

Polish-Slovak-Ukrainian Scientific Seminars – 30 years of cooperation

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The close cooperation between Polish and Slovakian academic statisticians began with the establishment of the independent Slovak Republic on 1st January 1993. On 3rd January 1993, Professor Józef Pociecha from the Department of Statistics at Krakow University of Economics, then headed by Professor Aleksander Zeliaś, visited the Department of Statistics at the University of Economics in Bratislava, headed by Eva Sodomová, Associate Professor, to discuss the possibilities of tightening cooperation between the departments. The initial idea, introduced by Viera Pacaková, Associate Professor, was to carry out a joint research project. After further discussions, it was concluded that the project would concern labour market statistical investigations in the transformed economies of both countries and be coordinated by the Central European University in Budapest. All relevant documents were prepared, but eventually our research project was not accepted.

In order not to waste the work and time spent on designing the initial research project, a new idea emerged of a joint Polish-Slovakian scientific seminar on quantitative methods and empirical research in area of economic investigations. The seminar was to bring together economists, statisticians and mathematicians from Krakow University of Economics and the University of Economics in Bratislava. This joint seminar provided an opportunity for presenting the results of recent research conducted by both parties. The seminar also offered a forum for discussion about the possibility to undertake special joint research projects.

The first Slovak-Polish Scientific Seminar, held on 27th–31st March 1995, was organised by the Department of Statistics at the University of Economics in Bratislava. The seminar focused on one topic: the labour market and unemployment in Slovakia and in Poland. ‘Problems of measurement of labour forces and their utilisation in transforming economies’ was the theme of the seminar. Eleven papers were presented by the members of the cooperating statistics departments from Bratislava and Kraków only.

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The 2nd Polish-Slovak Scientific Seminar, focused on ‘Statistical methods of the analysis of socio-economic aspects of the labour market in Poland and Slovakia’. It was organised by the Department of Statistics at Krakow University of Economics and took place on 15th–18th November 1995. In addition to the eleven papers delivered by authors from both universities, there was one guest presentation by Professor Serguei Gerasymenko from the Kiev State University of Economics. Professor Gerasymenko suggested extending cooperation to three partner institutions, i.e. the departments of statistics in Bratislava, Kraków and Kiev. The proposal was accepted, giving rise to a three-partner collaboration.

The 3rd Polish-Slovak-Ukrainian Scientific Seminar titled ‘Research on labour markets and the level of life in Poland, Slovakia and Ukraine: methods and results’ was held in Kraków on 14th–15th November 1996. The main topic of the seminar, which was the labour market and unemployment, was extended by topics connected with the former one: quality of life, consumer behaviour and poverty. The authors from Krakow University of Economics, the University of Economics in Bratislava and the Kiev State University of Economics presented 11 papers on the above-mentioned issues.

‘Statistical methods in socio-economic investigations: theory and applications’ was the main theme of the 4th edition of the seminar. It was held in Bratislava on 10th–12th November 1997. The topic of the seminar was expanded to include a general overview of the statistical methods applied to socioeconomic research. In addition to the four groups of issues discussed during the previous seminar, papers on forecasting, actuarial statistics, demographic investigations and other research problems were presented. 17 papers were delivered by the authors from the University of Economics in Bratislava, Krakow University of Economics and guest participants from the Slovak Academy of Sciences, the Tinbergen Institute in Rotterdam, the Agricultural University in Nitra, the University of Žilina, INFOSTAT Bratislava and the Institute of Labour, Social Affairs and Family.

The 5th Ukrainian-Polish-Slovakian Scientific Seminar relating to ‘Economic and social statistics in transition’, was organised by the Kiev National University of Economics and held in Kiev on 20th–22nd October 1998. The seminar focused on three main topics: quality of life, multivariate statistical analysis, and macroeconomic policy and indicators. Besides the 11 papers presented by the authors from the three cooperating universities, there was a guest speaker from the Scientific and Research Institute of the State Statistics Service of Ukraine.

The 6th Polish-Slovak-Ukrainian Scientific Seminar on the ‘Statistical methods in socio-economic research: theory and applications’ took place in Kraków on 8th–10th November 1999. The following groups of issues were discussed: theoretical and methodological aspects

of scientific research, problems relating to the investigation of market processes, economic and statistical challenges relating to transition processes in Central and Eastern European countries, and demographic research. 17 papers were presented by the authors from the three cooperating universities. Moreover, guest participants from the Lviv Academy of Commerce, the Ivan Franko Lviv National University and the University of Rijeka presented the results of their research.

The 7th Slovak-Polish-Ukrainian-Czech Scientific Seminar concerning ‘Analysis and international comparisons of the social consequences of transformation processes in post-communist countries’, was organised by the University of Economics in Bratislava and held in Svätý Jur on 15th–18th November 2000. Five main groups of issues were discussed and 18 papers delivered on: the economic conditions of social changes, quality of life, methods and results of international comparisons, labour market and consumer behaviour. In addition to the scientists working at the three cooperating universities, speakers from the University of Economics in Prague, the Lviv Academy of Commerce and guests from the Wrocław University of Economics presented their findings.

The 8th Ukrainian-Polish-Slovak Scientific Seminar on ‘Problems of economic statistics in transition countries’, was held in Kiev on 24th–26th October 2001. Four major themes were discussed: methodological and informational foundations of statistics, contemporary problems of applied statistics, statistical aspects of demographic investigations and education in statistics. Besides the regular participants from Ukraine, Poland and Slovakia, guest authors from the Berlin School of Economics, the Cabinet of Ministers of Ukraine, the State Statistics Committee of Ukraine, the Scientific Research Institute of Statistics, the National Academy of Management, the Lviv Academy of Commerce, and the Ivan Franko Lviv National University presented their papers.

The 9th Polish-Slovak-Ukrainian Scientific Seminar focusing on ‘International comparisons of socioeconomic consequences of transition processes in Central and Eastern European countries’, was organised by Krakow University of Economics and held in Krynica on 6th–8th November 2002. Four main groups of issues discussed at the seminar included economic processes and methods of their comparison, statistical methods for political and social investigations, quantitative economic research in theory and practise, ageing process and insurance problems, and demographic analysis and its applications. The authors of the 20 presentations came from the Bratislava, Kraków, Kiev and Lviv cooperating universities. There were also guest speakers from the National Academy of Management in Kiev and from Świętokrzyska Academy in Kielce.

The 10th Slovak-Polish-Ukrainian Scientific Seminar focusing on the ‘Education of quantitative mathematical and statistical methods at economic universities referring to future needs’, organised by the University of Economics in Bratislava, was held in Svätý Jur on 4th–7th November 2003. Seventeen papers were presented which set direction in new approaches to teaching statistical disciplines, the role of innovations in the study programme, theoretical and methodical aspects of the application of statistical methods in demographic, social and economic investigations. Pacaková and Pociеча also presented an occasional paper ‘Nine Polish-Slovak and Polish-Slovak-Ukrainian Scientific Seminars: the main ideas and methods of socioeconomic investigations’ (2003). The seminar was participated by scientists from Krakow University of Economics, the Kyiv National University of Economics, Wrocław University of Economics, Katowice University of Economics, the Lviv Academy of Commerce, the Kyiv National Academy of Management and the University of Economics in Bratislava.

The 11th Ukrainian-Polish-Slovak Scientific Seminar on ‘Statistics in management of social and economic development’ was held in Kiev on 20th–24th October 2004. Statisticians from nine Ukrainian institutions, Krakow University of Economics and the University of Economics in Bratislava took part in the event. 25 papers were presented on topics relating to the problems of macroeconomic statistics, household surveys, provision of informative support to the national development strategy, analysis and forecasting of demographic processes. The seminar showed that all presentations were dedicated to the then current problems of statistical methodology and practice of statistics and a great majority of the recommendations may have been successfully applied in statistical analysis and forecasting of the economic processes occurring in transition countries.

The 12th Polish-Slovak-Ukrainian Scientific seminar presenting ‘A comparative analysis of the socioeconomic consequences of transition processes in Central and Eastern European countries’ was held in Krynica on 8th-10th November 2005. The seminar offered an occasion for Polish, Slovakian and Ukrainian economists, statisticians and demographers from the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman (the Kyiv National University of Economics until 2005), the Lviv Academy of Commerce, the Odessa State University of Economics, the Doneck National University and Krakow University of Economics to meet. The 17 papers that were delivered at the seminar focused on five main groups of topics: economic process analysis, demographic research, quantitative economic investigations, social and business statistics, and labour market analysis.

The 13th Slovak-Polish-Ukrainian Scientific Seminar on the ‘Education of quantitative mathematical and statistical methods at economic universities referring to future needs’, organised by the Department of Statistics of the University of Economics in Bratislava, was held in Svätý Jur on 7th–10th November 2006. Scientists from Krakow University of Economics, the Kyiv National Economic University named after Vadym Hetman, Wrocław University of Economics, Katowice University of Economics, the Odessa State University of Economics, the Doneck National University and the University of Economics in Bratislava attended the seminar. This three-day event set direction in the new approaches to teaching quantitative methods, innovations in study programmes, the role of quantitative methods as a subject of study in economics and management, the restructuring process of the higher education system in the EU according to the Bologna Process. The theoretical aspects and applications of the statistical methods of demographic, social and economic analysis of various phenomena were also discussed.

The 14th Ukrainian-Polish-Slovak Scientific Seminar, addressing the issue of ‘Statistics in management of social and economic development’, organised by the Odessa State University, took place in Odessa on 24th–28th September 2007. Statisticians from 12 institutions (nine Ukrainian, one Polish and two Slovak) delivered a total of 20 presentations that focused on four main topics: economic and human development in Central and Eastern European countries, various aspects of demography and social statistics, the theory and methodology of statistical analysis and statistical methods of market analysis. This four-day event also provided an excellent opportunity for the participants to exchange opinions on the issues of statistical methodology and practice. The formulated recommendations proved useful in the area of statistical analysis and forecasting contemporary tendencies in the transition processes that the considered countries were undergoing.

The 15th Polish-Slovak-Ukrainian Scientific Seminar was held in Kraków on 21st–24th October 2008. Participants from the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Lviv Academy of Commerce, the Odessa State University of Economics, the Kharkov National University of Economics, the Doneck National University and Krakow University of Economics attended the event. The 20 papers which were presented at the seminar covered six groups of issues: quantitative methods in economics, quantitative investigations methodology, comparative studies on economies in transition, demographic investigations, social and economic statistics, statistical methods and their applications. The seminar gave rise to an initiative to exchange experiences gained in the course of the scientific work of the participating universities.

The 16th Slovak-Polish-Ukrainian Scientific Seminar on ‘Quantitative methods in socio-economic analysis’, organised by the Department of Statistics in Bratislava, was held in Kucisdorf Valley on 27th–30th October 2009. 16 presentations were made during the seminar, referring to the topical problems of statistical analysis in various economic and social contexts. The contributions focused on issues of statistical analyses in the economic, social and demographic areas, and their applications in banking and insurance institutions (mathematical modelling of credit risk, bankruptcy prediction), macroeconomic indicators (capital mobility, pro-, anti- and acyclic factors of economy), social and demographic analyses (household budget analysis, employment and unemployment analysis) and applications in other sectors of economic life (mathematical methods in management, quality control methods).

The 17th Ukrainian-Polish-Slovak Scientific Seminar was held in Lviv on 22nd–24th September 2010. The host institution was the Lviv Academy of Commerce. Researchers from Krakow University of Economics, the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Ivan Franko Lviv National University, the Odessa State University of Economics and the Doneck National University attended the seminar and delivered 21 papers. The event focused on the contemporary problems of transformation processes. The relevant socioeconomic issues were divided into four main groups: multi-dimensional macro- and microeconomic issues, the economic policy in transformation economies, quantitative methods in social research and regional issues in statistical research.

The 18th Polish-Slovak-Ukrainian Scientific Seminar was devoted to the ‘Statistical analysis of the economic and social consequences of transition processes in Central and Eastern European countries’. The event was organised by the Department of Statistics of Krakow University of Economics and took place in Krynica on 25th–28th October 2011. Statisticians, econometricians and demographers from the University of Economics in Bratislava, Kyiv National Economic University named after Vadym Hetman, the Ivan Franko National University of Lviv, the Lviv Academy of Commerce, the Odessa National University of Economics, the Doneck National University and Krakow University of Economics attended the seminar. During the event, 22 papers were presented focusing on six main groups of problems: the statistical analysis of international economic processes, economic investigations of the Ukrainian economy, statistical tools in socioeconomic investigations, issues relating to business statistics, methods of demographic analysis and statistical methods for process analysis.

The 19th Slovak-Polish-Ukrainian Scientific Seminar on ‘Quantitative methods in socioeconomic analysis’, organised by the Department of Statistics of the University of

Economics in Bratislava, took place in Svätý Jur on 23rd–27th October 2012. The event was attended by representatives of Krakow University of Economics, the Kyiv National Economic University named after Vadym Hetman, the Lviv Academy of Commerce and the University of Economics in Bratislava. The main topics of the 19 presentations were: macroeconomic analysis methods, special analysis methods, demographic investigations, labour market analysis, household income analysis, consumer opinion analysis, financial analyses, risk analysis, product design quality assessment.

The 20th, jubilee, Ukrainian-Polish-Slovak Scientific Seminar discussed ‘The role of statistics in the modern economy model development’. The meeting was organised in Kyiv on 5th–7th November 2013 by Professor Igor G. Mantsurov, head of the Department of Statistics of the Kyiv National Economic University named after Vadym Hetman. The seminar was attended by representatives of Krakow University of Economics, the University of Economics in Bratislava, the University of Pardubice in the Czech Republic, the Kyiv National Economic University named after Vadym Hetman, the State Statistics Service of Ukraine, the Odessa National Economic University, the Donetsk National University, the Oles Honchar Dnipropetrovsk National University and the Lviv Academy of Commerce. During the event, 23 contributions were made, and among them, Pocięcha and Sodomová presented ‘Twenty years of Polish-Slovak-Ukrainian Scientific Seminars: ideas and investigations’ (2014).

The 21st Polish-Slovak-Ukrainian Scientific Seminar themed ‘Quantitative methods for the analysis of economic and social consequences of transition processes in Central and Eastern European countries’, organised by the Department of Statistics at Krakow University of Economics, took place on 21st–24th October 2014 in Szczawnica. 25 papers were presented during the event. Participants from Krakow University of Economics, the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Lviv Academy of Commerce, the Lviv Institute of Banking, the University of Banking of the National Bank of Ukraine, the Scientific and Research Institute of Economics at the Ministry of Economic Development and Trade of Ukraine attended the seminar. The main topics of the presentations were: efficiency measures of educational and scientific systems, economic investigations of the Ukrainian economy, methods of demographic analysis, household budget investigations and business statistics.

The 22nd Slovak-Polish-Ukrainian Scientific Seminar relating to ‘Statistical methods in socioeconomic research: theory and applications’ was organised by the University of Economics in Bratislava in Virt on 20th–23rd October 2015. Participants from the University of Economics in Bratislava, Krakow University of Economics, the Kyiv National Economic

University named after Vadym Hetman, the Odessa National Economic University and the Lviv Academy of Commerce, attended the seminar, during which 18 papers were presented. The main topics were: sampling methods in socio-economic investigations, the influence of the global crisis on the economic stability of Central and Eastern Europe, challenges posed by the current crisis in Ukraine, demographic future of Ukraine, diversity of household expenditures, situation of women on the labour market, the logistic regression method in the research of the financial standing and business statistics methods.

The 23rd Ukrainian-Polish-Slovak Scientific Seminar, focusing on ‘The role of statistics in the modern economy model development’, organised by the Kyiv National Economic University named after Vadym Hetman and Research Institute for System Statistical Studies Information Systems and Technologies, took place on 12th–13th October 2016 in Kyiv. Representatives of Krakow University of Economics, Nicolaus Copernicus University in Torun (Poland), the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Oles Honchar Dnipropetrovsk National University, the National Academy of Statistics, Accounting and Audit, Kryvyi Rih National University, the Donetsk National University, the Odessa National Economic University, the Kyiv National University of Trade and Economics and the Lviv University of Trade and Economics attended the seminar and 33 papers were delivered.

The 24th Polish-Slovak-Ukrainian Scientific Seminar devoted to ‘Statistical methods in socioeconomic research: theory and applications’ was held in Dobczyce on 10th–13th October 2017. 22 papers were presented by participants from the Krakow University of Economics, the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Lviv University of Trade and Economics and the Lviv State University of Internal Affairs. The topics of presentations focused on: the contemporary problems of statistical analysis, social statistics, the statistical methods for economic investigations, methods of demographic research, statistical analysis of the global trends in higher education, quality of life, actuarial statistics and statistical methods in auditing.

The 25th Slovak-Polish-Ukrainian Scientific Seminar, addressing ‘Quantitative methods in socioeconomic research: theory and applications’, took place in Bratislava on 10th–12th October 2018. Participants from the University of Economics in Bratislava, Krakow University of Economics and the Kyiv National Economic University named after Vadym Hetman presented 15 papers. The main topics of the presentations included the philosophical foundations of statistics, contemporary problems of statistical analysis, social statistics, living standards of the population, bankruptcy prediction methods, statistical methods for economic

investigations, methods of demographic research, statistical analysis the quality of life, and actuarial statistics.

The 26th Ukrainian-Polish-Slovak Scientific Seminar on the ‘The role of statistics in the development of the modern economic systems’ was organised by Professor Igor Mantsurov in Kyiv on 8th–9th October 2019. Representatives of the Krakow University of Economics, the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine, the Institute for Economics and Forecasting of NAS of Ukraine, and the Ivan Franko Lviv National University attended the meeting, delivering a total of 28 papers. Digital development and its diversity, social statistics, statistical methods for economic investigations, demographic problems in Ukraine, labour market analysis and statistical analysis of the global trends in EU economy were the main topics discussed.

The 27th Polish-Slovak-Ukrainian Scientific Seminar concerning ‘Statistical methods in modern economy: theory and applications’, was organised on-line after the COVID-19 pandemic break by Krakow University of Economics on 19th October 2021. Participants from Krakow University of Economics, the University of Economics in Bratislava, the Kyiv National Economic University named after Vadym Hetman, the Lviv University of Trade and Economics attended the meeting and delivered 17 presentations. They concerned the paradigms of statistical inference and statistical learning, household budget investigations, statistical analysis of the Ukrainian agricultural sector, business demography methods, population ageing and rising costs of old-age pensions, statistical analysis of the young generations’ environmental behaviour and labour market analysis.

The main theme of the 28th Slovak-Polish-Ukrainian Scientific Seminar was ‘Quantitative methods in socioeconomic analysis: theory and applications’. The meeting was organised by the University of Economics in Bratislava on 20th–21st of October 2022. Participants from the University of Economics in Bratislava, Krakow University of Economics and the Kyiv National Economic University named after Vadym Hetman attended the event, during which 10 papers were delivered. The speeches concerned problems of using artificial intelligence and machine learning for socioeconomic investigations, the application of statistical learning methods in the estimation of missing data to supplement databases, keyword analysis based on multivariate statistical methods, modelling the dynamics of innovation diffusion in the industry, household budget investigations and a selection of issues relating to sampling methods.

The 29th Ukrainian-Polish-Slovak Scientific Seminar on ‘Quantitative methods in socioeconomic analysis: theory and applications’, held on 19th October 2023, hosted by the

Kyiv National Economic University named after Vadym Hetman, was organised on-line due to the war in Ukraine. 12 papers were presented by participants from the Kyiv National Economic University named after Vadym Hetman, the University of Economics in Bratislava and Krakow University of Economics. The main issues discussed at the seminar included statistical inference and statistical learning: two sides of the approximation of the real world, household budget analysis methods and results, analyses of the impact of the Russian invasion on the agricultural sector of Ukraine's economy, higher education in Ukraine under martial law, the modelling of grain production in regions of the world in the context of global food security, and the analysis of the demographic security of Ukraine.

The current, jubilee, 30th Polish-Slovak-Ukrainian Scientific Seminar themed 'Statistical methods in modern economy: theory and applications' was organised by Krakow University of Economics on 24th– 25th October 2024. The seminar gathered participants from four cooperating universities in Krakow, Bratislava, Kiev and Lviv. 16 papers were presented on methods of household budget research, poverty research, consumer behaviour on the market, Bayesian modelling and forecasting, bankruptcy forecasting, diffusion of innovations in the EU, the analysis of the situation in the food economy and agricultural sector in Ukraine.

30 years of uninterrupted scientific meetings of statisticians in three countries of Central and Eastern Europe have allowed for:

- an exchange of information on scientific research, the methods used and its results, conducted in the partnering departments of statistics;
- the improvement of the level and culture of statistical knowledge in Poland, Slovakia and Ukraine;
- the scientific promotion of the participants of these seminars;
- establishing close personal contacts and sometimes friendships among those attending.

The participants of these scientific meetings were also able to see the shortcomings and limitations of the previous editions of the seminar, and these include:

- failure to undertake a joint international project, which initially inspired the partnership;
- too few joint publications in international journals, inspired by the results presented during the seminars;
- inability to expand the seminar to include other partners from Central and Eastern Europe;
- discontinuation of the publication of the seminar proceedings with the full content of the papers, which was usually done until 2013;
- low effectiveness of the publication of the seminar papers in well-known scientific journals.

The participants of the seminars also see challenges for the future, giving the opportunity to develop these Central and Eastern European statistical seminars. These include:

- using English as the exclusive language at the conference;
- transforming the seminar into a conference bringing together statisticians, econometricians and economists from Central and Eastern European countries;
- attracting researchers from Western Europe specialising in issues relating to Central and Eastern European countries to attend our seminars;
- establishing stronger ties between universities which organise the seminars and academic centres of Western Europe;
- successfully applying for funds in EU institutions which would support the organisation of our seminars.

The future will show whether the Polish-Slovak-Ukrainian scientific seminars will constitute an effective platform for scientific cooperation between statisticians from Central and Eastern Europe.

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