



Management Accounting Maturity Levels Continuum Model: a Conceptual Framework

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Abstract

Until now, in the financial domain, there were only few attempts made to develop maturity models – a useful tool to identify strengths and weaknesses of certain domains of an organization. The aim of this paper is to present a maturity model for management accounting. The method used to develop the model is an interpretive approach, in which an exploratory sequential mixed method research design was applied to broadly explore and understand data on management accounting systems in various settings and in its historical perspective. This study extends my previous research on development of management accounting and financial leadership (Lebedev, 2014, 2015, 2016, 2018, 2019b, 2019a). The framework traces 10 prototype roles of management accounting along their continuum of maturity (from “non-existent” to “strategic leadership”). Each maturity level reflects the extent to which management accounting creates value for its users based on the support provided for “conversations” among stakeholders, the deepness of leadership “embodied” into the management accounting function, and the effectiveness of management accounting principles and management accounting practices (MAPs) employed. This study contributes to the theory of management accounting by offering a framework for understanding of the evolution of financial function and management accounting. In practical terms, the results of the research could be applied to support decisions in transformation of financial function along its maturity continuum (both conducted internally by managers and/or with external support of consultants and advisors), supporting the process of reconciliation of current practices of a company being transformed to a proposed transformational strategy and chosen direction of implementation.

Keywords: management accounting, maturity model, leadership

Introduction

Maturity models are an established means to identify strengths and weaknesses of certain domains of an organization (Marx, Wortmann, & Mayer, 2012). They have been designed to assess the maturity (i.e. competency, capability, level of sophistication) of a selected domain based on a more or less comprehensive set of criteria (De Bruin et al., 2005). The literal meaning of the word maturity is “ripeness”, which assumes the development from some initial state to some more advanced state, implying evolution or ageing and passing through a number of intermediate states on the way to maturity (Fraser, Moultrie, & Gregory, 2002). Maturity models are high in number and broad in application. They have proliferated across a multitude of domains, resulting in more than 150 maturity models, including, the maturity of IT Service Capability, Strategic Alignment, Innovation Management, Program Management, Enterprise Architecture and Knowledge Management Maturity (De Bruin, Freeze, Kaulkarni, & Rosemann, 2005).

Until now, in the financial domain, there were only few attempts made to develop maturity models. A costing maturity framework aims to support accountants in applying professional judgement and objectivity in the process of cost management and internal managerial analysis (Cokins, 2012). This framework was developed as a complementary resource to the International Good Practice Guidance “Evaluating and Improving Costing in Organizations”, published by the Professional Accountants in Business Committee of the International Federation of Accountants (The International Federation of Accountants, 2009). Marx et al. (2012) developed a Maturity Model for Management Control Systems (MCS), focusing on IT perspective MCS and consisting of three partial models for reporting, planning, and consolidation, which were integrated into one holistic MCS maturity model. IT-specific domain also boasts a Value Governance Maturity Model and Investment Management Maturity Model representing a part of The Val IT Framework 2.0 “Enterprise Value: Governance of IT Investments” (IT Governance Institute, 2008).

Despite the numerous attempts to investigate the evolution of management accounting, no holistic framework exists to evaluate its dynamics and maturity. During the last few decades, the paradigm of management accounting has noticeably changed from “number-crunching”, assuming mostly a technical role of an accountant, towards strategic partnership within a management team. At a company level, the practice of management accounting varies across different organizations. The process depends on the context and everchanging needs and priorities of various parties. It is important to have a tool for assessment of the state of maturity of management accounting in terms that are consistent with best-practice frameworks and approaches. This tool could enrich both our understanding of the development of management accounting within a scientific domain of enquiry and support a practice of management accounting by offering a decision-support solution. While achieving the best-practice is the ends, sometimes idealistic, both in theoretical and practical terms it is important to understand the dynamics of financial

transformation, which includes driving forces for change and various states or maturity levels of financial function and management accounting in a company.

In this paper I present a framework which traces 10 prototype roles of management accounting along their maturity levels continuum (from “non-existent” to “strategic leadership”). Each maturity level reflects the extent to which management accounting creates value for its users based on the support provided for “conversations”¹ among stakeholders, the deepness of leadership embodied into the management accounting function and the effectiveness of management accounting principles and MAPs employed.

The rest of the paper is organized as follows: Section 1 provides a short summary on the best-practice understanding of management accounting as the basis to consider while developing the maturity model; Section 2 explains a general methodology for building maturity models; in Section 3, the methodology used for this study is discussed in detail; Section 4 provides descriptions of each level of maturity of management accounting; Section 5 provides a discussion of the key points of the study.

1. The Essence of Management Accounting: Best-Practice Approach

Management accounting experiences constant changes (Napier, 2006). The tools and practices of management accounting and the context in which management accounting and control is practiced all have undergone substantial change especially during the last decades (Otley, 2016). From a historical perspective, this transformative path could be traced from a calculative technical low value-added role (a bean-counter) to a more advanced internal advisory role (those of a business-partner). Although previous studies demonstrate that in many cases, “this is a rather idealistic position reflecting wishful thinking” (Lebedev, 2018, p.1202), referring to the best-practices as such is a good starting point for bench-marking and continuous process improvement.

A noticeable systematic attempt to understand the evolution of management accounting began in 1989, when the International Federation of Accountants (IFAC) issued a statement on scope, purposes, and concepts of management accounting. It was revised in 1998 and released as Management Accounting Concepts – the first publication in the series of International Management Accounting Practice Statements, the framework which has an authority by virtue of the massive constituency that IFAC represents (Abdel-Kader & Luther, 2006). Referring to the leading edge practice internationally, IFAC defines the four stages of evolution of management accounting:

Stage 1: “Cost determination and financial control” (pre-1950)

¹ “Strategy development and execution is a conversation” (CIMA, 2014, p.9) that is supported by management accounting. Management accounting begins and ends with conversations” (CIMA, 2014, p.14).

Stage 2: “Information for management planning and control” (by 1965)

Stage 3: “Reduction of waste in business processes” (by 1985)

Stage 4: “Creation of value through effective resources use (by 1995) (IFAC, 1998)

The critical differences between stages are the advancements in the financial function with a visible shift from a technical role of the information provider to the management support in achieving effectiveness and efficiency (resource planning, waste reduction) and further to the support of the value creation process. Given the authority of the study and its international scope and longitudinal nature, the model presented in the report could serve as a prototype for building a maturity model.

The Global Management Accounting Principles (GMAP) adopted in 2014 by two of the world’s most prestigious accounting bodies, The American Institute of Certified Public Accountants and The Chartered Institute of Management Accountants (CIMA), extensively address both the change within the profession and state of the art attributes of management accounting. Management accounting is defined as “the sourcing, analysis, communication and use of decision-relevant financial and non-financial information to generate and preserve value for organizations” (CIMA, 2014, p.8). Further stated, that “[b]eing forward and outward-looking, management accounting brings structured solutions to unstructured problems providing people with decision-relevant data, rigorous analysis and informed judgement to make better decisions and to communicate them with impact” (CIMA, 2014, p.6).

Because decision-making approaches and styles vary between individuals and organizations, management accounting should address this complexity without assuming a linear decision-making process. The 4 formulated principles (influence, relevance, value and trust) assist in this, and they guide the best-practice and focus on the desired outcomes from the well-functioning system of management accounting (CIMA, 2014). The principles set out the fundamental values, qualities, norms, and features that represent management accounting in a case of best-practice. A summary of GMAP is presented in Table 1.

GMAP “are applied by *people* to the management of organizational *performance* and to the *practices* of the management accounting function” (CIMA, 2014, p.15). To achieve the goals of management accounting, the principles should be consistently applied to the following 14 main practice areas of the management accounting function (Table 2).

Table 1. Summary of GMAP

Principle (short)	Principle (full)	Principle (explained)	Value created
Information	Information is relevant	Help organizations plan for and source the information needed for creating strategy and tactics for execution	– information is the best available – information is reliable and accessible – information is contextual
Communication	Communication provides insight that is influential	Drive better decisions about strategy and its execution at all levels	– strategy development and execution is a conversation – communication is tailored – communication facilitates better decisions
Value	Impact on value is analyzed	Simulate different scenarios that demonstrate the cause-and-effect relationships between inputs and outcomes	– simulations provide insight into options – actions are prioritized by their impact on outcomes
Stewardship	Stewardship builds trust	Actively manage relationships and resources so that the financial and non-financial assets, reputation and value of the organization are protected	– accountability and credibility – sustainability – integrity and ethics

Source: adapted from (CIMA, 2014).

Table 2. Summary of the Core MAPs and Their Contribution to Value Creation

Management accounting practice areas	Value to the organization
1. Cost transformation and management	Improved customer satisfaction through the provision of product and service value for money. Increased organizational competitiveness and increased stakeholder value, achieved through the establishment of a lean culture and investment in innovative products and services
2. External reporting	Helps the organization to engage with a wide stakeholder base and explain the organization's strategy, business model, and performance
3. Financial strategy	Value of the organization is optimized for owners and other stakeholders. Organization's capital requirements are balanced with expectations of owners and other stakeholders. Investment opportunities are thoroughly appraised, robustly implemented, and appropriately governed
4. Internal control	Provides reasonable assurance that tangible and intangible assets are safeguarded and financial and non-financial resources are correctly accounted for. Reduces the risk of error and fraud and the likelihood of financial loss, thereby enhancing trust in an organization's financial stewardship. This leads to reliable reporting, which in turn enables sound decision-making and better financial management
5. Investment appraisal	Prioritizes opportunities for funding that generate value for stakeholders and avoids those which are likely to erode value
6. Management and budgetary control	Helps organizations evaluate performance against targets and take improvement actions. Provides a means for accountability and control to be decentralized, so that performance can be proactively managed by those managers closest to the execution of planned activity
7. Price, discount, and product decisions	Enhances profitability of products and services and helps organizations position their products and services within their target market
8. Project management	Provides controls over projects to increase the chance of benefits from projects being realized and risks minimized

9. Regulatory adherence and compliance	Helps to preserve value and mitigate losses through avoiding the direct and indirect costs of enforcement activity
10. Resource management	Helps organizations to manage transformational or continuous improvements to products and processes, efficiently, and effectively
11. Risk management	Awareness and management of these risks can help the organization address uncertainty by increasing the probability of success and reducing the probability of failure in executing its strategy and meeting stakeholder expectations
12. Strategic tax management	The organization is aware of and understands the implications of relevant tax legislation in the jurisdictions in which it operates
13. Treasury and cash management	The organization has sufficient cash to meet its obligations and fund prioritized opportunities. Provides risk management of the organization's exposures to currency fluctuations
14. Internal audit	Provides assurance that key financial and non-financial risks, including reputational, environmental and social risks, are being adequately controlled by the organization and its long-term value is protected. Internal auditors assist the external auditors with their procedures. It is a systematic approach to evaluating and improving the effectiveness of risk management, control and governance processes

Source: adapted from (CIMA, 2014).

The abovementioned is consistent with opinions of other respected professional bodies. According to the Institute of Management Accountants, the worldwide association of accountants and financial professionals in business, “[m]anagement accountants are vital to the financial health of organizations. They make critical decisions, safeguard a company’s integrity, and plan for business sustainability” (Institute of Management Accountants, 2019, p.1). Internationaler Controller Verein eV – a professional association of controllers (the term “controlling” emerged in German-speaking environment to address the similar domain as management accounting) states, “Controlling is the whole process of defining objectives, of planning and controlling (in the sense of steering and regulating) and includes all relevant financial and commercial aspects” and “while the manager runs the business and is responsible for the result, the controller has the economic meaning and takes the responsibility for the results transparency” (Internationaler Controller Verein eV, 2019, p.1). The Association of Chartered Certified Accountants – a global professional accountancy body – refers to the profession as to “professional accountants in

business” suggests that their role will rebalance away from traditional stewardship towards being a catalyst for creating value (The Association of Chartered Certified Accountants and Institute of Management Accountants, 2013).

In summary, the overall best-practice aspirations and expectations from the transformation of finance function and management accounting in organizations are the expectations of a significant contribution of the profession to the value creation process based on sound ethical and sustainability attitudes and values. A maturity model for management accounting should primarily address these dimensions to support, enrich and extend the efforts being undertaken by professional community.

2. Maturity Models: General Methodology

Maturity approaches have their roots in the field of quality management (Fraser, Moultrie, & Gregory, 2002). Since then, practitioners and academics have developed numerous maturity models for many domains allowing to measure competency, to assist organizations in gaining and retaining competitive advantage, and to be used as an evaluative and comparative basis for improvement (De Bruin et al., 2005).

De Bruin et al. (2005) argue that although there are many maturity models in application, “there is little documentation on how to develop a maturity model that is theoretically sound, rigorously tested and widely accepted” (p.3). They have suggested a general framework for developing maturity models applicable across a range of domains, which is summarized in Table 3.

Table 3. Model Development Phases

Phase	Goal	Factors to consider
Scope	To set the outer boundaries for model application and use	– Focus of model (domain specific, general) – Development stakeholders (academia, practitioners, government, combination)
Design	To determine the needs of the intended audience and how these needs will be met	– Audience – Method of application – Drivers of model application – Responders / Users – Application scope (geography, sector, number of entities etc.)
Populate	To determine the content of the model	– What needs to be measured in the maturity assessment? – How this can be measured?
Test	To test both the construct of the model and the model instruments for relevance and rigor	– Validity (to ensure the results measure what it was intended) – Reliability (to ensure results obtained are accurate and repeatable) – Generalizability
Deploy	To ensure that the model is available for use and to verify the extent of the model’s generalizability	– The first step in determining the critical issue of model generalizability – Initial application of the model with an involved stakeholder

		– The second step is to apply the model within entities that are independent of the model development
Maintain	To track model evolution and development	– Evolution of the model will occur as the domain knowledge and model understanding broadens and deepens – The continued relevance of a model will be ensured only by maintaining the model over time

Source: adapted from (De Bruin et al., 2005).

Key elements of a maturity model include dimension, level, and assessment instruments and approaches (Marx et al., 2012). This information is summarized in Table 4.

Table 4. Key Elements of Maturity Models

Element	Description
Dimension	Dimensions are specific capability areas, process areas, or design objects structuring the field of interest. Each dimension is further specified by several measures (practices, objects, or activities) or by qualitative descriptions for each maturity level
Level	Levels are archetypal states of maturity of a certain dimension or domain. The number of levels is to some extent arbitrary and depends on the ability to identify suitable labels or descriptive text which clearly differentiate one level or stage from the next. Each level should have a descriptor clearly providing the intent of the level and a detailed description of its characteristics. The characteristics of each level should be distinct and empirically testable and the relationship of each level to its predecessor and successor should be well defined
Assessment instrument	The assessment instrument can either be qualitative or quantitative (e.g. using Likert-based questionnaires and scoring models). Maturity assessments can be performed by an external auditor, or by self-assessment

Source: adapted from (Fraser et al., 2002; Marx et al., 2012).

Maturity models can be organized in a form of maturity grid, which describes in a few phrases the typical patterns of the subject of the maturity model at a number of levels of maturity. For each of several aspects of the area under study, the maturity grids allow to codify what might be regarded as good practice (and bad practice), along with some intermediate or transitional stages (Fraser et al., 2002).

3. The Management Accounting Maturity Model Construction

3.1. A Framework for Management Accounting Maturity Levels Continuum

The Management Accounting Maturity Model was developed following 5 key steps:

Formulation of the models' assumptions

Determination of the models' domains

Specification of measures for the dimensions of the model

Questionnaire development, data collection, pilot-testing

Qualitative descriptions for each maturity level were specified

These steps are disclosed in detail further in their respective sections. Tables 5 and 6 present, respectively, the key points of the framework applied for development of the maturity model and comments on the key elements of the model.

Table 5. The Management Accounting Maturity Model: Key Points of the Phases of the Project

Phase	Key points
Scope	The model focuses on the management accounting in general and on core domains of management accounting as determined by: a) principles of management accounting b) MAPs These sets the outer boundaries of the model. Key stakeholders of the model are academia and practitioners
Design	Drivers of the models' application include the changing nature of organizational requirements for the relevant information, the need for extraction of value from information, tailored communications and need of building trust within and beyond the organization. The model may be applied by: a) academia – using a framework for understanding of evolution of financial function and management accounting based on the assessment on how the [mainly informational] needs of the key stakeholders are served; b) practitioners – using as a tool that supports decisions in evaluation the state of and transformation of financial function along its maturity continuum (both conducted internally by managers and / or with external support of consultants and advisors) The scope of application is universal: the model may be used in any geographic sector, industry sector, entity type etc.
Populate	The model intends to measure the extent to which the system of management accounting in a company: a) contributes to the goals of management accounting, as determined by GMAP b) executes leadership roles in supporting decision-making processes. These can be measured by qualitative assessment at the initial stage of the application of the model. If required and practically feasible, it can be further measured by means of a questionnaire addressing the

	application of MAPs and their relation and contribution to the management accounting principles at a later stage
Test	The model was initially tested on the evidence from the data collected in a course of my research on management accounting representing: a) the data collected as a part of my historical studies based on archival methods (Lebedev, 2014, 2019b) b) the data collected as a part of an extended-survey based study (Lebedev, 2018) The subsequent testing (beyond the scope of this part of the research) will include both application of the model in a number of field studies and a practical usage of the model as a part of advisory services
Deploy	Internally, refer to the section “Test” above Independent usage of the model will be promoted by presentations to practitioners and scientific community
Maintain	To ensure the continued relevance of the model over time, it will be maintained and, if needed, updated by monitoring: a) the practice of the usage of the model internally and externally and received feedback from the independent parties b) the development of MAPs and principles c) the development of theory of management accounting

Source: own work.

Table 6. Key Elements of The Management Accounting Maturity Model

Element	Description
Dimension	The basis for the dimension’s selection is GMAP. Each dimension is specified by measures – core MAPs and by qualitative descriptions for each maturity level
Level	The model has 10 levels (9 levels of maturity and a “zero” level, where management accounting in a company is not existent). These levels are grouped into 3 layers (level groupings). The descriptors of levels apply a metaphor label expressing the corresponding archetypal role of management accounting at each level (e.g. “historian”, “reporter”, “expert” etc.), level groupings are labeled expressing the core role of management accounting typical for the all levels included into the group (“supplying of information”, “sense-making”, “sense-giving”). The characteristics of each level are based on management accounting principles and MAPs employed corresponding to each level
Assessment instrument	Application of the model assumes both qualitative and quantitative assessment, depending on the cost-benefit trade-off determined by the goals of the intended usage of the model. Qualitative (and more subjective) assessment, which is based on

	evaluation of artefacts corresponding to a certain level of management accounting maturity, may be performed at an initial stage of its application Quantitative assessment, which is based on a Likert-based questionnaire, may be performed to refine the preliminary assessment obtained by application of qualitative approach
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Source: own work.

3.2. *The Management Accounting Maturity Levels Continuum Model Assumptions*

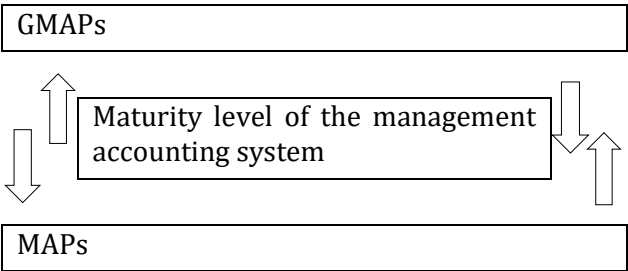
Three fundamental assumptions underpin The Management Accounting Maturity Levels Continuum Model:

Each level of the continuum characterizes the extent, to which the system of management accounting in a given company contributes to the goals of management accounting as determined by GMAP. Namely, it investigates interrelations between principles of management accounting and practices of management accounting by assessment of how management accounting principles are applied across practices and to which extent the practices in use realize the respective principles (Figure 1).

Consistent with the first assumption and with the definition of management accounting, each level of the continuum characterizes the extent to which the system of management accounting in a given company executes the leadership role in supporting decision-making process.

Any company may move along continuum in both directions. It is contingent to various contextual factors.

Figure 1. Principle Logic of the Maturity Model



Source: own work.

3.3. *The Model Domains: GMAP*

The basis for the dimensions' selection for the maturity model is GMAP. Table 7 summarizes the management accounting principles applied at each level of maturity continuum.

Table 7. Summary of the management accounting principles applied at different maturity levels of management accounting

Level group	Level	Level name (metaphor)	Principles of management accounting			
			I ¹	C ²	V ³	S ⁴
	0	Non-existent	No	No	No	No
Supplying of Information	1	Bean-counter	No	No	No	No
	2	Historian	Yes	No	No	No
	3	Reporter	Yes	Yes	No	No
Sense-making	4	Expert	Yes	Yes	Yes	No
	5	Consultant	Yes	Yes	Yes	No
	6	Advisor	Yes	Yes	Yes	Yes
Sense-giving	7	Trusted advisor	Yes	Yes	Yes	Yes
	8	Financial leader	Yes	Yes	Yes	Yes
	9	Strategic / Transformational leader	Yes	Yes	Yes	Yes

Source: based on data from authors' research.

3.4. The Measures for the Dimensions of the Model: MAPs

At the initial stage of analysis, application of certain principles was attributed to each of maturity levels, as presented in Table 7. This attribution does not take into account the extent to which the respective principle is applied, which is measured at a subsequent stage. It is stipulated that in the practical application of the principles of management accounting, "People need to use appropriate tools and techniques: these must be adapted and continually refined as objectives change" (CIMA, 2014, p.7). Accordingly, each dimension of the maturity model is specified by measures, including core MAPs (as summarized in Table 2) and by qualitative descriptions for each maturity level.

3.5. Questionnaire Development, Data Collection, Pilot-testing

An approach for operationalization and measurements of the models' dimensions followed 2 stages. Initially, a qualitative evaluation of each level was performed based on the data collected during my earlier research on the evolution of management accounting. These studies were historical studies based on archival methods, in which evidence was obtained from sources varying from related literature to personal field notes and reflections arising from observations and experience gained in my more than 2 decades as a consultant and educator in the field of management accounting. Analysis followed an interpretive approach. Narrative analysis of evidence used the model of thematic analysis to arrive at the findings (Lebedev,

¹ Information.

² Communication.

³ Value.

⁴ Stewardship.

2019b). Based on obtained classifications of concepts and categories, draft qualitative descriptions for each maturity level were developed.

At the subsequent stage, I used the data obtained in course of the survey-based study, which I conducted during 2015-2016. It was a joint project in a cooperation with the Center for Financial Management and Education of the National Guild of Professional Consultants of Russia, where I served as a Director of the Center (Lebedev, 2018). The study investigated the state of MAPs in mid-sized private Russian companies in comparison to the global framework. During this study, 756 representatives of financial and economic departments from 231 companies and organizations were surveyed.

To address the research questions, the following approach was taken for the operationalization of management accounting principles: 14 sub-sections of the questionnaire were developed, corresponding to each of the practice areas of management accounting. The definition of each practice area was adopted from GMAP to reconcile respondents' understanding of what is included in each practice area. Each subsection was divided into 4 parts, corresponding to each of the four management accounting principles. In each part, statements of best-practice, outlining how the principles could guide the practice, were suggested.

A Likert scale, ranging from 0 to 5, was offered to respondents for them to evaluate the extent to which certain practices were being applied in their companies. Data analysis produced integrated scores for each area of practice and for each principle of management accounting. For each respective area of practice, the results indicated the state and intensity of MAPs. For each respective management accounting principle, it indicated the extent to which management accounting principles are applied across practices. Comparisons to the maximal scores corresponding to the best-practice cases allowed to account for maturity levels.

3.6. Specification of the Qualitative Descriptions for each Maturity Level

Three principles determine the application of qualitative descriptions for each maturity level:

the characteristics of each level are based on the extent management accounting principles and MAPs are employed, corresponding to each level;

the metaphor of "conversation" is fundamental to each level; advancement in the level means advancement in the level of conversation;

the more advanced the level, the greater the extent of leadership is embodied into the management accounting function, hence an archetypal role metaphor (e.g. "historian", "reporter", "expert" etc.) is used to label the levels. Level groupings are labeled to express the core role of management accounting typical for the all levels included into the group.

The model has 10 levels – 9 levels of maturity and a zero level, where management accounting in a company is nonexistent. These levels are grouped into 3 layers (level groupings). This information is summarized in Table 8.

4. Levels of Maturity of Management Accounting

Level 0: Nonexistent

At this level, management accounting in a company is nonexistent. The company complies with minimal external reporting requirements. There are not any management accounting tools in practice, nor there is any demand from the management team for value-added informational support, or any financial assistance or expertise required. Accordingly, GMAPs are not applied.

Level 1: Bean-counter

At this level, some basic retrospective management reports are produced within a company. These reports formally describe what has already happened, using solely the language of numbers and calculations. The distribution of this reports happens with a formal system of communications, when the reports are kept available at the department in charge of their production and are presented on domains if such demand occurs. They are also occasionally sent to management without ensuring that they are understood and without expectations of any feedback. Although there might be some value in the information available, GMAPs are not applied at this level, and the relevance of the information cannot be verified and ensured.

Level 2: Historian

At this level, the management accounting system in a company expands beyond formally produced reports. Information generated within management accounting is supplemented with past-looking stories¹, or explanations, regarding the substance of the reported numbers, including formal variance analysis. These stories provide for adding some value to the information produced. However, stories only try to comment on what had happened, without attempting to explain why it happened and what must be done. This is the first maturity level, when one GMAP is applied. GMAP “Information” assumes the preparation of relevant information to support decision-making processes. Despite the fact that relevance is still needed to be achieved, systematic attempts to enrich the existing information are an artefact of management accounting systems that take into account the informational perspective of GMAPs.

¹ Extending the metaphor of conversations, I use the word “stories” to refer to the information provided by a management accountant to the interested parties.

Table 8. Levels of Maturity of Management Accounting

Level group	Level	Level name (label)	Summary of the level
	0	Nonexistent	Management accounting in a company is not existent
Supplying of Information	1	Bean-counter	Basic retrospective management reports
	2	Historian	Information generated within management accounting is supplemented with past-looking "stories" stating what has happened
	3	Reporter	"Stories" are supplemented with explanations and interpretations of a technical nature
Sense-making (Business partners)	4	Expert	Professional judgement and expertise are added to the "stories" and interpretations of the past
	5	Consultant	Sense-making of the information by looking at it in the context of present challenges that the company is facing, based on that solutions are offered
	6	Advisor	Perspectives of different stakeholders and issues of accountability, credibility, sustainability, integrity, and ethics are taken into account
Sense-giving (Leadership roles)	7	Trusted advisor	It is insured that information is viewed within a greater picture and context of recipients' values and beliefs reconciled to the corporate values
	8	Financial leader	Shared visions and beliefs are created. Mastering change, effective and efficient coaching are occurred. Strategic, organizational, and personal trust are cultivated
	9	Strategic / Transformational leader	Advanced financial leadership level, where sustainability of management accounting system itself is ensured. Core components of transformational leadership are applied

Source: based on data from authors' research.

Level 3: Reporter

This level distinguishes itself from the previous levels by adding interpretations supplementing the information produced by management accounting system. At this level, the second GMAP, "Communication", is also applied. The reporter not only presents information but creates a story around it. This is a noticeable attempt to communicate the information. However, it is often one-way communication. Moreover, the reported story comments on the past, without any consideration for the present and future and does not consider the organizational context.

Level 4: Expert

At this level, a management accounting system shifts from its role of a pure information provider to the more complex role of sense-making. Additional value to users of information is provided by financial expertise, which is contributed to ensure understanding, reflections, and insights to drive better decisions and execution. At this level, the third GMAP, "Value", applies. This principle assumes that the management accounting process supports value creation by the organization, thus it should inform the decision-making process. Experts distinguish themselves from reporters in that they enrich statistically-originated stories with evaluations and comments based on expertise and professional judgement. This change contributes to making information more relevant and tailored, allowing for synergies between the GMAPs already applied. More relevant information is more valuable to users. This fosters communications and dialog, which, in turn, creates a demand for new information. This is when the first step to forming business partnerships is completed. The expert aims to become a partner of the management in decision-making process. However, partnership ties are thin as trust is low in these relationships. Accordingly, this is a very basic level of corporate sense-making. The expert works in his paradigm of the past, although trying to apply it to the present. Experts do not offer solutions, but they provide a deep analysis of reasons and preconditions for past events.

Level 5: Consultant

Consultants overcome some of the shortcomings of the previous level. They not only provide professional expertise and judgement in the course of retrospective analysis, but they also look into the future. Consultants make sense of the information produced by management accounting systems by understanding it in the context of challenges that the company is facing and offering solutions to the arising problems. Thus, consultants provide a company with options, potentially contributing to value

creation. However, this is mainly a mechanistic, rather than an organic approach because it doesn't take into account factors at a deeper level, including values, attitudes, and sustainability. Technically or theoretically correct solutions are expected and provided at this level. Although the solutions are formally correct given the input factors, they may be inappropriate in a given context.

Level 6: Advisor

Transition to the level of advisor is marked by the conformity to the fourth GMAP, "Stewardship". Professional advice at this level is not limited to technically and/or theoretically correct solutions. It also considers perspectives of different stakeholders and issues of accountability, credibility, sustainability, integrity, and ethics. The advisor actively supports and facilitates corporate conversation and is oriented to the future. Management accounting at this level is an integral part of the management process, well-understood and appreciated by key players in organization. Furthermore, management accounting at this level is not static. Instead, it constantly adjusts to changing needs and aspirations. Generally speaking, this level represents a good practice of management accounting corresponding to current definitions of profession.

Level 7: Trusted Advisor

This is the first level at a "sense-giving" or a leadership part of maturity continuum of management accounting. Sense-giving assumes that information is not only understood by recipients, but rather it is viewed by them within a larger context of their values and beliefs reconciled to the corporate values (Lebedev, 2019a). The difference between the advisor level and the trusted advisor level lies mainly in their attitude to their counterparties (customers). While advisors provide the highest level of expertise and see the purpose of their jobs as solving clients' problems by applying technical and professional skills, the trusted advisors' jobs are, "to be helpful, and to provide guidance, input, and counseling to the clients' own thought and decision-making process" (Maister, 2008, p.79). Thus, while advisors simply lead transactions by providing answers (transactional leadership would be a right type leadership to describe the paradigm of an advisor), trusted advisors lead relationships. They ensure long-term relationships for sustainable value creation. They ask questions to stimulate correct answers. All the four GMAPs are applied at this level, with advancements on application of GMAPs "Value" and "Stewardship".

Level 8: Financial Leader

Trusted advisers have all necessary prerequisites to become champions of “financial leadership” in a company. At this level, management accounting takes on a trusted leader role. In this role, in addition to the characteristics of the trusted advisor, the financial leader is proactive in creating shared visions and beliefs, flexible and successful in learning and development of new skills and capabilities across the finance function and beyond and becomes a master of change management, and effective and efficient in teaching (coaching) (Lebedev, 2019a). For this to occur, the three critical types of trust that leaders need to master are necessary: strategic trust (the trust employees have in the top people of the organization, the trust in their capability to set and execute the right course) organizational trust (the trust people have not in any individual but in the company itself), and personal trust (the trust employees have in their own managers) (Galford & Drapeau, 2003). This ensures that the objective of the principle, “Stewardship builds trust”, which means, “to actively manage relationships and resources so that the financial and non-financial assets, reputation and value of the organization are protected” (CIMA, 2014, p.11) is fully achieved.

Level 9: Strategic / Transformational Leader

This is the highest level of maturity, where not only the objectives of the all principles of management accounting are achieved and all necessary GMAPs are effectively applied, but sustainability of management accounting system itself is ensured. Additionally, at this level, the core components of transformational leadership, including idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation (Bass & Riggio, 2006), are fully embodied into the management accounting function:

Management accounting serves as an ideal role model for followers in the process of value creation and sustaining of value. In its leadership role, it embodies the qualities of integrity, prudence, and due care, which makes it easy for the followers to believe and trust.

Management accounting can inspire and motivate followers through having and presenting a vision help in self-actualization for followers is ensured by developing trust among the organization's members and their authority figures.

Management accounting challenges followers to be innovative and creative. It encourages their followers to challenge the status quo.

It should be noted that this highest level of maturity is rather an idealistic vision. Its importance, however, is that it is a benchmark for assessment of dynamics of the best-practices.

5. Outlook

The maturity model presented in this paper is a systematic attempt to offer a framework for assessment of the state of management accounting in any company along the maturity continuum. The objective need for such a framework is determined by the constant changes in management accounting and in organizational contexts, which lead to a great number of possible configurations of GMAPs and MAPs given certain influential contextual factors. This is especially important as management accounting and the idea of the role of contingency theory of management accounting underlying this research is beginning to change. The research over the past four decades has suggested an extended list of possibly significant contingencies that are faced by organizations, many of which suggest conflicting recommendations (Otley, 2016). A systematic assessment of maturity of management accounting may offer at least a partial solution to consider arising conflicts.

Conclusion

This study contributes to the theory of management accounting by offering a framework for understanding the evolution of financial function and management accounting based on the assessment on how the [mainly informational] needs of the key stakeholders are served. In practical terms, the results of the research could be applied to support decisions in transformation of financial function along its maturity continuum (both conducted internally by managers and / or with external support of consultants and advisors). Namely, the results could inform the process of reconciliation of current practices of a company being transformed to a proposed transformational strategy and direction. Being an organistic, rather than a mechanistic framework, it welcomes further extensive testing in theoretical and practical environments to address possible inefficiencies and provide for necessary improvements.

All reasonable efforts to ensure relevance and rigor of the model were taken at the design and initial testing stages. However, some limitations of the research are determined by its qualitative, hence subjective nature. To address these possible shortcomings, the prototype model was discussed with three focus groups comprising of financial executives. Generally positive feedback was received, and minor improvements were advised and considered. Similar results were obtained

during application of the model in the course of advisory practices, including cases of various industries and companies facing different situations and contingencies.

Directions for further research and development of the model could include case-based applications of the model, which could further ensure its generalizability and validity and provide additional insights to enrich the descriptions of the levels with certain patterns. Operationalization and measurement of models' dimensions could be supplemented with additional descriptions, specifying tools, practices, patterns, and artifacts. Alternative operationalization and measurement of models' dimensions could be suggested and tested. Integrative application of the model could be performed, looking into the groupings of similar companies (e.g. SME, same industry, same geographic location etc.). A study assigning specific tools to certain levels of maturity could be the next step in detailing the MAPs assigned to each level of maturity.

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