

Compilation of Economic Statistics and Utilization of Administrative Data

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I . Introduction

1 We live in an age of unprecedented technological development. The socio-economic circumstances are rapidly changing in the world. The circumstances surrounding statistics are getting complicated and diverse, which is creating a number of new demands for statistical information.

2 Many statistical users desire detailed and recent statistical information. However, due to the dilemma of confidentiality, respondents neglect or hesitate to answer our statistical surveys.

3 To meet these changing circumstances, we need to develop and improve various statistical methods. With the development of information and communication technology, new statistical methods are being created. Also, we are making every effort to reduce the respondent's burden. This paper describes a study about the compilation of economic statistics and utilization of administrative records in the Republic of Korea.

II. Compilation of economic statistics

Censuses and a set of annual surveys by industry

4 Several censuses and surveys to collect data on economic structure have been conducted at different periods in Korea. These include the following censuses and surveys;

- Industrial Census (quinquennial)
- Census on Service Industry (quinquennial)
- Mining & Manufacturing Survey (annual)
- Construction Work Survey (annual)
- Transportation Survey (annual)
- Wholesale & Retail Trade Survey (annual)
- Service Industry Survey (annual)
- Census on Basic Characteristics of Establishments (annual)
- Survey of Business Structure & Activities (annual)

5 This system makes it difficult to produce comprehensive and comparable statistics in a single reference period. Because survey items are not standardized, it is difficult for users to compare the results among statistics.

Economic Census

6 The Korea National Statistical Office (KNSO) decided to introduce the Economic Census in 2011. It aims to standardize the definitions of survey items, reduce survey workload, prevent omission or duplication of establishments, and get comprehensive and comparable economic data at the same time. It will be an integrated census which covers two censuses and a set of annual statistical surveys by industry. <attachment 1>

7 The pilot surveys for the 2011 Economic Census are going to be conducted in 2008 and 2009. Its rehearsal survey will be carried out in 2010.

Business registers

8 The Census on Basic Characteristics of Establishments covers all domestic establishments except individual businesses engaged in agriculture, forestry and fisheries in order to acquire basic characteristics of establishments as follows;

- Name, address, and phone number of establishment
- Owner's name and gender
- Number of persons engaged
- Business activities
- Head or branch office if any

9 The reason why the Census is conducted every year is that the KNSO would like to reflect establishments' change for compiling accurate economic statistics. According to the results of the Census, among total of 3.3 million establishments, about 343 thousand (10.3%) establishments opened and 309 thousand (9.3%) establishments closed in 2007. The Census results are used as business registers to provide a national sample frame for various statistical surveys.

III. Utilization of administrative data and internet survey

Respondent's burden

10 As anticipated, respondents hesitate to answer statistical surveys because of the concern about disclosing their information. Also, the respondents are apprehensive due to the frequency of surveys such as annual and monthly surveys.

11 A survey showed that many establishments had much burden to answer the statistical surveys for the following reasons ;

Reasons for hesitating to answer statistical surveys

(unit : %)

Total	Too frequent surveys	Too many survey items	Concern about confidentiality	Difficult to match with financial statements	Difficult to understand survey questions	Others
100.0	24.7	12.7	11.0	10.9	10.7	30.0

* 2006 Survey on Respondent's Reaction, KNSO

12 Therefore, we feel the obligation to reduce the respondents' burden. To cope with these situations, the KNSO is trying to standardize and reduce survey items, and we have plans to conduct annual and monthly surveys by industry integratedly or simultaneously. Also, we'll make every effort to protect respondent's confidentiality as in paragraph 14.

Utilization of administrative data

13 In addition to the above measures, the KNSO plans to utilize administrative data for statistical purposes to supplement or substitute statistical surveys. It's because the administrative records can save workload and cost, and prevent omission or duplication.

14 However, obstacles exist in utilizing administrative records for statistical purposes. According to an article of the Tax Law regarding the taxpayer's confidentiality, the National Tax Service can not supply the KNSO with each establishment's business registers. Therefore, the KNSO is currently in the process of revising the related law which would permit the provision of tax records for statistical purposes. Also, the Statistics Law has a strong regulation to maintain confidentiality. Only authorized staff have the right of access to data on the database system. A person convicted of infringing an individual's privacy or establishment's confidentiality may be sentenced to a maximum of 3 years imprisonment or be fined 10 million Korean won.

15 In addition to the business registers of establishments, there are a lot of administrative records collected by different parts of agencies such as tax records, employment insurance records, financial statements, and gas supply records etc. They are currently utilized for compilation of many statistics as follows;

Administrative data for statistical purposes

Statistics	Administrative data	Related agencies
Monthly Mining & Manufacturing Survey	City gas supply records	City Gas Association
Annual Survey of Business Structure & Activities	Financial statements	Chamber of Commerce & Industry Financial Supervisory Service
Monthly Service Industry Survey	Accounts of schools & universities	Ministry of Education, Science & Technology
Annual Gross Regional Domestic Product	Aggregated value added tax data	National Tax Service
Agricultural Census	Farmland register	Ministry for Food, Agriculture, Forestry & Fishery
Basic Fishery Survey	Fishing boat register	Ministry of Land, Transport & Maritime Affairs
Monthly Service Activity Indexes	Fuel sales for vehicle or home	National Oil Corporation
	Transportation sales	Korea Railroad
	Revenue on insurance bill - life insurance - medical insurance - employment insurance - industrial disaster insurance	Financial Supervisory Service Heal Insurance Corporation Employment Information Service Worker's Compensation & Welfare Service
	Business income	Korea Exchange
	Real estate transaction	Land Corporation
	Waste collection and management	Environment and Resources Corporation

16 The list of all establishments derived from the Census on Basic Characteristics of Establishments can be mostly replaced by business registration documents of the National Tax Service, even though some definitions are slightly different between two data sources. For example, the Census uses the 9th Korean Standard Industrial Classification (KSIC) with 5 digits, but the business registration documents use the 6th KSIC with 4 digits and add their own 2-digit code.

17 Can we calculate the amount saved by reducing response burden? This is obtainable through the OECD guideline of Standard Cost Model as follows;

$$\text{Response burden} = \text{wage per hour} \times \text{responding time} \times \text{number of responses} \times \text{number of respondents}$$

18 However, if all survey items are not replaced by administrative records, we can not stop the survey as long as there is some information that we require. Therefore, the amount saved may be relatively less than our expectation.

Internet survey

19 The increase in the use of the internet has had profound effects, mostly positive, on the collection, analysis and dissemination of data and statistics. The internet survey is a convenient and efficient method because it can reduce survey workload, enhance data accuracy, and shorten data processing time.

20 The following censuses and surveys are conducted by internet survey and traditional survey methods.

- Population and Housing Census (quinquennial)
- Census on Basic Characteristics of Establishments (annual)
- Survey of Business Structure and Activities (annual)
- Mining and Manufacturing Survey (annual)

- Service Industry Survey (annual)
- Transportation Survey (annual)
- Household Income and Expenditure Survey (quarterly)
- Current Mining and Manufacturing Survey (monthly)
- Economically Active Population Survey (monthly)
- Cyber Shopping Mall Survey (monthly)

21 However, the KNSO found a paradox between the internet survey and utilization of administrative data. The KNSO experienced that utilization of administrative data disturbed the internet survey method. The KNSO used administrative records for the Survey of Business Structure & Activities for the first time in 2008. As a result, the internet survey ratio dropped from 16.5% in 2007 to 8.2% in 2008. Among total of 134 items, 26 financial statement items are replaced by administrative records such as financial reports and statements announced to the public. We surveyed additional items on the management strategies such as outsourcing, e-business system, globalization, and strategic coalition. As such, the internet survey ratio decreased because the respondents could easily answer the questions of the enumerators. They answered the questions of the enumerators immediately and didn't want to answer the questionnaires through the computer afterwards.

22 Furthermore, there are several problems in utilizing the internet survey method. This method can not be applied to the small establishments deprived of internet access, especially rural and elderly areas. Only those who want to respond through the internet can be targeted. Therefore, the internet survey method is simply a supplemental method of the traditional paper survey.

23 Despite these disadvantages, we are confident that the internet survey is a very efficient survey method from the benefit/cost viewpoint, which is the means to meet the changing circumstances. Hence, we believe that it will eventually replace the traditional survey method.

IV. Conclusion

24 In the statistical world, as in many others, the speed of change is accelerating. Our statisticians need to endeavor to meet these changes.

25 The Economic Census to be conducted in 2011 will standardize survey items, reduce survey workload, prevent omission or duplication of establishments, and get comprehensive and comparable economic data at the same time.

26 The use of administrative data must be beneficial for both statistical agencies and respondents. We need to improve the utilization of administrative records for compilation of economic statistics in order to meet the changing circumstances in our modern society. It would reduce the survey cost and respondent's burden. Also, we must strive to improve the quality of official statistics.

27 The statistical agencies need to make constant efforts to develop and improve the internet survey because it will become a convenient and efficient survey method to conform with the rapidly changing circumstances in today's society.

Attachment 1 - Coverage of the Economic Census

Korean Standard Industrial Classification	Censuses		Surveys	
A. Agriculture, forestry and fishing	Agricultural, Fishery & Forestry Census	Household	Basic Agricultural Survey Farm HH Economy Survey Basic Fishery Survey Fishery HH Economy Survey	-
		Establishment	Agricultural and Fishery Corporate Establishments Survey	Economic Census
B. Mining and quarrying	Industrial Census		Mining & Manufacturing Survey	
C. Manufacturing				
D. Electricity, gas, steam & water supply				
F. Construction	-		Construction Work Survey	
G. Wholesale and retail trade	Service Industry Census		Wholesale & Retail Trade Survey	
I. Accommodation & food service activities				
H. Transportation			Transportation Survey	
E. Sewerage, waste management, materials recovery and remediation activities			Service Industry Survey	
J. Information and communications				
L. Real estate activities and renting and leasing				
N. Business facilities management and business support services				
P. Education				
Q. Human health and social work activities				
R. Arts, sports and recreation related services				
S. Membership organizations, repair and other personal services			Professional, Scientific & Technical Service Industry Survey	
M. Professional, scientific and technical activities				
K. Financial and insurance activities			-	
O. Public administration and defence	-	-	-	
T. Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	-	-	-	
U. Activities of extraterritorial organizations and bodies	-	-	-	