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Introduction to the theory of statistics

This article discusses the history of statistics. Destinations such as mathematical and descriptive. The need for statistics as a science. It describes the three basic values of statistics. The first is a special industry practices aimed at the collection, processing, analysis, characterizing socio-economic situation of the country, its regions, industries, individual enterprises. Secondly, the statistics referred to science, is engaged in the development of technical regulations and the methods used statistical practice. Science and practice are very closely related, mutually relying on each other. Third, statistics called themselves the statistical data provided in the financial statements of enterprises, institutions, companies, firms, industries or data published in collections, directories, media as a result of statistical work.

Statistical indicators are accounting estimates and analysis. The specific method is based on statistical analysis and synthesis of the compound. And also, the article says the information base that provides support for emerging market and provides comprehensive and objective information to develop options, studies and management decisions.

Key words: statistical trend, statistics, statistical significance.

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Статистика негіздеріне кіріспе

Бұл мақалада статистика пәнінің даму тарихы қарастырылған. Оның негізін қалаушылары және бастапқы мектептері туралы жазылған. Жазу және математикалық бағыттары, статистиканың ғылым ретінде қажеттілігі қарастырылған. Статистиканың үш негізгі анықтамасы ашылып жазылған. Біріншіден, бұл тәжірибе қызметінің ерекше саласы. Яғни, елдің, экономика салаларының, жеке кәсіпорындардың әлеуметтік-экономикалық жағдайын мінездейтін мәліметтерді жинау, өңдеу және талдауға бағытталған. Екіншіден, статистика тәжірибде қолданатын техникаларды құрастырушы ғылым ретінде қарастырылады. Ғылым мен тәжірибе бір-бірімен тығыз байланыста болады. Үшіншіден, статистика кәсіпорындардың беретін статистикалық мәліметтерін айтамыз.

Статистикалық көрсеткіштер бағалы есепті және талдамалы болып бөлінеді. Статистиканың ерекше тәсілі анализ бен синтездің қосылу негізі. Және де мақалада жан-жақты нарықты қамти отырып басқару шешімдерін қабылдау үшін ақпараттық көз болып табылады.

Түйін сөздер: Статистика, математика, статистикалық мектеп, мемлекеттану, статистикалық жүйе.

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Введение в теорию статистики

В данной статье рассматривается история возникновения статистики. Описываются три основных значения статистики. Во-первых, это особая отрасль практической деятельности, направленная на сбор, обработку, анализ данных, характеризующих социально-экономическое положение страны, ее регионов, отраслей экономики, отдельных предприятий. Во-вторых, статистикой называют науку, занимающуюся разработкой технических положений и методов, используемых статистической практикой. Наука и практика очень тесно связаны, взаимно опираясь друг на друга. В-третьих, статистикой называют сами статистические данные, представленные в отчетности предприятий, учреждений, компаний, фирм, отраслей экономики, или же данные, публикуемые в сборниках, справочниках, СМИ в виде результатов статистической работы.

Статистические показатели бывают учетно-оценочными и аналитическими. Специфический метод статистики основан на соединении анализа и синтеза. В статье говорится о информационной базе, которая обеспечивает поддержку формирующегося рынка и даёт всестороннюю и объективную информацию для разработки вариантов, обоснования и принятия управленческих решений.

Ключевые слова: статистическое направление, статистические показатели, статистические значения.

INTRODUCTION TO THE THEORY OF STATISTICS

The term «statistics» comes from the Latin word «status» (status), which means “certain things”. Initially, it was used in the meaning of the word «State administration» was coined in 1749 by the German scientist G.Ahenval, published a book about State administration.

Statistics has a long history and is rooted in antiquity. With the formation of states has become necessary in statistical practice, ie, Full information about the availability of land, population, its property status. Several thousand years ago, such a calculation was carried out in China, ancient Rome and Egypt.

With the development of social relations, the emergence of the tax system need statistics becomes apparent, such as eg:

- Prices for bread;
- The number of cities;
- The urban population;
- The volume of foreign trade;
- Registration of new factories;
- Registration of marriages, births, deaths.

As the complexity of social life more expanded range of phenomena accounted for.

The growth of social production in the period of the emergence of capitalism, the expansion of trade and international relations stimulated the development of accounting and statistics.

In Italy, at the beginning of the XIV century there was a system of double-entry bookkeeping, in which the operation is recorded twice – in the debit and credit. Consequently, significantly increases the need for analysis of the economic environment. The volume of statistical information particularly sharply increased – need information describing:

- The size and placement of industrial and agricultural production;
- Markets for goods;
- Labor markets;
- Raw materials, etc.

Currently, the term “statistics” has three meanings:

The first is a special industry practices aimed at the collection, processing, analysis, characterizing socio-economic situation of the country, its regions, industries, individual enterprises.

Secondly, the statistics referred to science, is engaged in the development of technical regulations and the methods used statistical practice.

Science and practice are very closely related, mutually relying on each other.

Third, statistics called themselves the statistical data provided in the financial statements of enterprises, institutions, companies, firms, industries or data published in collections, directories, media as a result of statistical work.

Statistics as a science began to develop from the middle of the 17th century in two ways:

- Descriptive;
- Math

The most important representatives of the descriptive school gosudarstvovedeniya were German ucheny G.Konring (1606-1681) and G.Ahenvall (1719-1772).

The first distinctive feature descriptive direction is that her task description is considered “public interest”, such as:

- The territory of the State;
- State system;
- Population;
- Religion;
- Foreign Policy, etc.

That is the subject of statistics had numerical characteristics to the middle of the 18th century.

The second feature is that it is not yet analyzed the patterns and relationships social processes.

Mathematics was born in England. “Political Arithmetic” purpose is to identify patterns and relationships social processes by calculation

The most important representative of this trend was U.Petti (1623-1687), which Marx called “the inventor of a kind of statistics.” Later it developed F.Galton (1822-1911), K.Pirson (1857-1936), V.Gosset (1876-1936), R.Fisher (1890-1962) and others.

2. Each science has a significant specific features that distinguish it from other sciences, and give her the right to independent existence. The main feature of any science is:

- knowledge of the subject;
- principles and methods of its study, which together form its methodology.

The subject of research are the statistics:

- mass phenomena of socio-economic life;
- quantitative aspect of these phenomena in a given place and time.

The socio-economic life of society is manifested in various mass events, such as:

- Production of various types of products;
- consumption of these products;
- carriage of goods and passengers;
- Other phenomena of economic, cultural and political life;

- natural resources and environmental conditions.

3. The statistical index – a quantitative assessment of the properties of the phenomenon under study. It manifests the unity of the qualitative and quantitative aspects.

Statistics using statistical indicators characterizes:

- dimensions of the phenomena being studied;
- their characteristics;
- patterns of development;
- their relationship.

Statistical indicators are accounting estimates and analysis. The first reflects the volume or level. And the second is used to describe the features of the development, distribution, relationships, relationships of its parts. These include:

- averages;
- indicators of the structure;
- variations of dynamics, degree of closeness of the connection and others.

4. The specific method is based on statistical analysis and synthesis of the compound. At first:

- stand out and separate study of the phenomenon (the group);

– Evaluate the differences in the value of the characteristic;

- The reasons of differences;
- We give a description of the phenomenon as a whole and its trends.

All stages of statistical work is closely related to each other. Mistakes made at one stage will affect the entire study.

Statistics is closely linked with mathematics different levels of difficulty, especially with the theory of probability and mathematical. statistics.

Statistics based on the law of large numbers.

Therefore, based on statistical research is always mass observation of facts. The greater the volume of units observed, the closer the observed averages show patterns of the phenomenon under study.

5. In the current statistics there are three main parts:

- The general theory of statistics;
- Economic statistics and its industry;
- Social statistics and its industry.

General Theory of Statistics is developing the general principles and methods of statistical studies, the most common category (performance statistics).

The task of economic statistics is the development and analysis of synthetic indicators that reflect the state of the national economy, the relationship industries, especially the distribution of productive forces, the presence of material, labor and financial resources, the current level of their use.

Social statistics generates metrics to characterize the way of life and different aspects of social relations.

6. With the development of market relations the role of the knowledge base grows. This is due to the fact that:

- complicates the communications market actors;
- Appears the need for studying the impact of various factors on the results of economic activity, the social consequences;
- Requires a generalization on the macro and micro levels, as well as detailed information for the preparation of a wide variety of projections.

In order to perform a statistical study, necessary science-based information base. Which should:

- Provide support to the emerging market;
- Provide a comprehensive and objective information to develop options, studies and management decisions.

For this purpose, a special statistical unit engaged in systematic data collection, processing and presentation of the results in the form of statistical information to government and other bodies, commercial users.

Possessing information, enterprises can effectively implement the tasks. Conversely, an important cause of bankruptcies in Kazakhstan are the incompetent actions of the management companies, helped by the lack of available information on the managers of market conditions, and many other vitally important for the phenomena and processes of the enterprise.

Statistical observation helps the enterprise:

- Implement the marketing strategy;
- respond flexibly to market changes;
- Make informed choices.

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