

IN MEMORIAM: SALEM KHAMIS (1919–2005)

The members of the Association and many readers of the *Review* would be familiar with the seminal contributions of Salem Khamis including the celebrated *Geary-Khamis method* which is one of the principal methods of aggregation used in the computation of purchasing power parities (PPPs) for international comparisons of prices.

Salem Khamis was born in the small village of Reineh in Palestine in 1919. His early education occurred in Jerusalem and then in Beirut, where he graduated with a BA in Mathematics and an MA in Physics. He traveled to England on a British Council Fellowship and he obtained his doctoral degree in statistics from University College, London in 1950. He became an international civil servant by taking up a position as a Statistician with the UN Statistical Office in 1949. Later he worked as a Professor of Statistics at the American University of Beirut during 1953–58 and in 1961 became the Chief of Trade and Prices Branch of the Food and Agriculture Organization in Rome. There he held several senior positions including the position of Acting Director of Statistics Division before retiring in 1983.

My own acquaintance with the work of Khamis started back in 1969 when I first saw a seminar announcement on *Neoteric Index Numbers*. As a young graduate student at the Indian Statistical Institute, I can still recall wondering about the strange title of the seminar but decided not to attend as I had no interest on index numbers at that stage. It was not until later in 1970 I became aware of the new index number method Khamis was working on when my supervisor asked me to try and prove the existence and uniqueness of solutions to the index number system discussed in the seminar of Khamis. I can take full responsibility for coining the term *Geary-Khamis method* (used in a paper I published in the *Review of Income and Wealth* jointly with Moni Mukherjee in 1973), recognizing the contribution of the original contribution of Roy Geary which was subsequently worked on and popularized by Khamis; little did I know at that time that it would become such a popular term for those working on international comparisons. The Geary-Khamis method is one of the most elegant mathematical systems based on a set of very intuitive and simple equations. Yet it has many interesting properties including transitivity, additive consistency and the Walrasian exchange equilibrium interpretation of the Geary-Khamis international prices. Four decades on the Geary-Khamis method continues to fascinate and attract the attention of researchers as evidenced by research results reported in recent years.

Khamis was a brilliant statistician who made significant contributions to sampling theory and the tabulation of incomplete Gamma functions. However, it is his work on index number theory and applications and the development of the widely acclaimed Geary-Khamis method that has been indelibly imprinted on all the work on international comparisons over the last three decades. His many and

varied contributions in statistics, particularly the Geary-Khamis method, will endure the test of time.

Throughout his life, Khamis maintained a strong bond with his motherland and was an active supporter of the human rights of the people of Palestine. He was a passionate and vigorous supporter of the establishment of a Palestinian homeland, which he fervently hoped to see established during his lifetime. He was endowed with brilliance and endless curiosity; fearless in his support for the just rights of his fellow human beings and a passion for the less privileged and the poor in Africa and in other developing countries.

For those of us who were fortunate enough to have met with Khamis, his life and spirit will remain a great source of inspiration. I fondly remember many hours I spent at his house in Hemel Hempstead discussing index numbers and enjoying the hospitality of Khamis and his wife Mary.

Salem Khamis passed away on June 16, 2005 in Hemel Hempstead after a brief illness. He is survived by his wife Mary, his daughter Thea and three sons, Chris, Hanna and Tareq.

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