OUTSTANDING FIGURES IN THE STATISTICS WORLD

I. BOSTAN, V. HAPENCIUC, A. BURCIU, C. ROMAN
„Ştefan cel Mare" University of Suceava

Abstract. *After year 1850, as for the publication of Hermann Conring, G. Achenwall, John Graunt and William Petty paperwork the statistics domain has extended quite rapidly both as a social influence and regarding the approached contents and domains. Along the further decades, there have assessed a great number of specialists in statistics theory and practice, and also a impressive number of world magnitude reference papers. Beginning with year 1859, in our country, sets up the first Rumanian Statistics Office in Bucharest, and this fact enabled the elaboration of some statistical series of indexes which reflect social life conditions and specific of the moment. Commencement with year 1922 there has been published an annual Rumania's statistic and various statistic branch studies. The published studies regarding the Rumania's general population census (in 1930) and the agricultural census (1941) had a positive influence on the Rumanian statistics development.*

Rezumat. *După anul 1850, datorită publicării lucrărilor lui Hermann Conring, G. Achenwall, John Graunt si William Petty, domeniul statisticii a început să se extindă rapid fiind influentat atât de sfera socialului cât si de cotinuturile si domeniile abordate. În perioada următoare s-a remarcat un număr mare de specialiati în domeniul statisticii, a teoriei si practicii din acest domeniu. Începând cu anul 1859 s-a înfiintat în Bucuresti primul Birou de Statistică, acest lucru conducând la realizarea unor buletine statistice ce reflectau aspecte specifice din viata socială a momentului. Din anul 1922 s-au publicat, pe lângă un anuar statistic al României, diverse studii statistice. Realizarea recensămintelor privind populatia României din 1930 si cel agricol din 1941 au reusit să aibă o influentă pozitivă în dezvoltarea domeniului statistic din România.*

Keywords: *statistics, demography, information, social*

"Science is the most precious thing that humanity gained along its historical development", says our famous Rumanian mastermind statistics specialist Alexandru Barbat in his reference paper in the 1970's ("Theory of Social Statistics"). Indeed, the evolution, the individualization and automating of the various science domains has evolved quite slow along time. Firstly, the explicit separation between the exact and socio-humane sciences happened relatively slow in the humanity history, approximately two centuries ago. We can locate the first extended application of technical sciences and the individualization of science as a production factor during the Renascence and the Industrial Revolution period, so to say after 1800. Today it is almost a fact that *information* has become a distinct resource in the modern economy, namely that *information*

has individualized as a distinctive production (output) factor; similar affirmations about the science individualization role as an output factor were defined approximately two centuries ago. After the 1850, says J. D. Bernal, the science began to bring divvy. Towards the end of the 18th century, has appeared the first *Economics* distinct paperwork that was a foundation for the industrial capitalism and it became a very argued basic fundament of the liberal philosophy of the nation's economic growth (we obviously speak about Adam Smith famous work *The Wealth of Nations,* 1776).

But how can we quantify the information? How ca we compare the relative power of two countries and/or two companies under the information exploitation aspect? What instruments do modern statistics offer for the quantification of various quantitative / qualitative information components as a resource?

Without any aspiration for the complete answers at these questions, we'll try to succinctly sketch the learning process evolution in the humanity modern history. So, a series of inventions / innovations with a social character, as the same Peter Drucker shows, have favored almost an exponential evolution of information learning / assimilation by the young generations during the past four centuries. Innovation, says Drucker, is more likely a social term then a technical one and it derives mostly from a change of options or the of two destinations effective power possibilities. "Any practice is based on theory, even if practicians themselves are not conscious of it". Jean Baptist Say, Joseph Schumpeter or J. Keynes, and later Paul Samuelson and Peter Drucker have made their references to Adam Smith work, *The Wealth of Nations*. Without referring to Adam Smith paperwork we must catch the following moments in the process evolution of knowledge learning and spreading in all social media:

- Since Aristotel time (III century b.c.) and until XV century the essence of various knowledge domains has frequently restrained itself almost unanimous for the philosophy domain. This was and remained for a long period of time the domain which awarded the first Ph.D.(Philosophy Doctor);
- Approximately in the middle of the XVII century a great Czech reformer in the education problem, namely J. Amos Comenius, projects and uses the first Latin primers. Essentially, he invented that thing that today we name *textbook* and which for the social aspect represented a major invention, an invention that allowed the development and generalization of the educational system, generated the systematic preparation of the teachers and prefigured the further pattern of the German university. Without this invention, apparently minor, a brilliant professor can't teach simultaneously but 1 to 3 children; but using the textbook, even an inexperienced teacher can "force" 50 students to assimilate a knowledge volume, either in a general domain – as management, or in a more technical domain, as statistics. "Innovation, says Drucker, mustn't be absolutely technical and mustn't be by all means a thing." According to the same analyst, the hospital as a social innovation or the management as a distinct institution had each one of them a major impact in their reference domains. During the last century, management allowed that for the first time employees with various qualifications / knowledge

to be unitarily directed within an organization, a fact that generated an unprecedented efficiency in the economic evolution of the countries.

- The meaning that it has today, the *modern university* concept was invented by a German clerk, Wilhelm von Humboldt, in 1809, who founded the Berlin University, putting forward two major objectives:

- to take over the intellectual and scientific leadership that France was displaying at the moment;
- to induce to the Germans the energies that were released by the France Revolution, whether a successful action, with half a century later.

This *Humboldiane University* pattern was further "borrowed" by USA (approximately around 1850), and only after half a century to came back after the Europeans. Nowadays, the undeniable economic superiority of USA, both in its relations with Japan, and EU, mostly derive from the daily processed information in those over 3400 American universities. The initial starting pattern itself became relatively old-fashioned, especially after introducing the education in the OMC agenda; the new pattern to be is that of an *entrepreneurial university*, that deals with education as a common service and that functions / organizes accordingly with the newest management principles.

- Approximately around the year 1500, Gutenberg invented printing, and the printing process, although difficulty and asking for skills to be manipulated enabled during four centuries the knowledge storage in book pages and their remittance from one generation to another. After almost four centuries, in 1885, Ottomar Mergenthaler has invented the linotype for the letters cropping, and for the next period of time, after almost 5 years, the number of printed newspapers, magazine and books grew almost exponentially since the linotype became standardized and eliminated the old printing processes.

- Around 1900, a *Bell Telephone System* statistician has projected, for the next 50 years, two curves – one for the American population growth and one for the growth of necessary operators in order to manage the telephone calls volume – and the conclusion was that between 1925-1930, all American women aged between 17 and 60 years old would have to work in the manual system of the telephone calls. As consequence, two years later, the Bell engineers projected and installed the first automatic control panel.

Approximately around the year 1800 we encounter, under a historical aspect, the first obvious signs of the statistics development as a distinct discipline. Until this moment, various statistical information have been used across centuries in a formulation / evaluation predominant empirical (the population number of a country, quantitative elements expressing the strength of some empires etc.). The statistics individualization roots as a distinct discipline are to be found, beginning with the XVIII century, in the so called "descriptive school" and "politics arithmetic's" school.

NAMES AND REFERENCE PAPERWORKS IN THE WORLD STATISTICS

After year 1850, as for the publication of Hermann Conring, G. Achenwall, John Graunt and William Petty paperwork the statistics domain has extended quite rapidly both as a social influence and regarding the approached contents and domains. Along the further decades, there have assessed a great number of specialists in statistics theory and practice, and also a impressive number of world magnitude reference papers.

From all these statistics specialists and world reference works we name the following:

• French Math man Antoine Deparcieux, author of "Sur la probabilité de la durée de la vie humaine" ("About the probability of human life duration"), elaborates mortality tables that are named after him, and serve the France General Pension House, created in 1850, at tariffs calculation (today is called *life duration*).

• German statistician Karl Knies, in his work „Die Statistik als selbständige Wissenschaft" ("Statistics as an autonomous science"), published in 1850, gives a suggestive image of the unique statistics through its comparison with "a river that has two springs", namely the descriptive school and the politics arithmetic.

• German statisticians Gustav V. Rümelin (1815-1889), Ernst Engel (1821-1896), have numbered over 100 statistics definitions; this demonstrates the fact that this discipline had some unsolved issues, that left some space for elucidation research and trials; in 1875, Rümelin talks about the statistics ramification as a social science, emphasizing the fact that it can't be a social and a political science at once. The same Rümelin is the first one that recommends the statistics division in three parts: population statistics, economic statistics and cultural statistics. Due to the fact that statistics methods have encountered across time their applicability also in natural science (meteorology, astronomy, biology etc.) the issue of the unique or multiple statistics study object has preoccupied various theoreticians for the further decades also.

• At the middle of the XIX century statistics was defined as "science of social acts" (1840-Dufau; 1847-Moreau de Jonnès) and later it will be considered as a "research method of mass phenomena". Generally speaking, statistics object has included big number collectivities or series from demography, economy, culture, public administration, psychology, pedagogy and some exact sciences.

• German statistician and sociologist Georg V. Mayr, throughout his work "Statistics and Society Science", (a four volume work, but only three published), presents statistics only as a "method science", based on the statistics duality idea namely as a formal statistics and a material statistics. So, this statistician suggests that branch statistics are meant to solve various problems in application domains

and that there exists a single science of statistics; yet he didn't finished his conclusions reserved for the last chapter of this paper work.

- Between the years 1880-1930 appeared a great number of works dedicated to the statistics domain, either globally, or for application branch.
- In 1929, the German sociologist Ferdinand Tönnies elaborates a statistics concept inserted into sociology under the form of "sociography", a concept that had quite a lot of adherents;

NAMES AND REFERENCE PAPERWORKS IN THE RUMANIAN STATISTICS

Beginning with year 1859, in our country, sets up the first Rumanian Statistics Office in Bucharest, and this fact enabled the elaboration of some statistical series of indexes which reflect social life conditions and specific of the moment.

Synthetically the main names and reference works in the Rumanian statistics history are:

- **Nicolae Şuțu** has published at Iasi, in 1849, the "Moldavia Nations Statistics", translated by Teodor Codrescu; he bring information referring to the territory, population, agriculture and industrial output, trade, consummation and productive forces of Moldavia at the moment;
- **George Barițiu** published at Brasov, in "Transylvania newspaper" 1838, important statistical data referring to *products price, stocks course price, Transylvania trade, population, cultural, social and political life of this principality;* at the middle of the XIX century he will create a veritable statistics school in Transylvania, being preoccupied mostly by the demographic, economical, political, national and cultural issues of this province;
- **Dionisie Pop Marțian,** he is one of the advocates of the first Rumanian Statistical Office; he organizes and creates the first population census from 1859 until 1860 in the Romanian Country (Țara Românească); he publishes in 1860 "The Statistics Annals" and, in connection "The Economy Annals"; bring to light his personal idea about statistics and emphasizes his scientifically believes towards the conscience development regarding the theoretical and applicative statistics significance in our country;
- **Ion Ionescu de la Brad** leads the organization of the 1859-1860 census in Moldavia, and throughout his work "Povățuiri pentru catagrafia Moldovei, precedate de oarecare elemente de statistică" creates the first real statistics textbook, the first one of this kind published in Rumanian. Ion Ionescu de la Brad is also the one who contributed to some notions terminological clarification in the Rumanian Statistics and published during 1866-1869 three complete monographs of Dorohoi, Mehedinti and Putna counties.
- Some contributions to the Rumanian statistics development ought to **Mihail Kogălniceanu,** whom in 1870 tried to introduce by law means the decennial compulsoriness of the population census.

- **Leonida Colescu** had indisputable merits in the statistics development through the census realized in 1899 and the one from 1912; regarding especially the later census, Leonida Colescu introduced new data registration rules and principles. In the period 1901-1902, Leonida Colescu organized the first industrial investigation through which he registered the development level of Rumania's industry at the end of the XIX century.
- **I. N. Angelescu** professor from Trade Academy in Bucharest realized important statistical studies in the demographic, economic and population health domains, studies which were published in 1915.
- Beginning with 1919, in Rumania there has been organized the Central Statistics Directory, which structure included County Statistics Offices. Beginning with year 1922 there has been published an annual Rumania's statistic and various statistic branch studies. The published studies regarding the Rumania's general population census (in 1930) and the agricultural census (1941) had a positive influence on the Rumanian statistics development.

REFERENCES

1. **Anghelache C., 2000** - *Economical Publishing House*, Bucharest.
2. **Baron T., Biji E. (coordinators), 1996** – *Economic and Theoretical Statistics*, Didactical and Pedagogical Publishing House, Bucharest
3. **Bădiță M., Baron T., Korka M., 1998 -** *Business Statistics*. Efficient Publishing House, Bucharest
4. **Bărbat Al., 1972** – *Social Statistics Theory*. Didactical and Pedagogical Publishing House, Bucharest,
5. **Jula D., 1999** – *Rumania – Macro economical Prospective Sceneries*. Rumanian Academy, Economical Research Institute, Bucharest,
6. **Trebici V., 1979** – *Demography,* Scientific and Encyclopedia Publishing House, Bucharest,
7. **Vasilescu N., 2000** – *Statistics*. Reprograph Publishing House, Craiova,