

## Cost Accounting in Russia: Historical Aspects

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### Abstract

The article is devoted to retrospective analysis of development stages of the system of cost and management accounting in the USSR and Russia. The features of full costs accounting method used in Russia have been considered, comparative analysis of the given method and that of absorption costing has been performed. The problems of implementation of management accounting techniques have been studied. Particular attention is paid to study of the early stages of production accounting development.

**Keywords:** costs, management accounting, conception, analysis, absorption costing

### 1. Introduction

Over the past two decades in domestic theory and practice of cost accounting the changes occurred, quite expected ones, affecting all aspects of accounting analyst activities. They are primarily caused by transformation processes at the macro level, eventually led to deregulation of calculational cost accounting and, consequently, to emergence from abroad numerous methods of calculating the actual and planned costs. However, these changes, unfortunately, are peripheral in nature, not very deep and thorough. Until now, especially among practitioners, there is no clear understanding of content and principles of some foreign systems of cost calculating. There is no proper attention and to the traditional Russian systems of cost accounting. However, complicated history of development of cost accounting in Russia requires study and comprehension.

### 2. Method

To the problems of global cost accounting there were dedicated the researches: De Bruyn P., Huysmans P., Mannaert H., Verelst J. (2013), Hopper T. (2013), Hutchinson R. (2013), Laitinen E. K. (2014), Narayanan V. G., Smith M. (2011).

The aim is to study the dynamics of cost accounting system in Russia. The period before 1915 is characterized by use of simple approaches in the system of cost accounting and planning. However, in the end of XIX century in the Russian accounting the grouping of fixed and variable costs was already applied. Since 1902 in some companies, the calculations in terms of direct labor costs, materials and fuel were made in order to analyze. In this case, production overhead costs and administrative costs were not included in the cost of finished products, and related to the reduction of company's revenue. In professional community of accountants there were raised questions about introduction of budget accounting, i.e. on account of "the facts that have not yet occurred." In other words, it was understood that the responsibility of accountants may also include calculation of future facts of economic activity (planning and budgeting) in the case, if there is a high probability of their occurrence. These were attempts to explain the need for generating information on actual and planned expenditures within one service - accounting. At the same period, norms of indirect costs (the ratio of indirect costs and direct labor costs). Industrial operation is considered as exchange of values and purpose of the operation is to increment values (which are also subjected to planning).

At the next stage of development of the accounting system (1915 - 1930) the comprehensive system of accounting, planning and cost analysis was formed. It was that period, when the basics of existing system of cost accounting in Russia were set: cost accounting of auxiliary production, semi-finished products accounting, absorption of overhead costs on multibased basis, cost accounting in integrated production (estimation of by-products as to planned value), organization of costs control system, calculation of variable and fixed costs, evaluation of work in progress. Scheme of managerial cost accounting used by Russian enterprises in 1920-1930 is shown in Figure 1.

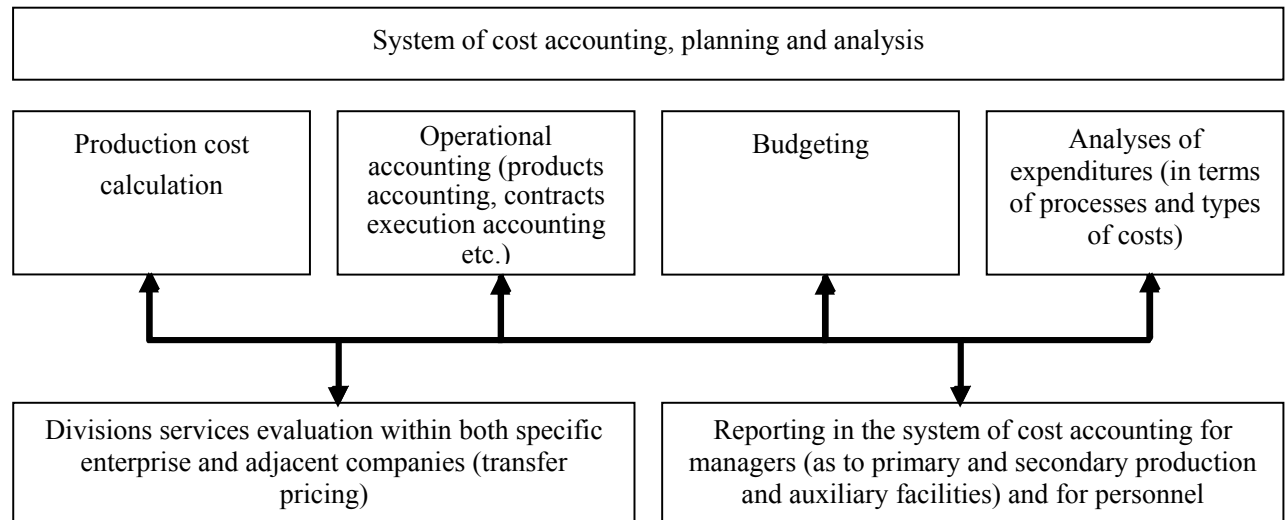


Figure 1. Production accounting, planning and analysis in Russia in the first quarter of the twentieth century (1920-1930)

The option of two-step absorption of administrative costs (between departments and then between products) was actively used at Russian enterprises already in 20-s of XX century. At the same period the elements of transfer pricing were used, i.e. semi-finished products, when transferring from department to department could be valued at the estimated, market and proportional prices (fixed costs are accounted for separately and written off only for the final product). The use of proportional price, in fact, meant the transfer of semi-finished products from department to department at variable costs.

In the middle of 20-s of XX century there were considered the problems of evaluation of services in complex households (the complex households were meant as a set of branches, departments, agencies, shops, businesses). The evaluation of services at actual cost was common (with obligatory cover of administrative costs, i.e. the costs of the main office).

Information about overhead costs was formed using two methods: accounting of overhead costs as to processes or absorption of costs directly between finished products without accounting of process structure.

Problematic issues also arose with respect to operational accounting, which at the time underwent some changes (transition from book accounting system on card one). The operational account was understood as type of accounting, the purpose of which is timely formation of information for the company's management on individual facts of economic activity: preparation of filing for accounting the contracts, accounting of contracts execution, order of acceptance of works from the workers in the departments, control of machine idles through no fault of the workers, comparison of annual centralized procurement plan with incoming contracts, drafting the plans of products shipment as to the contracts concluded, monitoring the implementation of plans, etc. So, in the community of accountants the question of transfer of operational accounting to the accounting division was raised, although these ideas did not receive proper development at that period.

In 20-s of XX century to the functions of cost accounting can be attributed and reporting to company personnel, including workers. Directives of the Government prescribed to inform staff about the activities of the enterprise. As a result, the accountants offered workers a number of reporting forms, among which one can identify the simplified balance sheet, reports on the cost of manufactured products, reports on implementation of measures to reduce costs, etc. The articles appeared in the press on the drafting of regulatory balances of industrial enterprises, compiling subbalances (e.g. subbalance of production). During this period, tight cost control is organized by drawing up standard calculations. In this case, the system of production accounting was designed to monitor the production processes, calculate cost of goods manufactured and sold, analyze the cost of products, including in the context of processes, and to use statistical methods to collect information. The problem of determining the role of calculation in management system became acute. The question of "who should calculate unit product cost" becomes particularly relevant. As a result, the integration of calculation procedures is performed into accounting system.

Since the results of calculation of the cost of production were used in management decisions making, then in the period of 1926-1929 there were produced general principles of calculation: calculation, primarily was intended for managers, it should be matched to the accounting, calculations must be reliable and comparable as to branches of industry.

The widespread method of calculating the "dead point" (break-even point) appeared. During this period, the statistical methods, including correlation analysis, begin to be used. In particular, by the results of determining the closeness of relationship between the average industrial wage and labor productivity the conclusions were drawn about the nature of labor costs, dominance of one or another form of remuneration, etc.

The accounting units used (1929) two methods of control over the implementation of planned targets: analytical one (comparison of actual and planned calculations) and balance one (deviations from the estimate are determined on the accounts by comparing the actual costs with the resources overvalued as to estimate -planned prices).

The next stage (1931 - 1970) is characterized by the formation of hard-regulated system of cost accounting. This period can be called stagnation, because communication with the global accounting system, in fact, was lost. The materials on development of cost accounting outside the USSR were published rarely. Thus, it should be noted that the integration of various techniques was anyhow traced. Thus, in 50-70-s in the Soviet production companies actively were used adapted for Soviet enterprises the elements of standard costing method. It was proposed to normalize the costs associated with operation of equipment. The issue was raised of calculating variances in natural values, for example, in machine-hours, indicators of steam, energy consumption.

In the period of 1971 – 1986, tough-regulated system of cost accounting continues to act. However, the press frequently published studies of Anglo-Saxon and German systems of managerial cost accounting conducted by Russian scientists. Thus, along with the existing in practice system of accounting, planning and cost analysis, there came from abroad transcendental cost accounting system, consisting of the elements prescribed in theory but not applicable in practice to the Soviet companies. Such elements are, in particular, the Western methods of “direct costing”, “absorption costing”. In other words, theory and practice co-existed in isolation from each other. “Direct costing” in practice was not used, because it was difficult to apply it in highly tied administrative-command system of management.

Moreover, it was not claimed, since all prices were regulated by the state. Instead of “absorption costing” in Soviet and Russian accounting theory and practice existed and still exists the approach, when general business (managerial) costs fully are included in the cost of finished product (Figure 2).

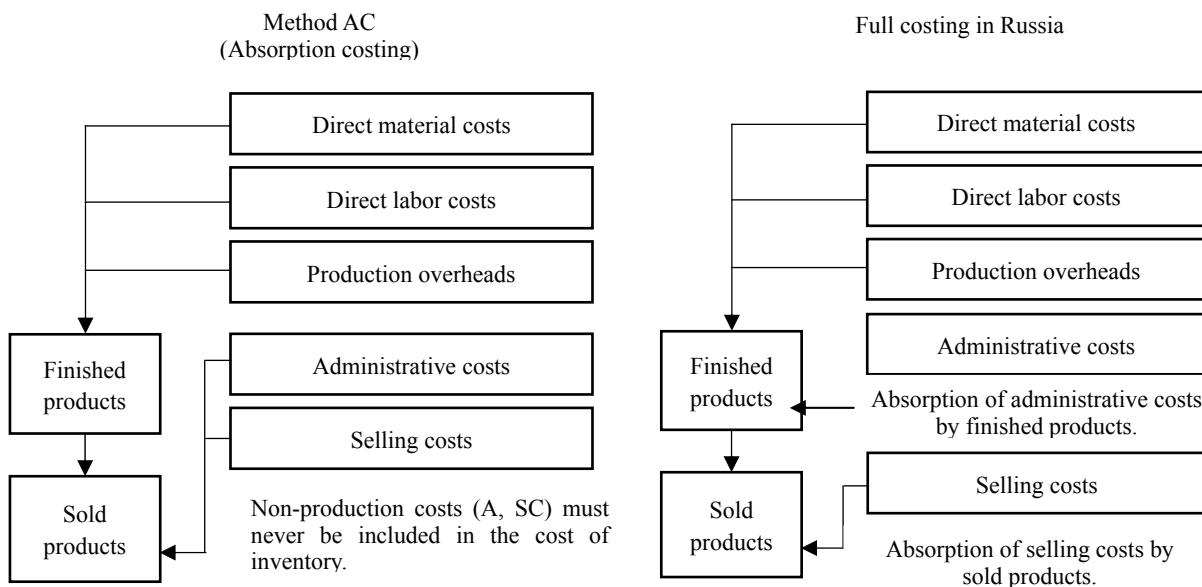


Figure 2. Comparative analysis of methods for calculating the full costs in Russia and “Absorption costing” (AC) method

Let us perform comparative analysis of these two methods. Financial result, when using AC method is determined by formula:

$$I = S - \left[ \left( vp + vo + \frac{F}{pu} \right) \times su + A + SC \right] \quad (1)$$

where I – income (profit/losses); S – sales in monetary units; F –total fixed production overheads; A –total administrative costs (a fixed costs); SC –total selling costs; vp –variable prime cost per unit; vo –variable overhead cost per unit; pu –production in units; su – sales in units.

The financial result of using the Russian method of accounting for the full costs determined by the formula:

$$I = S - \left[ \left( vp + vo + \frac{F + A}{pu} \right) \times su + SC \right] \quad (2)$$

In the western accounting system, this approach has not been spread, while in Russia for a long time it was the only one and common to all enterprises.

The period between 1987 - 1991 is characterized by use of many developments of domestic and foreign experts of management accounting in practice within the system of economic calculation. Economic calculation is a system, where each company commensurates the costs of production and the results of its activity, provides profitability of production. Calculation of profitability and access to self-support of companies is the basis of this method. The country has started the restructuring of the entire economy, the purpose of which is transition to market relations. Cost accounting as to responsibility centers and factors of production is developed. Costs as to factors of production – it is the costs associated with maintenance of fixed capital (insurance, repairing of plants and equipment), labor (labor protection, payment of downtime, defective products, staff, etc.), working capital (taxes, fees, stationery, transport costs, etc.). We study the efficiency (speed of passage of accounting information) and analyticity (tininess of information in the system of cost accounting).

In 1991, the country transits to the market price regulation. By this the next phase of development of cost accounting is marked. During this period the companies become economically independent and can generate information about the costs and benefits in any aspect for management purposes.

In recent years, the Russian system of production cost accounting is characterized by integration approaches. The problem is organization of management accounting on the multivariate basis, including using several methods of cost accounting. So, in 1996, for preparation of financial statements Russian companies were allowed using the AC method. It became widely used in practice, although many of its tools are still not available for Russian companies (Table 1).

Table 1. Comparative analysis of the elements of AC method in domestic and international practice

Elements of AC method and accompanying instruments	World accounting practice	AC method in Russia (practice)
Production costs are related to product, non-productive costs are those of the period	+	+
Use of planned <i>annual</i> rates of distribution of overhead costs (based on practical, normal or expected capacity)	+	–
Determination under and over absorption of overheads with reflection of difference in the accounts	+	–
Redistribution of costs between serving (auxiliary shops) and manufacturing centers of responsibility (main shops)	+	+
Reapportion service cost centre costs to production cost centres	+	+
Determination of normal and abnormal losses and abnormal gains (with reflection on accounts)	+	–
Application of FIFO methods and average-weighted assessment of work in progress with calculation of equivalent units	+	–
AC-pricing (absorption cost pricing) on the basis of data of management accounting technique of production costs of AC.	+	–

Gradually comprehension of the fact came to be realized that the management accounting tools are useful primarily for the enterprises themselves. Today, the concept of formation of costs as to life-cycle stages, target costing, cost accounting in enterprises applying the principles of lean manufacturing, cost accounting on types of activities, etc. have developed.

### 3. Result

One can identify the following stages of development of cost accounting system in Russia: (1) simple systemic cost accounting (up to 1915); (2) complex integrated system of accounting, planning and cost analysis (1915 - 1930); (3) tightly regulated system of accounting, planning and cost analysis (based on the use of as-to-order and as-to-process cost accounting methods) (1931 - 1970); (4) strictly regulated accounting system used in practice and transcendental, abstract, western accounting system, which exists only in theory (1971 - 1986); (5) The system of accounting, planning and cost analysis in the framework of economic calculation (1987 - 1991); production accounting in terms of occurrence of market relations (1992 - 1995); (6) integrated management accounting of costs (since 1996) and pro western accounting system.

### 4. Conclusion

Management accounting costs originated in periods, when in industrial enterprises more acute financial problems appeared. It should be noted that during all stages of development of the system, the interest to it increases, when organizations faced certain difficulties. Under conditions of fierce command administrative system were not used all the tools of management accounting. The State required use of only one accounting system of full costs, when non-production costs (administrative costs) were related to the cost of manufactured finished products. However, when the economic situation in the country being changed (growth, stagnation, decline) changed methods of management and including production accounting changed. This fact suggests the existence of some spiral in development process of the system: during decline labor-intensive methods are used, aimed at controlling and optimizing the costs, during growth - simple techniques aimed at gathering information to make decisions. This trend can also be seen at the moment.

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