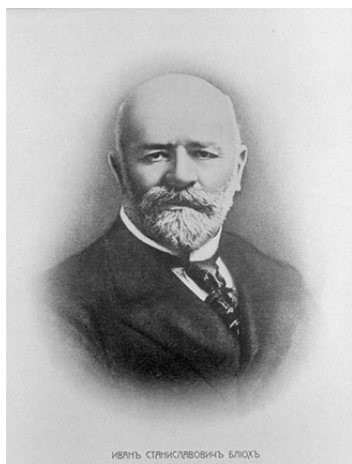


## I.S. BLIOH (1836 – 1901) RAILWAY MAGNATE AND PEACEMAKER, PROMINENT SCIENTIST-RAILROADER: ECONOMIST, STATISTICIAN AND FINANCIER

Lapin V., Ph.D., Kryvopishyn O., Ph.D., Katsman M., Ph.D.

•  
South-Western Railway, Kyiv, Ukraine  
e-mail: [vnbsp@sw.uz.gov.ua](mailto:vnbsp@sw.uz.gov.ua)



Wretched presence of *Ivan Stanislavovich Blioh (1836 – 1901)* in modern historical and scientific memory of Poland, Russia and Ukraine, that in those countries in which he was born, was working, and lived extraordinarily creative life specifies on possible, in course of time, danger of complete disappearance of his name not only from the scientific inheritance of these states but also from European collective memory. Unfortunately Blioh, in understanding of nationalistic idea, was very Russian for the Polish nationalists, very bourgeois for soviet communists, very much asimilyant (adopted Christianity) for anti-semites, that in course of time resulted in a partial loss, from these reasons, his scientific acquisition and his merits as military theorist and figure of international peaceful motion.

At the same time Blioh was a successful businessman and exceptionally gifted person who knew French, German, Russian and Polish languages. His ideas became the basics for creation OUN. Blioh the first in theory formulated and practically carried out important direction in the sphere of social partnership between businessmen and workers by creation of railway pension cash desks of insurance type. On the whole his life is a whole epoch in technical, financial, intellectual and nationally-cultural development of the Russian empire of the second half of XIX century. In fact Ivan Blioh is not only a railway magnate and banker but also scientist, known economist, statistician and financier, military theorist, peacemaker, figure of international peaceful motion. He was nominated on the Nobel Prime of the world. He was born on June, 24, 1836 in the Polish town of Radom, was a seventh child in a poor, having many children family. His education he received in Warsaw and Berlin [1,2,3].

In 1850 I. Blioh arrived to Warsaw and began to work in the bank of family of Teplica and studied in the Real gymnasium. In 1856 I. Blioh leaves Warsaw and moves to search the best fate to Petersburg. He began to work as a subcontractor on constructing of railway between Warsaw and St. Petersburg. First time the name of I. Blioh appears in the Russian archives in 1860 year. In these documents Blioh is remembered as an owner of company «enterprise of Blioh» and honored businessman [1].

In 1866 I. Blioh got a concession on constructing of railway in Lodz. Lodz railway was built by Blioh independently and only for his money. Railway by a length in 26 versts connected the center of textile industry, which developed quickly, with the station of Kolyushki of Warsaw-Viennese railway. After the sizes of gross and clean profit, in a count on a verst, Lodz railway excelled the Mykolaiv railway even. After high-quality building of this railway in short terms I. Blioh became a famous person among the builders of railways. The following in his career of railway builder was construction of the part of Libavska railway by length in 294 versts. The construction lasted more than two years (1869-1871) and did not bring the considerable financial achievements for Blioh, but he got considerably anymore due to it, – Ivan Stnsislavovich received a reputation of professional specialist, reliable and timely performer of contracts.

Blioh after becoming an actual proprietor of Kiev-Brest railway put beginning on it pension cashdesk with principles of self-finance and insurance. In this he saw the way of providing of deserving financial position of workings on a railway transport at the end of labour life. He confirmed practical actions by scientific work, published in 1875 in a coauthor with O.I. Vishnegradskiy. The purpose for decision of which it was written by two known domestic scientists, - exposure of effective economic mechanisms of creation of the unique, but not separate, system of pension cashdesks which would operate on a railway transport on principles of self-finance and life-insurance. It is necessary to notice that future ministers of finance of Russian Empire I. Vishnegradskiy and S. Vitte at one time, before the ministerial brief-cases, were related to work on the railway transport (South-Western railways) and both submitted to I. Blioh. Ideas that were conducted by them for reformation of the financial system of the Russian Empire were got from collaboration with Blioh [1].

Among colleagues-railroaders, economists, financiers I. Blioh, differed thirst to scientific-practical activity. In 1864, in the age of 28 years Blioh published his first scientific work on questions of constructing and exploitation of railways. This work had a form of message, but paid attention on itself by leading spheres in the state and helped to it's author to take the prominent place among other known figures that time in the area of construction and exploitation of railways. At the beginning of 70-th I. Blioh had a mass popularity as a connoisseur of railway business, he was known as a serious economist and gifted publicist. Since the publication of the first scientific article Ivan Stanislavovich did not limit his life only by business, scientific work became the norm of his everyday life [2].

In 1890 appears his extraordinarily valuable scientific research „About an agricultural reclamative credit in Russia and abroad”. The basis of research is made by the collected materials about organization of this important, but weaker than other kinds of credit, developed in Russia. He is an author of more than ten multivolume, fundamental scientific works in macroeconomics, railway statistics, finances, problems of war and peace, land-tenure, demography. Most of his scientific works were translated into foreign languages. Come into the special notice and have a scientific value the works of Ivan Stanislavovich on questions of railway statistics, determination of cost of railway tariffs and prime price of railway transportations, influence of new type of transport, – railways on the economic and financial position of Russia. Blioh was one of the first, who laid beginning to the scientific analysis of influence of railways and railway construction on economic position of country and began constantly work above this theme [1, 2].

Minister for finance the Russian Empire M.H. Reytern, acknowledging useful to appoint commerce of adviser Blioh, by the member of scientist of Committee of ministry of finance in his presentation to the emperor in relation to setting, gave such description to Ivan Stanislavovich: «In the environment of commercial estate pays attention on itself literary and by scientific works commerce adviser Blioh. The work about the Russian railways and systematic tables about trading in cattle in Russia, published by him deserved the most complimentary reviews of persons, specially acquainted with this business. Presently Bliokh is busy at collecting of materials for the research undertaken by him about development of productive forces of Russia for the last twenty years, part of which appeared already in the print... Commerce adviser Blioh, religions of evangelistic-reforming, is deliberative member of the Veterinary committee of ministry of internal affairs from April, 24, 1874 and has orders of Saint Ann with a crown second stage, Saint Stanislav second stage, Saint Vladimir fourth stage and Austrian order's Franca Joseph Commander Cross with a star. Position of member of scientific Committee of ministry of finance behaves to the first class».

By his work «Influence of railways on economical state of Russia» (5 volumes with a graphic atlas, 1878) I.S. Blioh extended the limits of financial science, the first analyzing influence of building of railways on expense part of the state budget, marking that the state must not only find out the methods of mobilization of necessary it money but also study, as expense part influences on the different aspects of public life in that number during transition from one form of state ménage to

other. Blioh conducted the analysis of financial reforms, directed on strengthening of monetary item, touched state profits and painting of profits and charges.

In his works Blioh proved that true analysis of charges of exploitation has large importance not only for the proprietors of railways but also for national interests, which considerably suffer from complete absence of the analytically exhaust basic beginnings of railway exploitation. He selected 4 groups of running expenses, dividing them into two categories: proportional (dependent) and permanent (independent) from the sizes of motion and also offered comparative measuring devices of volumes of works for establishment of rational norms of exploitation. Determination of own charges of railways on unit of carrying passengers and loads was needed for I.S. Blioh for subsequent determination of utility or unprofitability of passenger and freight tariffs and also for perfection of account of own charges of railways with the purpose of estimation of rightness and necessity of the sustained losses.

Research and conclusions of I. Blioh had a determining influence on the decision of problems of forming and management charges on a railway transport and became the beginning of development of prime's price calculations of transportations on domestic railways. Except for determination of prime price of transportations, I. Blioh, as a research worker and proprietor of railways, was interested in the question of formation of tariffs. In this area he tested «certain difficulties» at reasoning about that, in what dependence charges of exploitation are from motion on this railway on how many advantageously and it is possible to attract on it loads by the greater or less decline of tariff.

The sense of the last years of his life I.S. Blioh saw in distribution of idea of creation the world's peace, which took him approximately in 1890, an in the organization of the first museum of war and peace. He undertook to serious research of the noted problem and as a result I.S. Blioh became an author of «the bible of pacifism», - multivolume work with the title «Future war in technical, economical and political relations» and other popular scientific works on this question. In 70th of XX century the works of 360 prominent figures of peacemaking motion were reprinted in the USA, including 6 volume "Future war in its technical, political and economic relations.

Ivan Stanislavovich Blioh died because of aneurysm of heart in December, 1901. At such intensive way of life there is nothing strange. He was known as titan of work, who dedicated night-time to scientific researches, and in a day conducted the usual economic and financial businesses. For such lifestyle Ivan Stanislavovich got the considerable squall of criticism from contemporaries, they could not understand and accept such way of life – combination of successful business and prominent scientific activity.

Getting considerable financial resources on railway concessions, Blioh actively joined to public life of the Russian state. He productively worked in a commission on the revision of legislation about jewries, headed by count Palen, except for scientific works from an economy and finances came forward as a theorist and practical figure in a fight for world disarmament, accepted active voice in organization of world conference from general disarmament, going out from financial-economical expedience and production necessity founded society of the South-Western railways and long time was the chairman of Rule.

I.S. Blioh is one of founders of railway statistics, which is component part of statistical industry that studies a railway transport. Basic directions of his scientific work there were also problems of railway tariffs, political economy and statistics of national economy.

Appointed the member of Scientist committee of ministry of finance, Blioh printed a work: «About penalty by Russian railways the transport pays in metallic currency» (1877) and published wide work «Finances of Russia of the XIX century» (4 volumes, 1882). This work is translated into French, German and Polish languages and filled up by a volume which contains history of finances of Reign Polish till confluence of them with general state budget. In 1890 there was published Blioh's book: «About an agricultural land-reclamation credit in Russia and foreign states», in 1898 – his research «Future war and it's economic consequences» (6 volumes and 1 volume of cartograms; reprinted also in Polish, German, French and English languages).

In 1901 was printed his scientific work: «Comparison of financial and ethics welfare of provinces western, great russian and at Wisl's» (5 volumes, with the atlas of charts and cartograms, except for 25 copies destroyed the fire of printing-house, now rare book).

In his works «Russian railways in relation to profits and charges of exploitation and motion of cargoes» (1875) and «About penalty by Russian railways the transport pays in metallic currency» (1877) he in detail considered the question of determination of transport pay on the example of the state of businesses on Kiev-Brest railway which belonged to him.

By him there were analyzed volumes of transportations of different types of products of industries of industrial and agricultural production, duration of their delivery and tariffs, necessities of population in railway transportations, degree of satisfaction of necessities of shippers and consignees.

Tasks that were put by him in relation to the analysis of activity of railway transport and its influence on the economy of country until now are actual and are deciding on railways with the purpose of effective organization of transportations operating work and is a mean operatively prescriptive to activity of guidance of railways.

Considering a necessity to accept certain economic measures against the removal of losses of railways which arose up as a result of depreciation of Russian national currency, Blioh in his scientific work “About penalty by Russian railways the transport pays in metallic currency” proposed the project of increasing the profitability of railways by the increase of passenger tariff on 30%, and freight on 20%. But this suggestion of Ivan Blioh was not supported by shippers and government [1, 2].

Comparing present population on provinces, their financial incomes on one habitant of province I. Blioh came to the conclusion, that from point of justice, expense, that the state carries because of construction of railways it is necessary to translate not on all population of country, which in the majority does not use railways, and only on that part of population, which with appearance of railways extracts additional benefits.

Examining railways «as industrial enterprises for a movement or transportation of cargoes and passengers», I. Blioh analyzed possibility of application of laws of free competition to the railways and came to the conclusion, that railways must carry cargoes and passengers on a maximum tariff. A free competition for railways is possible only in exceptional cases, as railways make a monopoly of transportations in this locality.

Determining the degree of influence of tariffs on passenger and freight motion, Blioh comes to the conclusion that «decline of tariffs with the purpose of bringing in the passengers and loads from other ways of report, it is impossible not to notice that in that behalf passenger and freight motion is presented quite by different characters». For passenger motion the declining of transport pays don't increase the amount of passengers, so as passage of passengers on railways is caused by their vital necessities and only on occasion by travel satisfactions.

Blioh considered that establishment of freight tariffs is impossible without the studying of direction of motion of cargoes. «Without the previous studying straight of motion of cargoes managements of railways indispose the proper information for establishment of rational tariffs». Low tariffs are advantageous to national economy only at their protracted actions. Not variable, but permanent, low tariffs are of the use as to the state so to the railways.

Working out the totals of his work, Blioh considered appropriately, that this work would «serve grain from which, at a good supervision ... in the future not only rational statistics of commercial motion on railways but also rational looks, will be worked out for the correct estimation of activity of railways».

On defence of domestic railway policy which was represented in the increased railway building (for 11 years 20 thousand versts) I.S. Blioh published in «Announcer of Europe» for 1877 row of the articles under the name «Economic position of Russia in the past and today», which later were reworked and in 1878 were published under the name «Influence of railways into economic position of Russia» in 5 volumes with the detailed graphic atlas [4].

In this work first to the analysis of the systems statistical material was subject during great while accumulated in the ministry of ways of report about motion of loads. This significant research was soon translated into the French and Polish languages. On the World exhibition in Paris in 1878 this work of Blioh was recipient by large gold medal. By this work the beginning of development of railway statistics was fixed, – I. Blioh processed and used present materials, applying a new method – grouping and cartograms.

«In the published by me book «Russian railways» I wanted to explain fact sheets and external of our railways environments by comparison to foreign such as: attitude of profits toward charges, freightage, direction of different industries of trade on the different arteries of the railway system, etc. A favorable reception is given this research encouraged me to engage in subsequent development of questions which behave to economic and financial influence of railways in Russia, questions untouched in the first work» [4].

That fact is not subject a doubt, wrote I. Blioh, that diminishing by railways the value of transportation, increase the net income of producers and the same promote to the increasing of the productivity and raising of prices on earth and labour, helping distribution of welfare thus. Construction of 20 thousand versts of railways and their exploitation brought to country great capitals and delivered to different classes of population very considerable earnings [4].

Analyzing reasons of economic backwardness of the Russian Empire before Crimean war, consequences of the Crimean company and reforms before the crisis of 1866, transformation and general financial position in 60-th years of XIX age an author comes to the conclusion, that among main reasons of defeat of Russia it is possible to name three groups of factors: political, technical and social-economic.

For research of the put questions Blioh used current and statistical materials of railways, ministry of ways of reports, in particular published by the government of country in publication «Types of foreign trade».

After systematizing, grouping and dividing into groups the enormous amount of statistical and current material for period from 1802 to 1876 Blioh conducted an external economic point-of-sale statement of the Russian Empire with the subsequent purpose of determination of role of railways in the improvement of economy of country and external point-of-sale relations of the empire.

The last book of 5 volume work has the name «Financial results». Widespread opinion, that to Crimean war in Russian Empire there was brilliant economic position Blioh named a «mirage». Russian public servants that time, insulated political and economic life of country from the other whole world and put little attention on economic position of population, did not give itself a report in constantly growing power of other countries. Force of the states was measured only the quantity of army and forgot that with the improvement of ways of report and military technique, the fight of people between themselves decide accumulated financial and mental resources and [8, p.5-6]. Nevertheless that Russia from 1831 to 1853 years did not conduct wars, the state during 23 years was not able to cover the charges ordinary profits, no expenses were though done on needed works neither on raising of level of education nor on driving of administration to more correct, proper the requirements of time of position [4].

Thus, Ivan Stanislavovich draws conclusion, that state administration was in a self calming in relation to the economic resources of country to the that time, while Crimean war did not lead to all insolvency of the domestic political system [4].

All of it induced to the radical changes in the financial and administrative system of the state. To the measures the necessity of which was realized society and government, belonged aspiration to find the money for possibly rapid constructing of railways. But the decline of state credit was the phenomenon unfavorable for railway construction [4].

Diminishing of federal deficit by the cutback of the soldiery spending was impossible as a result of active armament of the European countries in the period of french-italian-avstrian war in 1859. Russia is not only for the sake of the influence on the European states but also for the sake of

the safety had to increase the quantity of army and perfect a military armament [4]. The unique methods of coverage of federal deficit were the external and internal borrowings.

Such was financial and economic position of the Russian empire before the increased construction of railways gave an enormous shove to the productivity and to the considerable receipt of capitals from abroad, changing a fund and financial market condition and improved the position of state finances. Analyzing in the 4 sections of fifth volume the financial position of state credit, in the fifth section «Financial history of railway construction» Blioh notices that building of railways needs money, and as a result of declining of state credit construction of new railway lines was halted. «It became clearly for all that railways must improve economic and financial position of the state». «The question about new railways arose up only then, when Crimean war by unprofitable a perceptible and fatal method showed unprofitable, as a result of large distances, terms in which the put state at defense of the borders» [4].

Working out the totals of the VIII section, Blioh notices: Comparing the numbers of commodity motion to the numbers shown out by us in the work «Russian railways» after 1871, 1872 and 1873 years easily to mark, as position of our railways gets better considerably. From 1871 to 1874 years the median income from a pood and verst diminished only from 1/25 on 1/26 kop., while charges fallen down from 1/32 to 1/43 kop., and it is possible to hope that on this way of progress of railway will not stop [4].

Active construction of railways became the reason of considerable increase of money circulation in the state. A money in an economy acted as paying for labour of great number of office workers, busy on construction and exploitation of railways, and also as paying for different build materials which before the beginning of construction of railways quite not had a value and outlaid unproductively or had an useless value.

Blioh I.S. considered that influence of railways on economic position of Russia had been expressed in dual sense: from one side enormous part of influence belonged to them on development of productive forces, strengthening of consumption, export and import. If not inevitable offerings on them from the side of the state, that increased a national debt abroad, such concept of economic way of life of country would be reflected also on the improvement of rates of exchange in a greater degree, what it could take place at the increase of sum of Russian foreign payments. From the other side, construction of railways made a very large turn, in 1,5 milliards of roubles, which was distributed mainly on earnings of different layers of population and enabled them not only more in good condition to bring in taxes but also strengthen a consumption, in general to improve the way of life and create an economy if to not all the people on the average to mass, in the environment of which again private capitals appeared in great number. In that sense also operated charges for exploitations of railways which made in the period of 11 years (1865-1875) the sum in 535 million roubles.

Ivan Stanislavovich finished his 5 volume work by words which are actual until today: «So, the shown picture certifies by the way of indisputable arguments, which are the numbers, that the welfare of the state and development of it's force is not in the stagnation, not in separate from other nations, not in difficulty of terms of internal way of life, and opposite – in a gradual, but courageous continuous forward movement, in sent forward other people on their way of development and national freedom» [4].

## CONCLUSIONS

In the article there is described the production and scientific activity of I.S. Blioh in the industry of building and exploitation of railway transport, creation of railway pension cash desks of insurance type, determination of role of railway statistics is on the cost of construction of tariffs, an analysis of influence of railways is on economic development and finances of Russian Empire in the second part of XIX – beginning of XX centuries, and also public activity from the problems of war and peace, world's disarmament, prevention of soldiery conflicts, land-tenure and demography

## LITERATURE

1. Лапін В.П. Роль І.С. Бліоха у розбудові залізниць України (друга половина ХІХ століття) / В.П. Лапін // Матеріали 6-ї Всеукраїнської наукової конференції «Актуальні питання історії техніки». Київський політехнічний інститут. К., – 2008. – С. 55–58.

2. Лапін В.П. Історична необхідність організаційних та структурних перетворень в мережі залізниць Російської імперії другої половини ХІХ століття / В.П. Лапін // Історичні записки Східноукраїнського національного університету ім. В. Даля. Збірник наукових праць. Випуск 20. ч. 2. Луганськ : – 2008. – С. 97–106.

3. Лапін В.П. Теоретичний і практичний внесок І.С. Бліоха в ідеологію всесвітнього роззброєння / В.П. Лапін // Історія української науки на межі тисячоліть. Дніпропетровський національний університет. Випуск 38. – К. : 2009. – С.142–150.

Бліох И. С. Влияние железных дорог на экономическое состояние России / И. С. Бліох. – СПб., тип. Стасюлевича. 1878. – т. 1–5.