
Editor's Foreword

Time flies and Year 2001 has almost gone. I would like to take this opportunity to wish all members a healthy and prosperous new year.

In this issue we have a reproduction of an article by R. S. Tsay on the interview with Prof. George Tiao, one of the eminent Chinese statisticians. Through the interview, members know more about Prof. Tiao, his contributions to statistics and the International Chinese Statistical Association.

Our Programme Secretary, Mr. C.N. Lo kindly writes a report on the Sports day held on 27 October 2001. A tennis tournament was also arranged on that day. Mr. Y. B. Law of the Census and Statistics Department, gives an overview of Hong Kong tourism.

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CONTENTS

(Vol. 24/No. 3, December 2001)

	Page
President's Forum	1
<i>W.K. Li</i>	
Interview with Professor George C. Tiao	2
<i>Reproduced from the January issue of</i> <i>the International Chinese Statistical Association Bulletin</i>	
Hong Kong Statistical Society Sports Day	9
<i>C.N. Lo</i>	
An overview of Hong Kong Tourism	10
<i>Y. B. Law</i>	
News	13

President' s Forum

Professor W.K. Li

Kung Hei Fat Choy! I take this opportunity to wish you all a happy and prosperous Lunar Year of the Horse.

Time really flies and very soon we will have our AGM again at the end of March. I am very happy to report that preparation for the HKSS professional examination has been going on fine. We have by the closing date of Jan 31, received some 70 applications for examination associate. In contrast, there were only 30 applications last year. In other fronts, the Secondary School Student Statistical Project Competition is now in full swing

and the Public Commentary Sub-committee has organised a half-day workshop on statistical methodology on Saturday, February 23.

In this issue we have also an article introducing Professor George Tiao, who has been nominated as a candidate for the Presidency of the American Statistical Association this year.

Finally, we are looking forward to your continued support of the Society in the coming session.

[This article is reproduced from the January issue of the
International Chinese Statistical Association Bulletin.]

Interview with Professor George C. Tiao

Ruey.S. Tsay

[Interview questions are provided by Sue-Jane Wang and William Wei]

George C. Tiao is W. Allen Wallis Professor of Econometrics and Statistics, University of Chicago. Born in London in 1933, he returned to China with his parents in early 1934. He graduated from the elementary school in Chungking the year Japan surrendered. During the Chinese civil war, he moved with his parents and the Nationalist Government from Chungking to Nanking to Shanghai to Chungking to Hong Kong and finally to Taipei in 1950 and, as a result, attended a number of middle and high schools. He earned his B.S. in Economics from National Taiwan University in 1955 and came to the States in 1956. He earned his MBA from New York University in 1958 and his Ph.D. in Economics from the University of Wisconsin-Madison in 1962.

George was assistant, associate, full, and Bascom Professor of Statistics and Business from 1962 to 1982 at the University of Wisconsin-Madison, and served as Chairman of the Statistics Department from 1973 to 1975. He joined the Graduate School of Business, University of Chicago in 1982. A leader in Bayesian inference, environmental study of stratospheric ozone and air pollution, and time series analysis, he has authored, co-authored and co-edited 8 books and more than 120 articles in leading econometric, environmental and statistical journals. He has supervised more than 25 Ph.D. and served in numerous academic committees in the United States, China, and Taiwan. He has received many honors, including the 2001 Wilks Memorial Medal and the Shiskin Award of the American Statistical Association, Fellow of ASA and IMS, and elected member of Academia Sinica, Taiwan in 1976.

He is the Founding President of ICSA and the Founding Chair-Editor of Statistica Sinica.

*Q1: Many of our newer members are organization. As one of the pioneers of the
curious about the history of our International Chinese Statistical*

Association, please tell us the early life of ICOSA, for instance, from its creation to the toddler stage of early 90s.

George: It all started in Wisconsin. I first attended the ASA annual meeting in 1961 and to my surprise there were only three Chinese statisticians; two in economics and one in biostatistics. Things started to change in the late 60s and early 70s. My wife and I bought a house with a basement in Madison in 1967 and started to invite Chinese statistics students and their families to the Thanksgiving dinner at the basement. This “dinner festivity” grew to more than 80 participants and lasted for more than 20 years. Many students came to prepare the food the day before Thanksgiving and help cook dinner the next day. We have very nice memory about these dinners. As a matter of fact, many former students know my wife much better than me because of the dinner and opportunities to get together. It was at the 1968 dinner that I realized we need an association to promote communication and collaboration among Chinese statisticians. We started with an informal association called the Chinese Statistical Society in U. S. With the help of 8 to 10 enthusiastic volunteering students, a hand-written bulletin that contains the directory of Chinese statisticians was published in the following year. The principal student leaders for the first two years were Austin Lee and Der-An Hsu. After the third year I thought that it is better for the Society to broaden its base by locating it around the

States. I asked Professor Y. S. Chow of the Columbia University for help. He recruited Min-Te Chao, later the Founding Director of the Institute of Statistical Science, Academia Sinica, to be responsible for the administrative activities of the Society. At that time, Chao was at the Bell Lab. Without the help of graduate students, the publication of the annual bulletin quickly became an impossible burden for any single individual. Three years later, the Society moved back to Madison and was renamed Chinese Statistical Association in America.

Besides the bulletin, Chinese statisticians got together to have dinner each year at the annual ASA meeting as a means to get acquaintance with one another. As I recall, this started in the early 1970’s at the St. Louis meeting with Hubert Chen as the first organizer. It began with 10 to 20 people, but grew quickly to more than 100 by the beginning of the 1980’s. It also became a regular event with an informal meeting in the late afternoon of Wednesday followed by the dinner. With the expansion, we started to wonder whether such an arrangement is effective and sufficient for promoting the communication among Chinese statisticians. The final push to have a formal association has to do with *Statistica Sinica*.

Three key developments occurred in 1986. First, I returned to Taiwan for the Academia Sinica members meeting and had a chance to meet with Director Chao and

other statisticians. Chao suggested that the Institute is sufficiently mature and has budget to launch a new statistical journal. We felt that to publish a new journal it is best to involve all Chinese statisticians inside and outside of Taiwan. Second, the 1986 ASA meeting was held in Chicago and Jia-Yeong Tsay suggested at the afternoon meeting that the time is ripe for the association to be formalized. He, Grace Yang and Gordon Lan formed a committee to draft the constitution of ICSA in a similar spirit to the ASA Charter. Third, at the dinner James Fu told me of his plan to launch a new statistical journal. I suggested to James and Min-Te that it is best to combine their efforts to establish a world wide first-rate journal. They came back to me about the Christmas time that year saying that they decided to cooperate and wanted me to formally launch the journal. To make the long story short, I consulted with several senior Chinese scholars including the late Professor Shein Ming Wu from Madison. They were all very supportive and gave me valuable suggestions, including having a strong local support at Chicago. As you know, Wing Wong was in Chicago then and he gave me his whole-hearted enthusiastic support. Ruey Tsay and Xiao-Li Meng also came to Chicago shortly after. Furthermore, I also obtained enthusiastic support from Smiley Cheng, T. L. Lai, L. J. Wei, and Jeff Wu. Thus, I decided to accept the challenge. An editorial board was formed in April 1987 and I served as the Chair-Editor. Because the Institute cannot sign an agreement with

an informal association, the ICSA was formally established in 1987 to jointly sponsor the journal, *Statistica Sinica*.

The mission of ICSA clearly states that the association should not only provide services and communication among Chinese statisticians in North America, but also help promote statistical theory, application and education among Chinese communities in mainland China, Hong Kong, Singapore and Taiwan. To this end, one of the first goals of the Association when established was to hold an international conference in Hong Kong in 1990. The conference was organized by S. Y. Lee at the Chinese University of Hong Kong and was a great success, and subsequent international conferences held in Taipei, Beijing and Kunming were equally successful. Last year, the 5th international conference was again held in Hong Kong. Another success story of ICSA is the annual Applied Statistical Symposium. Many members of ICSA are biostatisticians working in the pharmaceutical industry and in the federal agencies such as FDA and NIH. Jia-Yeong Tsay and Gordon Lan initiated and organized a successful half a day meeting called ICSA Biopharmaceutical Statistics Symposium in Washington, DC in 1990, and it was expanded to include other areas beside biostatistics and changed into the current name two years later. This symposium has become an annual event and grown into a three-day affair attracting more than 200 participants from around the

world.

Q2: You were the recipient of the prestigious Shiskin and Wilks Memorial Awards in 2001. Could you tell us what were the specific accomplishments cited in these two awards?

George: I was deeply honored to receive these two awards. For the Shiskin Award, they cited my contributions to the analysis of business and economic data in general and the model-based approach to seasonal adjustment in particular. For the Wilks Medal, it is the accumulation of my modest contributions to statistics. As stated in the criteria for the medal, Professor S. S. Wilks had made outstanding contributions in many areas of statistics including statistical theory, statistical application, and services to the profession. Thus, the Committee considered the contributions of recipients from all aspects. In my case, they cited my research contributions in Bayesian inference, environmental study on ozone depletion and air pollution indexes, and time-series analysis, my services to the profession in various committees and education, and my efforts in promoting statistical education in China and Taiwan.

Q3: You have been nominated to be a candidate for the ASA President in 2002 election. Congratulations! From the ASA perspective, where do you think the relationship between ASA and ICSA stands now, and where and how do you think the relationship between the two societies may

be strengthened?

George: I am honored to be nominated to stand for the President of the ASA, which by all accounts is a very generous association to minority groups. For example, it has routinely provided a room for ISCA members to hold their annual members meeting during the annual joint statistical meetings for many years. The two associations have many common members and share many common goals such as promoting statistical education and research across different disciplines and different countries. Regarding the relationship, I would say that the two societies have already had a very good start, due to the efforts of a number of colleagues notably S. C. Chow, Tim Chen, C. P. Han, Huey Ju and several recent ASA Presidents such as Jon Kettenring. ICSA has in recent years played a more active role in the joint statistical meetings such as sponsoring an invited session to feature selected articles published in *Statistica Sinica*. In addition, several presidents of ASA have been invited to deliver keynote speeches at the ICSA Applied Symposium. For the future, there are many ways the two societies can further cooperate. I think the relationship between ASA and the Canadian Statistical Society is a good example to follow. ICSA can co-sponsor awards, the annual joint meetings, and other more focused conferences. For instance, I believe that the ICSA Applied Statistical Symposium can serve as an example for a winter or early spring meeting of ASA. The emphasis on

substantive applications and short courses to disseminate state-of-the-art knowledge in statistics will distinguish such a winter meeting from the annual summer meeting. Furthermore, we can add a placement service for new graduates in the winter meeting as the time corresponds to the academic recruiting season.

Q4: As a candidate for ASA President, can you tell us about your vision and mission for this endeavor?

George: Thank you for having the opportunity to share my vision and mission with members of our association. This is an exciting time for statisticians and an important time for the statistics profession. We are witnesses to and participants in a worldwide explosion in the collection, manipulation and analysis of data addressing issues of societal importance. Yet statisticians do not command the attention and respect of the society as we should. Our profession is at a critical juncture and associations such as ASA and ICSA must make good use of the opportunity to expand the influence of our profession. If elected, I would focus on two main directions. First, I would take concrete steps to expand the role and the visibility of statistics in science, industry, business, and public policy. Second, I would move aggressively to unify the profession across diverse statistical disciplines and identify substantive ways to shape the ASA into an organization that (i) furthers the growth of the profession, (ii)

promotes the development of statistical theory and methods in individual application areas, and (iii) fosters interdisciplinary exchanges that strengthen the profession as a whole. More specifically, as shown in my statement to ASA, I will give priority to the following areas.

New challenges in emerging areas. There are great opportunities in information technology, life sciences, and biopharmaceutical research. Building on the ASA's long tradition of cooperation with sister statistical associations, we should forge strong links with other societies (e.g., ACM, IEEE, DIA, etc.) by co-sponsoring meetings, revising curriculum, forming lobby groups, and participating in the drawing of funding priorities and government policies. Efforts of this kind will stimulate collaborative projects leading to advancement of statistical theory, methods, and application.

Proactive role in federal agencies. ASA should play a key role in assisting government agencies such as FDA and NIH to establish guidelines/guidance for drug research and development. In addition, for agencies such as NASA and EPA, which generate enormous amount of scientific data but do not have central statistical offices, ASA should take the lead in persuading the government to create individual advisory committees for overseeing statistical functions and dissemination of quantitative information. To help achieve this goal, I will seek to

form an ASA standing committee consisting of prominent colleagues with established reputation in specific application areas. Members of the committee can then be called upon to speak for the profession on issues of critical importance and to advise government agencies on statistical functions.

“Professional” degrees in Statistics.

Practicing statisticians will command more attention and compensation if their degrees are regarded more like professional degrees such as the MBA, MPA or MPH. The ASA should take the lead in promoting the creation of these types of professional statistics degree programs. They can be two-year programs for a MS in Statistics/Biotechnology, Statistics/Environment, Statistics/Financial Economics, Statistics/Law and the like. Excellent examples of MS programs with an applied concentration have already been established at Carnegie Mellon, Columbia, Iowa State, NC State and a number of other major statistics departments. Under ASA sponsorship and in collaboration with experts from individual substantive disciplines, standardized curriculum and test can be established to help maintain their quality. I believe that these kinds of degree programs, if successfully implemented, will greatly enhance the marketability of well-trained statisticians and lead to sustain long-term growth of the profession.

Enhanced functions of chapters. ASA

chapters are its grass root organizations. They are the best communication channels for academia, industries and government agencies in the same region. Thus chapters provide great potentials for collaborative research and development activities among the three main branches of our profession. There should be a membership drive to increase dues-paying members of the chapters. The ASA office should also provide greater resources to promote collaborative projects in the chapters and facilitate networking among chapters.

International collaboration. In the age of globalization, ASA should play a more active role in the international arena. It can co-sponsor theme conferences with societies in other continents, and increase membership in other countries. Through collaboration with international and individual country statistical organizations, it can foster an international network of statisticians with interests/expertise in any given area of emerging importance.

Membership service. ASA should continue to increase opportunities for members to obtain additional statistical training and learn new applications. It should also explore the possibility of a more focused winter or spring meeting that emphasizes applications and short courses, and provides a placement service that would more conveniently coincide with the academic hiring season. This second meeting could possibly be held jointly with another society or led by sections/chapters

of ASA.

Having stated my own vision as a candidate of ASA President, I would like to return to your previous question regarding the cooperation between ASA and ICSA. It is my sincere belief that members of both associations can and should work closely together to accomplish these goals, which, in my opinion, would in turn strengthen our profession as a whole in the long run.

Q5: You have successfully spread the influence of statistics worldwide. Your efforts in Asia such as China, Hong Kong, Singapore and Taiwan are particularly noteworthy. As many of our members are seeking guidance regarding their career choice and development, what would you like to tell us regarding your experience and any words of advice?

George: This is an important question, and I can only provide some thoughts for our members to consider. First, I am a strong believer that statistical theory and application must go hand in hand. This was true in the past and will be even more so in the future. Advances in science and technology have opened new frontier for statistical thinking and applications. We must prepare ourselves for the information age. Having professional degrees in

statistics mentioned in my mission statement is just one of many ways to prepare our profession for the future. The degrees emphasize on statistical training as well as learning knowledge of the specific area of application. We must understand the substantive characteristics of the problem under study for statistical theory to be relevant and statistical application to be successful. Second, a specific yet related example of a most promising and important application area is biostatistics and bioinformatics. As the chair of the advisory committee for the Division of Biostatistics and Bioinformatics, National Health Research Institutes, it is clear to me that Taiwan has had a good start, even though it still has a long way to go. China, on the other hand, is a vast, virgin land! In the midst of its phenomenal economic growth, how to address the urging issues in public health and medical advancement poses a serious challenge the resolution to which our profession and in particular, our members, can and should get involved. Members interested in the area must learn statistical theory and methods and, in addition, take relevant courses in biomedical science, computing and even humanity.

Finally, I would like to thank you, Bill, and Sue-Jane for your effort and the interview.

Hong Kong Statistical Society Sports Day

C N Lo
Programme Secretary

On 27 October 2001 (Saturday), the HKSS organised a Sports Day for members of the Society. The Sports Day was held in the University Sports Centre of the Chinese University of Hong Kong. Members were to play activities like badminton, squash and table tennis free of charge.

Also included in the Sports Day was a tennis tournament. There were five teams to participate in the competition. The competition started at 2:30pm. Professor SY Lee and Mr. Andy Fung won the championship of the tournament.

Members participating in the Sports Day enjoyed the Sports Day very much. It ended at around 5:30pm. As people working nowadays are so busy, they do not have a chance for exercise and a bit of excitement in their lives. They showed they had interest by participating more in play activities and/or tournaments organised by the Society as so to balance their well-being and good health. Also they would like to have more social gatherings of this kind for all of us.

An Overview of Hong Kong Tourism

Ying-bill Law
Census and Statistics Department

Introduction

Tourism is an important activity in Hong Kong. In particular, inbound tourism plays an important role in the export of services and continues to be one of the major earners of foreign exchange for Hong Kong. This article discusses the methodology of tourism statistics in general. The performance of some businesses related to tourism would also be presented.

The Methodological Framework

For statistical compilation and analysis, tourism should be viewed in the context of a “service domain”. A service domain comprises those parts of economic activities straddling different industries (e.g. air transport, water transport, land transport, travel agents and hotels industry) but are somehow related to a common purpose (e.g. serving visitors). It may include all activities carried out by all establishments in a service industry that is closely related to the domain. In some other cases, however, only a portion of the establishments in an industry or even only part of the establishments’ activities is related to the domain.

In some industries that are very closely related to tourism (e.g. travel agents and hotels), practically all activities carried out by the establishments involved are related to tourism. Even then, there are still problems for statistical compilation. For example, in estimating value added, it is difficult to distinguish between inbound tourism (i.e. foreigners visiting Hong Kong) and outbound tourism (i.e. Hong Kong residents visiting places outside Hong Kong) in the case of travel agencies. In other cases (e.g. retailers, restaurants and taxi operators) only a relatively minor proportion of the business activities are related to services provided to visitors and such services may account for only a small proportion of the total activities of those establishments as they serve both visitors and local customers.

Conceptually, the economic significance of tourism may best be assessed in terms of its contribution to Gross Domestic Product (GDP). In practice, it is difficult to delineate the proportion of each economic activity that is related to tourism as discussed above. Moreover, initial visitor expenditure will percolate through the economy, stimulating further indirect expenditure. Hence, there is no simple and direct measure

of the prominence of the tourism domain in terms of its contribution to GDP. We cannot simply add up the value added of the “relevant” industries, the business receipts or even the number of persons employed to arrive at the respective totals for the “tourist industry”, as this would end up with significant over-counting.

Currently, the Census and Statistics Department (C&SD) compiles a business receipts index (BRI) for the domain of tourism, convention and exhibition services. In compiling the index, multiple data sources are used. For industries which primarily serve visitors (including travel agents, air ticket agents and hotels), business receipts data are collected directly from establishments in the industries concerned through the Quarterly Survey of Service Industries. For other industries that also serve a good number of local residents (e.g. restaurants, retailers and transport operators), using the total receipts data of the entire industries will substantially over-estimate the tourism-related receipts, but the operators of the businesses often cannot provide the relevant receipts breakdown. Therefore, such data have to be collected from the visitors instead of the service providers. Those data are currently collected by the Hong Kong Tourism Board (HKTB) through a regular Visitors Survey.

The HKTB also compiles and publishes statistics on tourism receipts relating to

expenditure of foreign visitors, servicemen, aircrew members and transit/transfer passengers in Hong Kong. As such statistics are targeted at measuring receipts generated from inbound tourism only (i.e. foreigners visiting Hong Kong), the coverage is bound to be different from the corresponding component of the BRI for the tourism, convention and exhibition services domain compiled by C&SD, which measures changes in total receipts of local establishments engaged in tourism related businesses. For the latter, in addition to receipts due to inbound tourism, those from businesses related to outbound tourism (i.e. Hong Kong residents visiting places outside Hong Kong) and domestic tourism (i.e. Hong Kong residents visiting places within Hong Kong) are also included. Because of such differences in coverage, the two sets of statistics are not directly comparable.

Business Related to Tourism

Among all the economic activities, transportation, hotel accommodation and retail industry are closely related to tourism. The following addresses the performance of the above three tourism related industries.

(A) Transportation

An efficient transportation network and the provision of various convenient modes of transport connection with the rest of the world is a crucial factor affecting Hong Kong as an

attraction for visitors. In 2000, the most popular mode of transport adopted by arriving visitors was by air (51.4%), followed by land (32.6%) and by sea (16.0%).

It is noted that Hong Kong's role as a regional hub and visitor "gateway" for the mainland of China is growing. The number of visitor arrivals to Hong Kong *via the Mainland* in 2001 was 6.7 million compared with 5.8 million in 2000, or an increase of over 14%. At the same time, the number of visitor departures for the Mainland *via Hong Kong* in 2001 was 6.0 million compared with 5.7 million in 2000. The most popular mode of transport adopted by these two types of visitors was by land. In 2001, 75% of visitor arriving Hong Kong via the Mainland and 78% of the visitor departing for the Mainland via Hong Kong adopted land transport.

(B) Hotel Accommodation

Hotels are major service providers closely related to tourism. According to the HKTB, there were over 35 000 hotel rooms in 2001. The revival in the growth of visitor arrivals pushed the hotel room occupancy rate from 76% in 1997 to 83% in 2000. However, a decline in average occupancy rate to 78% has been observed for January to November 2001. Along with the fall in hotel occupancy rate and business receipts for the hotels industry in 2001, the BRI for hotels industry decreased by 11% in the third quarter of 2001 compared with the same quarter in

2000.

(C) Retail Industry

The retail sector is among the sectors that draw part of their business income directly from visitors' spending. Total visitor spending on shopping amounted to HK\$29.7 billion in 2000. Analysed together with retail sales, it is noted that the proportion of visitor spending on shopping out of total retail sales was 16% in 2000. Analysed by the source country of visitors, the contribution to visitors' spending on shopping by Mainland Chinese visitors has been growing since 1994. As a percentage of total shopping by all visitors, shopping purchases by Mainland Chinese visitors increased from 18.5% in 1994 to a record high of 40.0% in 2000.

Concluding Remarks

With the forthcoming development of new attractions (e.g. Disneyland) and various policy measures of promoting inbound tourism coming into effect, coupled with Hong Kong's world-class facilities, further strong growth in inbound tourism is expected. In addition, as Hong Kong and the Mainland develop closer economic ties, there will be more and more tourism flows between the two places.

News

Appointment

Department of Statistics, The Chinese University of Hong Kong

Prof. Jianqing Fan will be on leave from January to April 2002. Prof. Ngai Hang Chan will be the acting Chairman of Department of Statistics during the leave of Prof. Fan.

Coming Events

Workshop on Social Survey and Research

A workshop on Social Survey and Research will be held on 23 February 2002 (Saturday).

Annual General Meeting

The Annual General Meeting of the Society will be held on 27 March 2002. Members will receive the notice shortly.