Dissertation on Shanghai 2008 Annual Conference of International Association for Official Statistics (IAOS)

An Explorative Study of Metropolitan Statistics in China

By

Cui Shu-qiang[1]   Wang Hong[2]   Li Ping[3]   Ding Wen-bin[4]

Abstract

In view of the grand backdrop of the rapid development trend of urbanization, this article has carried out an analysis of the contributions accomplished by the metropolitan cities in China to the economic development-oriented society, as well as of some still existing problems facing our statistical work. Meanwhile, with an organic combination of experiences gained during recent years in the reforms of statistical practices, this article has conducted some further exploration and research into such issues as the orientation of reforms in metropolitan statistical work and feasible

[1] Mr. Cui Shuqiang, Head of Beijing Municipal Bureau of Statistics, Senior Economic Manager.
[2] Ms. Wang Hong, Deputy Director of Beijing Municipal Bureau of Statistics, Senior Statistician.
[3] Ms. Li Ping, Deputy Director of Survey Organization in Beijing of National Bureau of Statistics ,
                                                                    Senior Statistician.
[4] Mr. Ding Wenbin, Deputy Director of Research Institute of Beijing Municipal Bureau of Statistics.
                                                                    Senior Statistician.

Contact author by: Email: dwb@bjstats.gov.cn   Tel: 8610-83539683   Fax: 8610-83539685

Address: No.36 Guanganmen Southern Street, Xuanwu District, Beijing, China, 100054

methodology and modes in this regard. Accordingly, this study has reached a conclusion that, in implementing urban statistical work, a "vertical management" system should be adopted with a corresponding indicator system that can reflect the characteristics of the cities. Equally important is the data collection, which should make full use of means and measures of informatization technology with intensified cooperation and communications with other countries in the world.

Key Words: Metropolitan City(Metropolis); Statistic System; System Innovation

Metropolitan cities[5] have a most significant role and impact in and upon the development of the economic society of an individual country and even of that of the whole world. The development of metropolitan cities and urban management greatly depend and hinge on data statistics, which makes providing true, accurate and timely statistical information the common responsibility and mission that we, as government sectors of metropolitan data statistics, are all faced and obliged to shoulder together

---

[5] The concept of metropolitan, by definition, was originated in ancient Greece. In Greek, the word "metropolis", meaning "Mother City" originally referred to the principal city of a country or of a particular region. By the definition provided in the encyclopedia, a metropolis is "an urban region with a relatively large land area and population, divided into several independent administrative sub-regions" . Up to this date, there have been no clearly unified definitions on the concept of a metropolis. As far as China is concerned in this aspect, the National Statistics Bureau has merely classified the cities into groups according to the sizes of the populations (grouping by non-agricultural population sizes in the urban areas), namely, cities with a population between five hundred thousand and one million inhabitants are classified as large cities; cities with a population between one million and two millions as very large cities; and cities with population reaching two million or above as super-sized cities. In this article, the so-named metropolis or metropolitan cities refer to cities with a population of over six million inhabitants within independently administrated regions.

with.

Being the large developing country in the world, China has made great headway in the development of an economic society since the adoption of reforms and opening-up in 1978. China's accession to WTO in 2001 actually made her further integrated into the global trade and economic system. As major hubs of talents, capitals, information and technologies, and along with the rapid economic development, metropolitan cities have witnessed tremendous and prominent changes in terms of social structures and orders_____ as a result of convergences and concussions caused by both internal and external factors. Meanwhile, new economic and social phenomena have also been coming to the fore unceasingly, which in turn call for rapid responses and timely follow-ups in our statistical work. Hence, these changes have virtually rendered our old-fashioned, traditional institution and methods of statistics and the statistic system as a whole in want of improvement or innovations.

As the capital city of China, the city of Beijing is making an accelerated forward march towards the status of an international metropolis. In recent years, the Beijing Municipal Bureau of Statistics, in compliance with the current situation, has conducted some audacious explorations and exploitations in its reforms of metropolitan statistical work. Fruitful results have not only been seen in our strategic goals put forward towards building a metropolitan statistic system, but also some of

those goals have been materialized in our pilot programs of the actual construction of the indicator system, in the innovation of data collection and gathering, as well as in reforms of the management system of statistics. With an aim to provide quality data statistical services to the urban administration and management sectors, as well as to the general public, this article will draw on our practical experiences gained during the recent years with our earnest endeavors in building up a metropolitan data statistic system for the city of Beijing, and this article has also carried out a research into what and how metropolitan cities should do in order to meet the challenges in our time.

Part One. The Status Quo of the Urban Development and Statistics in China

1. The Status Quo of the Urban Development

Ever since the adoption of reforms and opening-up policies in the 1980s, urbanization has undergone a rapid development with ever-increasingly expanded city sizes. By the end of 2007, there were already 655 cities in total in China, amongst which the proportion of population of cities[6] under direct jurisdiction of corresponding local provinces had made up 28.2 per cent of the total population of the whole country with most of the provincial capital cities' populations expanded

---

[6] The term population refers to the so-called "permanent population", referring to those people who have lived in this city for half a year or above (hereinafter the same definition applies to similar cases)

up to six million or more inhabitants. The populations of cities like Beijing, Tianjin (Tientsin), Shanghai, Chongqing, Guangzhou(Canton) had all reached above ten million people. From the perspective of economic development, the total urban economic volumes have been constantly on the rise with various industries being upgraded obviously faster and higher than the national average pace and level. According to statistical data information publicized by the National Statistics Bureau, by 2007, the accumulated total economic volumes (GDP) of 48 cities[7] (including that of Beijing) had already constituted 48.7 per cent of the total economic volume of the whole of China. The proportions of tertiary industries of those cities were all well above the national averages, amongst which, that of Beijing (proportion of the tertiary industry) had far exceeded 70 per cent. The above figures have testified to a fact that, in present China, urban development has been undoubtedly playing a pivotal and crucial role in the grand scheme of national development of an economic society.

Nevertheless, what is worthy of attention is the fact that, a city is not only often a region which can often boast its fastest economic development, but also it is where various contradictions and problems often converge and collide, consequently rendering itself under

---

[7] Those 48 cities include: Beijing, Shanghai, Tianjin, Chongqing; Dalian, Qinhuangdao, Yiantai, Qingdao, Lianyunguang, Nantong, Ningbo, Wenzhou, Fuzhou, Guangzhou(Canton), Zhanjiang, Beihai, Weihai, Shenzhen, Zhuhai, Shantou, Xiaomen, Haikou, Ha Er Bin, Shenyang, Xian, Wuhan, Nanjing, Chengdu, Changchun, Hangzhou, Suzhou, Wuxi, Jinan, Zhoushan, Nanchan, Changsha, Hefei, Nanning, Taiyuan, Zhengzhou, Urumchi, Xining, Yinchuan, Guiyang, Lanzhou, and Kunming.

multitudinous difficult management situations. During the process of China's intensified endeavors of industrialization and urbanization_____viewed in terms of the urbanization situation in present China, huge amount of rural populations have surged into the urban areas, which leads to a situation that has been already posing massive problems such as the overpopulated migrant people, colossal energy consumption, overcrowded traffic, etc. Take the city of Beijing as an example, the permanent inhabitants by 2007 statistics was 16.33 million, among which migrant people added up to almost four million. The total energy consumption climbed up to a scale of 62.8504 million tons of standard coals_____(amazingly) an amount fairly sufficient for the consumption by small-sized country. As for automobile vehicles owned by different urban sectors, the total number already had reached three millions and is now still rising at a rapid pace. Given the above grave situation, we should be truly watchful about our urban statistical undertakings in China as when it comes to giving description of urban economic conditions, or as when various management tasks of the city are taken into considerations.

2. The Status Quo of Urban Statistics in China

On a world basis, the urban statistic system of China is relatively self-contained and complete. Not only has a special urban statistic department (Department of Urban Statistics) been set up within the

National Statistics Bureau, but also organizations on county (or above) levels specially assigned for official statistical work and investigation teams on different levels under the National Statistics Bureau have been established across the whole country. Again, let us use Beijing as an example, among the functionary departments or divisions under the Beijing Municipality Government, a special statistics bureau (The Beijing Municipal Bureau of Statistics) has been set up; and correspondingly, within the 18 administrative districts(or counties) under the jurisdiction of the Beijing Municipality, there are also well-established independent statistic organizations.

With regard to urban statistics, we have adopted a so-called level-by-level responsibility mechanism with the head of the local statistic bureaus being put in charge of the overall supervision of the statistical work and quality. Speaking more specifically, such issues as job responsibilities, personnel management (i.e. recruitment and so on), fund arrangement of those local statistic organizations are under the unified control of the local governments. However, many of the specific work details are subject to the guidance from their superior statistic organizations, and many of the professional standards must be carried out in conformity with rules and regulations laid out for statistical works by the National Statistics Bureau. From 2006 onwards, reforms of the management system have been carried out by the statistic system of the

Chinese government with branch organizations specially assigned for undertaking investigations in 31 provinces, cities and municipalities and autonomous regions, (formed up by the National Statistics Bureau, namely, the general investigation teams in different provinces and regions under the unified leadership of the National Statistics Bureau) with a complete set of ramification widely extended into some local cities on regional or county levels. For instance, a general investigation team, entitled "The General Investigation Team of Beijing under the National Statistics Bureau", is established in the Beijing Municipality. Meanwhile, smaller investigation teams have also been set up in its ten administrative districts.

Part Two. Construction of the Statistic System for the Metropolitan Cities in China

1. The System of Statistic Methods

The System of Statistic Methods is an important component of statistical work with the indicator system being the key element at the core. The urban statistic indicator system should be made in such a way that it really reflects and represents the characteristics of the city. In collecting and gathering data, the favorable and advantageous foundations of urban informatization should be made use of. Over a long time, though the System of Statistic Methods and the urban statistic indicator system have kept constant improvement, yet on the whole, due

to various obstructions and obstacles, the format and design of the indicators and data collecting methods are still some way from being adequate and sufficient to meet the actual needs of our present era. Most significantly, the imperfection lies in the fact that, the system can not satisfy the needs craved for in a rapidly developing and ever-changing urban economic society. Besides, the data collection and gathering flow process has also not made full use of the existing informatization technologies. For example, in the first place, along with the advancement of urbanization in China and its rapid economic development, urban energy consumption has also seen a rapid rise, however, the statistical work in this aspect is still relative backward and outmoded with seriously understaffed professional work teams. Secondly, the urban service industry development has moved much forward, yet its statistic system is far from being complete and perfect. Productive service industry and high-tech service industry are yet to be facilitated with relevant indicator surveillance systems. Third of all, in view of data collection and gathering and their flow process, the conventional report forms on paper media and the level-by-level reporting mechanism are still commonly seen in our present-day work.

During the recent several years, aiming at address the above-listed problems and issues, the statistical departments of the Beijing Municipality have pioneered some explorative researches and practices.

In 2005, drawing upon the experiences and references accumulated by some major metropolitan statistic systems in both home and abroad, we framed out what we call "The Beijing Metropolitan Statistic Indicator System", which now includes some 800 key indicators in reflection of the features of the development of the economic society of the metropolitan city. Among those 800 odd indicators, some indicators such as statistics on modern manufacturing industry, economic statistics of the headquarters of the enterprises, statistics relating to leisure time activities of the residents, statistics on time distribution and so on had never before accomplished in the past. At the same time, we also piloted a whole bunch of statistic subdivisions such as the divisions of Energy Statistics; Service Industry Statistics, and New Industry Statistics for monitoring the development of newly emerged industries. In data collecting and gathering, as well as in management flow process, we also attempted audacious and novel practices (e. g. by using the Internet data transmitting tools, we developed a special data collecting management platform where work units under the survey can transmit data to the relevant statistic departments). Nowadays, the conventional, old-styled report form filling that once used paper media has been replaced by filling in the forms directly on the Net. And data processing, auditing and supervision, collection and compilation can all be manipulated and accomplished on the network platform. By using informatization

technology for upgrading the data collection and management mode so as to shorten data delivery time and enhance work efficiency, the System can also reflect the features and advantages of urban statistics.

2. The Organization Management System

The efficiency of urban statistic work is intimately related to organization management. The simplification of management structures, and implementation of flat model management is conducive to reducing attenuation and enhancing work efficiency. At present, the official formal urban statistic management systems are mainly classified into two major categories[8] and respectively, on three levels. The two categories are carved up according to specific job assignments in different individual government functionary departments or branches. Official statistic bureaus and general investigation teams affiliated to their corresponding local governments(such as the Beijing Municipality Statistics Bureau and "The General Investigation Team of Beijing under the National Statistics Bureau") are usually called government comprehensive statistic departments, as included in Category One; and the statistic organizations set up in other professional governmental functionary branches (such as statistic organizations in educational and public health sectors), as included in Category Two, are usually called sector(departmental)

---

[8] In addition to official statistics, there are also some non-government statistics with some professional affiliations. Due to space and volume limits, this article should not take them into consideration.

statistics. The above-said three levels[9] of urban statistics are respectively plotted out by different administrative regions and their levels of administration___namely, statistic organizations on provincial, regional or municipal, or county levels.

Viewed from our past experiences gained through a long historical period, due to the sheer number of transversely connected sections of urban statistics, as well as the intricately and vertically woven levels to which those sections，departments，or sectors are attached, our statistic work was riddled with a colossal number of problems. In particular, one problem was that certain data of one category were often generated from multiple organizations with different measures and standards, thus leading to a chaotic situation with tremendous difficulties for the urban statistic management work.

In order to do a good job in effectively coordinating and managing urban statistics, in recent years, the statistic sector of the Beijing Municipality Government has been conducting conscientious researches and has already exerted its due efforts in the following aspects:（1） Giving full play to the comprehensive and inclusive guiding role and functions of the governmental statistic branches, making active coordination and communications with the professional functionary statistic departments.

---

[9] The "Department of Urban Statistics" is a sub-work unit under the National Statistics Bureau, not an independent administrative unit. Hence this article has not classified it into a certain level.

At present, the Beijing Municipality Statistics Bureau has already materialized the sharing of a statistic data bank featuring basic work unit items with taxation units, industrial and commercial units, and units in charge of quality inspections, etc so as to prevent overlapped and neglected statistic reports from the original sources of data collection and gathering.

(2) Earnestly implementing duties and responsibilities assigned to our governmental statistic organizations and upholding their due official positions in statistical work.

In 2006, the Beijing Municipality Committee promulgated a special document clearly pointing out that, statistic organs should function as the data center of the development of economic society for the whole city, and as the supervision and evaluation center for regional and industrial developments. The document also requested that the statistic sectors should develop and construct economic data banks on a macro-scale for the whole urban area. Presently, the construction of the macroeconomic data bank for the Beijing Municipality has been fully initiated and has already entered into its second phase of construction. In the not-too-distant future, the Bank will serve as an urban information service system facilitated with a fullest range of data of the Beijing Municipality, covering a whole array of different trades and industries. By actually materializing the macro-data bank system project, statistic information

sorted out by the comprehensive statistic departments under the Beijing Municipality Government and the professional statistic organizations will be effectively synthesized and so that the authoritative place of the official statistics will also be further strengthened and the quality of statistics assured with more reliable data.

（3）Strengthening "Vertical Management" of the Urban Statistics So As to Ensure a Coordinated and Orderly Fashion in Our Statistical Work.

In view of the present condition facing our metropolitan statistic work, and in order to meet the demands of the its future development, and as well as by taking advantage of the favorable opportunity brought about by the system reforms of the national investigation teams, the statistic organization system of the Beijing Municipality has already made some major breakthroughs in "vertical management". Actual vertical management by the city investigation team over its sub-investigation teams on county or district levels, and likewise, vertical management on district levels over street and township statistic work units have all been materialized. In so doing, we have reached a full and adequate synthesis and synergy of our statistic strengths and resources of the whole city. Besides, this system reform is conducive to streamlining the management mechanism of statistic organizations and conducive to the assurance that the statistic work be carried out in a coordinated and orderly manner.

3. International Cooperation and Communications

Viewed from a global basis, without an effective coordination mechanism, many details of the present urban statistic work are rendered in need of international standards, thus bringing about huge difficulties to comparing urban statistic works among our fellow partners of this profession in the international arena. Besides, in recent years, out of the needs in our research or daily routine work, we often have to understand and interpret some of the metropolitan statistics about the economic societies gathered from abroad, yet to our great frustration, we too often find ourselves stranded in enormous obstacles and obstructions while carrying out such a mission. One reason is that statistic organizations in many cities across the world are often understaffed with all-too-simple job responsibilities, or in some places, there are no statistic organizations specially established at all for this mission. The second reason lies in that, methods and standards set for statistics vary greatly (from city to city, and from country to country). Take the three cities for example: the city of London in U.K., the city of New York in the United States, and the city of Paris in France. All of them are world-renowned international metropolitan cities, yet none has already had a special statistic bureau set up by the city government for the statistic job[10]. Therefore, statistic data

---

[10] There is a consulting team made up of experts of statistics under administration of the London City Hall, yet it is not a professional functionary organ.

relating to a city can only be obtained___quite inconveniently and indirectly___through the national statistic bureau of the country to which the city belongs. Furthermore, even if some data can be gathered in such a way, it is still often times far from being complete and inclusive with rather conspicuous differences in the implications, methodology and standards set for measuring those data. Obviously, such an awkward situation has, to a great extent, hindered urban statistic communications on the international level.

Beijing is both the capital and a super-sized city in China with an ever-increasing globalization trend, which definitely needs international talents who are truly familiar with the relevant international rules and regulations in statistics, as well as talents with a good mastery of statistic theory and practices. In order to meet the demand of planned training of internationally competitive communication talents, since 2006, the statistical sector of the Beijing Municipality Government has sent out some of its best elite professionals in different batches to the United States, Canada, France, the Energy Division under the United Nations, etc for further training or international communications and exchanges. Up till now, this project has already been listed into the mid-long term development planning of the statistic system under the Beijing Municipality Government. This mechanism has also ensured a solid foundation for building up a whole body of talents in Beijing for its

ever-increasing globalization in statistic communications and exchanges.

The globalization of urban statistics is a long and arduous task that really calls for concerted and coordinated endeavors and efforts to be made by the UN Statistics Council, the International Official Statistics Association, as well as all relevant statistic organizations in metropolitan cities throughout the whole world. Therefore, faced with the current trend of economic globalization, it is our hope that all of the statistic organizations in metropolitan cities in different countries all do their parts to strengthen contacts and communications with common concerted efforts in exploring feasible and practical modes for statistic works in metropolitan cities. Undoubtedly, once this expectation has been realized, we can surely further promote and push ahead our urban statistic works to a new height.

References:

1.A New Leap Forward in Statistics for Beijing Through Intensification and Enrichment (by Cui Shu Qiang, in the 2nd Issue , 2008 on " The Data")

2. An Explorative Study on the Indicator System of Performance Evaluation of the Local Governments in China (by Cui Shu Qiang with other authors in the 3rd Issue, 2006 on "Statistics Study")

3. Construction of the Metropolitan Statistic System of the Capital City

(by Cui Shu Qiang, in the 5th Issue of "China Statistics")

4. New Breakthroughs in the Reforms and Construction of Statistics Through Conscientious Thinking and Active Measures and Actions (by Cui Shu Qiang, in the 8th Issue in 2008, on "Beijing Statistics")

5. " The Global Cities -New York/London/Tokyo"-Saskia Sassen, translated work by Zhou Zhen Hua and others, published by the Shanghai Publishing House of Social Sciences, new issue of 2001)

6. "Compilation of Statistic Materials of 2007-Municipalities, Cities on Subsidiary Provincial Level, Special Economic Zones and Coastal Cities With Opening-up Policies"(by the Secretariat of the 24th Statistics Exchange Conference, August, 2008)