Obituary
Ödön Éltető (1931–2020)

World-renowned Hungarian statistician, *Ödön Éltető* passed away on the 24th of January 2020.

After graduating as a mathematician, Ödön Éltető worked for 3 years at the Mathematical Research Institute and then from 1958 until his retirement in 1995 at the HCSO (Hungarian Central Statistical Office). Following this, he stayed on for 11 more years as a scientific advisor to the HCSO. For his outstanding achievements in his field, he received acknowledgements and 'Fényes Elek medal' from the HCSO, 'Keleti Károly medal' from the Hungarian Statistical Association, and the title of 'Honorary Professor' from the Corvinus University of Budapest.

In keeping with his background as a mathematician and his interest in finding solutions to statistics-related practical problems, he contributed immensely to the development of official statistics in numerous key areas. He regularly presented his work at international forums and was a member of the International Statistical Institute, the International Association of Survey Statisticians and the IARIW (International Association for Research in Income and Wealth).

His name had become known worldwide for the EKS (Éltető-Köves-Szulc) index. International comparisons require methods with characteristics close to the ones of ideal indices. Ödön Éltető devised one with *Pál Köves*, a senior expert in index theory, and published it in Hungarian (*Éltető–Köves* [1964]). Nowadays it is referred to as EKS or GEKS (Gini EKS) method (explained in *Köves* [1999]). This procedure is widely used in the International Comparison Program that is managed by the World Bank under the auspices of the United Nations Statistical Commission, and is also preferred by the OECD (Organisation for Economic Co-operation and Development) and Eurostat in calculating heading purchasing power parities (*Eurostat–OECD* [2012]). The index is cited by many papers at IARIW conferences even today.

The HCSO was in dire need of a mathematician owing to the introduction of representative population surveys at the end of 1950s as basing them on a representative sample of the population was quite challenging. While such surveys were first being conducted in the 1960s, Éltető also participated in one of the research projects of the United Nations Economic Commission for Europe on the international comparison of income distribution and the analysis of relative differences. In 1968, he along with

Ervin Frigyes presented a revolutionary new system of inequality indicators in *Econometrica* (*Éltető–Frigyes* [1968]), which became known as the Hungarian inequality measure. These indicators assess the degree of income inequality and are decomposable into economically interpretable components that show how certain factors contribute to inequality. Their simple geometric interpretation is closely related to the Lorenz curve and for most of the distribution functions the indicators proposed can be simply expressed with the parameter(s) of the distribution. Due to their versatility and good statistical attributes, they are known and studied in many countries.

He was also interested in analysing survey quality and results, elaborating mathematical-statistical solutions to real-life problems such as the relation of earnings and family income or the effect of invisible income on income distribution. The use of an equivalence scale is an everyday practice in family-income-related sociology. He gave a solid method to set an appropriate equivalence scale that reflects the real circumstances of a country, and analysed eventual biases in the results and conclusions of using a false one (*Éltető–Havasi* [2002]).

Ödön Éltető's lifelong achievements embody excellence and integrity. The memory of him will be with us forever.

KATALIN SZÉP

retd. Head of the Methodology Department
Hungarian Central Statistical Office
Email: katalin.szep@gmail.com

References

ÉLTETŐ, Ö. – KÖVES, P. [1964]: Egy nemzetközi összehasonlításoknál fellépő indexszámítási problémáról. (On a problem of index number computation relating to international comparison.) *Statisztikai Szemle*. Vol. 42. No. 5. pp. 507–518. (In Hungarian.) http://www.ksh.hu/statszemle_archivum#year=1964/issue=05.

ÉLTETŐ, Ö. – FRIGYES, E. [1968]: New income inequality measures as efficient tools for causal analysis and planning. *Econometrica*. Vol. 36. No. 2. pp. 383–396. https://doi.org/0012-9682(196804)36:2<383:NIIMAE>2.0.CO;2-3

ÉLTETŐ, Ö. – HAVASI, É. [2002]: Impact of choice of equivalence scale on income inequality and on poverty measures. *Review of Sociology*. Vol. 8. No. 2. pp. 137–148. https://doi.org/10.1556/revsoc.8.2002.2.7

EUROSTAT – OECD (ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT) [2012]: *Eurostat-OECD Methodological Manual on Purchasing Power Parities*. https://doi.org/10.2785/33942

KÖVES, P. [1999]: EKS index and international comparisons. *Hungarian Statistical Review*. Vol. 77. Special number 3. pp. 3–14. http://www.ksh.hu/statszemle_archive/1999/1999_K3/1999_K3_003.pdf

ÖDÖN ÉLTETŐ'S STUDIES PUBLISHED IN ENGLISH IN THE HUNGARIAN STATISTICAL REVIEW[1]

ÉLTETŐ, Ö. – HAVASI, É. [1999]: Income inequality and poverty in Hungary in the mid 1990s. *Hungarian Statistical Review*. Vol. 77. Special number 3. pp. 49–70.

ÉLTETŐ, Ö. – HAVASI, É. [2004]: Income or expenditure? Their competing role to characterize the living conditions of households. *Hungarian Statistical Review*. Vol. 82. Special number 9. pp. 10–21.

ÉLTETŐ, Ö. – HAVASI, É. [2006]: Poverty in Hungary with special reference to child poverty. *Hungarian Statistical Review*. Vol. 84. Special number 10. pp. 3–17.

ÉLTETŐ, Ö. – LAKATOS, J. – RÉDEI, M. [1998]: State responses to poverty and unemployment in Hungary. *Hungarian Statistical Review*. Vol. 76. Special number 2. pp. 92–109.

ÉLTETŐ, Ö. – MIHÁLYFFY, L. [1997]: Stability of composite estimators: experiments with Hungarian LFS data. *Hungarian Statistical Review*. Vol. 75. Special number 1. pp. 36–45.

[1] Several studies and article reviews have been published by Ödön Éltető in Hungarian in the *Statisztikai Szemle* scientific journal. For these works, see http://search.ksh.hu/#/?c=s