

Mapping the results of management accounting research in Indonesia

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ABSTRACT

During this time, the publication of the management accounting research is still left behind that of financial accounting. Moreover, there is no description of the previous literature about the causes and effects of management accounting practices in Indonesia. This study aims to describe the accounting management practices in Indonesia by mapping the results of empirical research to answer the questions in each study on what is being observed, what is the direction, what is the type of relationship, and to what level the analysis is. The data collection method used is by mapping the theories which are consistent with the empirical study on management accounting. There are 31 articles which are taken from the accredited national journals and can be tracked online from 2005 to 2017. This study shows that the result of management accounting research consists of four maps. These four maps cover the causes and effects of individual level budgeting; causes and effects of subunit and organizational level budgeting; information for planning and control; performance measures and incentives. The maps with absolutely no research result are: the map of management accounting changes, contract and control: micro processes, individual judgments and decisions, management accounting in historical and social context, organizational change and relation of financial and operational reality. Based on the result, it can be concluded that accounting management research in Indonesia is only restricted on certain topics, especially in the topic of information for planning and control.

Introduction

This study aims to describe the management accounting practices in Indonesia by mapping empirical research results in the field of management accounting in Indonesia. In particular, this article describes what will be researched, what the direction and shape of the explanatory link proposed, and what the level of analysis in each paper. The method used is a guideline from Luft and Shields (2003) which is a guideline in developing a mapping of causes and effects of management accounting practices. This method was chosen because it suitable with the specific purpose of this study, namely developing a mapping of the causes and effects of management accounting practices.

This method is different from the other literature study method in management accounting field, among others examining the phenomenon of management accounting from various perspectives (Baiman, 1982; Covaleski, Dirsmith, & Samuel, 1996; Hopwood, 1978), the others based on topics, research methods and scientific disciplines (Hesford et al., 2006). Hopefully, this paper will contribute to provide an overview of causes and effects between variables carried out by management accounting researchers in Indonesia. Furthermore, the results can be used as a reference for the future research to fill in the blanks or answer the inconsistency of causal relationships of various variables.

The development of empirical research on management accounting practices is not as rapid as financial accounting research. Rayburn (2005) expressed concern over the increasing domination of financial accounting research topics in academic journals. In Indonesia, the dominance of financial accounting research can also be seen from the distribution of articles received in accounting accredited national journals. Some examples of literature studies from the results of accounting research in Indonesian national accredited journals, including study by Suprianto and Setiawan (2017) who describe the development of earnings management research in Indonesia with the sample of 67 articles (years 1999-2016). Herawati and Bandi (2017) reviewed the development of taxation research in accounting in Indonesia, with a sample of 83 taxation articles for 20 years (1997-2016). Fitriana, Dewi,

and Setiawan (2018) analyzed dividend policy with a sample of 35 articles over 16 years (2002-2017). Dewi, Fitriana, and Setiawan (2018) examined company information disclosure in Indonesia with a sample of 66 articles in 14 years (2004-2017).

From the sample size of the of financial accounting research articles above, compared to this study, namely 32 articles for 12 years (2005-2017), it can be concluded that the publication of management accounting research is far behind financial accounting. So far there has been no description of the literature about the causal relationship of management accounting practices in Indonesia. Therefore, motivation of this study is to know the description of the causal relationship of management accounting practices in Indonesia specifically to answer questions about what topics are being studied, what is the direction and the shape of the relationship between the variables studied, and what is the level of analysis. To answer this question, we conduct mapping the result of studies published in accredited national journals specialized in management accounting in Indonesia.

In some studies, management accounting is bundling with behavioral accounting. The latest issues in management accounting such as activity-based management, customer orientation, total quality management, ABC systems and balanced scorecard also enrich the results of management accounting research. Because the variety of results of management accounting research in Indonesia is limited, articles are mapped only in four groups, namely 1) the causes and effects of individual level budgeting; 2) cause and effect of subunit and organizational level budgeting; 3) information for planning and control; 4) performance measures and incentives

Hopefully this study will be beneficial for providing maps of the causes and effects of management accounting practices in Indonesia. Furthermore, from the mapping, it can be seen the extent of the development of management accounting research in Indonesia. Therefore, it can be one of the references in exploring the topics, which need further research in different fields. Furthermore, this paper will be divided into four parts. First, the introduction includes the objectives of writing, contributions, methods and results. The second part will explain the method. Next, it will describe the mapping and explanation of the management accounting research variables. The last part of the conclusion, clarifying the research conclusions and suggestions for researchers regarding the topics of management accounting that still need further research.

Research Method

This study analyzes the development of the results of empirical research on management accounting in Indonesia. It based on the visual representation of the mapping of management accounting practices that provides evidence consistent with the theory of causes and effects of management accounting practices. The method used is guidelines from Luft and Shields (2003) to capture natural connections, avoid artificial connections, and develop maps of the causes and effects of management accounting practices. This map provide answers to questions of each study in term on what has been examined, what are the direction and shape of the explanatory link, and what is the level of analysis. Compared with other methods (e.g. Baiman, 1982, Covaleski et al., 1996; Hopwood, 1978; Hesford et al., 2006), only the method of Luft and Shields (2003) which is a method for mapping causes and effects between variables. Luft and Shields (2003) provide 17 guidelines in answering these questions to evaluate and design research in developing a complete and valid map from empirical research that is consistent with the theory of management accounting practices. Various results of the research were mapped in accordance with the provisions of the mapping area, which included selection of the empirical research results and grouping of research results into maps.

Criteria for the results of research or articles to be selected are as follows: 1) Articles are empirical research published in accredited national journals and can be tracked online. The chosen period is from 2005 onwards. The selection of the period is based on the fact that starting in 2005, the article can be accessed online. The articles are expected to provide examples of evidence that is consistent with the theory and representation of management accounting practices. 2) The article provides evidence of management accounting practices in the management of organizations where the article is the result of research that is not capital market, taxation, and not including in the public sector. 3) The article explains the causes and/ or effects of variations in management accounting practices; 4) Articles provide consistent evidence with theories submitted in them. The Consistency of evidence with the theory can be indicated by testing hypotheses specified ex ante for quantitative evidence or showing ex ante and/ or ex post the explanatory value of specific theory for qualitative evidence. Sources of evidence include archive data (both quantitative and qualitative), field studies, laboratory research, field-based surveys and mail surveys.

The articles of management accounting research chosen from national accredited journals that can be traced online comprising 31 articles from 14 nationally accredited journals in Indonesia, namely: *Jurnal Akuntansi dan Auditing Indonesia (JAAI)*, *Jurnal Akuntansi dan Keuangan Indonesia (JAKI)*, *Jurnal Ekuitas*, *Jurnal Ventura*, *Jurnal Akuntansi Multiparadigma (JAMAL)*, *Jurnal Siasat Bisnis*, *Jurnal Akuntansi dan Keuangan (JAK)*, *Jurnal Mix*, *Jurnal Aplikasi Manajemen*, *Jurnal Manajemen dan Bisnis*, *Jurnal Akuntansi dan Manajemen (JAM)*, *Jurnal Manajemen dan Bisnis*, *Journal of Indonesian Economy and Business*.

After the process of article selection, the next step is constructing the map in two steps, which are constructing graphic representations of each study that met the criteria described above and grouping these graphic representations into maps. After making a graph of the representation of each research result that meets the criteria described above, then grouping the graph into a map. As describe above, there is three questions about each study: First, what is being studies or which set of variables included. Second, what are the direction and shape of the explanatory links proposed – that is, what is the causal model? Third, where does variation in the variable of interest occur- that is what is the level of analysis (e.g. individual, organization). Because the terms “variable”, “cause”, “causal model”, and “level of analysis”, have been used in different ways in the literature, it is important to clarify how the terms are used in this study.

1. Variable: In general, a variable can be a theoretical variable or operational variable. In particular, 'variable' shows an abstraction that is not related to the context, where the indicator is associated with the same meaning, cause and effect
2. Cause: In general causes refer to the explanation of the relationship between variables. In particular, causal explanations can imply determinism. Studies using a causal model retain the more general meaning, namely that research provides an explanation, without implying that this explanation should not be intentional or limited in scope.
3. Causal-model form: If a causal relationship occurs, then the scope of the explanation is often limited by determining the conditions or context in which the explanation is valid.

The following is a simple causal form that illustrates some types of restrictions appear from management accounting literature.

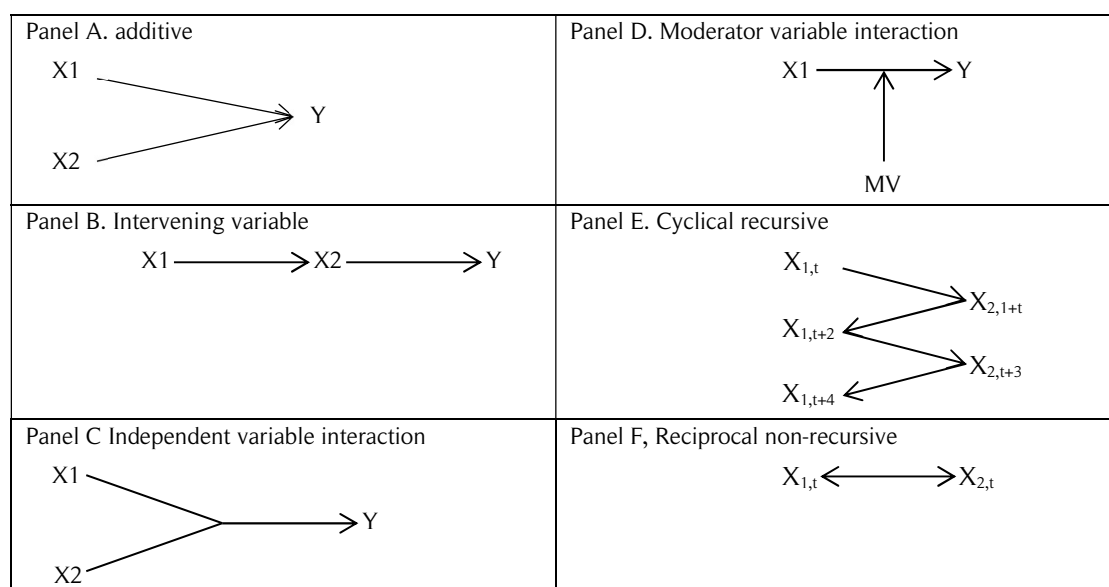


Figure 1. Types of Causal Model

The simple causal model shown in Figure 1 represents several types of restrictions that appear in the management accounting literature, namely:

- a. Additive model (Panel A)

In the additive model, each independent variable (X_i) has an effect on the dependent variable (Y) which is unconditional at another value of X_i , and the value of X_i itself is unconditional on Y or X_i .
- b. Intervening variable model (Panel B)

The effect of X_1 on Y occurs in conditions where X_1 affects X_2 and X_2 in turn affects Y , but X_2 does not affect X_1 , and Y does not affect X_i . When the value of X_2 is determined, the effect on Y is not dependent on X_1 .
- c. Interaction Model (Panel C and D)

The amount of X_1 affects Y depending on the value of X_2 and how much X_2 affects Y depends on the value of X_1 . However, X_1 and X_2 do not affect each other, and Y does not affect X_i . This interaction model represents the causes of different relationships. In the interaction model of the independent variable (Panel C), each X_i has a causal influence on Y . Conversely, in the interaction of the moderator variable model (Panel D), MV (moderator variable) does not affect Y in the absence of X_1 , and the moderator variable has no effect on X_1 .

d. Panels E and F

In the cyclic recursive model (Panel E) there is a time interval between changes to X1 and the corresponding changes from X2, as well as between changes to X2 and corresponding changes from X1. In contrast to the reciprocal non-recursive model (Panel F), there is a reciprocal relationship between two variables.

4. Level of analysis

Each variable on the maps is assigned to one of four levels of analysis: individuals, subunits, organizations, or outside the organization. The variable level is defined at the level at which major variations occur. For example, an individual incentive system is the level of individual variables if the study examines the causes and/or effects of using different incentive systems for different individuals, and we are attracted to individuals solely, not to individuals as proxies for subunits or organizations.

After making graphic representations of individual studies, the next step is grouping individual studies into maps. Grouping of individual studies into maps in two steps. First, studies that linked (at least some of) the same variables were grouped together. Second, more and less dense of the resulting causal networks were identified visually as a basis for the maps.

In accordance with the guidelines of Luft and Shields (2003), the results of individual studies are grouped in maps A through I (9 maps) as follows:

- 1) Causes and effects of budgeting at individual level,
- 2) Cause and effect of budgeting at the organizational and subunit level,
- 3) Information for planning and control,
- 4) Implementing management accounting change,
- 5) Performance measures and incentives,
- 6) Contracting and control,
- 7) Individual judgment and decisions,
- 8) Management accounting in its historical and social content, and
- 9) Organizational change process and the relation of financial and operational realities.

Results and Discussion

After going through the process of searching and selecting articles, we begin to classify them based on the name of the journal, author, year, number of samples, and response rate (specifically for the survey method) of each article. After the classification process, then mapping steps are carried out according to the guidelines of Luft and Shields (2003).

Article Classification

There are several approaches in research method in general, these are survey approaches, case studies, literature studies and experiments. As the articles from management accounting research with approaches other than empirical studies could not group the variables, we only use articles with empirical approaches. The number of articles obtained is 32 articles. The distribution of articles in each journal is shown in Table 1.

Table 1. Number of Articles in Each National Accredited Journal

No	Journal	Frequency
1	Jurnal Akuntansi dan Auditing Indonesia (JAAI)	1
2	Jurnal Akuntansi dan Keuangan Indonesia (JAKI)	3
3	Jurnal Ekuitas	4
4	Jurnal Ventura	4
5	Jurnal Multiparadigma (JAMAL)	2
6	Jurnal Siasat Bisnis	1
7	Jurnal Akuntansi dan Keuangan	2
8	Jurnal Mix	2
9	Jurnal Aplikasi Manajemen	5
10	Jurnal Manajemen dan Bisnis	1
11	Jurnal Akuntansi	3
12	Jurnal Akuntansi dan Manajemen	1
13	Jurnal Manajemen dan Bisnis	1
14	Journal of Indonesian Economy and Business	1
Total		31

Table 2. Article Classification

No	Author	Journal	Year	Sample	Response rate
1	Soleman	Siasat Bisnis	2012	72 SKPD apparatus	N/A
2	Yusnaini	JAK	2010	88 accounting college student	-
3	Alim	JAK	2008	92 manager	N/A
4	Susanto	JAKI	2009	44 hotel manager	N/A
5	Gunawan & Santioso	Jurnal Akuntansi	2015	200 manager	122/200= 61%
6	Witjaksono	Ekuitas	2012	162 manager	31/162=31%
7	Pasaribu	JAKI	2009	N/A	N/A
8	Sari	JAKI	2016	173 vice rector /dean	159/173=92%
9	Gunarianto	Jurnal Aplikasi Manajemen	2011	151 employee	N/A
10	Metekohy	Jurnal Aplikasi Manajemen	2013	100 small business	N/A
11	Purwanti, et. al	MIX	2017	35 small business	100%
12	Hertawan	Jurnal Bisnis dan Manajemen	2015	50 manager	N/A
13	Sulijaya	Jurnal Akuntansi	2015	85 employee	N/A
14	Munizu et. al.	Jurnal Aplikasi Manajemen	2012	114 manager	N/A
15	Serang & Surachman	Jurnal Aplikasi Manajemen	2011	120 manager	99/120= 82,5%
16	Nursiah & Radhi	JAM	2009	150 manufacture company	42%
17	Suarniki	Jurnal Aplikasi Manajemen	2011	174 director of rural bank (BPR)	141/174 = 81%
18	Hakim	MIX	2016	25 business manager	100%
19	Mananeke	Ventura	2012	200 business owner	N/A
20	Muttaqin & Dharmayanti	Jurnal Akuntansi	2015	39 banking company	69,64%
21	Utary	Ventura	2014	189 manager	N/A
22	Alamsjah, et. al.	Manajemen & Bisnis	2012	300 manufacture company	33,3%
23	Hidayat	Ekuitas	2008	N/A	N/A
24	Bone & Sholihin	Ekuitas	2012	100 college student	-
25	Kasingku & Goedono	Journal of Indonesian Economy and Business	2017	120 student of accounting management class	-
26	Irwandi & Akbar	Ventura	2014	205 manager	N/A
27	Basri	Ventura	2013	67 manager	67/160= 42%
28	Akbar & Irwandi	JAMAL	2014	250 manager	16/250= 64%
29	Fitriasari et. al	JAMAL	2014	150 manager	60/150= 40%
30	Abdullah & Laksamana	Ekuitas	2009	350 manager	105/350= 30%
31	Srirejeki	JAAI	2012	47 accounting postgraduate student	-

Mapping Results

Map A: Causes and Effects of Budgeting At Individual Level

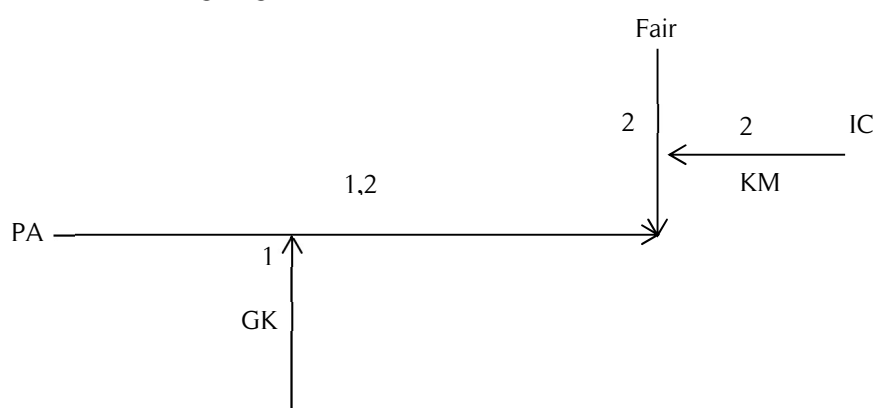


Figure 1. Causes and Effects of Budgeting at Individual Level

Variables identification:

Fair : Fairness

GK : Leadership Style

IC : Incentive Contracting

KM : Managerial Performance

PA : Budget Participation

Prior research:

1. (Soleman, 2012)
2. (Yusnaini, 2010)

Map A analyzes individuals encounters with budgeting (Luft & Shields, 2003). Map A describes the design of an organization's social environment that affects employee performance, and connects the social environment with motivation, stress, and individual satisfaction. There are only 2 articles on this map. The study on Map A shows that the management accounting practice studied is budgetary participation (PA) at the individual level. Relationships that occur are causal relationships, all in a positive direction. The study on this map illustrates that participatory budgets improve managerial performance (KM). The non-accounting variables on this map are leadership style (GK) and fairness. The leadership style is proven to strengthen the relationship between budget participation and managerial performance. Likewise incentive contracting (IC) strengthen the relationship between fairness and managerial performance.

Budget is important for planning and performance evaluation, therefore it seems that the budget has several positive effects (Ekholm & Wallin, 2000; Marginson & Ogden, 2005). According to psychological theory, participatory budgeting has a positive effect on performance through motivational and cognitive mechanisms (Birnberg & Luft, 2007). This is in line with the study of Soleman (2012). Whereas Yusnaini (2010) found that non-participatory budgets cause low performance when the target and the process of determining the budget are done unfairly.

Non-accounting variables that appear based on psychological theory are individual characteristics such as the leadership style (e.g., link 1). This management accounting variables in map A captures individual's sense of personal constraints and opportunity arising from budgeting: for examples, how much individuals participation have in setting the budget (participative budgeting) and how budget participations affect managerial performance (e.g. link 1, 2). The study on map A, which only numbered 2 articles, show that research in the level of individual budgeting was less attractive to researchers.

Map B: Cause and Effect of Budgeting at the Organizational and Subunit Level

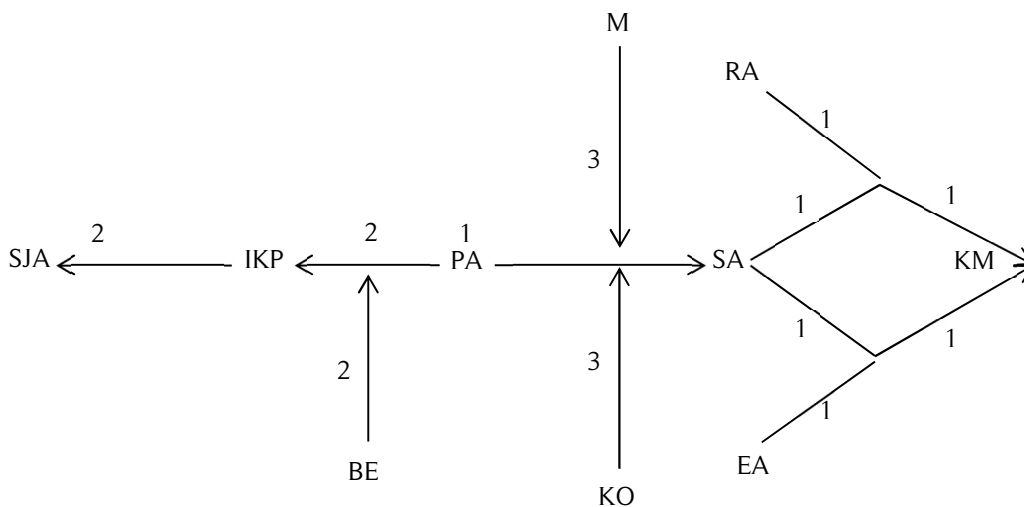


Figure 2. Cause and Effect of Budgeting at the Organizational and Subunit Level

Variable identification:

- | | |
|--------------------------------------|--------------------------------|
| B : Budget Emphasis | SA : Budget Revision |
| EA : Budget Evaluation | JA : Budgetary Slack |
| IKP : Intensity of Market Competence | M : Motivation |
| KM : Managerial Performance | KO : Organizational Commitment |
| PA : Budget Participation | |

Prior research:

1. (Alim, 2008)
2. (Susanto, 2009)
3. (Gunawan & Santioso, 2015)

Map B analyzes the causes and effects of budgeting at the organizational and subunit level. The articles mapped on it as many as 3 articles. It indicates that research in the field of budgeting at the level of private organizations is still rarely done. Non-accounting variables on this map such as market competency intensity (e.g. link1, 2), organizational commitment and motivation (e.g. link 3). Management accounting variables that appear on map A, such as managerial performance (e.g. link 1) and budget participation (e.g. link 1.2). The management accounting variables that appears on map B is a budget emphasis (e.g. link 2), budget evaluation, budget target, budget revision (e.g. link 1).

Typical map B shows the variables studied were participatory budgeting at the organizational level. On this map, it appears that budget participation can increase budgetary slack through the intensity of market competencies (link 2). Managerial performance is influenced by interactions between budget revisions and budget targets, and interactions between budget targets and budget evaluation. All relationships are positive. Therefore, organizations need to consider participatory budgets in improving organizational performance, while being careful not to create budgetary slack too high.

According to contingency theory, the budget emphasis and flexible budget planning model used to coordinate the operations of each business unit can improve the efficiency of the organization's operations and achieve budget satisfaction (Luft & Shields, 2003). Kung, Huang, and Cheng (2013) found that there is a positive relationship between budget emphasis on the performance of the management as well as that of the organization, while in Map B it appears that budget emphasis strengthens the relationship between budget participation and budgetary slack (Susanto, 2009).

Budget evaluation is carried out to determine the success and at the same time the level of budget deviations, such as, Warsoko's findings (2007) which showed that budget evaluations affect the level of budget realization; Budget participation influences the results of budget evaluations (Simmons, 2012). Appears on map B that there is a role of budget evaluation that interact with budget targeted to influence at managerial performance.

Map C: Information for Planning and Control

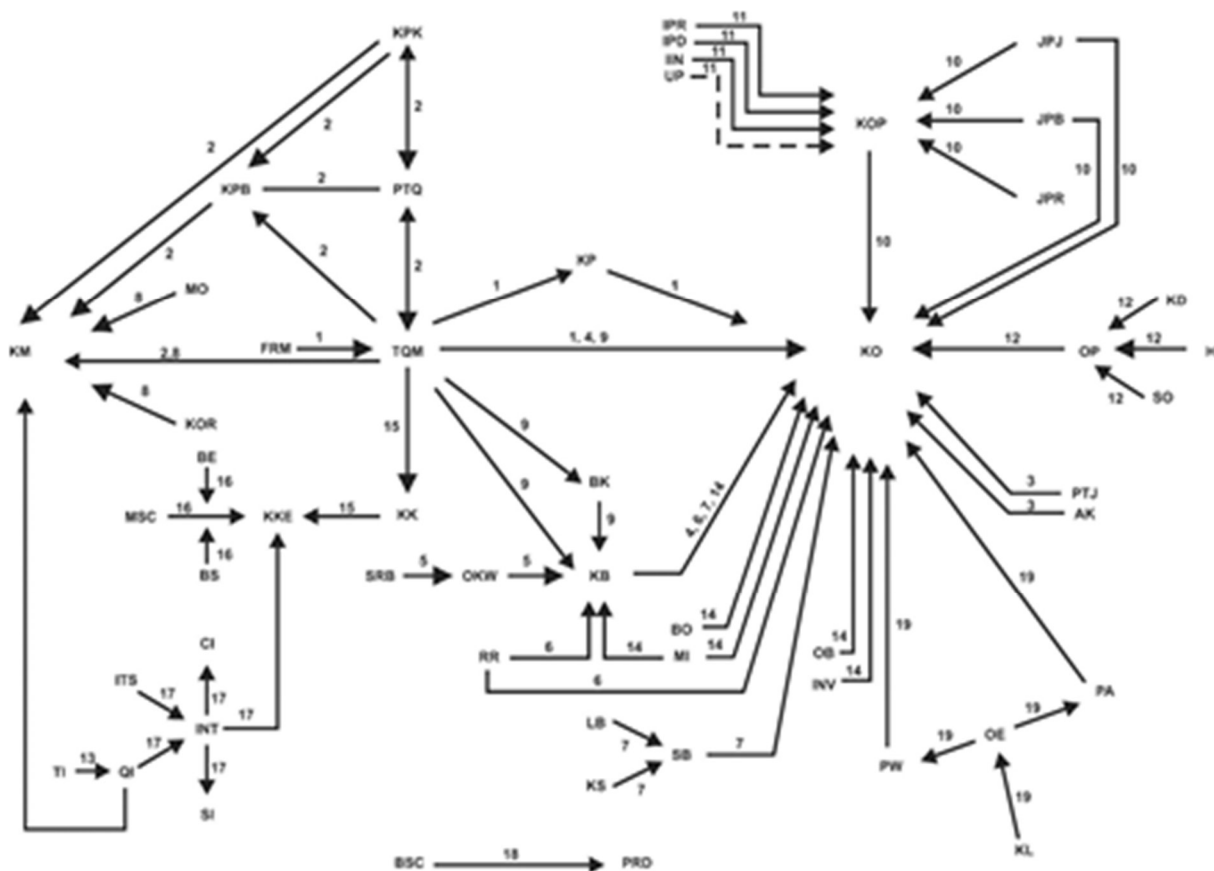


Figure 3. MAP C Information for Planning and Control

Variable identification:

AK : Accountability	MI : Intellectual Capital
BK : Quality Culture	KP : Product Quality
BO : Organizational Culture	CDE : Effectiveness of Cost Control
BSC : application of BSC	KPK : Commitment of Top Leaders
CI : Customer Information Integration	KS : Strategic Leadership
DS : Decentralization	LB : Business Environment
FRM : Formalization	MO : Motivation
HI : Relationships between individuals	OB : Learning Orientation
IIN : Implementation of Innovations	OE : Efficiency Orientation
INT : Information Integration	OE : Efficiency Orientation
INV : Innovation	OK : leadership orientation
IPD : Product Innovation	OKW: Entrepreneurship Orientation
IPR : Process Innovation	OP : Market Orientation
IQ : Information Quality	PA : Accounting Control
ITS : Information Technology Support	PRD : Company Productivity
JPB : JIT Purchase	PTJ : Perception of Clear and Measurable Goal
JPJ : JIT Sales	PTQ : Perception of the division manager about TQM
JPR : JIT Production	PW : Delegation of Authority
KB : Competitive Advantage	QI : Information Quality
KD : Characteristics of Directors	RR : Rare Resource
KK : Performance Quality	SB : Competing Strategy
KKE : Financial Performance	SI : Supplier Information Integration
KL : Perception of Environmental Uncertainty	SO : Organizational System
KO : Organizational Performance	SRB : Strategy Resource Base
KOP : Operational Performance	IT : Information Technology
KOR : Organizational Commitment	TQM: TQM Practice
MCS : Management Control System Design	UP : Company Size

Prior research:

- | | |
|-----------------------------|------------------------------------|
| 1. (Witjaksono, 2012) | 10. (Serang & Surachman, 2012) |
| 2. (Pasaribu, 2009) | 11. (Nursiah & Radhi, 2009) |
| 3. (Sari, 2016) | 12. (Suarniki, 2011) |
| 4. (Gunarianto, 2011) | 13. (Hakim, 2016) |
| 5. (Metekohy, 2013) | 14. (Mananeke, 2012) |
| 6. (Purwanti, et. al, 2017) | 15. (Muttaqin & Dharmayanti, 2015) |
| 7. (Hertawan, 2015) | 16. (Utary, 2014) |
| 8. (Sulijaya, 2015) | 17. (Alamsjah, et. al., 2012) |
| 9. (Munizu et. al., 2012) | 18. (Hidayat, 2008) |
| | 19. (Abdullah & Laksamana, 2012) |

Map C analyzes the causes and effects among variables in management accounting practices as planning and control information. The level of analysis on this map is subunits and organizations. Production decision is the example of management accounting variable as information for planning functions while performance measurement as information for control functions. Therefore, this map illustrates the variation in the specific accounting information employed in subunit and organizations and variation in the detail of how and where to employ. Articles included in map C are 19 articles. This number of articles is the highest among other maps.

Appear on map C several solid areas (areas where visible causal relationships appear to cluster), namely organizational performance variable, total quality management (TQM), managerial performance, operational performance, competitive advantage. Some management accounting variables are derived directly from practice for example: TQM practices affect organizational performance (e.g. link 1, 2, 8, 9), just in time (JIT) influences operational performance (e.g. link 10), BSC (balance scorecard) affects productivity (e.g. link 18).

Management accounting variables among other TQM practices which are influenced by formalization (e.g. link 1), motivation and organizational commitment (e.g. link 8), and manager's perception of the practice of TQM (e.g. link 2). Aside from TQM, other management accounting variables are operational performance that is influenced by JIT practices (link 10), leadership orientation, process innovation, product innovation, implementation of innovation (e.g. link 11), and negatively influenced by company size (link 11). The next management accounting

variables are financial performance that is influenced by performance quality (e.g. link 15), design of MCS (e.g. link 16), and information integration (e.g. link 17) which is influenced by the practice of TQM (e.g. link 2) and customer service (e.g. link 17).

Non-accounting variables have a positive effect on performance are managerial motivation (e.g. link 3), information quality (e.g. link 13), innovation, learning orientation, organizational culture (e.g. link 14). All these relationships are in a positive direction. The most dense areas are organizational performance, which is influenced by the practice of TQM (e.g. link 1, 4, 9), product quality (e.g. link 1), market orientation (e.g. link 12), perception of clear and measurable goal (e.g. link 3), delegation of authority and accounting controls (e.g. link 19), learning orientation and innovation (e.g. link 14), competitive strategies (e.g. link 7), intellectual capital and organizational culture (e.g. link 14), rare resource (e.g. link 6).

On map C there are several management accounting practices applied in organizations that function as planning tools, namely TQM, JIT, and BSC. Many empirical studies have found that the application of TQM practices can reduce rework and waste, improve product quality, and have a positive impact on company performance (Wayhan & Balderson, 2007; Duh, Hsu, & Huang, 2012). These are in line with the studies on map C which show that TQM practices has a positive effect on organizational performance (Witjaksono, 2012; Pasaribu, 2009; Gunariato, 2011; Sulijaya, 2015; Munizu et al., 2012).

The JIT practice on the map appears in link 10 showing the JIT system has a positive effect on operational performance (Serang & Surachman, 2012). These results are in line with the findings of Kannan and Tan (2005) which proves that at the strategic and operational level there is a relationship between JIT, total quality management and supply chain considering by the organization as part of its operating strategy. It can be concluded that most of the strategies in the map C show a positive relationship between the implementation of various strategies with organizational performance. Judging from the amount of research on each strategy, BSC is a strategy that is rarely used. Future research is expected to explore deeply why the practice of BSC associated with organizational performance is still rarely being studied. The further research needs to consider other innovative strategies in relation to organizational performance.

Map E: Performance Measurement and Incentives

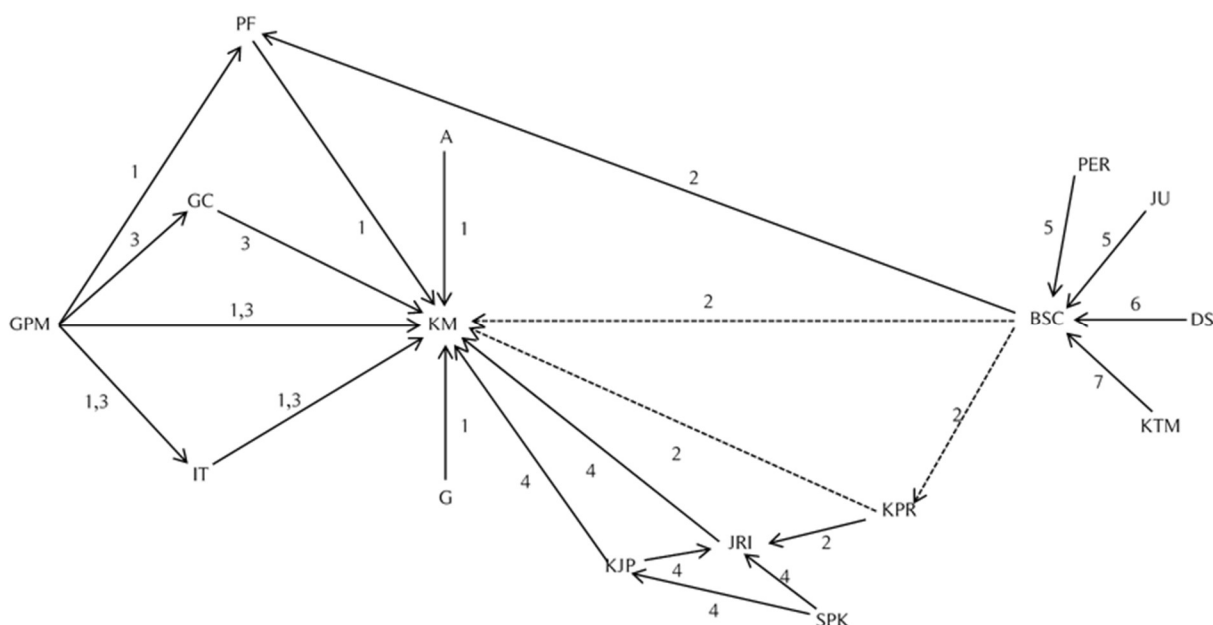


Figure 4. Performance Measurement and Incentives

Variable identification:

- | | | | |
|-----|--------------------------------------|-----|--------------------------|
| A | : Age | JU | : Size Type |
| BSC | : Balance Scorecard | KJP | : Fuzziness of Role |
| DS | : Disaggregation Strategy | KM | : Managerial Performance |
| G | : Gender | KPR | : Role Conflict |
| GC | : Goal Commitment | KTM | : Manager Involvement |
| GPM | : Goal setting Participation Manager | PER | : Perspective |

IT : Interpersonal Trust
 JRI : Job relevant information

PF : Procedural Fairness
 SPK : Performance Measurement System

Prior Research:

1. (Irwandi & Akbar, 2014)
2. (Basri, 2013)
3. (Akbar & Irwandi, 2014)
4. (Fitriasari et. al., 2015)
5. (Bone & Sholihin, 2012)
6. (Kasingku & Goedono, 2017)
7. (Srirejeki, 2012)

Map E analyzes management accounting practices for organizational control. This Map emphasizes performance measurement and manager incentives. Articles classified into map E are 7 articles. Management accounting variables in this study include management accounting practices such as participation manager in goal setting (e.g. link 1.3), Balance Scorecard (BSC) (e.g. link 2), performance measurement system (e.g. link 4). These management accounting practices have a positive effect on managerial performance, except for BSC which actually shows a negative influence on managerial performance. Some individual actions in map E, for example interpersonal trust (e.g link 1.3), performance measurement systems with balance scorecards are influenced by: type of measure (e.g. link 5), disaggregation strategy (e.g. link 6), and manager involvement (e.g. link 7).

The performance measurement system has become an ongoing issue among practitioners, academics, and researchers which are still being criticized and debated. In the measurement system literature there are traditional performance measurement systems that focus on financial measurement. The traditional financial measurement system has been criticized for focusing only on the short term rather than the long term, and it is limited to the past and not the future (Jusoh, Nasir Ibrahim, & Zainuddin, 2008). Ittner, Larcker, and Randall (2003) consider the diversity of performance measurements that complement traditional financial measures with a mixture of a variety of non-financial measures expected to capture strategic performance not reflected in financial or short-term accounting measures. Similarly, Ullrich and Tuttle (2004) and Henri (2006) argue that a comprehensive system is designed to measure performance in all important areas of the company.

Typical map E studies show that various strategies in performance measurement systems (directly or indirectly) influence managerial performance, including strategic performance measurement systems (Fitriasari et al., 2015); balance scorecard (Basri, 2013), delegation of authority and accounting control (Abdullah & Laksamana, 2012); procedural fairness (Irwandi & Akbar, 2014); job relevant information (Basri, 2013). Behavioral problems in performance measurement systems include: goal setting participation manager (Irwandi & Akbar, 2014); efficiency orientation and perception of environmental uncertainty (Abdullah & Laksamana, 2012); role conflict and role ambiguity (Fitriasari et al., 2015); interpersonal trust (Akbar & Irwandi, 2014).

The Balanced Scorecard is one of the most influential management ideas for the past 75 years (Sibbet, 1997). The BSC is not only used as an indicator of performance measurement but also as a tool to implement and monitor corporate strategy (Kaplan & Norton, 1996). Lipe and Salterio (2000) found that individuals tend to pay more attention to general measurements than unique measurements. On map E, it appears that in evaluation with BSC, general measurement bias is influenced by size type (Bone & Sholihin, 2012), disaggregation strategy (Kasingku & Goedono, 2017), and manager Involvement (Srirejeki, 2012).

Conclusion

Management accounting research is a field that has received less attention from researchers in Indonesia, as evidenced by the number of research results far below from the financial accounting studies. This study aims to map articles from empirical research in management accounting practices in Indonesia. The purpose of mapping is to answer questions in each study about what is examined, what direction and shape of the link, and what level of analysis.

Classification of maps according to Luft and Shields (2003) consists of nine maps starting from map A to map I. This study resulted in four maps including map A for causes and effects of budgeting at individual level; map B for cause and effect of budgeting at the organizational and subunit level; map C for information of planning and control; and map E for performance measures and incentives. Maps that have absolutely no research results are: map D for implementing management accounting change; map F for contracting and control; map G for individual judgment and decisions; map H for management accounting in its historical and social content; map I for organizational change process and the relation of financial and operational realities. The scarcity of research on these topics, possibly because these topics are less popular in Indonesia.

Based on this mapping, it can be concluded that the results of management accounting research in Indonesia are less spread so it is only concentrated on certain topics, especially in accounting practices as

information for planning and control. Therefore, for future agenda, it is necessary to conduct socialization by academics and journal managers to increase the interest of researchers in the field of management accounting in Indonesia, especially on topics that are still not common, through enrichment of lecture material and incentives for management accounting researchers.

The limitations of this study are that the mapping only employed on articles with empirical methods, while the other methods, such as literature studies, case studies, descriptive studies are not analyzed. To get a better description of development of management accounting practices in Indonesia, it would be better to map the studies included all method by combining empirical studies with literature study approach. Further research, can utilize the results of this study as a guideline in mapping the results of empirical research, especially on topics of management accounting that have not been studied or in other accounting fields.

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