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Management Accounting Model for Small Industrial Enterprises

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INTRODUCTION

In historical development, accounting has performed and continues to perform several important functions, of which the provision of information as a management tool is of the greatest importance for market conditions. It should therefore be developed in line with the development of management methods and their information requirements (Štubňová, 2005).

A prerequisite for effective management is the existence of a tool that can optimally solve problems. This tool in the corporate sphere is an information system. According to M. Majtan (2005), the term information system means a system consisting of people, technical and software mean to ensure the collection, transmission, storage, selection, processing, distribution and presentation of information for decision-making so that the manager can perform his management functions in all components of the control system. According to B. Soukupová (Soukupová, 2007; Soukupová et al., 2010), the company's information system is a system of records of economic phenomena taking place in the company, from which the information needed in the process of business management is created. The role of accounting is to provide the necessary economic information for financial management and decision-making. This information is of the following nature:

- cognitive, ie. that the records in the accounts of the economic phenomena carried out in value terms make it possible to know the course of the economic activity of the enterprise, and
- manager, ie. that the accounting records summarized in the financial statements are subject to analysis. The results of the analyzes are used to evaluate the course of economic activity, to manage and prepare business decisions, ie. to influence the future development of the company.

On this basis, accounting is, by its nature and focus, the Accounting Information System (UIS), which is part of the company's information system. (Soukupová et al., 2010) According to official management accounting terminology (Managerial accounting – official terminology, 2014), an accounting system is defined as a set of procedures and records of an entity by which transactions are processed in the form of financial records. These systems identify, collect,

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analyze, calculate, classify, record, summarize, and report transactions and other events.

One of the basic ideas that influenced the development of accounting in the last century was the knowledge that the way of displaying the business process needs to be differentiated according to who is the user of accounting information and what decision-making tasks he solves. The basic manifestation of this difference was the division of accounting in advanced market economies into user-friendly subsystems.

According to B. Soukupová (Soukupová, 2007; Soukupová et al.,2010), the basic elements of the accounting information system are:

- financial accounting,
- managerial accounting.

According to the authors, e.g. T. Petřík (2005) and J. Fíbírová, (2015) the basic components of ÚIS are tax accounting, financial accounting and managerial accounting. This difference stems from the differences in the institutional relationship between financial accounting and tax accounting (tax records) in different countries. (www.pef.mendelu.cz) At present, the two subsystems of the accounting information system are strictly separated or overlap. A typical representative of the separation of the two subsystems in the United States of America, where tax accounting is strictly separated from financial accounting and is kept by specialists dealing with tax law (Petřík, 2005).

MANAGEMENT ACCOUNTING MODEL

The intention of the model design was not to cover the whole issue of managerial accounting, due to its broadly conceived content, not only in terms of the subject of the display but also in terms of the methods used to obtain relevant information. The type breakdown of costs used in financial accounting does not fully meet the needs of internal management. The proposed model is focused mainly on the issue of internal management with an emphasis on overhead costs, which are not given sufficient attention in small businesses. Based on these facts, the proposals also focus on the breakdown of costs in financial accounting in terms of specific criteria that will contribute to the management of overhead costs even in small industrial enterprises.

The survey revealed the basic tasks that managerial accounting should perform in small industrial enterprises (Baštincová, 2007):

- Provide information on cost structure, outputs and revenues.
- Provide information for financial accounting, e.g. on the state and change in the state of inventories created by the company's own activity, on its own costs related to assets and services created by its own activity, on the costs of sold services and on administrative and sales costs.
- Provide internal departments with the information necessary for their management, which makes it possible to assess their effectiveness, contribution to the company-wide result of management and can also serve as a basis for remuneration.

- Ensure routine cost control.
- Provide information to decision-making managers, the requirements for which depend on the nature of decision-making tasks and their basic classification, ie. whether these are short-term decision-making tasks, long-term decision-making tasks, or price decisions. Part of this task is to evaluate the effectiveness of these changes.

PROPOSAL FOR COST BREAKDOWN IN FINANCIAL ACCOUNTING

The basic source of information in small industrial enterprises, as the analysis showed, is financial accounting. Small businesses keep their accounts mainly in such a way as to meet the relevant statutory requirements. Financial accounting is regulated by several legal norms. The basic legal norm that regulates accounting in general and applies to all accounting entities, regardless of whether the account in the system of simple or double-entry bookkeeping, whether they are natural or legal persons, whether it is a business or other entity is the Accounting Act, as amended. regulations. In addition to the laws, there are a number of measures issued by the Ministry of Finance, which are updated every year as needed and always published in the Financial Newsletters issued by the Ministry of Finance. One of the basic measures that regulate the method of keeping financial accounts in small industrial enterprises is a measure laying down accounting procedures and a general chart of accounts for entrepreneurs accounting in the double-entry bookkeeping system, as amended.
Financial accounting as a management tool and especially its outputs, formed by financial statements, are criticized for the following reasons:

- financial accounting provides relatively synthetic data,
- the financial statements are affected by tacit reserves and taxation,
- the period between the date of preparation of the financial statements and the submission of its statements is long.

In small companies, financial accounting is kept internally through its own employees, or the management of financial accounting is entrusted to an external entity. In the case of internal financial accounting, the number of employees entrusted exclusively with its management is small. As a result, accounting is not detailed and accounting records are often simple. From the point of view of company management, it is necessary to have detailed data from detailed elaborated analytical records. Analytical records can be provided in the form of analytical accounts for synthetic accounts listed in the general chart of accounts of entrepreneurs accounting in the system of business entities or in another form, for example through inventory cards of tangible and intangible fixed assets, material stock cards, customer balance, etc. When creating analytical accounts for in the case of a synthetic account, accounting units must comply with the criteria defined in the accounting procedures for entrepreneurs, for example, they must ensure the breakdown of costs according to the requirements for quantifying the income tax base, value added, etc. In financial accounting type breakdown of costs. None of the analyzed small industrial enterprises used the created analytical accounts in account class No. 5 to break down individual cost types into direct and indirect costs or fixed and variable costs. Based on the above fact, I consider it necessary from the point of view of the needs of internal organizational settlement to ensure in small industrial enterprises the breakdown of type costs into costs that can be directly attributed to the product or order of the so-called direct costs or indirectly budgeted (scheduled) costs, spent on more and different types of activities, so-called indirect costs. Based on their relation to the production volume, it is appropriate to include direct and indirect costs between fixed and variable costs (Figure 1).

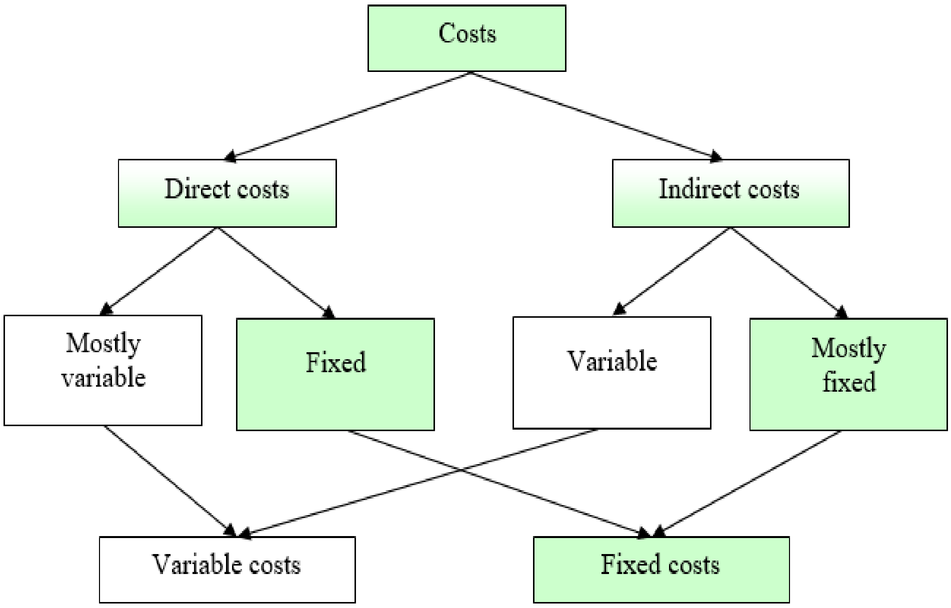

Fig. 1 Relationship between direct, indirect and fixed and variable costs

At the same time, when classifying individual cost types within the analytical records for account class number 5 – Costs, it is necessary to take into account the criterion of their primary consumption so that there is no overlapping of costs that are not materially related, e.g. wage costs would be broken down into analytical records into:

- wages – of production workers,
- masters' salaries,
- wages of overheads,
- payroll administration,
- surcharges and supplements,
- bonuses and bonuses,
- holiday pay,
- other.

Some of the costs that are listed in the general chart of accounts in account class number 5 are considered to be so-called neutral accounting costs in relation to the calculations. These include non-production costs, extraordinary costs and costs that are related to the performance of the business but do not fall within the time period. Examples of neutral accounting costs are given in Table 1.

Table 1 Examples of neutral accounting costs

Type of neutral cost	Examples from account class – Costs
Non-productive – they have no relation to the company's performance	– Other social costs – Net book value of sold intangible fixed assets – Gifts – Creation and settlement of adjustments to inventories – Securities and shares sold – Current income tax payable
Extraordinary – costs that may be related to the performance of the company, but their occurrence is irregular	– Damage (from natural events) – Other damages – Shortages and damage to financial assets
Non-time period – costs related to the company's performance, but manifested in another accounting period	– Contractual fines, penalties and interest on arrears – Other fines, penalties and interest on late payments – Write-off of receivable

Neutral costs should be considered as non-calculable costs or costs outside the time frame within the breakdown of cost elements in financial accounting for management purposes, which should be identified and also accrued within the breakdown of cost elements for management purposes. Non-calculable costs are not included in the own costs of individual services and do not prevent their cycle. Costs that do not fall within the time period must be deferred when they are included in the performance costs themselves, it follows that part of these costs may be reflected in the price of the services.

By respecting the proposed breakdown, it will be possible to identify direct variable costs, direct fixed costs, indirect variable costs, indirect fixed costs, non-calculable costs and costs that need to be accrued directly from financial accounting. However, for optimal monitoring and analysis of costs, it is necessary to assign to each cost the place of origin, responsibility as well as the cause of origin. This can be ensured by cost centers. Examples of documents used to divide indirect costs into individual cost centers are shown in Table 2.

Breakdown of individual cost types according to the relationship to cost centres for primary costs, ie. costs of the centre received from the environment and secondary costs, ie. the costs of the centre received within the framework of in-house clearing from other centres do not need to be secured in small industrial enterprises by means of analytical records within the framework of financial accounting or in-house accounting.

Table 2 Examples of criteria for allocating indirect costs to individual cost centers

Type of costs	Documents for division
Operating substances	- consumption per cost center on the basis of document (expenditure)
Directing material	- consumption per cost center on the basis of a document (expenditure)
Energy consumption	- consumption per cost center by consumption and power input
Overhead pay for ancillary work + statutory social insurance	- assignment of employees to the cost center, or payslip
Depreciation	- according to the allocation of assets to individual cost centers, in the case of special machines used by several centers, the costs directly related to the deployment of machines are therefore also depreciated of these machines to individual centers by means of collected machine hours and their rates
Rent	- by square meters used by the individual cost centers
Property insurance	- according to the allocation of assets to individual cost centers,

The system of monitoring and reporting intra-organizational economic phenomena in the form of an economic clearing sheet (HZH), which is compiled in tabular form outside the accounts, is better suited for small businesses. It follows that only primary costs will be subject to accounting in small industrial enterprises. Secondary costs will be transferred to other cost centres outside the accounts through an economic clearing sheet. Figure 2 shows in a simplified form the possibility of apportioning costs in financial accounting.

Revenues stated in financial accounting in account class 6 – it is also appropriate to break down in more detail according to individual types of services, e.g. revenues for own products, to break down these revenues according to individual products or groups of products.

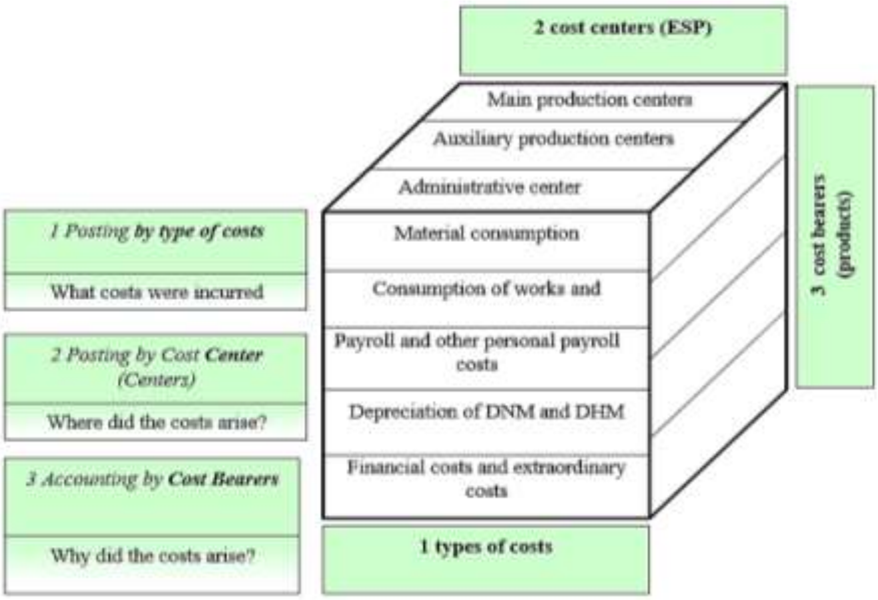

Fig. 2 Proposed breakdown of costs in financial accounting

** the figure does not show the breakdown of costs depending on the production volume*

PROPOSAL OF A COST MANAGEMENT METHOD PRIMARILY FOCUSED ON CENTERS

From the point of view of cost management, it is important not only to find out their real state and identify deviations, but it is also necessary to analyze the cause of their occurrence and the subsequent breakdown according to the responsibility for their occurrence. The in-house departments to which costs are assigned according to responsibility are called responsibility centres. The condition for monitoring costs according to the place of origin and responsibility for their origin is the existence of the economic structure of the company, which is directly related to the organizational structure of the company.

The task of the organizational structure of the company is to define the areas and levels of authority and responsibility of the main managers of the departments in their material form. The economic structure of the company complements the material management tools with the use of motivationally effective value-added tools of responsibility management. The result is an economic structure, the individual elements of the so-called responsibility centres are, to a greater or lesser extent, interested in the achieved value results. In terms of the scope of authority and responsibility and according to the value instruments used, it is possible to distinguish six basic types of responsibility centres: cost, profitable, profitable, investment and expenditure centre.

In small businesses, simple, clear organizational structures are in place, which enables direct management and control. A simpler organizational structure usually means less bureaucracy and lower business management costs. Small businesses often have only one owner or a small number of owners. The owner may entrust the management of the business to a manager, but in most cases, he is directly involved in the day-to-day running of the business. The advantage is the centralization of management, which allows quick response, promotes entrepreneurship and high flexibility of business management. Small businesses are also characterized by a simpler division of labour and a less specialized business structure, which allows for a quick response and adaptation to external changes. Despite the simple structure, less complexity of the production process, mostly narrow range of manufactured products, it is possible to establish at least some division of powers and responsibilities in key areas and in a very small company, through cost centres or other forms of simple but effective controls. The cost centre is the centre with the least degree of delegation of authority and responsibility. Its task is to provide a specified type and volume of performance in achieving the highest possible economy. The economic criterion for evaluating the cost centre is the costs achieved and the difference between the budgeted and the actual costs incurred. (Kemmetmueller, Bogenberger, 2000)

When creating an economic structure in small industrial enterprises, it is necessary to ensure the division of centres according to the nature of the activity into:

- *production centres* whose activities are related to the output produced, both in mainstream and in ancillary production, where they have the character of service centres and transfer their services to the main production centres,
- *administrative centres* whose activities are not related to specific outputs of the current period.

To correctly quantify the actual costs of individual outputs in small industrial enterprises, it is necessary to ensure that direct costs are directly attributed to individual outputs and indirect costs are allocated to cost centres and subsequently to individual outputs based on specific benchmarks, according to causality through internal accounting (Figure 3). The cost accounting in financial accounting must also be adapted to this.

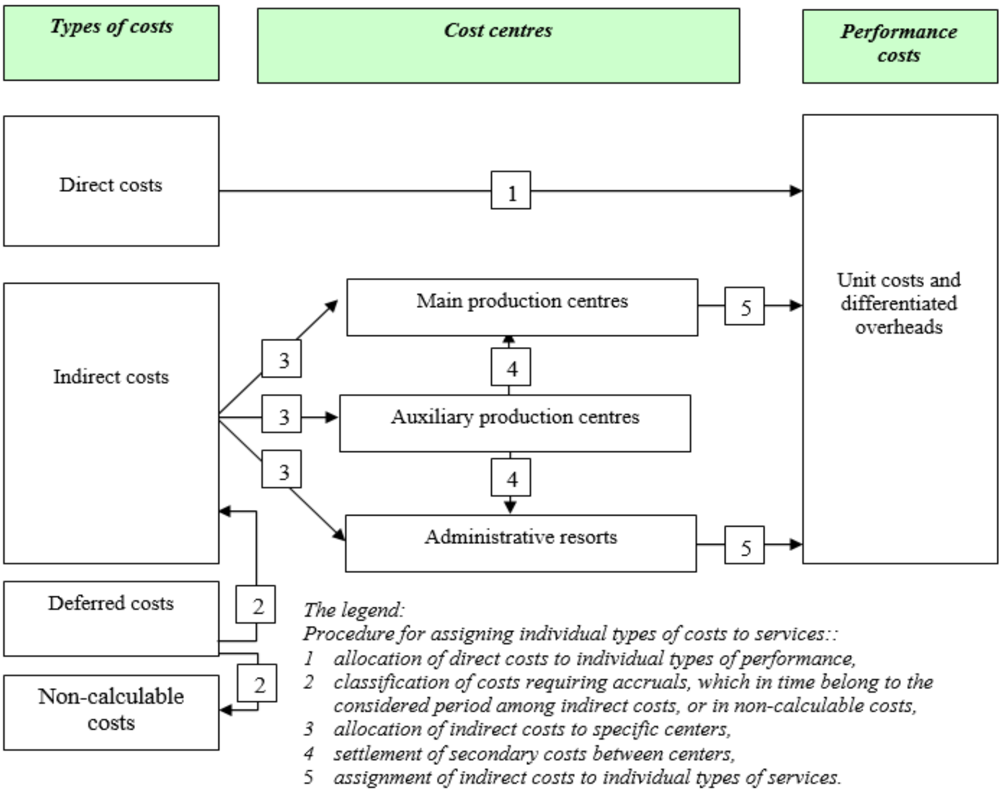

Fig. 3 Intra-organizational cost accounting

Economic clearing sheet – a form of internal accounting in small industrial enterprises

The allocation of direct and indirect costs to individual outputs can be ensured in small industrial enterprises through an economic clearing sheet. With its generally recommended structure, the economic clearing sheet not only contributes to the transparency of centres' cost flows, to the control of centre costs and to the evaluation of their cost-effectiveness but also makes it possible to improve the calculation of performance costs. In small industrial enterprises, it is able to perform the tasks that are provided in medium and large enterprises through internal organizational accounting.

The economic clearing sheet allows:

- reallocate the initial indirect costs to the centres according to the causal principle,
- allocate the secondary costs between the centres (first, the costs of the common centres are transferred to the other business centres and then the costs of the auxiliary production centres are transferred to the main production centres),
- set calculation rates for each centre and activity i.e. set internal prices of services,
- find out how many overheads are incurred in each cost centre,
- provide for insufficient or excessive coverage of central costs, manifested as a deviation between the costs actually incurred (booked) and planned (budgeted),
- calculation of cost-effectiveness indicators suitable for monitoring and evaluating the efficiency of (cost) city centres,
- improve the calculation of costs per unit of calculation by using differentiated surcharges and overhead rates according to the causal principle.

In the economic clearing sheet, which has the form of a Table, the types of costs are listed vertically in the individual rows and the economic centres are listed horizontally in the individual columns. It can be compiled monthly, quarterly, etc.

Sequence of steps in creating an economic clearing sheet:

- Transfer of primary indirect (overhead) costs from financial accounting from account class 5 to the economic clearing sheet. Costs can be transferred to individual HZH items directly from the financial accounting in the event that indirect costs are also recorded for individual cost centres or indirectly if their monitoring is not ensured in the financial accounting for individual cost centres as well. In this case, they are assigned to individual HZH items using reference quantities. As a result, the Center is burdened with the types of costs it has consumed in securing its activities and can influence them.
- Allocation (transfer) of the indirect overheads of the auxiliary centres to the purchasing centres.
- The sum of direct costs and overheads results in production costs, which allows a realistic valuation of work in progress and finished products for financial accounting.
- In the third part of the HZH the schedule bases are given, i. basic relational quantities and quantified surcharges of overhead costs of centres, which are used to allocate overhead costs to calculation units (resulting calculations). In the case of the inclusion of planned costs and actual costs in the HZH, it is possible to compare them to determine the excess or saving of centre costs.

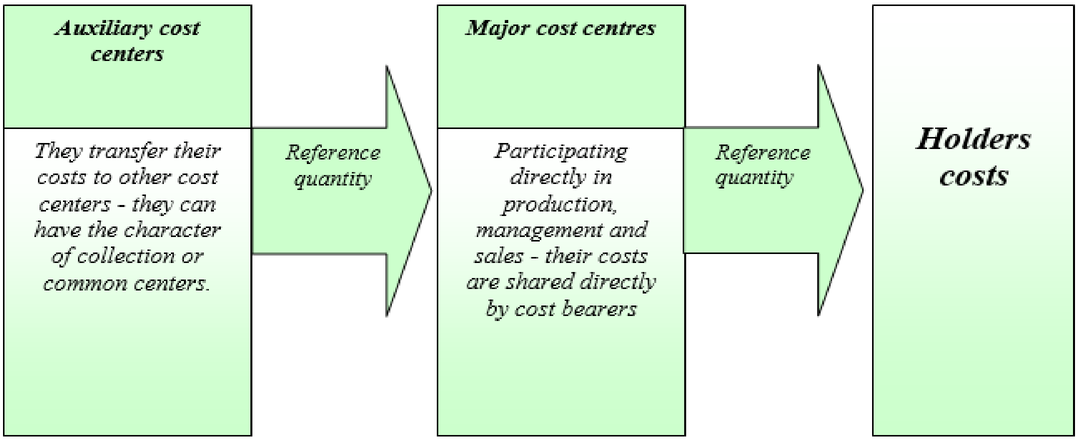

Fig. 4 Method of cost transfer

DESIGN OF MANAGERIAL INCOME STATEMENT

For the needs of determining the efficiency of management of the company as a whole for a given period, for the need to determine the creation of contributory profit and to take measures in the future to ensure its creation in the necessary amount, it is possible to compile a managerial income statement (Table 3).

Table 3 Management income statement

Receipts
– turnover costs
= Period costs
– individual cost accounts of the period
= **Contribution to cover the costs of the period +,-**
+ other revenue accounts - Revenue
+ Profit / – Loss

The first step is to quantify the contributory profit generated for the period. Contribution profit (contribution for payment) is calculated as the difference between sales and turnover costs (production costs of sold products). Revenues can be determined from financial accounting (Revenues for own products for the relevant period). We calculate turnover costs according to the following formula:

Direct material (production)
+ overhead material (sum of indirect costs – material cost centre, if it exists in the company)
+ direct wages
+ production overhead

= production costs of manufactured products
- increase in stocks of work in progress
+ reduction in stocks of work in progress

= production costs of finished products
- increase in stocks of finished products
+ reduction of stocks of finished products

= turnover costs

In the second step, the individual costs of the period are deducted from the contributory profit. In case the contribution to the costs of the period shows a negative value, it is necessary to propose measures in the future to improve the situation.
One possible solution is, for example, to reduce the costs that can be influenced. The costs of the period are therefore made up of contractual (necessary) and controllable costs. Examples of eligible costs are e.g. Representation expenses, Other advertising services, Gifts, Income of partners and members from dependent activities). Another possible solution is, of course, to increase the creation of a contribution to the payment, which can be achieved by increasing the cost-effectiveness of production costs.
Important information for managers is also knowledge of the need to generate a profit for the next period. Its calculation consists of the sum of the following items: the owners of the required profit in the following period, the need for resources for investments, or loan repayments and fixed costs (all contractual and controllable costs that the owners require to remain).

CONCLUSIONS

Based on the generalization of available definitions and lessons learned from practice, we have defined managerial accounting as an effective management tool that displays, analyzes and interprets economic data in such a way that their usability for decision-making and management is as effective as possible. Due to the disagreement of opinions on the structure of managerial accounting, we described its structure. In our opinion, the part of managerial accounting is internal organizational accounting, calculation system, a system of plans and budgets and other calculations necessary for internal management and decision-making.
The theory elaborated in individual publications dealing with the issue of managerial accounting is mainly focused on medium and large companies. Not all methods and tools mentioned in these publications are applicable in small businesses, especially due to their specific size. Also, the given publications do not sufficiently define the transmission of information within individual subsystems of the accounting information system. For this reason, we focused on the methods and procedures that are applicable in small industrial enterprises and we designed a management accounting model for these enterprises so that the individual subsystems of the accounting information system are interconnected. Due to the limited financial resources available to small businesses, we tried to ensure that all proposals do not require investment in the purchase of financially demanding information systems, but that they can be implemented using software that companies already own, ie. using MS Exel and simple accounting software. For this proposal, we used our knowledge of accounting software used by small businesses. All data from financial accounting can be transformed into the MS Exel program. In this way, it is possible to keep intra-organizational accounting in small industrial enterprises,

in a non-accounting form, ie. through an economic clearing sheet, which allows you to control the economy of individual cost centres, strengthens the sense of responsibility and motivates better results of individual cost centres, also serves to compile the resulting cost calculations, especially in cases where cost points are not directly involved in the production, or if the cost point creates a stand-alone performance.

The application of the proposed model in the practice of small industrial enterprises would be reflected e.g. in ensuring the mutual exchange of information, in the interconnection of information flows, in increasing transparency and control of costs in all areas of the company's activities, in improving the calculation system, and consequently in assortment and pricing policy, in ensuring efficient use of resources, etc.

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Abstract: The aim of the paper is a model of managerial accounting for small industrial enterprises, which is not theoretically developed in the literature and in most small enterprises, managerial accounting is not even practically applied. The questionnaire survey found information about the tasks, tools and methods that managerial accounting performs in medium-sized companies. The analysis of the use of managerial accounting is the practice of small industrial enterprises was carried out through guided personal interviews, while the evaluation specified the most problematic areas of its application in these enterprises. Based on the findings of the analysis following the information obtained on the tasks, methods and tools of management accounting in medium-sized enterprises, a model of management accounting for small industrial enterprises was proposed. It defined the tasks that managerial accounting should perform in small industrial enterprises and, among the existing methods and procedures traditionally used in managerial accounting, those that are practically applicable in the given enterprises were proposed. The main benefit of the paper is the management accounting model for small industrial enterprises. The main emphasis is placed on the transparency of costs and the interconnection of information on individual elements of the accounting information system with minimal capital expenditures.

Keywords: managerial accounting, model, accounting system, industrial enterprise