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Sustaining Growth or Boosting Profit: Accounting Tools under Process-Based Management in a Transition Economy

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Abstract: Over the past three decades, economic transformations in Eastern Europe and Russia have substantially affected the use of management technologies. More and more businesses prioritize sustaining growth and development in the long run instead of maximizing profits in the short term. The shift in the business paradigm requires the implementation of new management tools along with the improvement of management accounting. Through the example of seven Russian boiler manufacturers, this study examines the main reasons for the transition to process-based management. The study identifies patterns of using management accounting tools in process-based management by employing the literature analysis, conducting an expert survey, and studying the accounting documents of selected companies. The authors analyze features of management accounting tools at different stages of implementation of the process-based management system, in enterprises with different life cycles and different sizes. A total of 53 employees were surveyed, which included senior managers, accountants, and middle-level managers. It is found that the main reason for the transition to process-based management is a shift in the focus of managers' attention from cutting costs to creating value. By adding new features of business process classification, developing new classification groups, and proposing the optimal structure of the core, auxiliary, and controlling business processes, this study contributes to the optimization of management accounting when organizational change requires implementing process-based management.

Keywords: accounting; business processes; costs; economic growth; management accounting; management decision making; process-based management; sustainable growth

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1. Introduction

In recent decades, the global economic environment has been changing increasingly intensively amid growing economic, social, and political uncertainties. Among others, current uncertainty factors include technological development, production, and digital technologies (Trukhachev et al. 2019), and the intensification of resource use and information flows. The changes are particularly demonstrative in transition economies, where the entire doing business paradigm turns upside down. Over the past three decades, a series of economic, social, and political transformations across post-Soviet countries of Eastern Europe, Russia, and Central Asia have radically changed the use of management technologies and the entire set of management accounting tools across all sectors. Previously, costs and profit were the key determinants of all business processes, even for state-backed companies of the Soviet type. In a market environment, more and more businesses prioritize sustaining growth and development in the long run instead of maximizing profits in the short term. Such a fundamental shift in the business paradigm gives rise to new management techniques, as well as actualizes the need to improve the existing ones. So far, most studies have focused on the impact of uncertainty factors (caused by the transformation of economic and

production systems) on the change in strategic management tools, economic analysis, and planning of business activities. While many scholars have explored strategic adaptation to process-oriented management, modest attention has been paid to examining the role that management accounting plays in effective information support of decision-making in business process management. Accounting methods have been studied to a lesser extent, as they have been considered less related to any transformational processes in the economy and society. However, the development of existing management accounting methods and the emergence of new management tools have given companies the opportunity to focus not only on financial information, but also on non-financial issues and, thus, to emphasize the strategic scope of managerial decisions.

Organizational change as well as transformations in the economic environment require adaptation of management accounting practices to respond to changing market conditions, competitor and consumer behavior, government economic policies, and other factors (Busco and Scapens 2011; Pavlatos and Kostakis 2015; Schaltegger et al. 2022). Institutional and market changes across transition economies force businesses to reassess their strategic position and get engaged in strategic change. Top management heterogeneity influences strategic change both directly and indirectly through the development and use of management accounting (Naranjo-Gil and Hartmann 2007; Dobroszek et al. 2019). Moreover, many common cost accounting systems lead to poor investment decisions regarding the accounting of certain costs (Gluch and Baumann 2004).

Management accounting can provide data for a wide range of purposes, but the implications of similar management accounting practices in different economic and administrative environments may differ substantially (Hiebl et al. 2013; Wanderley and Cullen 2013; Lasyoud et al. 2018; Chu 2021; Liu et al. 2022). Accordingly, one of the most topical issues in the contemporary management accounting research agenda is whether organizational transformations in business activities force economic entities to adjust the portfolio of management accounting tools (and if they do, which particular accounting tools and models of management accounting take over). One of the most illustrative examples of how most radical economic transformations may result in minor changes in management accounting practices is Russia. As one of the authors' earlier studies shows (Erokhin et al. 2019), Russia predominantly uses traditional methods of management accounting that barely meet the requirements of the contemporary business environment. These methods are based on comparing actual results with standard values, identifying, and analyzing deviations, and taking measures to level out unfavorable deviations. Most Russian companies use budgets to manage their costs, i.e., they focus on cost containment rather than on cost reduction.

This study aims to bridge the gap between the short-term orientation on costs and profits and the long-term vision of sustainable development and growth by elaborating the model of management accounting adapted to the process-based management system. To achieve this objective, the authors attempt to reveal the reasons for the transition of companies to the model of process-based management accounting, summarize business processes commonly adapted by Russian companies, prospect the methods of management accounting that might improve organizational efficiency, and construct the model of management accounting which could be efficient under the conditions of the process management system. In a practical way, the authors provide a comprehensive assessment of management accounting tools and models most widely applied in the transformative economic environment. In terms of the potential theoretical contribution to the literature, this study projects the ways in which the use of management accounting tools can be studied considering the transition from the short-term orientation on costs and profits to the long-run vision of stable and sustainable development and growth of a business.

The remainder of the paper is structured as follows. Section 2 overviews the conceptual framework of the study along the five pathways: the transformation of management accounting tools, implementation of activity-based costing in various sectors, business process modeling, the influence of various macroeconomic factors on business modeling,

transformations of managers' information needs, and formation of new planning and control mechanisms. The approach to conducting the study is elaborated in Section 3. In Section 4, the authors present the findings and discuss them in relation to business processes, management accounting models, and trends in using management accounting tools. Section 5 concludes the paper by summarizing findings, outlining limitations, and projecting potential implications of the findings to future studies and policies.

2. Conceptual Framework

It is commonly accepted that combinations of management techniques and management accounting tools improve the performance of organizations according to specific strategic priorities (Chenhall and Langfield-Smith 1998b; Varaniūtė et al. 2022). Companies are not committed to applying any one management system and prefer more flexible forms of management. Changing management systems need mechanisms of information support—this pattern facilitates the management accounting pattern used in this study. According to Malmi and Granlund (2009) and Du et al. (2018), existing theories of management accounting are unable to provide real support to practitioners. Due to the specifics of operating in a transitional market environment, individual transition economies need to adjust the provisions of general management accounting theory to local circumstances and adapt management accounting tools to the specifics of companies' functioning.

The conceptual framework of the study involves the following narratives:

- Transformation of management accounting tools (Kaplan and Johnson 1987; Burns and Scapens 2000; Smith et al. 2005; Ezzamel et al. 2008; Nagar and Yu 2014; Butler and Ghosh 2015; Davison 2015; Schleicher and Walker 2015; Andreassen 2020; Chut 2020; Varzaru 2022);
- Implementation of activity-based costing in various sectors (Brewer 1998; Nüttgens et al. 1998; Bromwich and Hong 1999; Bevilacqua et al. 2009; Tai et al. 2015; Kaiser 2019; Tsai et al. 2019; Duran and Afonso 2020; Tran and Tran 2022);
- Business process modeling and the formation of the concept of the business model under the influence of various macroeconomic factors (Magretta 2002; Smith and Fingar 2003; Scheer et al. 2005; Tomaskova and Weber 2020; Panduwinasari et al. 2021; Entringer et al. 2021);
- Transformations of managers' information needs (Anderson and Lanen 1999; Azeroual and Theel 2018; Szukits 2022);
- Formation of new planning and control mechanisms (Chenhall and Langfield-Smith 1998a; Ellwein et al. 2019; Oluyisola et al. 2022; Herrmann et al. 2022).

The essential theoretical and practical significance of the development of management accounting methodology in the context of organizational control and efficiency is shown by Otley (1980). In this context, the results of studies on the role of communication in decision-making systems based on management accounting (Jönsson 1998), as well as the identification of the role of management accounting in the development of performance evaluation systems (Chenhall and Langfield-Smith 1998a) stand out. The genesis and prospects for further development of management accounting are considered by Scapens (2006), Johansson and Siverbo (2009), Burritt and Schaltegger (2010), Busco and Scapens (2011), Parker (2012), Babich and Mityuchenko (2016), and Bakhsh et al. (2019).

The most common form of business organization in Russia is the functional one that is used in various modifications such as simple, complex, and linear functional. At the same time, a number of studies show a higher efficiency of other forms and tools of management. Thus, according to Pulic (2000), Schaltegger et al. (2022), and Varaniūtė et al. (2022), the existing accounting system can no longer meet the requirements of modern companies, because the core of the modern business is not cost, but value creation. The information provided by the core economic function by measuring the effectiveness of value creation is crucial to the successful management of intellectual assets. This underlines the effectiveness of process-based management.

It should be noted that businesses may use different management accounting models in different circumstances (Pham et al. 2020). Islam and Hu (2012) found that no single type of organizational structure applies equally and universally to all organizations. Rather, the appropriateness of a particular management accounting and control system depends on the organization's ability to adapt effectively to the environment (Ojra 2014; Turner et al. 2017). The influence of external factors on management accounting tools is also demonstrated by Anderson and Lanen (1999) and Bobryshev et al. (2021).

Process-based structures have some obvious advantages over linear-functional structures. In process management, information is grouped in the context of business processes, subprocesses, and types of work and operations. It allows for calculating costs and results of business activity by cost centers if they are associated with its business processes. The process-based approach in corporate management is based on the concept of added value, which provides for the differentiation of business processes in accordance with the typical elements of the value chain that forms the added value. This ensures the identification of business processes that add and do not add value and is applied to make decisions on removing and outsourcing those business processes that do not add value. Information on business process costs is also a necessary element for making strategic management decisions (Langfield-Smith 2008).

3. Materials and Methods

The study applies a comprehensive approach to identify the patterns of use of management accounting tools in process-based management which includes analysis of literature sources (stage 1), conducting an expert survey of respondents (stage 2), and studying the accounting documents of Russian companies (stage 3). Stage 1 incorporated the analysis of the sources carried out to identify the existing groundwork in the researched area. At stage 2, the authors applied the quantitative method of expert survey to identify the most common reasons for companies to move to a model of management accounting by business processes, methods of management accounting that organizations use to improve organizational efficiency, as well as the classification of business processes made by Russian enterprises. To ensure the comparability of respondents' answers, a scale from 1 (the parameter is not minor importance) to 5 (a very important parameter) was applied. In order to expand the geographical coverage of respondents and optimize the data processing, the survey was conducted in an online format (Google forms of questionnaires were forwarded to respondents by e-mail). Similarly, respondents returned completed questionnaire forms by e-mail to the survey organizers. The study involved seven firms operating in four regions of Southern Russia: Stavropol, Krasnodar, Rostov, and Dagestan. The firms are engaged in the production of boilers for central and autonomous heating. The respondents were differentiated by three contexts:

- To reflect the specifics of the application of management accounting tools, the authors surveyed the companies in which the business process management system is implemented (four companies), the system is being implemented at the moment (one company), and the system of process-based management is not applied (two companies).
- In order to reflect the diversity of organizational features and management culture, the study involved companies, that have operated on the market for over 30 years (two companies), for 10 to 30 years (three companies), and up to 10 years (two companies).
- One of the seven respondents was a microenterprise (less than fifteen employees). There were also three small firms (15–100 employees), and three medium-sized companies (101–250 employees). No large enterprises (over 251 employees) were considered. The classification criteria were taken from the Federal Law of the Russian Federation "On the Development of Small and Medium Entrepreneurship in the Russian Federation".

A total of 53 respondents were surveyed, representing senior management personnel (12 people), accountants (27 people), and middle-level managers (14 people). The respondents were asked about the use of management accounting tools under conditions of applying the process-based management concept in three periods: retrospective (expe-

rience of using process-oriented management tools in the past); present (current use of tools); intention to use certain management accounting tools or to introduce new ones as process-oriented management develops in the company.

At stage 3, the authors studied a set of accounting reports, registers, and primary accounting documents to identify the most effective model of management accounting in terms of the process management system. The array comprised seven enterprises. The surveyed documents included a current chart of accounts, quarterly accounting reports, production reports for basic production costs, as well as overhead allocation sheets, calculation sheets on the calculation of the actual cost of three boiler modifications for central and autonomous heating (KSUV-80, KSUV-100, KSUV-300). The reference period is 2015–2020.

4. Results and Discussion

4.1. Business Processes

In terms of business processes, the authors added the attributes of the classification of business processes and proposed new classification groups. The most common is the classification of business processes by the degree of impact on the creation of added value. According to it, there is a distinction between core business processes, auxiliary business processes, and management business processes. The survey results allowed the authors to make optimizations to the structure of business processes. The optimized framework included business processes as identified by over 70% of respondents (Table 1).

Table 1. Structure of business processes in boiler manufacturing companies.

Main Business Processes	Relative Share, %	Auxiliary Business Processes	Relative Share, %
Purchasing	92.2	Repair of gas burners	75.2
Production of boilers for central and autonomous heating	100.0	Production of auxiliary devices	74.1
Sales	100.0	Technical control	85.4
Maintenance and repair of boilers	89.1	Boiler assembly/disassembly	80.6
Dismantling and disposal of boilers for central and autonomous heating	78.8	Technical (warranty) maintenance and repair of fixed assets	71.2
Management of financial and material resources	89.4	Transport service	76.8
Information resources management	70.6	Process and production automation	72.3
Human resources management	72.5	Capital construction	70.4
Environment program management	70.2	Research and advanced development	72.1
External relations management	70.1		

Source: authors' development.

The study also identified additional classification attributes that can be used to differentiate business processes. According to respondents, these are business processes that are amenable and not amenable to digitalization. Among business processes amenable to digitalization, the study also considers those fully automated and those partially automated. It is also important to distinguish between business processes involved in adding value and those not involved in adding value. The presented classification allows for developing data on the costs and results by business processes of the economic entity, which are cost centers. Relying on the respondents' recommendations, the following process structure is recognized as being the most suitable for boiler manufacturing (Table 2).

Table 2. Types of business processes in boiler manufacturing.

Levels of Business Processes	Types of Business Processes	Cost Centers (Responsibility Centers for Business Processes)
Core business processes (operational business processes)	Research and advanced development	Design engineering department; trial production; testing laboratory
	Purchasing	Logistics department; stock bank
	General business processes	Burner production department; injector production; production of temperature sensors; manufacture of traction sensors and igniters; manufacture of paronite gaskets; boiler blanks production workshop; boiler shell production; framing; auxiliary components; heat exchanger production; boiler assembly shop; test bench; manufacture of other products
	Sales	Sales department
	Maintenance and repair	Aftersales department
	Disposal	Aftersales department
Auxiliary business processes (business processes in auxiliary activities)	Repair of gas burners	Gas burner maintenance
	Transport service	Transport department
	Technical control	Technical control department
	Boiler assembly/disassembly	Assembly/disassembly department
	Process and production automation	Instrumentation and automation department
	Production of auxiliary devices	Tool shop department
	Maintenance and repair	Department of warranty maintenance and repair of fixed assets
	Capital construction	Department of capital construction
Corporate management	Management of financial and material resources	Accounting department
	Information resources management	Economic planning department
	Human resources management	Human resources office
	Environment program management	Legal department
	External relations management	Administrative services

Source: authors' development.

The study showed that experts of boiler manufacturing companies use only the most proven and widespread tools and do not want to implement innovative management accounting systems. The respondents obviously underestimated some technologies and tools. This was also evidenced by the heterogeneity of evaluations in different focus groups. When it comes to the experience of using management accounting tools, 46.7% of respondents mentioned the normative method of cost accounting. At the same time, the respondents noted a decrease in the popularity of this tool.

4.2. Standalone and Integrated Management Accounting Models

One of the most important methodological problems in the development of management accounting for business processes is the development of a set of accounts and corresponding entries to calculate the cost of business processes and identify the financial

result of their implementation. For this purpose, Russian companies use two models of the management accounting system: standalone and integrated.

The essence of the integrated model consists of the fact that the same system of accounts is used for financial accounting and management accounting, i.e., accounts with balances refer to two accounting systems at the same time. In the case of recording commercially sensitive information, only balances are reflected in financial accounting accounts, while business transactions are disclosed in the management accounting system. Management accounting data are integrated into financial accounting and vice versa by means of special collective-distributive accounts.

Compared to integrated accounting, the standalone accounting system is more flexible and productive. The standalone accounting system involves so-called "screen accounts", while costs are grouped by economic elements in financial accounting and by calculation items in management accounting.

The accounting functions of management accounting are part of financial accounting in an integrated system that allows for the use of two systems of accounts, while financial and management accounting are closed. Financial and management accounting in this case is kept independently of each other which consequently can lead to different financial results.

The respondents found that among the companies that implemented business process management systems, 66.7% use a standalone model of management accounting, and only 33.3% use an integrated model. Experts concluded that the standalone model is more appropriate for companies that use innovative management technologies and have operated on the market for a long time. Thus, among the companies operating for over 30 years, 62.4% of experts noted the expediency of using the standalone model. The larger the organization, the more likely it is to use the standalone model of management accounting, which is more labor-intensive and requires more resources (Table 3).

Table 3. Common model of management accounting in different categories of companies (according to the results of experts' survey).

Parameter	Company Categories	Management Accounting Model		
		Standalone Model	Integrated Model	No Managing Accounting Performed
Implementation of the model	Companies with implemented process-based management system	66.7	33.3	0.0
	The system is being implemented	11.2	76.4	12.4
	No process-oriented management system is implemented	12.4	44.7	42.9
Years in the market	Over 30 years	62.4	29.8	7.8
	10–30 years	33.9	53.7	12.4
	Less than 10 years	5.7	77.4	16.9
Size of enterprise	Microenterprises	5.4	64.9	29.7
	Small companies	22.8	62.7	14.5
	Medium-sized companies	27.1	50.8	22.1

Source: authors' development.

The choice of the management accounting model determines not only the methodological and organizational aspects of business activities but also their conceptual foundations. Among the advantages of the standalone management accounting model, Erokhin et al. (2019), Alam and Hossain (2021), Oyewo (2020), Duci (2021), Dalal (2022), Bauchadze (2022), and Asiedu and Opoku (2022) emphasized the ability to accumulate an information base,

and not only to group the available data according to new features (qualitative difference of the model from financial accounting). The standalone model provides for the need to group information on business processes solely using the free chart of account items, which avoids difficulties with coding and the formation of offset entries when using the same accounts in financial accounting and management accounting. In turn, the arguments in favor of using an integrated accounting model are based on the statement about the unity of the accounting system and a multitude of information requests from various users (demonstrated by Thong (2017), Ponomareva (2018), Haghighi et al. (2019), and Liu (2022)). According to the current study, the authors allow the possibility of using both a standalone and an integrated management accounting model, since the choice of the most appropriate management accounting system is individual for each economic entity. As shown by the survey results (Table 3), such a choice should be based on such parameters as years in the market and the implementation of the model of accounting and management technologies.

The authors propose using active accounts in the context of business process groups (accounts 22: core business processes, 27: management processes, 24: auxiliary business processes, 06: development business processes). The debit of these accounts records the costs of implementing business processes, while the credit records the write-off of the cost of processes and subprocesses. The authors recommend using account 93: selling and account 95: financial results for recoding independent financial results. Account 93: selling is an active and passive account, the credit of the account calculates revenues, and the debit of the account records the write-off of the cost of the implemented business processes by sub-accounts. Account 95: financial results show profit or loss from business processes implementation. With this management accounting model, the accumulation of information on the costs associated with the business processes implementation in separate synthetic accounts strengthens the analytical functions of the entire management system, due to the separation of information flows between financial and management accounting.

In case the management accounting in an organization is not an independent subsystem of accounting, the integrated model of accounting should apply. It provides for the development of analytical capabilities of the existing synthetic accounts. Then, all business processes are independent calculation objects. The account 20: core production records business processes, the account 23: auxiliary production records auxiliary processes, while accounts 08: development business processes and 26: management Processes record management processes. The debit of these accounts calculates the costs of the relevant business processes implementation, and the credit records writing-off of these costs to the accounts of financial results, which allows to determine the amount of the cost of basic, auxiliary, developing business processes, and management processes. Analytical accounting is maintained in the context of the types of products manufactured, work performed, and services rendered by the main business processes. The proposed accounting system will significantly decrease the burden on overhead accounts, as well as the distorting effect that distributional costs have on costing objects (products, works, and services). The proposed variable accounting model (integrated and standalone) is universal and can be used in any manufacturing enterprise (Figure 1).

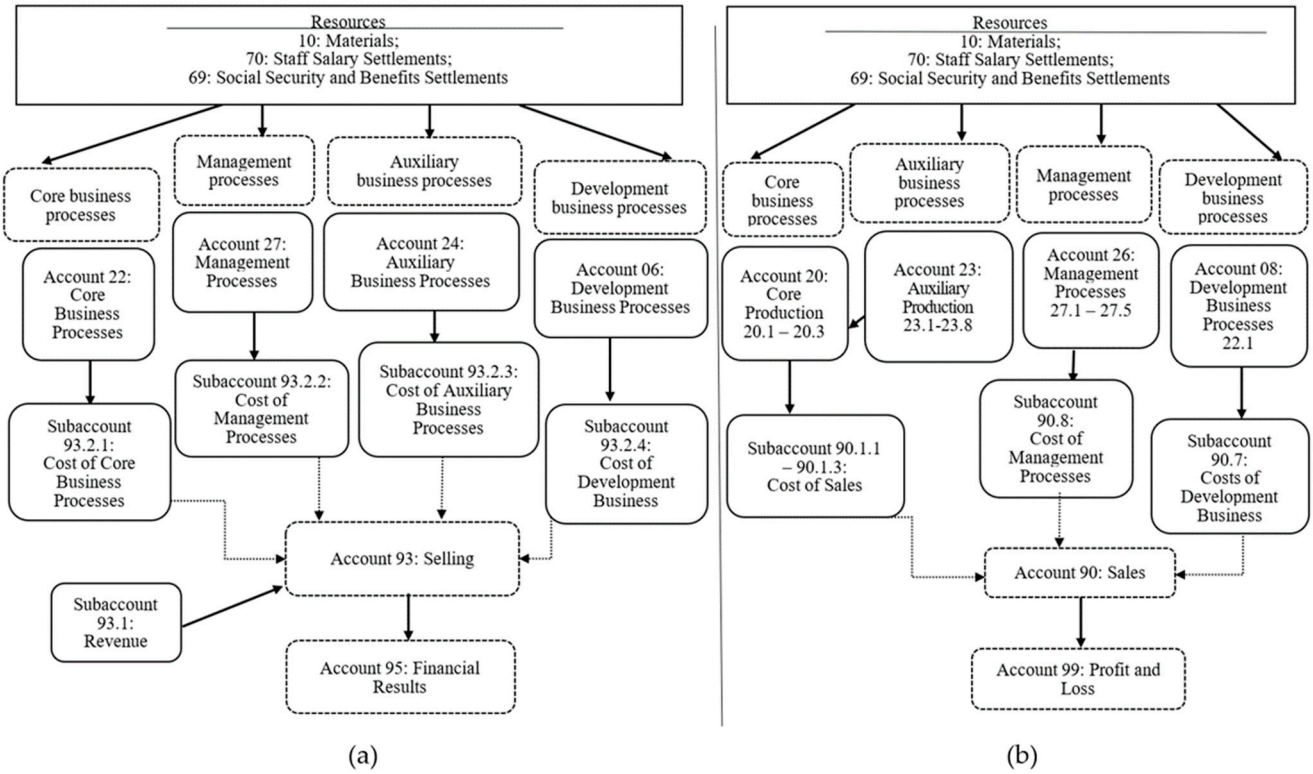


Figure 1. Model of accounting support in the process-based management accounting system: (**a**) Version 1; (**b**) Version 2. Source: authors' development.

4.3. Current Uses and Future Trends

According to the survey, the longer a company operates on the market, the more likely it is to apply management accounting. Conversely, young companies more often refuse to implement management accounting tools. The integrated model is more often used by organizations at the stage of transformation, when a new management technology is being introduced, or when a full-fledged system of management accounting is being implemented. Among promising trends, 48.9% of the respondents named drawing up the company's business model, 47.7% of the respondents named economic value added, and 47.3% named strategic management accounting (Table 4). The latter finding agrees with Rigby and Bilodeau (2018) who ranked strategic planning among the top strategic management tools, particularly those that are gaining popularity. Therefore, this study also emphasizes the trend of increasing popularity of strategy-focused management accounting tools.

Another extensively used tool is budgeting, which is confirmed by Covaleski and Dirsmith (1983), Abernethy and Brownell (1999), and Brownell (1983). The respondents referred to the balanced scorecard and activity-based costing as the most popular technologies of management accounting (53.8% and 49.4%, respectively). The prevalence of this tool is demonstrated by diverse studies for various regulation and administrative environments (for example, see Martinsons et al. (1999), Libby et al. (2004), Qu and Cooper (2011), and Kaplan and Norton (1992)).

Table 4. Experience of using management accounting tools (according to the results of experts' survey).

Management Accounting Tools	Used Previously	Currently in Use	To Be Used in the Future
Budgeting	25.6	46.5	27.9
Forecasting	17.9	46.4	35.7
Strategic accounting	16.2	36.5	47.3
Standard cost method	46.7	33.3	20.0
Direct costing	19.0	36.9	24.1
Total quality management *	20.7	43.9	35.4
Calculation of value added	18.9	45.3	35.8
Economic value added	20.5	31.8	47.7
Balanced scorecard	15.1	53.8	41.1
Activity-based costing	13.9	49.4	36.7
Management by responsibility centers	16.8	44.2	38.9
Management accounting	16.7	47.0	36.4
Management analysis	18.7	44.9	36.4
Key performance indicators	26.3	38.6	35.1
CVP analysis (break-even analysis)	27.7	37.3	34.9
Drawing up a business model of the enterprise	14.9	36.2	48.9
Production accounting and issues of calculating the cost of production	40.9	40.9	18.2
Just-in-time system *	20.8	47.2	32.1

Note: * = in terms of cost accounting and cost calculation. Source: authors' development.

5. Conclusions

As shown by the study, the main reason for the transition to process-based management is a shift in the focus of managers' attention from costs to the product value creation and value of a company as a whole and a consequent need to calculate the costs and results of an economic entity by cost centers and processes that form the added value in accordance with the elements of the value chain. In the study, the authors added new features of business process classification and proposed new classification groups (in terms of the possibility of digitalization and added value), and proposed the optimal structure of the core, auxiliary, and controlling business processes on the example of boiler manufacturers in Russia. The main focus of this article is the study of the most preferred management accounting tools. In the experts' survey, the respondents defined the normative method of cost accounting and cost as the most common tool in the past. A total of 46.7% of the experts surveyed had experience using this method. A total of 53.8% and 49.4% of respondents considered the balanced scorecard and activity-based costing to be the most rapidly spreading tolls at present. Management accounting of enterprise business model (48.9%), economic value added (47.7%), and strategic management accounting (47.3%) were considered the most promising instruments of the future.

Among the practical implications of the above findings is the revealing and assessment of management accounting tools, which economic entities can use to improve their performance in the transition economy. In addition, the study provides insight into the use of standalone and integrated management accounting models. Specifically, the authors suggest choosing between the models based on such parameters as years in the market and the implementation of the model of accounting and management technologies. Replicating the approach and the findings in sectors other than processing industries, such as agriculture, banking, retail, and information technology may allow scholars to expand and identify cross-industry variables that may further enhance insight into the role of management accounting in organizational change when implementing process-based management.

The potential theoretical contribution of the study to the body of academic literature on management accounting consists in revealing the areas for future research in terms of evaluating the prospects and dynamics of implementing various management accounting tools amid the transition from the short-term orientation on costs and profits to the long-run vision of stable and sustainable development and growth of a business.

The study cannot avoid limitations. One of the critical methodological problems is the development of a set of accounts and offset entries for calculating the cost of business processes and identifying the financial result of their implementation. The standalone

model emphasized in the study involves the need to group information on business processes exclusively using the free chart of accounts items. Such an approach is justified by the irrationality and difficulties with coding and the formation of offset entries when using the same accounts in the accounting financial and management accounting. The study shows that under this model of management accounting, the accumulation of information about the costs associated with the implementation of business processes in separate synthetic accounts enhances the analytical functions of the entire management system, due to the separation of information flows between financial and management accounting. Overcoming the limitations of using the standalone model for the benefit of business entities in a transition economy is one of the potential research themes that could be explored.

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References

Abernethy, Margaret A., and Peter Brownell. 1999. The Role of Budgets in Organizations Facing Strategic Change: An Exploratory Study. *Accounting, Organizations and Society* 24: 189–204. [CrossRef]

Alam, Md. Saiful, and Dewan Mahboob Hossain. 2021. Management Accounting in the Era of Digitalization. *The Journal of Industrial Distribution and Business* 12: 1–8. [CrossRef]

Anderson, Shannon W., and William N. Lanen. 1999. Economic Transition, Strategy and the Evolution of Management Accounting Practices: The Case of India. *Accounting, Organizations and Society* 24: 379–412. [CrossRef]

Andreassen, Roy-Ivar. 2020. Digital Technology and Changing Roles: A Management Accountant's Dream or Nightmare? *Journal of Management Control* 31: 209–38. [CrossRef]

Asiedu, Michael Amoh, and Mustapha Osman Opoku. 2022. A Review of Multi-Theoretic Determinants of Strategic Management Accounting Information Disclosure. *International Journal of Social Science and Human Research* 12: 6032–43. [CrossRef]

Azeroual, Otmane, and Horst Theel. 2018. The Effects of Using Business Intelligence Systems on an Excellence Management and Decision-Making Process by Start-Up Companies: A Case Study. *International Journal of Management Science and Business Administration* 4: 30–40. [CrossRef]

Babich, Oksana V., and Lyudmila S. Mityuchenko. 2016. Role of Accountability Management in Activity of Industrial Enterprises. *International Review of Management and Marketing* 6: 1–6.

Bakhsh, Allah, Zeeshan Mahmood, and Sana Chaudhry. 2019. The Adoption of Management Accounting Practices (Maps) in Small and Medium Enterprises (SME's) of Pakistan. *Journal of Accounting and Finance in Emerging Economies* 5: 243–60. [CrossRef]

Bauchadze, Besik. 2022. Trends in Development of Management Accounting in Georgia. *International Journal of Innovative Technologies in Economy* 38: 1–4. [CrossRef]

Bevilacqua, Maurizio, Filippo Emanuele Ciarapica, and Giancarlo Giacchetta. 2009. Business Process Reengineering of a Supply Chain and a Traceability System: A Case Study. *Journal of Food Engineering* 93: 13–22. [CrossRef]

Bobryshev, Alexey N., Genaz S.-H. Dudaev, Natalya F. Krivorotova, Maria A. Vahrushina, and Lyudmila Meshcheryakova. 2021. Features of Professional and Psychological Training of an Accountant-Analyst for Making Management Decisions in an Economic Crisis. In *The Challenge of Sustainability in Agricultural Systems. Lecture Notes in Networks and Systems*. Edited by Aleksei V. Bogoviz. Cham: Springer, vol. 2, pp. 317–27. [CrossRef]

Brewer, Peter C. 1998. National Culture and Activity-Based Costing Systems: A Note. *Management Accounting Research* 9: 241–60. [CrossRef]

Bromwich, Michael, and Cheolkyu Hong. 1999. Activity-Based Costing Systems and Incremental Costs. *Management Accounting Research* 10: 39–60. [CrossRef]
Brownell, Peter. 1983. Leadership Style, Budgetary Participation and Managerial Behavior. *Accounting, Organizations and Society* 8: 307–21. [CrossRef]
Burns, John, and Robert W. Scapens. 2000. Conceptualizing Management Accounting Change: An Institutional Framework. *Management Accounting Research* 11: 3–25. [CrossRef]
Burritt, Roger L., and Stefan Schaltegger. 2010. Sustainability Accounting and Reporting: Fad or Trend? *Accounting, Auditing & Accountability Journal* 23: 829–46. [CrossRef]
Busco, Cristiano, and Robert W. Scapens. 2011. Management Accounting Systems and Organisational Culture: Interpreting Their Linkages and Processes of Change. *Qualitative Research in Accounting and Management* 8: 320–57. [CrossRef]
Butler, Stephen, and Dipankar Ghosh. 2015. Individual Differences in Managerial Accounting Judgments and Decision Making. *British Accounting Review* 47: 33–45. [CrossRef]
Chenhall, Robert, and Kim M. Langfield-Smith. 1998a. Factors Influencing the Role of Management Accounting in the Development of Performance Measures within Organizational Change Programs. *Management Accounting Research* 9: 361–86. [CrossRef]
Chenhall, Robert, and Kim M. Langfield-Smith. 1998b. The Relationship between Strategic Priorities, Management Techniques and Management Accounting: An Empirical Investigation Using a Systems Approach. *Accounting Organizations and Society* 23: 243–64. [CrossRef]
Chu, Weimei. 2021. On the Transition from Financial Accounting to Management Accounting in the Era of Artificial Intelligence. *Advances in Vocational and Technical Education* 3: 78–82. [CrossRef]
Chut, Maksym. 2020. Modern Tools for Management Accounting and Their Role in Ensuring the Total Value of the Enterprise. *Three Seas Economic Journal* 1: 153–58. [CrossRef]
Covaleski, Mark A., and Mark W. Dirsmith. 1983. Budgeting as a Means for Control and Loose Coupling. *Accounting, Organizations and Society* 8: 323–40. [CrossRef]
Dalal, Rewan Kumar. 2022. Management Accounting Practices and Organizational Performance. *Problems and Perspectives in Management* 20: 33–43. [CrossRef]
Davison, Jane. 2015. Visualising Accounting: An Interdisciplinary Review and Synthesis. *Accounting and Business Research* 45: 121–65. [CrossRef]
Dobroszek, Justyna, Ewelina Zarzycka, Alina Almasan, and Cristina Circa. 2019. Managers' Perception of the Management Accounting Information System in Transition Countries. *Economic Research-Ekonomska Istraživanja* 32: 2798–817. [CrossRef]
Du, Bingxin, Jiaxu Jiang, and Xiuzhi Ji. 2018. Research on the Development of Management Accounting in Small and Medium-Sized Enterprises in China. *Open Journal of Accounting* 7: 19–24. [CrossRef]
Duci, Ejona. 2021. The Relationship between Management Accounting, Strategic Management Accounting and Strategic Cost Management. *Academic Journal of Interdisciplinary Studies* 10: 376. [CrossRef]
Duran, Orlando, and Paulo Sergio Lima Pereira Afonso. 2020. An Activity Based Costing Decision Model for Life Cycle Economic Assessment in Spare Parts Logistic Management. *International Journal of Production Economics* 222: 107499. [CrossRef]
Ellwein, Carsten, Anja Elser, and Oliver Riedel. 2019. Production Planning and Control Systems—A New Software Architecture Connectivity in Target. *Procedia CIRP* 79: 361–66. [CrossRef]
Entringer, Tulio Cremonini, Ailton da Silva Ferreira, and Denise Cristina de Oliveira Nascimento. 2021. Comparative Analysis of the Main Business Process Modeling Methods: A Bibliometric Study. *Gestão & Produção* 28: e5211. [CrossRef]
Erokhin, Vasilii, Dmitry Endovitsky, Alexey Bobryshev, Natalia Kulagina, and Anna Ivolga. 2019. Management Accounting Change as a Sustainable Economic Development Strategy during Pre-Recession and Recession Periods: Evidence from Russia. *Sustainability* 11: 3139. [CrossRef]
Ezzamel, Mahmoud, Hugh Willmott, and Frank Worthington. 2008. Manufacturing Shareholder Value: The Role of Accounting in Organizational Transformation. *Accounting, Organizations and Society* 33: 107–40. [CrossRef]
Gluch, Pernilla, and Henrikke Baumann. 2004. The Life Cycle Costing (LCC) Approach: A Conceptual Discussion of Its Usefulness for Environmental Decision-Making. *Building and Environment* 39: 571–80. [CrossRef]
Haghighi, Reyhaneh, Mohammad Ali Bagherpour Velashani, and Mohammad Javad Saeri. 2019. Establishment of Integrated Accounting Information System in an Emerging Market—Problems and Barriers. *International Journal of Business and Development Studies* 11: 83–97.
Herrmann, Jan-Phillip, Sven Tackenberg, Elio Padoano, and Thilo Gamber. 2022. Approaches of Production Planning and Control under Industry 4.0: A Literature Review. *Journal of Industrial Engineering and Management* 15: 4–30. [CrossRef]
Hiebl, Martin, Birgit Feldbauer-Durstmüller, and Christine Duller. 2013. The Changing Role of Management Accounting in the Transition from a Family Business to a Non-Family Business. *Journal of Accounting and Organizational Change* 9: 119–54. [CrossRef]
Islam, Jesmin, and Hui Hu. 2012. A Review of Literature on Contingency Theory in Managerial Accounting. *African Journal of Business Management* 6: 5159–64. [CrossRef]
Johansson, Tobias, and Sven Siverbo. 2009. Why Is Research on Management Accounting Change Not Explicitly Evolutionary? Taking the Next Step in the Conceptualisation of Management Accounting Change. *Management Accounting Research* 20: 146–62. [CrossRef]

Jönsson, Sten. 1998. Relate Management Accounting Research to Managerial Work! *Accounting, Organizations and Society* 23: 411–34. [CrossRef]
Kaiser, Mark. 2019. The Role of Factor and Activity-Based Models in Offshore Operating Cost Estimation. *Journal of Petroleum Science and Engineering* 174: 1062–92. [CrossRef]
Kaplan, Robert S., and David P. Norton. 1992. The Balanced Scorecard—Measures That Drive Performance. *Harvard Business Review* 70: 71–9.
Kaplan, Robert S., and H. Thomas Johnson. 1987. *Relevance Lost: The Rise and Fall of Management Accounting*. Boston: Harvard Business School Press.
Langfield-Smith, Kim. 2008. Strategic Management Accounting: How Far Have We Come in 25 Years? Accounting. *Auditing & Accountability Journal* 21: 204–28. [CrossRef]
Lasyoud, Alhashmi Aboubaker, Jim Haslam, and Robin Roslender. 2018. Management Accounting Change in Developing Countries: Evidence from Libya. *Asian Review of Accounting* 26: 278–313. [CrossRef]
Libby, Theresa, Steven E. Salterio, and Alan Webb. 2004. The Balanced Scorecard: The Effects of Assurance and Process Accountability on Managerial Judgment. *The Accounting Review* 79: 1075–94. [CrossRef]
Liu, Jun. 2022. Analysis of the Integrated Accounting System of Enterprise Accounting and Statistics in the Big Data Era. *MATEC Web of Conferences* 359: 01032. [CrossRef]
Liu, Rui, Yuqin Wang, and Jing Zou. 2022. Research on the Transformation from Financial Accounting to Management Accounting Based on Drools Rule Engine. *Computational Intelligence and Neuroscience* 2022: 9445776. [CrossRef]
Magretta, Joan. 2002. Why Business Models Matter. *Harvard Business Review* 80: 86–92.
Malmi, Teemu, and Markus Granlund. 2009. In Search of Management Accounting Theory. *European Accounting Review* 18: 597–620. [CrossRef]
Martinsons, Maris, Robert Davison, and Dennis Tse. 1999. The Balanced Scorecard: A Foundation for the Strategic Management of Information Systems. *Decision Support Systems* 25: 71–88. [CrossRef]
Nagar, Venky, and Gwen Yu. 2014. Accounting for Crises. *American Economic Journal: Macroeconomics* 6: 184–213. [CrossRef]
Naranjo-Gil, David, and Frank Hartmann. 2007. Management Accounting Systems, Top Management Team Heterogeneity and Strategic Change. *Accounting Organizations and Society* 32: 735–56. [CrossRef]
Nüttgens, Markus, Thomas Feld, and Volker Zimmermann. 1998. Business Process Modeling with EPC and UML: Transformation or Integration? In *The Unified Modeling Language—Technical Aspects and Applications*. Edited by Martin Schader and Axel Korthaus. Heidelberg: Physica-Verlag, pp. 250–61. [CrossRef]
Ojra, Jafar. 2014. Strategic Management Accounting Practices in Palestinian Companies: Application of Contingency Theory Perspective. Doctoral thesis, University of East Anglia, Norwich, UK.
Oluyisola, Olumide Emmanuel, Swapnil Bhalla, Fabio Sgarbossa, and Jan Ola Strandhagen. 2022. Designing and Developing Smart Production Planning and Control Systems in the Industry 4.0 Era: A Methodology and Case Study. *Journal of Intelligent Manufacturing* 33: 311–32. [CrossRef]
Otley, David T. 1980. The Contingency Theory of Management Accounting: Achievement and Prognosis. *Accounting, Organizations and Society* 5: 413–28. [CrossRef]
Oyewo, Babajide Michael. 2020. Outcomes of Interaction between Organizational Characteristics and Management Accounting Practice on Corporate Sustainability: The Global Management Accounting Principles (GMAP) Approach. *Journal of Sustainable Finance and Investment* 11: 351–85. [CrossRef]
Panduwinasari, Elsya, Nurafni Eltivia, and Aang Afandi. 2021. Business Process Modeling with Cloud Computing Support: A Case Study. *International Journal of Research in Business and Social Science* 10: 512–19. [CrossRef]
Parker, Lee D. 2012. Qualitative Management Accounting Research: Assessing Deliverables and Relevance. *Critical Perspectives on Accounting* 23: 54–70. [CrossRef]
Pavlatos, Odysseas, and Hara Kostakis. 2015. Management Accounting Practices before and during Economic Crisis: Evidence from Greece. *Advances in Accounting, Incorporating Advances in International Accounting* 31: 150–64. [CrossRef]
Pham, Duc Hieu, Thi Huong Dao, and Tien Dung Bui. 2020. The Impact of Contingency Factors on Management Accounting Practices in Vietnam. *The Journal of Asian Finance, Economics and Business* 7: 77–85. [CrossRef]
Ponomareva, Svetlana. 2018. Formation of Systematically Integrated Accounting and the Mechanism of Its Implementation in the System of Quality Management of Business Processes. *Vestnik Universiteta* 7: 104–8. [CrossRef]
Pulic, Ante. 2000. VAIC™—An Accounting Tool for IC Management. *International Journal of Technology Management* 20: 702–14. [CrossRef]
Qu, Sandy Q., and David J. Cooper. 2011. The Role of Inscriptions in Producing a Balanced Scorecard. *Accounting, Organizations and Society* 36: 344–62. [CrossRef]
Rigby, Darrell, and Barbara Bilodeau. 2018. *Management Tools and Trends*. London: Bain and Company, Inc.
Scapens, Robert W. 2006. Understanding Management Accounting Practices: A Personal Journey. *The British Accounting Review* 38: 1–30. [CrossRef]
Schaltegger, Stefan, Katherine Christ, Julius Wenzig, and Roger Burritt. 2022. Corporate Sustainability Management Accounting and Multi-Level Links for Sustainability—A Systematic Review. *International Journal of Management Reviews* 24: 480–500. [CrossRef]

Scheer, August-Wilhelm, Oliver Thomas, and Otmar Adam. 2005. Process Modeling Using Event-Driven Process Chains. In *Process-Aware Information Systems: Bridging People and Software through Process Technology*. Edited by Marlon Dumas, Wil M. P. van der Aalst and Arthur H. M. ter Hofstede. New York: Wiley, pp. 119–44. [CrossRef]

Schleicher, Thomas, and Martin Walker. 2015. Are Interim Management Statements Redundant. *Accounting and Business Research* 45: 229–55. [CrossRef]

Smith, Howard, and Peter Fingar. 2003. *Business Process Management: The Third Wave*. Tampa: Meghan-Kiffer Press.

Smith, Julia, Jonathan Morris, and Mahmoud Ezzamel. 2005. Organisational Change, Outsourcing and the Impact on Management Accounting. *The British Accounting Review* 37: 415–41. [CrossRef]

Szukits, Anges. 2022. The Illusion of Data-Driven Decision Making—The Mediating Effect of Digital Orientation and Controllers' Added Value in Explaining Organizational Implications of Advanced Analytics. *Journal of Management Control* 33: 403–46. [CrossRef]

Tai, Yi-Hui, Wen-Ying Wang, and Jerome Katrichis. 2015. The Impact of Improved Costing Methods on Customer Portfolio Management Activities. In *Advances in Management Accounting*. Edited by Marc J. Epstein and John Y. Lee. Bingley: Emerald Group Publishing Limited, pp. 259–87. [CrossRef]

Thong, Vu Quoc. 2017. Factors Defining the Effectiveness of Integrated Accounting Information System in ERP Environment—Evidence from Vietnam's Enterprises. *Ho Chi Minh City Open University Journal of Science* 7: 96–110. [CrossRef]

Tomaskova, Hana, and Gerhard-Wilhelm Weber. 2020. Approaches Combining Methods of Operational Research with Business Process Model and Notation: A Systematic Review. *PeerJ Computer Science* 6: e301. [CrossRef]

Tran, Uyen Tu, and Hien Thi Tran. 2022. Factors of Application of Activity-Based Costing Method: Evidence from a Transitional Country. *Asia Pacific Management Review* 27: 303–11. [CrossRef]

Trukhachev, Vladimir, Alexey Bobrishev, Elena Khokhlova, Valentina Ivashova, and Olga Fedisko. 2019. Personnel Training for the Agricultural Sector in Terms of Digital Transformation of the Economy: Trends, Prospects and Limitations. *International Journal of Civil Engineering and Technology* 10: 2145–55.

Tsai, Wen-Hsien, Shu-Hui Lan, and Cheng-Tsu Huang. 2019. Activity-Based Standard Costing Product-Mix Decision in the Future Digital Era: Green Recycling Steel-Scrap Material for Steel Industry. *Sustainability* 11: 899. [CrossRef]

Turner, Michael J., Sean A. Way, Demian Hodari, and Wiarda Witteman. 2017. Hotel Property Performance: The Role of Management Accounting. *International Journal of Hospitality Management* 63: 33–43. [CrossRef]

Varaniūtė, Viktorija, Ineta Žičkutė, and Akvilė Žandaravičiūtė. 2022. The Changing Role of Management Accounting in Product Development: Directions to Digitalization, Sustainability, and Circularity. *Sustainability* 14: 4740. [CrossRef]

Varzaru, Anca Antoaneta. 2022. Assessing Digital Transformation of Cost Accounting Tools in Healthcare. *International Journal of Environmental Research and Public Health* 19: 15572. [CrossRef] [PubMed]

Wanderley, Claudio, and John Cullen. 2013. Management Accounting Change: A Review. *Revista Base (Administração e Contabilidade) da UNISINOS* 10: 294–307.

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