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LINKS BETWEEN ACCOUNTING AND BUSINESS STATISTICS

Abstract: An accounting database harmonized with statistics, aimed at all categories of users, has been developed in Ukraine. A possibility to harmonize official accounting systems is stipulated by: the use of monetary indices; the use of economic categories in conceptual device; orientation at external information users; aggregation (consolidation, generalization) of received data; initiatives concerning constant increasing of quality of information. Those characteristics together with the absence of conceptual contradictions between these systems allow to talk about possibility of harmonization of accounting information.

Keywords: links, accounting, business statistics.

1. Introduction

World tendencies point out the necessity to form information for business as an integrated resource for wide circle of consumers, which is generally admitted and accessible. Therefore it is necessary to harmonize informational flows of statistics and accounting. At the same time we should admit that the problem of harmonizing the systems of accounting and statistics in modern Ukraine has not been solved. Moreover, a preparation by Ukrainian companies of financial reporting according to international financial reporting standards(IFRS) is a necessary condition of their admittance to the resources of world financial markets [2]. Such a change of accounting and statistics leads to involvement of economic objects of Ukraine into the world economy. It is characterized by such mega tendencies as globalization of economic processes, convergence (transfusion and mutual enrichment) of IFRS and American standards of accounting US GAAP with aim to create a sole system of world accounting standards.

Search of ways of statistics and accounting harmonization in modern conditions by which we understand detection of principles of systematization and unification of accounting information is vital for Ukraine. In connection with that arises the timely question about possibilities and ways of convergence of statistics and accounting concerning the terminology, interpretation and classification of assets, revenues, expenses, taxes, other concepts and indices.

Effectiveness of any administrative system depends on quality, timeliness and trustworthiness of information provided. Informational system of any organization consists of different subsystems among which the most important is economic subsystem which uses the accounting information.

Accounting system of organization consists of operative, statistical, tax and financial accounting. They differ by composition of reflected phenomena and methods of realization.

2. A role of accounting at decision-making process

Accounting is characterized by a set of peculiarities which differ it from other types of accounting (operative, statistical, tax, and financial accounting). It is continuous and perpetual. It means that it reflects all accomplished business deals in the order of their realization. Selective (non-continuous) reflection in accounting is not used. Each accounting notice should be obligatorily registered, confirmed by primary document. It makes accounting data more evidential and enhances their role in control of economic processes.

Accounting uses special methods and approaches: double-entry chart, system of accounts, inventory, etc. In comparison with other record keepings it fully reflects economic activity of an enterprise as a unit. Special methods of data treatment are used to get generalized aggregations. Consolidated financial reporting serves as a source of information for management of dependent enterprises. Accounting data are widely used for the analysis of economic activity of enterprises in the process of identifying unused reserves for further growth of economy.

All types of accounting are coherent. Operative, statistic and financial accountings are united in one accounting system used by enterprises and organizations. Each type of accounting uses special methods of reflection of economic activity and its control, investigates certain side of economics of enterprises, at the same time they are complementary. Meanwhile we can observe a tendency of converging of operative, statistic and financial accountings, increase of quality of accounting information, strengthening of its control functions, removal of duplication and parallelism in receiving of economic indices. Further strengthening of relations between all types of accounting will allow to ease, to speed up and to cheapen accounting process on the base of automated preparation and treatment of sole primary bookkeeping documentation, usage of PC to receive operative, and trustworthy information which is necessary for managing, control and analysis of economic activity.

The use of modern automated systems of information treatment and economic-mathematic methods widens the possibilities of organization of accounting on the basis of integration when once registered and inserted into memory of computer, data can be used many times in unite accounting system of an organization. Hereby each type of accounting in the process of integration saves its methodical peculiarities and appointments in the system of enterprise's management [1].

3. A role of business statistics at decision-making process

Business statistics is relatively young field of statistics as a science. It was formed in the 50s and 60s of the 20th century in connection with the need to obtain information about the entrepreneurs (enterprises) behaviour which influences behaviour of managers, investors, economists, analysts on the direction of competitors, micro- and macro-economical processes, situation on the markets of commodities, services, labour. Business is a mass, complicate, stochastic process. Therefore the use of statistical methods for its measuring is the most efficient. Business and terms in which it functions change constantly. This causes a requirement for stable perfection of statistical methods and development of business statistics as a science. Gradually developing the methods of collection, treatment and analysis of such information, it passed to the similar problems not only at the level of enterprise but also at national and international levels. It was pushed to such problems slightly by processes that were going on at that time in an economy: increasing competition, globalization, transition from industrial to informative society and other processes. Big leap forward to development of business statistics was the use of computer technique. At the beginning of 70s of the 20th century the creation of the Decision Support Systems and Management Accounts began in the US [9]. It also whipped up the process of development of business statistics.

In addition, integration with such sciences as accounting, financial analysis, econometrics, and economic statistics (including System of National Accounts – SNA [8]) allowed business statistics to extend the possibilities for measuring and analysis of entrepreneurial activity and environment in which it is carried out. One of its scientific products was an invention of statistical registers of enterprises.

Scientists from France, the US, Germany and other countries actively conduct research in the area of business statistics. Different scientific organizations are engaged in these problems at an international level. In the first place it is necessary to mark works of the International Statistical Institute (section The International Society for Business and Industrial Statistics [5]).

Practical activity in collection, treatment and analysis of information about business is closely related to science. The most successful in this activity are the French and American scientists. Right after the Second World War the so-called censuses of industry began in France with the purpose of measuring the results of production in industry. From the beginning of 70s of the 20th century the annual censuses of enterprises have been conducted. More than 250 thousand enterprises are created in France annually [4]. Every year there have been appearing more types of activity of these enterprises, especially in the field of services. The statistical register for organization of the statistical monitoring of enterprises was created and conducted by French National Institute of Statistics and Economic Studies (INSEE) in 1973. A statistical register, created on the basis of administrative register, is enriched with information about structural investigations and tax administration (tax declaration). The frequency of receiving such data for a statistical register is annual.

Answers to two questions is important: 1) whether an enterprise is active; 2) whether information which has been received from an enterprise is correct. A statistical register allows making corrections which are impossible in administrative register on the basis of new information. Therefore it better represents the actual condition of enterprises. Samples of enterprises are formed and the sampling is conducted on the basis of statistical register. Similar processes occur in other countries, but the system of statistical accounting differs from one another. International organizations are interested in its standardization, slightly pushing to it particular countries. To solve these problems, the Statistical Office of France organizes annual conferences on problems of business statistics. Business Statistics Department of INSEE invites business leaders, scientists, managers of agencies engaged in creation of business, and statisticians, to share their experience.

In the US censuses of business began much earlier. First census was conducted in 1930 and based on data of 1929 on the limited circle of enterprises. Initially it covered retail and wholesale trade and building trade only, and some industries of service were included in 1933. However, the first census valuable from the point of view of methodology was conducted in 1954. Consistent concepts, definitions, classifications, periods of time, and registration units were used. It was the first census conducted by mail, using the registers of firms. Transport, travel, transportation of products and cargo have been included in a census since 1963. In addition, small firms have been included in the program. List of industries covered in the censuses of enterprises continued to elongate. The census of building trade on regular basis began in 1967, and the scopes of service industry were extended in 1967, 1977, and 1987. Census of small business enterprises was first conducted as the special project in 1969 and in 1972 it was incorporated with the census of businesses being in women's property [6]. In 1992, a census extended on communications, public, financial, insurance services and industries on real estate operations services. Further there is a tendency of gradual taking into account industries under government control.

Large-scale experience of former Soviet Union in the area of economic statistics, including enterprise statistics, especially industrial statistics, also must be marked. Regular (monthly, quarterly, annually) vast statistical information was collected by the continuous method of observations (continuous survey) on the enormous number of indices of results of production, labour, quality of products, unit cost, financial results and other indices. Information on many indices of industrial, and agricultural statistics was collected daily, every ten days. In 1923 in the USSR for the first time in the world was developed powerful instrument of macroeconomical statistical account, analysis and planning – balance of national economy, considerably earlier than its analogue – the SNA [7, p. 19].

At the international level the Eurostat is engaged in the problem of business statistics. It has developed the methodology of collection, treatment and analysis of data. Information about business in the countries of the European Union is gathered and published by Eurostat [3].

The constituents of the complex associate system of enterprise statistics of the Eurostat are Structural Business Statistics (SBS) and Short-Term Business Statistics (STS). The primary purpose of SBS is compiling information about economic position, economic activity of enterprises for the analysis of the structure of national economy, development of enterprises of different types of activity, forms of property, sizes (in accordance with the quantity of workers, volume of worked-out or realized products, works, services), structures by the types of economic activity.

On the basis of a primary purpose, the tasks of SBS are: collection and treatment of data from the enterprises for the analysis of the structure of economy; providing the national accounts with necessary statistical information. SBS covers industry, construction and services. Financial services are showed separately. SBS does not cover agriculture, forestry and fishery, and non-market services like, for example, education and health.

The basic feature of short-term (by conjuncture) statistics is observation of the dynamics of production every year, and structure of economy for the certain period of time. Following the business cycle is the necessary condition of activity of many persons acting in market economy. It is very important for politicians, governmental structures, entrepreneurs, and consumers to know when the economy is in the phase of growth, when stagnation or slump is and how a situation will develop in the near future.

All users of such information wish to watch out business-cycle closely and on the ground of it react as quickly as possible. Basic in this context are turning points which happen when a tendency changes in a short-term dynamics to opposite one. An exposure of the earliest signs of economic progress is important. In this connection short-term statistics consist of the system of quarterly and monthly surveys of enterprises on an individual program for every industry (according to the type of activity).

The basic indices of dynamics are the following: of products, receipt of new orders on making products, turnover. These three indices consistently reproduce a progress of economy trend and in an aggregate enable to carry out an analysis and short-term prognosis of economic activity of enterprises.

In addition, the Eurostat renders a methodological help for transition countries. For example, Eurostat helps Ukraine to make the statistical register of enterprises.

As an educational discipline business statistics is taught in many institutions of higher education of the world, where economists and statisticians are prepared. The typical course of Business Statistics is intended for business leaders, and covers the statistical methods of collection, treatment and analysis of data about business. The purpose of course is to provide students with knowledge of statistical methods, for example, probability, statistical inference, and sampling, time series forecasting and regressive analysis, used in describing of data business. Statistical estimation of efficiency of the fixed assets, current, human capital, as well as statistics of quality of products are designed to provide the basis for a decision-making.

4. Methodical approach to the problem of harmonization of the national systems of the accounting and business statistics

There are two traditional approaches to the organization of accounting in the world which are absolutely opposed to the system of statistics.

1. First approach is directed especially to the providing an enterprise with comparison of data. Classification of revenues and expenses is being done. As a result the economic analysis becomes possible. Statistic macroeconomic systems use two main sources to build proper models.

2. Second approach specifies on analysis of company reporting, especially profit and loss statement aimed at calculation of indices which show profitability of investments. Here the conceptual division between management and financial accounting is not done. Profit and loss statement reports disclose the information concerning the financial results which are the object of great attention of investors and shareholders. In such a way of presentation of information the process of main activity (the use of inputs) is not described. Thus, the structure of this approach is unsatisfactory regarding the economic analysis.

Two aforementioned approaches to the organization of accounting define different relationships between statistics and bookkeeping in different countries.

Countries applying first-approach statistics (e.g. France) actively use bookkeeping information and a system of accounting and accountability is assigned to form a structure of information system. The system of statistic data about enterprises is very integrated. Large-scale unification of databases is used. It is obvious that integration of languages of accounting, statistics, taxation and jurisprudence ensures considerable saving of resources of the whole society especially as it decreases total value of data accessing.

In countries which apply the other approach (e.g. the US) statistics do not use data of enterprises' accounting. Therefore they have to do much more operations to coordinate different sources of information on macroeconomic level. In this case we see low level of integration of statistical system. Hereby unification of databases does not occur. Statistics do not use data of financial accountability. Once every five years a poll is made which covers the whole manufacture system, and annual inspections of enterprises are also made.

As the result of such approach the quality of statistic indices is decreased because of the absence of harmonization between statistic and accounting conceptions: the latter are being formulated by enterprises for internal accounting. Besides, the value of information furnishing increases, which countries with transition economy, e.g. Ukraine, hardly can afford.

In any case, regardless of the method of information acquisition, statistics should handle data that are received from enterprises aiming to prepare aggregates which are necessary for economic analysis.

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RELACJE MIĘDZY RACHUNKOWOŚCIĄ A STATYSTYKĄ BIZNESU

Streszczenie: Na Ukrainie dokonał się rozwój bazy danych księgowych zharmonizowanych z danymi statystycznymi, adresowanymi do wszystkich kategorii użytkowników. Możliwość zharmonizowania systemów rachunkowości jest uwarunkowana przez: stosowanie indeksów pieniężnych, stosowane urzędnicy, orientację na zewnętrznych użytkowników informacji, konsolidację otrzymanych danych, inicjatywy dotyczące stałej poprawy jakości informacji. Wyeliminowanie z systemów rachunkowości sprzeczności pozwala dokonać harmonizacji informacji księgowych. Powstaje konieczność szukania sposobów harmonizacji systemów rachunkowości, które pozostałyby odporne na interesy użytkowników. Jest to możliwe pod warunkiem korzystania z zasad semantyki, które leżą u podstaw rachunkowości finansowej oraz zasad dotyczących statystyki i podatków w tych przypadkach, gdy jest to możliwe i uzasadnione. Zasady semantyki mają być wykorzystane do tworzenia algorytmów koordynacji indeksów rachunkowości finansowej oraz sprawozdawczości statystycznej.