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Hong Kong Statistical Society

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Editor's Foreword

In this issue, we may find three very interesting articles. One of the articles entitled "The Use of the Calibration Estimation Method in the General Household Survey" was contributed by TS TSANG, Census and Statistics Department. It addresses the concepts of the calibration estimation method and explains how it can solve the inconsistency problem between the person-based and household-based estimates.

As we all know, being an annual event of the HKSS since 1986/87, the Statistical Project Competition for Secondary School Students (SPC) aims to promote the interest of secondary school students in statistics. Actually, it is also a long-term commitment of our Society to promote statistical literacy in the community. Keith K C PANG, Chairperson, Organising Committee of 2008/09 Statistical Project Competition for Secondary School Students had this annual event reported in the second article. With the photos, we are also able to share the excitements of the winners in the Prize Presentation Ceremony held on 18 April 2008.

I would like to congratulate three of our senior members for their brilliant achievements. Professor Tony FUNG Wing-kam has been awarded the honour as the Fellow of the Institute of Mathematical Statistics (IMS) in April 2009, Professor LI Wai-keung, has recently been selected to receive the 2009 Outstanding Service Award from the International Chinese Statistical Association (ICSA), and Dr TANG Man-lai has recently been elected as an Elected Member of the International Statistical Institute (ISI).

Finally, Editorial Board would like to express its sincere thanks to all contributors in this Bulletin for their continuous support. In addition, we urge our members to contribute their articles or inform us the detailed about important and interesting news or events in statistics by the end of this year.

W.L. Wong

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President's Forum

Leslie TANG

Over the past few months, the Society has continued to make efforts to establish closer links with international and Mainland statistical organisations as well as to promote statistical literacy in the community.

In collaboration with the Census and Statistics Department and the Department of Statistics and Actuarial Science of the University of Hong Kong, we invited Professor Paul Cheung, Director of United Nations Statistics Division to deliver a seminar on "Population Planning in a Low Fertility, High Migration and Rapidly Ageing Demographic Regime: Approaches and the Role of Statistics" on 27 March 2009.

Professor Cheung had rich experience in both national and international statistical work. He had served as the Chief Statistician of the Government of Singapore, the President of the International Association of Official Statistics, the Chairman of the Governing Board of Statistical Institute of Asia and the Pacific, and the Chair of the Economic and Social Commission for Asia and the Pacific Committee on Statistics.

At the seminar, Professor Cheung explored the intricacies of population planning in Singapore and their relevance to other Asian countries and regions. Apart from discussing the drivers of Singapore's population trends and their impact on the Singapore society, Professor Cheung also talked about population policy options in a multi-ethnic city state and the role of statistics in supporting population planning.

Moreover, a delegate of some 30 statistical professionals from the Jiangsu Province visited our Society in May 2009. During the exchange, they were particularly interested in our work on promotion of statistical literacy in Hong Kong, organisation of professional examinations and establishment of closer relationship with other advanced national and international statistical organisations. In that occasion, they also shared with us the statistical development of the Jiangsu Province. Both sides found the discussion informative and fruitful.

On statistical literacy, a new competition entitled "Statistics Creative-Writing Competition for Secondary School Students" is being organised together with the Education Bureau. The Competition aims to raise the interest of secondary school students in statistics, and to encourage them to creatively express in worlds the daily application of statistical concepts or put statistical concepts into a story in a scientific and objective manner. To enable participants to better understand the details of the Competition, a briefing seminar was conducted in May 2009 for interested teachers and students. The response from the participants was very encouraging. Nearly 100 entries for the Competition had been received.

The preparatory work of another important activity that promotes statistical literacy, the 24th Statistical Project Competition for Secondary Students, has started. The Chairman of the Organising Committee of this round of Competition is Dr Billy Li of the Census and Statistics Department. The Hang Seng Indexes Co. Ltd. has kindly agreed to provide generous sponsorship to support the competition.

Finally, I wish to take this opportunity to congratulate Professor Tony Fung of the University of Hong Kong, who received the honour of fellowship of the Institute of Mathematical Statistics in April 2009, and Professor Li Wai-keung of the University of Hong Kong, who was selected for the 2009 Outstanding Service Award of the International Chinese Statistical Association (ICSA) in August 2009. Their contributions to the statistical community are well recognized and are fully deserved for receiving the relevant awards.

The Use of the Calibration Estimation Method in the General Household Survey

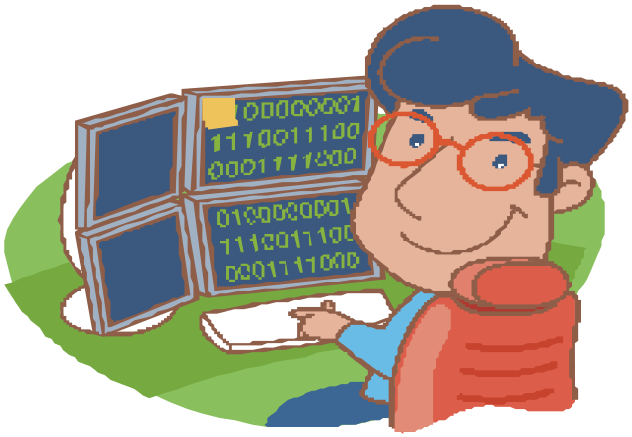
TS TSANG
Census and Statistics Department

Background

The General Household Survey (GHS) is a continuous sample survey which has been conducted by the Census and Statistics Department (C&SD) since August 1981. Its main objective is to collect information on the labour force, employment, unemployment and underemployment. In addition, information on the demographic and socio-economic characteristics of the population is also collected. For details about the survey coverage, the sampling frame and the sampling design, please refer to C&SD (2002).

Like many other household surveys, the GHS provides estimates at both person and household levels (e.g. unemployment rate and average household size). Since very accurate statistics from external data sources are usually available at person level (e.g. population figures by age and sex that are compiled based on administrative records on births, deaths and passenger movement), it is quite common that some post-stratification techniques (e.g. ratio estimation) are employed in household surveys for compiling person-based estimates. The use of these post-stratification methods however poses some practical difficulties in compiling household-based estimates. As each household consists of members of different characteristics, the grossing-up factors (GUF) for compiling the person-based estimates are not the same. In other words, these person GUFs cannot be used direct for compiling household-based estimates. Before February 2007, household GUFs and person GUFs were separately compiled using the ratio estimation method. However, the estimates compiled based on these two sets of GUFs

were not consistent. For example, the number of persons in one-person households as compiled based on the person GUFs was different from the number of one-person households as compiled based on the household GUFs. The inconsistency between the person-based and household-based estimates was undesirable and indeed not appealing to data users who are interested in both the household characteristics and the profile of persons living in certain types of households.



Taking the opportunity of incorporating the new population benchmark after availability of the results of the 2006 Population By-census, the C&SD has adopted the calibration estimation method in the GHS since February 2007. This paper briefly explains the concepts of the calibration estimation method and provides information on how this method is applied to the GHS.

Calibration Estimation Method

The concept of the calibration estimation method was introduced by Deville and Särndal (1992). Simply speaking, the calibration estimation method is to find a set of calibrated weights which are as close to the initial weights (usually the design weights) as possible and in such a way that the grossed-up figures for selected auxiliary variables based on the calibrated weights are reconciled to the known totals of the auxiliary variables. Given this objective, it provides a theoretical framework for compiling consistent person-based and household-based estimates simultaneously.

First, let us consider a finite population U of N elements. The target variable of each element k is denoted by y_k and there are p associated auxiliary variables with each of them denoted by x_{ik} ($i = 1,\ldots, p$).

Let $Y = \sum_{k\in U} y_k$ and $X_i = \sum_{k\in U} x_{ik}$ be the population total of the target variable and the i^{th} auxiliary variable respectively.

A sample S of n elements is drawn according to a specified sampling design. Let the probability of selecting the k^{th} sampling unit be π_k. The Horvitz-Thompson (HT) estimator for the population total of Y ($\hat{Y}_{HT}$) is

$$\hat{Y}_{HT} = \sum_{k\in S} \frac{y_k}{\pi_k} \qquad \text{—} \qquad (1)$$

By denoting $d_k = \pi_k^{-1}$, equation (1) can be rewritten as follows:

$$\hat{Y}_{HT} = \sum_{k \in S} d_k y_k \qquad \text{—} \qquad (2)$$

In this notation, d_k can be viewed as the GUF of the k^{th} element in the sample S.

As said, the calibration estimation method is to find a set of calibrated weights w_k's which are as close to d_k's as possible and in such a way that the estimates based on w_k's for all the p auxiliary variables are exactly equal to the known totals (i.e. $X_1,\ldots, X_p$). Mathematically, it is a minimisation problem as follows:

$$\text{Minimise} \quad \sum_{k \in S} q_k d_k G(\frac{w_k}{d_k}) \qquad \text{—} \qquad (3)$$

subject to the constraints of

$$X_i = \sum_{k \in S} w_k x_{ik} \quad \text{for } i = 1 \text{ to } p$$

where $G(z)$ is a strictly convex distance function with $G(1)=0$, $\left.\frac{\partial G}{\partial z}\right|_{z=1} = 0$ and $\left.\frac{\partial^2 G}{\partial z^2}\right|_{z=1} = 1$, and q_k's are the constants for defining the relative importance of individual elements to the distance function.

The above minimisation problem can be recast as follows:

$$\sum_{k \in S} q_k d_k G(\frac{w_k}{d_k}) + \sum_{i=1}^{p} \lambda_i (X_i - \sum_{k \in S} w_k x_{ik}) \quad \text{—(4)}$$

Using the method of Lagrange multipliers by differentiating expression (4) with respect to w_k's and equating them to zero, we have

$$q_k \frac{\partial}{\partial (w_k / d_k)} G(\frac{w_k}{d_k}) - \vec{\lambda}' \vec{x}_k = 0 \qquad \text{—(5)}$$

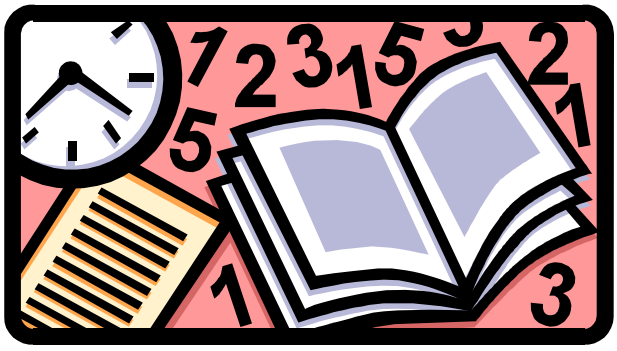
where $\vec{\lambda}' = (\lambda_1, \cdots, \lambda_p)$ and $\vec{x}_k' = (x_{1k}, \cdots, x_{pk})$.

Equation (5) can be simplified as follows:

$$w_k = d_k F(\frac{\vec{\lambda}' \vec{x}_k}{q_k}) \qquad \text{—} \qquad (6)$$

where $F(x)$ is the inverse function of $\frac{\partial G}{\partial z}$ or usually known as the calibration function.

Given d_k's, q_k's, X_i's, x_{ik}'s and the function G, equation (6) gives the exact solution of w_k's. In other words, they are independent of y_k's. As such, the calibrated weights w_k's can be used as a unique set of GUFs for compiling estimates at various levels.



Application in the GHS

In the GHS, the linear calibration function is adopted. The linear calibration function $F(x)$ and the associated distance function $G(x)$ are of the following forms:

$$F(x) = (1 + x) \quad \text{and} \quad G(x) = \frac{1}{2}(x-1)^2$$

By substituting $F(x)=(1+x)$ in equation (6), we have

$$w_k = d_k F(\frac{\vec{\lambda}'\vec{x}_k}{q_k}) \qquad \text{— (7)}$$

Since $\vec{X}=(X_1,\cdots,X_p)=\sum_{k\in S} w_k \vec{x}_k$, the Lagrange multipliers $\vec{\lambda}'$ can be expressed as follows:

$$\vec{\lambda}=\left(\sum_{k\in S}\frac{d_k}{q_k}\vec{x}_k\vec{x}_k'\right)^{-1}(\vec{X}-\vec{\hat{X}}_{HT}) \quad \text{—(8)}$$

Substituting equation (8) back into equation (7), we have

$$w_k = d_k\left[1+\frac{\vec{x}_k'}{q_k}\left(\sum_{k\in S}\frac{d_k}{q_k}\vec{x}_k\vec{x}_k'\right)^{-1}(\vec{X}-\vec{\hat{X}}_{HT})\right]$$

— (9)

The calibration estimator for Y $(\hat{Y}_{cal})$ is of the following form:

$$\hat{Y}_{cal}=\sum_{k\in S} w_k y_k = \sum_{k\in S} d_k\left[1+\vec{x}_k'\left(\sum_{k\in S} d_k\vec{x}_k\vec{x}_k'\right)^{-1}(\vec{X}-\vec{\hat{X}}_{HT})\right]y_k$$

— (10)

After re-expression, equation (10) can be simplified as follows:

$$\hat{Y}_{cal}=\hat{Y}_{HT}+\vec{\hat{B}}'(\vec{X}-\vec{\hat{X}}_{HT})$$

where $\vec{\hat{B}}=\left(\sum_{k\in S} d_k\vec{x}_k\vec{x}_k'\right)^{-1}\sum_{k\in S} d_k\vec{x}_k y_k$.

In other words, the calibration estimation method adopted in the GHS is indeed the generalised regression estimation method.

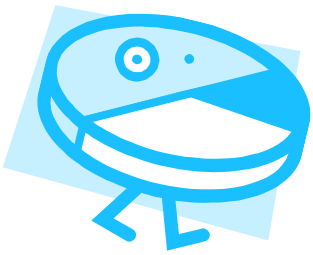
In the GHS, the values of d_k's are derived by taking into account the responding pattern of 78 classes of households as classified by housing type and geographic area. The computational formulae is as follows:

$$GUF_i^{(0)}=\frac{1}{r_i}\times\frac{H}{\sum_{j=1}^{78}\frac{n_j}{r_j}}$$

where the k^{th} element is in the i^{th} non-response class, H is the total number of households, r_j is the sample response rate for households in the j^{th} non-response class and n_j is the number of enumerated households in the j^{th} non-response class in the sample.

As for the auxiliary variables, there are in total 34 different x_i's adopted in the GHS. These include both household characteristics (number of households) and person characteristics (number of residents by type, sex and age). The control totals of the auxiliary variables are separately estimated.

After analysis of some empirical results, q_i's is chosen to be the root mean square of the numbers of different groups of residents. Its value will be exactly equal to the household size if all members in a household belong to one and only one group of residents.



Practical consideration

A major drawback of adopting the linear calibration function is that negative calibrated weights are admissible. As an ongoing quality assurance measure, the ratios of the calibrated weights to the initial weights in the GHS are closely monitored, with the lower limit and upper limit setting as 0.4 and 2.5 respectively. Based on the real data, around 90% of the enumerated households have the adjustment ratios lying between 0.8 and 1.2 and the events of exceeding the limits are very rare. For the very few exceptional cases, the actual differences from the limits are very marginal and no adjustment (e.g. truncation) has been required insofar.

Given the need to release the provisional person-based estimates around 18 days after the end of the reference three-month period, they are still compiled first based on the old ratio estimation. These person-based estimates are then revised based on the calibration estimation method in the annual revision in August of the next year. For household-based estimates, as no provisional figures are released, they are directly compiled using the calibration estimation method. In other words, the consistency between person-based and household-based estimates is maintained for the revised GHS estimates only. The makeshift arrangement of using the old ratio estimation in the compilation of the provisional person-based estimates is to strike a balance among timeliness, consistency and management of the revision policies.

Benefits to the GHS

The calibration estimation method (or the generalised regression estimation method) has been widely used in many labour force surveys and household surveys conducted by the advanced overseas statistical offices such as Australian Bureau of Statistics, Statistics Canada, UK National Statistics Office, National Institute for Statistics and Economic Studies of France (INSEE), and Statistics Belgium. The use of the calibration estimation method brings the following benefits to the GHS:

1. The two sets of household-based estimates and person-based estimates are consistent to each other.

2. The totals of the household-based and person-based estimates are reconciled to the control totals separately estimated.

3. The calibration helps further reduce the non-response error where households of smaller sizes which in general have lower response rate are accorded usually with an adjustment ratio greater than one and households of larger sizes usually with an adjustment ratio smaller than one.

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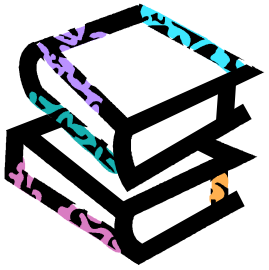


2008/09 Statistical Project Competition for Secondary School Students

Keith K C PANG
Chairperson, Organising Committee of
2008/09 Statistical Project Competition for Secondary School Students

It is a continuous, long-term commitment of the Hong Kong Statistical Society (HKSS) to promote statistical literacy in the community. Being an annual event of the HKSS since 1986/87, the Statistical Project Competition for Secondary School Students (SPC) aims to promote the interest of secondary school students in statistics, encourage them to understand the local community in a scientific and objective manner and promote a sense of civic awareness.

The 2008/09 SPC is its 23rd round and had been successfully concluded with the concerted effort of HKSS and the Education Bureau (EDB), as well as contributions from Patrons and sponsor.

The trophies for the winning teams of the 2008/09 SPC

The responses of the 2008/09 SPC were very encouraging, with the participation of 229 entries from 1 021 students of 63 secondary schools.

Of the 229 entries received, including 101 for the Junior Section and 128 for the Senior Section. The entries covered a wide variety of themes, focusing on various social and economic aspects of Hong Kong. The issues studied by the participating students largely included those with growing concern from member of the public, e.g. domestic violence, air pollution, and drug abuse.

The adjudication panel was formed under the leadership of Dr LI Leong-kwan of the Polytechnic University of Hong Kong. It consisted of 34 members including academics from local tertiary institutions and statistical professionals working in the Government.

Having undergone stringent scrutiny by the adjudicators, the more outstanding statistical projects were short-listed and the potential candidates were invited to attend a selection interview before the awards were finally determined.

The adjudication panel also provided all participating teams with constructive comments on their entries, with a view to facilitating them to better understand statistical concepts and techniques of analysing data. As a token of appreciation on the students' participation in the Competition, all participants were awarded a Certificate of Appreciation.

The Prize Presentation Ceremony (the Ceremony) held on 18 April 2008 signified the successful completion of the 2008/09 SPC. Patrons and Honourable guests hosted the Ceremony and delivered enlightening speeches to the audience. At the Ceremony, the First, Second, Third and five Distinguished Prizes for each of the Junior and Senior Sections, as well as the Sun Hung Kai Properties Prize for the Best Thematic Project, were awarded to the winning teams.

Teachers and students from Stewards Pooi Kei College, winners of the First Prize of the Junior Section and the Sun Hung Kai Properties Prize for the Best Thematic Projects, shared the memorable moment with the officiating guest, Dr CHAN Ka-ki, Deputy Secretary for Education.

Teacher and students from Chiu Lut Sau Memorial Secondary School, winners of the First Prize of the Senior Section, shared the memorable moment with the Patrons and Honourable guests.

The winners of the First Prize of both the Junior and Senior Sections were invited to give a summary account of their winning projects and shared with the audience their valuable experience and gains in the course of preparing the projects. The performance of the students was greeted by audience with rapturous applause.

Students from Chiu Lut Sau Memorial Secondary School, winner of the First Prize of the Senior Section, shared with the audience their experience and gains in the course of preparing the project.

The 2008/09 SPC could not be accomplished without the contributions from a group of zealous statistical practitioners serving as the Organising Committee of the Competition, and support from EDB and the Census and Statistics Department (C&SD).

With a view to arousing the interest of secondary school students in participating in the 2008/09 SPC, a new initiative was made to produce a leaflet showing key steps of preparing a statistical project and major sources of official statistics, and highlighting key features of the winning entries for the last two rounds of the Competition for distribution to the secondary schools.

The members of Organising Committee of the 2008/09 SPC and helpers shared the memorable moment with the Patrons and Honourable guests.

For the 2008/09 SPC, the winning teams were first arranged to pay a visit to C&SD in July 2009, enabling them to better understand the work of official statistical agency of Hong Kong.

Another congratulatory outcome of 2008/09 SPC was that its briefing seminar was recognised by EDB as a window of opportunity for secondary school teachers to learn more about various items of official statistics and proper ways of collating information, analysing data and writing reports. The briefing seminar of SPC has been introduced to the Programme of Continuing Professional Education for Teachers as implemented by EDB starting from the 2008/09 round.

The briefing seminar of 2008/09 SPC was held successfully on 25 October 2008. Around 100 teachers from 78 secondary schools participated in the seminar, nearly doubled that of the previous round.

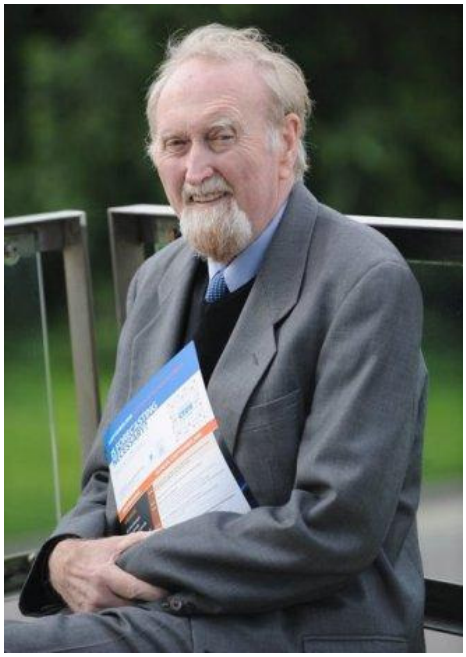
The Honourable guests (from right: Mr LEE Pak-leung, Chief Curriculum Development Officer (Mathematics) of EDB, and Mr FUNG Hing-wing, Commissioner for Census and Statistics) and teachers of the winning teams exchanged their views on SPC at the tea reception after the Ceremony.

Being the Chairperson of the 2008/09 SPC, I would like to take this opportunity to express, on behalf of the Organising Committee, our heartfelt gratitude to Mr. Joseph LEE, Chairman of the Commission on Youth, for being the Patron of the SPC; to Dr. CHAN Ka-ki, Deputy Secretary for Education, and Mr. FUNG Hing-wang, Commissioner for Census and Statistics, for being the Patrons of the SPC and the officiating guests of the Ceremony; and to Mr. Leslie TANG, President of HKSS, for being the officiating guest.

Professor Sir Clive Granger in Memoriam

Professor W K LI
The University of Hong Kong

I was shocked with the news that Professor Sir Clive Granger passed away on May 27, this year. Sir Clive was the external examiner of my Ph D thesis in 1981 and he visited the Department of Statistics and Actuarial Science of the University of Hong Kong in 1999 and 2006. He also visited the Polytechnic University in 2007. Sir Clive received the Nobel Prize in Economics together with R F Engle in 2003. Sir Clive was a statistician by training and had been very productive through out his academic life. He was easily approachable and always very helpful and generous. He will be remembered as a great scholar and gentleman.



Sir Clive was an innovative person. He was a pioneer in at least four major areas namely: co-integration, long memory time series, bilinear time series models and Granger causality. He is also influential in the study of changing conditional variance using the GARCH family of models. He received the 2003 Nobel Prize of Economics for his contributions to the theory of co-integration. I will briefly summarise his contributions below.

The study of co-integration began with a puzzle observed by Sir Clive and Paul Newbold in the 1970s, the so called spurious regression phenomenon. See Granger and Newbold (1986) for details. It was noted by Granger and Newbold that the coefficient of determination could be very close to one when two independent random walks are regressed on each other. In those days, it was commonly advised that differencing should always be applied to non-stationary time series in order to make them stationary and amenable to statistical analysis such as the fitting of a

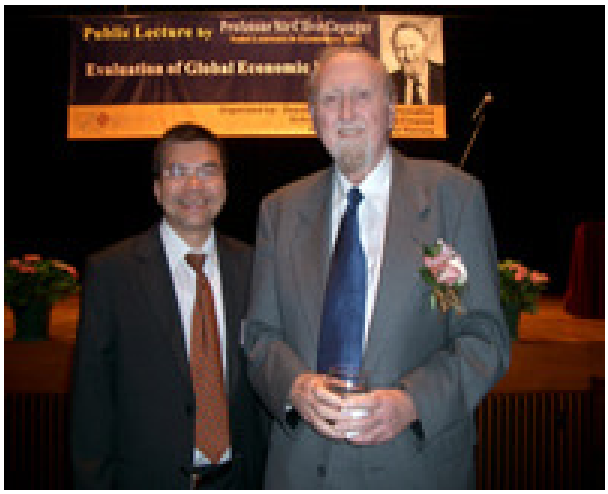
vector autoregressive model. Today the spurious regression phenomenon can be fully explained by statistical theory designed especially for time series with a random walk (non-stationary) component. The advice on differencing too has been fully revised by the Granger representation theorem (Engle and Granger, 1987) which is based on the concept of co-integration. Two time series are said to be co-integrated or having a common stochastic trend if there is a linear combination of them that is stationary. Many economic or financial time series display this co-integrated feature because they 'trend' together stochastically. However, by the Granger representation theorem if co-integration exists between two non-stationary time series then fitting a vector autoregressive model to the differenced time series would be incorrect. The correct model should have a so called error correction term which can be interpreted, for some economic variables, as the correction or adjustment for the two time series to be not in equilibrium as suggested by economic theory. The result clearly revolutionised time series analysis and econometric theory. Co-integration tests and error correction models are now commonly applied in econometric work.

Sir Clive is one of the originators of long memory time series models (Granger and Joyeux, 1980). Long memory is said to be present in a time series if the autocorrelations of a time series sum to infinity in absolute values. Otherwise it is short memory. The long memory phenomenon can be modelled by the so called fractionally differenced (integrated) time series models. See for example Li (2004) for details. However, whether or not there is long memory in time series becomes a very controversial issue and Sir Clive himself seems to have changed his stands in recent years. Nevertheless it seems that the idea can be successfully extended to the modeling of volatility for financial time series in the form of fractionally integrated GARCH (FIGARCH) models (Baillie, et al. 1996).

Towards the end of the 1970s various proposal of nonlinear time series models were suggested. Sir Clive was one of the first few to introduce the bilinear time series models to the statistical community. This was done in the monograph by Granger and Andersen (1978). Unfortunately the bilinear model is less successful than other proposals such as the threshold model of Tong (1978).

Granger causality is another very controversial concept. Cleary causality is an important and age old philosophical question. Grange causality is related to the predictability of one time series using another. Roughly, one time series X(t) is said to be Granger causing another series Y(t) if Y(t) can be better predicted by past values of X(t) and Y(t) than by using past values of Y(t) alone (Granger, 1969). The concept has generated a lot of debate among econometricians. Granger (1980) gave some personal view of the controversy.

Sir Clive's many contributions to time series analysis and econometrics are clearly immense and fundamental. His contributions and his personality will always be remembered.



Professor GRANGER delivered a public lecture on "Evaluation of Global Economic Models" as one of the activities to commemorate the 30th anniversary of the Hong Kong Statistical Society in May 2007.

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News Section

Honour and Award

Fellow of the Institute of Mathematical Statistics

Professor Tony FUNG Wing-kam, Chair Professor of the Department of Statistics and Actuarial Science of The University of Hong Kong and the past President of the Hong Kong Statistical Society, has recently been awarded the honour as the Fellow of the Institute of Mathematical Statistics (IMS).

Professor FUNG is amongst the very few scholars in Hong Kong who had received this honour in the past years. He is awarded the honour for his influential contributions to robust statistics and forensic statistics, and for his leadership in statistical research and education in Asia. All along, Professor FUNG has also conducted outstanding research in a wide array of areas such as outliers and influential observations, longitudinal data analysis, DNA profiling, statistical genomics and genetic epidemiology. He is especially renowned for the research in statistical DNA forensics and has distinguished contributions in the interpretation of DNA mixtures, paternity testing and computer software development. Moreover, Professor FUNG is continually rendering professional services in renowned international organisations, including being the Council Member of the International Statistical Institute and Vice President of the International Association for Statistical Computing.

2009 Outstanding Service Award of the International Chinese Statistical Association

Professor LI Wai-keung, Chair Professor of Department of Statistics and Actuarial Science of The University of Hong Kong, has recently been selected to receive the 2009 Outstanding Service Award from the International Chinese Statistical Association (ICSA).

Professor LI is the only statistical practitioner in Hong Kong receiving the Award this year. He is awarded the honour in recognition of his outstanding contributions to the ICSA over the years. Professor LI have been heavily involving in rendering professional services and assuming numerous important roles in the ICSA. He was the Chairman of the Organising Committee for the 5th ICSA International Conference held in 2001. He has also been serving as an Associate Editor of the professional Journal *Statistica Sinica* since August 1999. Moreover, he had been a member of various executive arms of the ICSA, including being a member of the Program Committee of ICSA from 2002 to 2007, and a member of the Board of Directors from 2006 to 2008.

Elected Member of the International Statistical Institute

Dr TANG Man-lai, Associate Professor of the Department of Mathematics of the Hong Kong Baptist University and Programme Secretary for the Hong Kong Statistical Society, has recently been elected as an Elected Member of the International Statistical Institute (ISI).

Elected members of ISI are elected by virtue of their distinguished contributions to the development or application of statistical methods, or to the administration of statistical services, or the development and improvement of statistical education. Candidates for elected membership must be nominated by three existing honorary or elected ISI members. Elections take place twice a year, under the authority of the ISI Elections Committee, whose recommendations are subject to the approval of the ISI Executive Committee.

Applications of Probability and Statistics Seminar

The Hong Kong Statistical Society (HKSS) is co-organising with Education Bureau the following seminar to HKSS members and school teachers:

Applications of Probability and Statistics Seminar
「概率及統計的應用」研討會

Description:
Probability and Statistics play an important role in education, economics, science, engineering, business, administration and social studies. Nowadays, quantitative information is everywhere, and probabilistic prediction and statistical estimates are increasingly presented with the intention of adding credibility to advertisements, arguments, or advice. However, most citizens just rely on their own experience in solving many problems rather than rely on data-based evidence. This seminar will touch upon the uses of probability and statistics in the investment field and some societal issues in our daily lives. The influences of probability and statistics in our daily life will be explored.

Date: 21 November 2009

Time: 9 am – 12 noon

Venue: Dr. Hari Harilela Lecture Theatre, Lam Woo International Conference Centre, Shaw Campus, Hong Kong Baptist University, 34 Renfrew Road, Kowloon Tong

Speakers and Topics:
Professor M.K. Siu (Department of Mathematics, The University of Hong Kong) 「成敗得失知多少 ----- 概率論只是常識嗎？」
Professor K. Lam (Department of Finance and Decision Sciences, Hong Kong Baptist University) 「投資裡的統計乾坤」

Language: Cantonese