Stahl, B. 2013. "Virtual Suicide and Other Ethical Issues of Emerging Information Technologies." **Future** 50: 35-43.

Srinivasan, N. & Tikoo, S. 1992. "Effect of Locus of Control on Information Search Behavior." **NA-Advances in Consumer Research** 19: 498-504.

Suksawang, P. 2013. **Structural Equation Modeling.** Bangkok: Watana Panich.

Wooldridge, B. & Floyd, S. 1990. "The Strategy Process, Middle Management Involvement, and Organizational Performance." **Strategic Management Journal** 11: 231-241.