

# Statistical System, International Comparison, and Strategies for Advancement of Statistics

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## About KOSTAT

- Mission & Vision
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# Mission & Vision

## MISSION

Lead advancement of official statistics and produce reliable statistics

## VISION

Highly advanced Statistics Korea opens the future with the general public

## KOSTAT Strategies

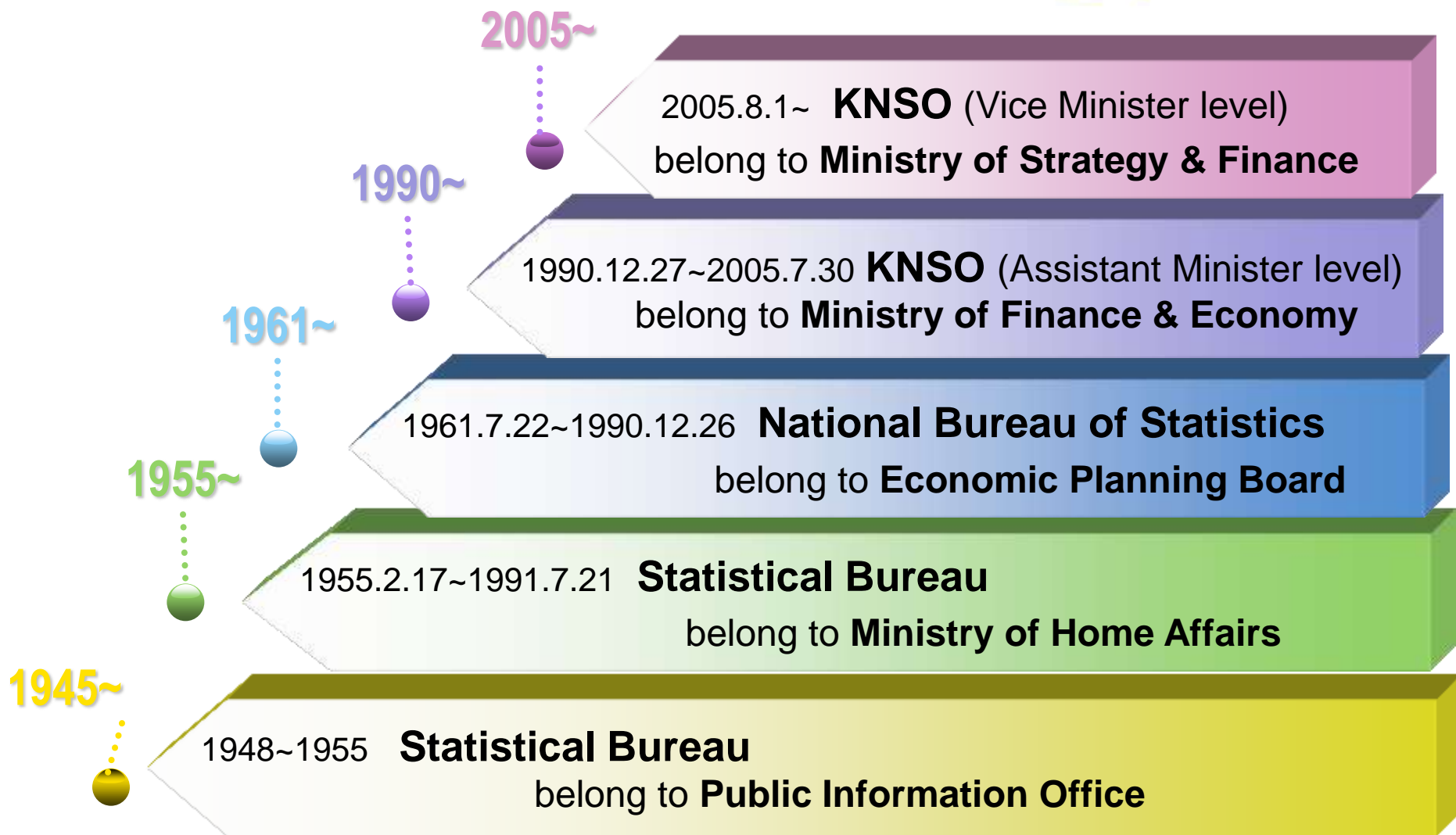
Strengthen infrastructure of official statistics to produce high-quality statistics



Enhance customer satisfaction with user-centered statistical services



# History of the KOSTAT

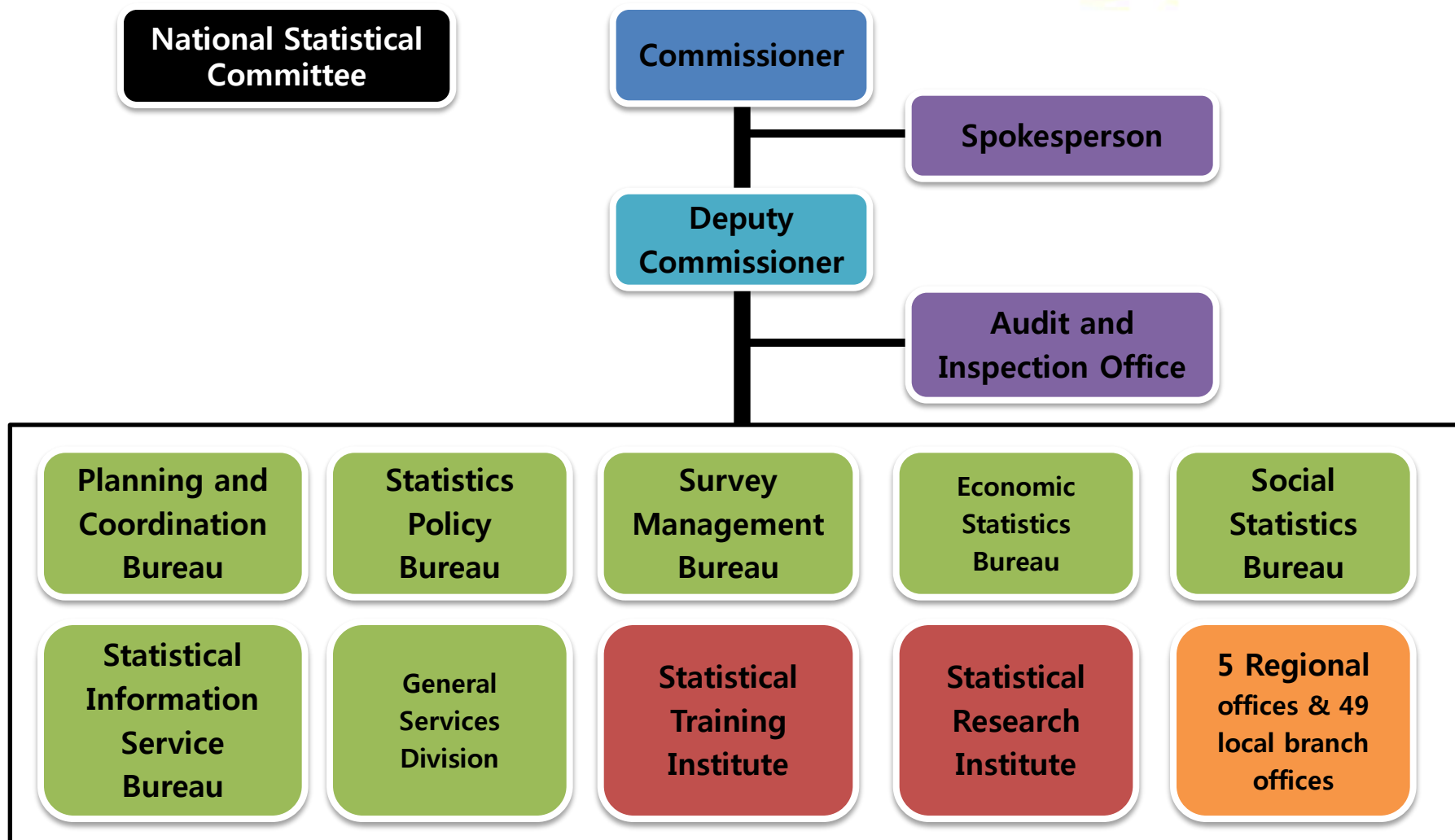


# Major Events Occurred



Date	Main feature
26 Dec. 1990	Head of KNSO was upgraded to the level of Assistant Minister
1 Sep. 1995	1st Celebration of Statistics Day
1 July 1998	Statistical work of Ministry of Agriculture & Fishery was transferred to KNSO (500 persons) – Farm Household Economy Survey
1 Aug. 2005	Head of KNSO was upgraded to the level of Vice Minister
1 Jul. 2006	Statistical Research Institute was established
1 Feb. 2008	Statistical work of Ministry of Agriculture & Fishery was transferred to KNSO (699 persons) – Agricultural Production & Fishing Catchments)
1 Feb. 2009	12 Local Offices were merged into 5 Regional Offices

# Organization



# Organization (continued)

## National Statistical Committee (Minister-level)

- Review improvement and development of the national statistical system
- Review short- and long-term plans for the development of statistics (statistics-policy linkage, TQM..)
- Review arrangement and adjustment for similar or overlapping statistics, and coordination of producers of official statistics
- Review quality assessment and improvement of statistics

**Chair  
(Minister of Strategy and Finance)**

**Statistical Policy**

**Economics  
Statistics**

**Social Statistics**

**Quality  
Management on  
Statistics**

**Sub-committee for  
Regional Statistics**

**Sub-Committees**



# Resources

- Manpower: 2,259 persons (6 Bureaus)
  - HQ : 549 (+ 200)
  - Local offices : 1,637 (+ 800)
  - STI : 30
  - SRI : 43
- Budget : \$340M (2010 FY)
- HQ : 6 bureaus, 40 divisions
- Local : 5 regional offices,  
49 branch offices
- STI : 2 divisions
- SRI : 3 divisions

# Statistical Surveys Conducted by KOSTAT

## Field Survey

	Total	Household Surveys	Agriculture & Fishery	Establish- ments
Total	38	6	16	16
Monthly Surveys	12	3	3	6
Quarterly Surveys	2	-	1	1
Yearly Surveys	24	3	12	9

# Statistical Surveys Conducted by KOSTAT

## Monthly Surveys(for Household)

(unit : household)			
Name of Survey	Reference and Survey Period	Sample Size	Survey Methods
Economically Active Population Survey	The week, 15th	32,000	CATI, CASI, Face-to-face
Household Income & Expenditure Survey	1st ~ 31th	9,000	Daily book, Electronic form
Housing Rent Survey	25th	10,000	Face-to-face
Food Grain Consumption Survey	Beginning of a month	999	Face-to-face

# Statistical Surveys Conducted by KOSTAT

## Monthly or Quarterly Surveys(Agricultural & Fishery)

(unit : household)

Name of Survey	Reference and Survey Period	Sample Size	Survey Methods
Farm Household Economy Survey	Every month	2,800	Diary book
Crop Land Cultivation Survey	5 times a year		At fields
Agricultural Production Survey	At harvest		At fields
Agricultural Production Cost Survey	Every month	2,147	Dairy book
Fruit Production Cost Survey	"		Face-to-face
Poultry Stock Survey	Quarterly	16,696	Face-to-face, Telephone
Poultry Production Cost Survey	Every month	1,400	Diary book
Food Grain Consumption Survey	"	1,639	Face-to-face
Fishery Household Economy Survey	"	1,144	Dairy book
Fish Catching Survey	"	32,907	Face-to-face, Telephone

# Statistical Surveys Conducted by KOSTAT

## Monthly Survey(Establishments)

(unit : establishment)

Name of Survey	Reference and Survey Period	Sample size	Survey methods
Current Mining & Manufacturing Survey	1st ~ 19th	8,300	Face-to-face, CASI
Machinery Orders Received survey	1st ~ 19th	162	Face-to-face
Construction Orders Received Survey	1st ~ 19th	441	Face-to-face
Whole & Retail Trade, Service Survey	1st ~ 19th	9,300	Face-to-face, CASI
Cyber-shopping Mall Survey	1st ~ 22th	1,018	Face-to-face
Consumer Price Survey	5th. 15th. 25th	21,500	Face-to-face, PDA



# Statistical Surveys Conducted by KOSTAT

## Yearly Surveys

(unit : household, establishment)			
Name of Survey	Reference and Survey Period	Sample size	Survey methods
Social statistics survey	June	16,000	Face-to-face
Basic agricultural statistics survey	December	63,000	"
Agricultural & fishery establishment survey	April	6,000	"
Whole & retail trade and service survey	May ~ June	105,000	"
Transportation survey	April ~ May	6,900	"
Business activities survey	September	14,000	"

# Special Functions

## Dissemination of Statistical Information

- v Provide statistical data for a variety of users in various formats
  - Ø Users : Policy-makers, researchers, universities, companies
  - Ø Formats : publications, KOSIS, CD, Data-Warehouse, micro-data
  
- v Build Web-based database system for the general public
  - Ø KOSTAT Main Website [<http://www.kostat.go.kr/eng>]
    - Monthly hits : 6,480 thousand
  
  - Ø KOSIS Data Service [<http://kosis.go.kr>]
    - Statistics portal system in Korea
  
  - Ø SGIS [<http://gis.kostat.go.kr>]
    - Statistical Geographic Information System



# Special Functions (continued)

## International Statistical Cooperation

- √ Exchange statistical missions on main issues with bilateral activities
  - Ø Japan, China, Germany, Mongolia, Vietnam, Thailand, Iran, UAE, Kazakhstan
- √ Host or participate in international statistical conferences or courses
  - Ø UN, OECD, ESCAP, ECE, ILO, ISI, IMF, SIAP
- √ Provide statistical data to international organizations
  - Ø OECD, IMF, UN, etc.
- √ Technical Assistance for statistical capacity building of developing
  - Ø Collaboration with the KOICA (seminars, experts, etc.)
  - Ø Host SIAP Statistical Training Courses
  - Ø Provide consulting service (IT) in cooperation with IOs



# Special Functions (continued)

## Statistical Training and Research

- v STI trains statisticians from the public and private sector
  - Ø deal with a wide range of topics (sampling techniques, survey methodology, individual surveys, statistical packages ...)
- v SRI conducts analytic research relating to official statistics
  - Ø Advanced analysis techniques, analysis of socioeconomic change and implications, new areas of statistics ...
- v The Statistics Center newly constructed in September 2009 for SRI and STI

# Statistics Developed over Time at KOSTAT

	1960s	1970s	1980s	1990s	After 2000 ~ 2008
<b>Total</b>	<b>18</b>	<b>9</b>	<b>5</b>	<b>14</b>	<b>7</b>
10-year	- National Capital Stock				
5-year	- <b>Censuses on Population &amp; Housing, Industry, Wholesale &amp; Retail Trade, Agriculture &amp; Fisheries</b>			- Family Income & Expenditure - Population Projection for Whole and Provinces - <b>Time Use</b>	- Forest - Household Projection
Biennial		- Statistical Manpower & Budget		- Statistical Demands - Response Burden	
Annual	- Vital Statistics - Mining & Manufacturing - Construction - Agricultural Production Cost - Basic Agricultural Statistics	- Internal Migration - <b>Social Statistics Survey</b> - Transportation - Basic Fisheries Statistics - Food Grain Consumption	- Wholesale & Retail Trade - Service Industry - GRDP	- <b>National Establishments Survey</b> - Life Tables - Social Indicators - Cause of Death	- Agri. & Fishery Establishment - Environment Industry  • <b>Regional Labor Force Survey(2008)</b>
Monthly	- <b>Labor Force Survey</b> - <b>Income &amp; Expenditure</b> - <b>Consumer Prices</b> - <b>Current Mining &amp; Manufacturing</b> - <b>Farm HH Economy,</b> - <b>Fisheries HH Economy</b>	- Construction Orders Received - Machinery Orders Received, - Manufacturing Production Capacity & Operation Ratio	- Composite Indices - Wholesale & Retail Trade	- Value of construction completed - Estimation Index of Equipment Investment - <b>Activities on Service industries</b> - Consumer Sentiment	- Cyber shopping mall - E-commerce by enterprises - <b>International migration</b>



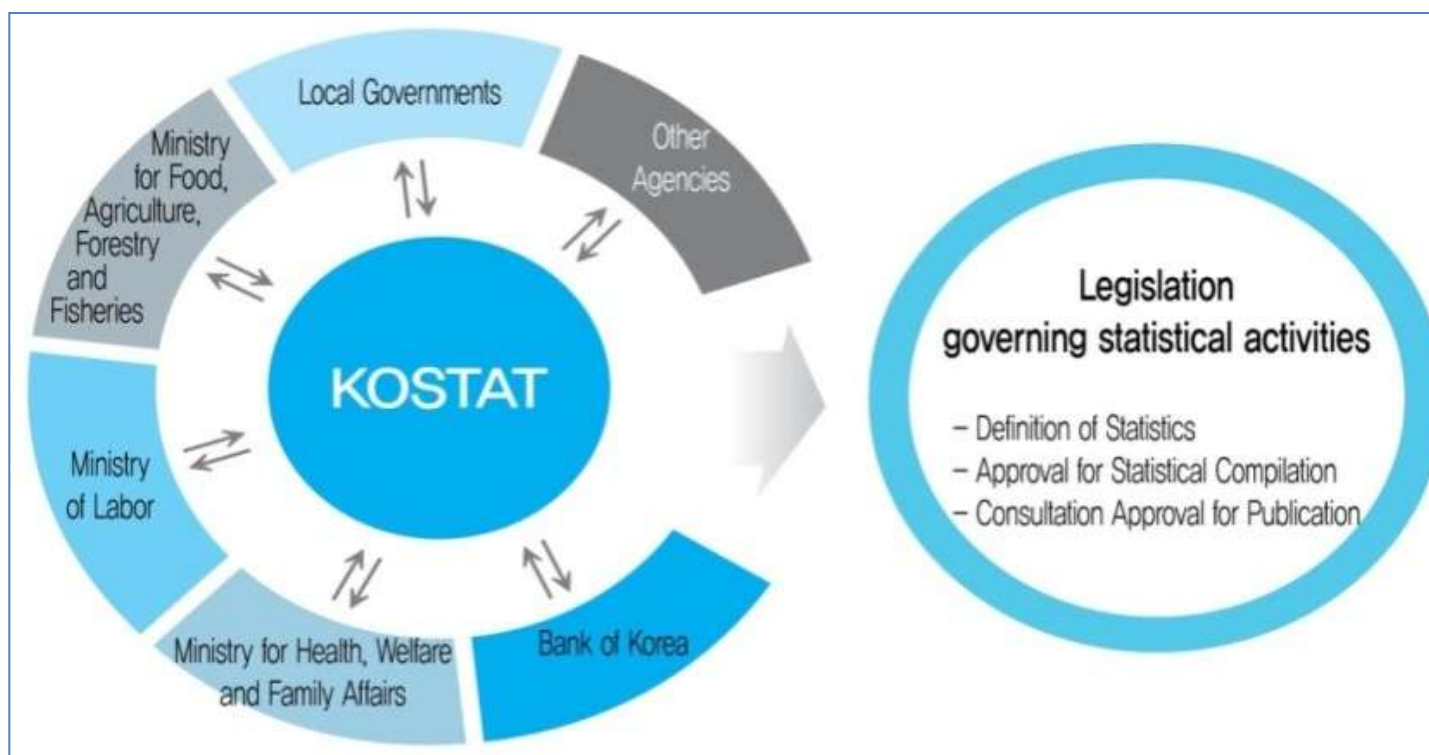


## **National Statistical System**

# National Statistical System

## Decentralized Statistical System

375 organizations produce 850 subjects of official statistics.

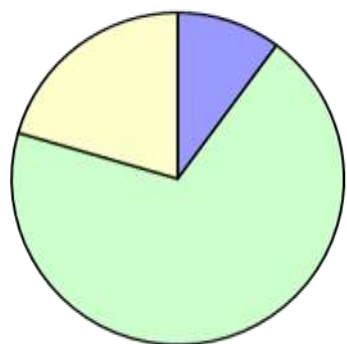


# National Statistical System (continued)

## Decentralized Statistical System

### < Producers >

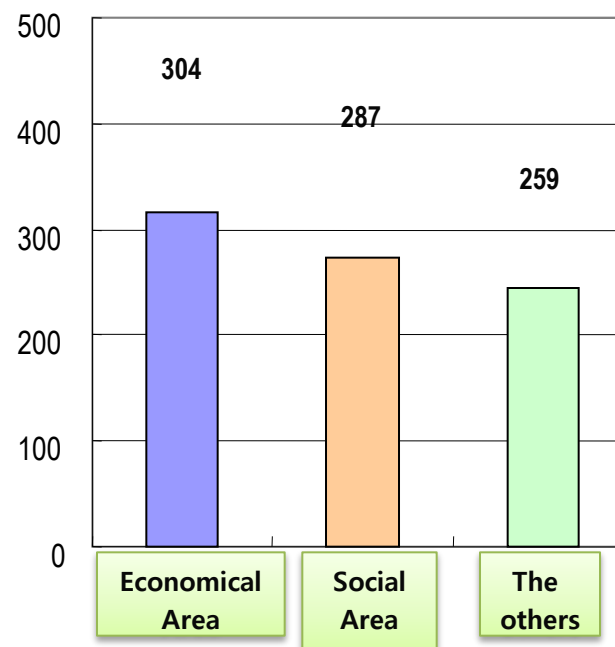
Total : 375 offices



- Central government bodies: 38
- Local governments : 260
- Other designated agencies : 77

### < National Statistics >

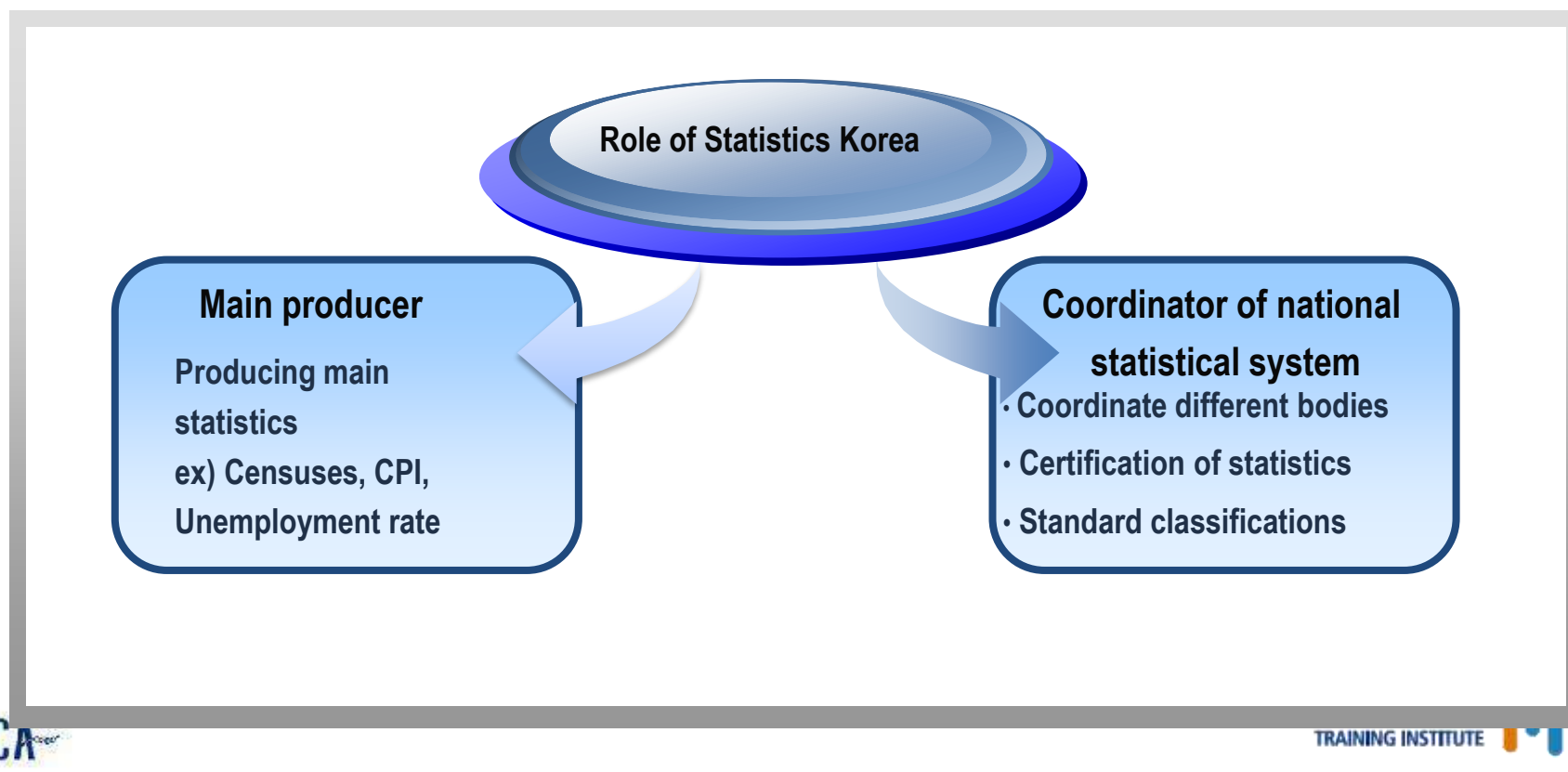
Total : 850 statistics



# National Statistical System (continued)

## Role of the Statistics Korea

- KOSTAT plays **a key role** in integrating and coordinating statistical activities of all agencies.



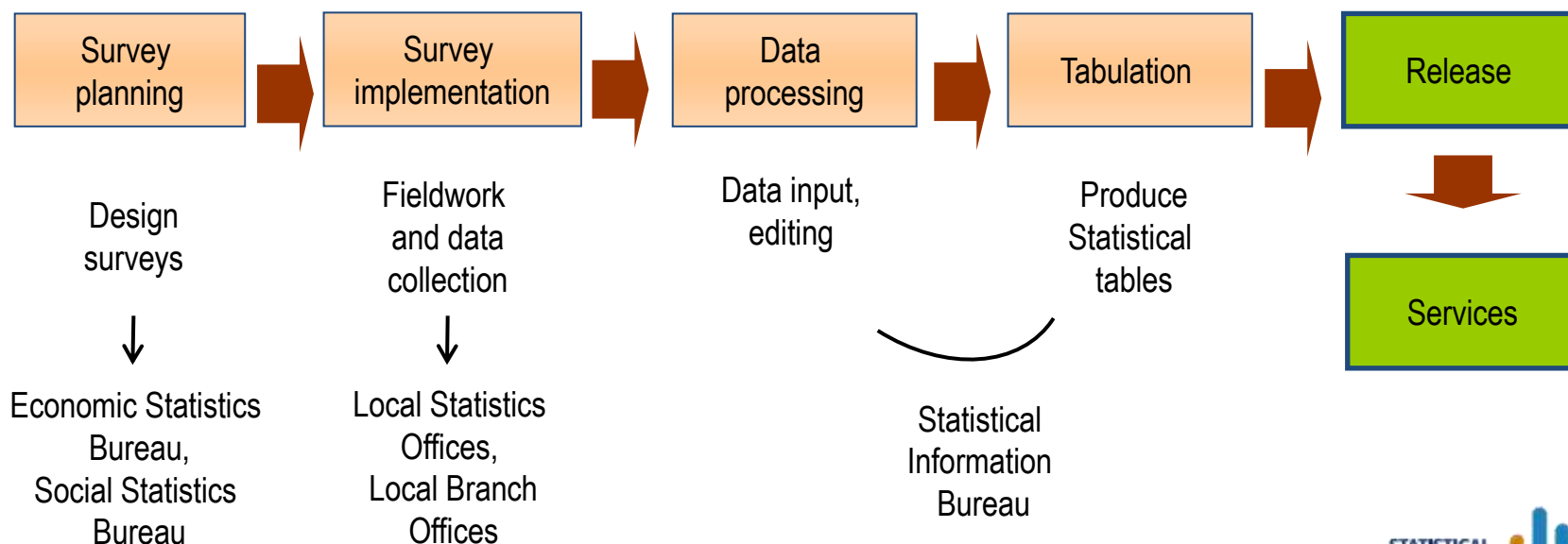
# National Statistical System (continued)

## Role of Statistics Korea

Main Producer – Compile Statistics

### Survey Procedure

Statistical works have various steps in the procedures from producing statistics , which are needed by relevant fields, to supply data to users.





# National Statistical System (continued)

## Role of Statistics Korea

### Main Producer – Compile Statistics

#### Population and Housing Census

- v To clarify the size, structure, distribution and characteristics of the population, households and housing
- v The **Population Census** has carried out every 5 years since 1925
- v Periodicity : year ending in 0 & 5
- v Scope and Coverage : the whole area of KOREA
- v Method of Data Collection : **self-enumeration** method for residing in apartment and **interview** for other households

# National Statistical System (continued)

## Role of Statistics Korea

### Coordinator of National Statistical System

Verify and approve newly compiled statistics,

Establish statistical standards and classifications,

Sampling, preparation of survey, statistical analysis and other technical support,

Support the production of regional statistics,

Identify and resolve new statistical need,

Strengthen the linkage between statistics and policies.

# National Statistical System (continued)

## THE STATISTICAL ACT REVISION (OCT 2007)

- 1 Revised in order to support the development of a more efficient national statistics system.
- 2 Designation of statistical officers in statistical agencies for identifying statistical demands and effectively coordinating statistics.
- 3 Adaptation of a periodical, occasional, and self-assessing statistical quality review system.
- 4 Provision of necessary administrative data to produce official statistics
- 5 Definition of scope and process for the system of statistics-based policy management.

# Why we study on statistical system?

- Every country has a **long history** to establish Central Statistical Organization (CSO) dating back to around 1800.
- However, the statistical system shows a notable **difference**, reflecting the historical and cultural facets unique to each country.
- This leads to the significant variance in the **quality of statistics** (relevance, accuracy, timeliness, accessibility, coherence) .
- Thus, it is important to understand individual circumstances of each statistical system, especially for the purpose of **comparing data internationally**.

# Issues to be Considered



- To what degree is data accumulation of various **administration statistics centralized** through CSO or decentralized over the relevant authorities ?
- In collecting data, how do the cooperative and complementary **relationship** between the central and local governments work ?
- What is the **relative importance** of the surveys to the administration statistics ?
- **To what extent** are various kinds of statistics compiled by CSO ?  
Especially, is SNA compiled by the CSO ?



# Classification of Statistical Activities

Domain	Area
Demographic and Social Statistics	<b>Population and migration, Labour, Education, Health, Income and consumption, Social protection, Human settlements and housing, Justice and crime, Culture, Political and other community activities</b>
Economic Statistics	<b>Macro-economic statistics</b>
	Economic accounts
	<b>Business statistics</b>
	Sectoral statistics ( <b>Agriculture, forestry and fisheries, Mining and manufacturing, Transport, Tourism, Banking, insurance and financial</b> )
	Government finance, fiscal and public sector statistics
	International trade and balance of payments
	<b>Prices (CPI only)</b>
	Labour cost
	Science and technology

# Classification of Statistical Activities, Cont'd

Environment

## Regional and small area statistics

Multi-domain statistics and indicators

- Living conditions, poverty and cross-cutting issues
- Gender and special population groups
- Information society
- Globalization
- Indicators related to MDGs
- Sustainable development

## Yearbook and similar compendia

Environment and  
Multi-domain  
Statistics

# Classification of Statistical Activities, Cont'd

Domain	Area
Methodology & Data Collection, Processing & Analysis	Meta-data
	Classifications
	Data sources (Censuses, Surveys, Registers, etc.)
	Data editing and data linkage
	Dissemination, data warehousing
	Statistical confidentiality and disclosure protection
	Data analysis
Strategic & Managerial Issues of Official Statistics	Institutional frameworks and principles
	Coordination within statistical systems
	Quality frameworks and measurement of performance
	Management and development of human resources
	Management and development of technological resources
	Coordination of international statistical work
	Technical cooperation and capacity building

# Countries by Type of Statistical System

Decentralized System	Centralized System
<p>China (NBS)</p> <p>Japan (SB)</p> <p>Korea (KOSTAT)</p> <p>India (Ministry of Statistics &amp; Program Implementation,)</p> <p>Singapore (DOS)</p> <p>Thailand (NSO)</p> <p>Viet Nam (CSO)</p> <p>France (INSEE)</p> <p>Sweden</p> <p>U.K (ONS)</p> <p>U.S.A (11 Principal Organizations)</p>	<p>Canada</p> <p>Australia (ABS)</p> <p>New Zealand</p> <p>Indonesia (CBS, ?)</p> <p>Germany (FSO)</p> <p>Netherlands</p>

# Pros and Cons of Decentralized System

Advantages	Disadvantages
<p><b>Easy</b> to compile the administration statistics that is relevant to the working of the ministries such as railways, postal services, health services, telecommunications, etc.</p> <p><b>Minimal costs</b> in the collection of data.</p> <p><b>Good knowledge</b> of the subject and in best position to interpret data.</p> <p><b>Easy</b> to cater to all information needs.</p>	<p><b>Not easy</b> to cater to all information needs.</p> <p>Possible <b>duplication</b> in data collection efforts.</p> <p>Possible <b>discrepancies</b> in applied concepts and definitions.</p> <p>The <b>coordination role</b> of CSO is required.</p>

# CSOs managed by Agency-type

\* Agency : Not financed from the general tax revenue

- UK Office for National Statistics
  - Statistics Sweden
  - Statistics Norway
  - Australian Bureau of Statistics
  - Statistics New Zealand
  - Japan (only Statistical Information Center)
  - Korea (only 5 Regional Statistics Offices, and SRI)
- 
- Senior staffs are recruited on a competitive basis.
  - Staffs are evaluated by performance indicators.
  - Some budgets come from the outside agencies.



# Is the CSO adherent to F P O S ?

F P O S : Fundamental Principles of Official Statistics

1. Meet the needs of users and be made available **impartially**.
2. Be based on **professional** consideration.
3. Provide the **meta-data**
4. Prevent **misuse** of statistics.
5. Use all types of **sources**.
6. Keep individual data **confidential** and use them only for **statistical purposes**.
7. Make laws and regulations **public**.
8. Promote **coordination** and cooperation among agencies.
9. Follow **international** guidelines.
10. Promote international **cooperation**.

# Statistical Personnel in A & P Countries

	C S O			Other Ministries	Local Governments
	Total	HQs	Local Branches		
Korea (2007) - Regular - Irregular	1,700	<b>500</b>	1,200	1,500	120
	700	200	500	?	?
Japan (2004)	1,506	1,506	-	5,692	2,242
U.S.A (2004)	11,347	6,023	5,324	6,004	1,000
Canada (2004)	6,500	<b>4,400</b>	2,100	500	160
Australia (2004)	2,873	<b>1,661</b>	1,212	50	150
N.Z (2003)	762	762	-	?	?
China (2000)	19,500	1,500	18,000	?	70,000
Singapore (2005)	250	250	-	?	?
Thailand (2005) - Regular - Irregular	934	533	401	?	?
	1,533	489	<b>1,044</b>	?	?
Viet Nam (2005)	5,000	500	4,500	?	?

# Statistical Personnel in European Countries

	Central Statistical Organization			Other Ministries	Local Governments
	Total	HQs	Local Branches		
France (2001)	6,452	2,139	4,313	2,923	?
Germany (1999)	2,656	2,656	-	?	7,941
UK (2001)	3,321	3,321	-	2,301	?
Switzerland(1998)	470	470	-	?	500
Netherlands (2000)	2,500	2,500	-	?	?
Finland (2002)	1,074	1,074	-	?	?
Belgium	?	?	?	?	?
Denmark	635	635	-	?	?
Italy	?	2,366	208 Offices	385	?
Norway	900	900	-	?	?
Spain	?	?	50 Offices	?	?
Sweden	1,300	1,300	-	?	?
Ireland	731	731	-	?	?
Portugal	850	?	5 Offices	?	?
Austria	1,220	1,220	-	?	?



# Statistical Personnel in International Organizations

International Organizations	Year	No. of Staffs	Location
EUROSTAT	2001	813	Luxembourg
OECD – Statistics Directorate - Other Directorates	2004 2004	80 150	Paris
UN Statistics Division	2004	124	New York
ESCAP Statistics Division		30	Bangkok
ECE Statistics Division	2005	30	Geneva
IMF Statistics Department		?	Washington, D.C.
ILO Bureau of Statistics	2005	15	Geneva

# Example of Statistical System - India



- **Ministry** of Statistics & Program Implementation
  - Central Statistical Organization (**CSO**) : National Accounts, IPI, CPI, etc.
  - National Sample Survey Organization (**NSSO**) : Survey design, field operations, tabulation.
  - **Computer Center** : Processing data collected by the CSO and NSSO.
  - **Indian Statistical Institute** : Empowered to award degrees in statistics, mathematics, computer science, quantitative economics.
- Other Central Ministries : Agriculture, Labour, Commerce, Industry, Water Resources & Health

# Example of Statistical System – U.S.A.

Departments	Statistical Organization	Manpower (2003)	Budget (2003, in Million \$)
Department of Commerce	Bureau of the Census (BOC) Bureau of Economic Analysis (BEA)	8,822 (F/T 6,142) 556 (F/T 533)	571 66
Department of Agriculture	National Agricultural Statistical Service (NASS) Economic Research Service	1,358 (F/T 1,352) 504 (F/T 465)	138 69
Department of Education	National Center for Education Statistics (NCES)	108 (F/T 107)	184
Department of Energy	Energy Information Administration (EIA)	369 (F/T 352)	80
Department of Health and Human Services	National Center for Health Statistics (NCHS)	516 (F/T 469)	126
Department of Justice	Bureau of Justice Statistics (BJS)	57 (F/T 52)	32
Department of Labor	Bureau of Labor Statistics, (BLS)	2,792 (F/T 2,376)	492
Department of Transportation	Bureau of Transportation Statistics (BTS)	140 (F/T 136)	30
Department of Treasury	Statistics of Income Division (SOI)	?	32
National Science Foundation	Statistics Division	?	36



# Example of Statistical System – U.K.

- Minister for National Statistics : Minister of Finance
- **Government Statistical Service** (Heads of Profession)
  - Decentralized system, across 30 Government Departments (3,000) and at the ONS (4,000)
- National Statistician : Head of the **Office for National Statistics**, Head of GSS as well as Registrar-General
  - No overall statistical legislation
  - National Statistics Framework, Code of Practice
  - National Statistics protocols (quality management, etc.)
  - Annual Report and 3-Year Program
- **Statistics Commission** : Advises Ministers of concern about quality and direction of National Statistics

# Statistical Activities at Local Level

Type I	Type II	Type III	Type IV
Both CSO's Branch Offices and Local governments are active.	CSO's Branch Offices are active, but Local governments are weak.	CSO's Branch Offices does not exist. Local governments are responsible for data collection.	CSO HQs are directly responsible for data collection.
<ul style="list-style-type: none"> <li>- Korea</li> <li>- Canada</li> <li>- U.S.A.</li> <li>- Australia (Queensland Government)</li> <li>- China (Type III before)</li> </ul>	<ul style="list-style-type: none"> <li>- France</li> <li>- Indonesia</li> <li>- Philippines</li> <li>- Thailand</li> <li>- Viet Nam</li> </ul>	<ul style="list-style-type: none"> <li>- Japan</li> <li>- Germany</li> <li>- Switzerland</li> <li>- India</li> </ul>	<ul style="list-style-type: none"> <li>- U.K.</li> <li>- Finland</li> <li>- New Zealand</li> <li>- Sweden</li> <li>- Singapore</li> </ul>

# Types of Statistical Council or Commission

	Countries	Name	Chair	No. of Members
Type I	Korea	Statistical Council	Commissioner of KNSO	29
	Japan	Statistical Council	From academy	11
	Australia	Statistical Advisory Council	From academy	18
	Sweden	Council for Official Statistics	Director-General of Statistics Sweden	7
	France	Council for Statistical Information	Minister of MOFE	100
Type II	UK	Statistics Commission	From academy	7
	Philippines	National Statistical Coordination Board	D-G of National Economy Development Authority	Under secretaries
Type III	USA	Statistical Policy Office, OMB	Chief Statistician	8

# Coordination Role in Statistical System

Type I	Type II	Type III
By Advisory Committee (Council)	By Independent Organization	By Board or Council
To provide advisory role to CSO ( <i>weak</i> )	To provide work on the priority setting and policy formulation ( <i>strong</i> )	To provide <i>supervisory role</i> through the approval for the work of CSO and the preparation of annual evaluation report.
<ul style="list-style-type: none"> <li>- Korea</li> <li>- Japan</li> <li>- Hong Kong</li> <li>- Canada</li> <li>- Australia</li> <li>- Belgium</li> <li>- Finland</li> <li>- Germany</li> </ul>	<ul style="list-style-type: none"> <li>- UK - Statistics Commission (<a href="http://www.statscom.org.uk">http://www.statscom.org.uk</a>)</li> <li>- Philippines (National Statistical Coordination Board, NSCB)</li> <li>- U.S.A (Statistical Policy Office, OMB, President Office)</li> </ul>	<ul style="list-style-type: none"> <li>- Denmark (Board of Governors)</li> <li>- France (<a href="http://www.cnis.fr">http://www.cnis.fr</a>)</li> <li>- Netherlands (Central Commission for Statistics)</li> <li>- Italy (Governing Board)</li> <li>- Sweden (Board and Scientific Council)</li> <li>- Ireland (<a href="http://www.nsb.ie">http://www.nsb.ie</a>)</li> <li>- Portugal (Administration Board and Statistical Council)</li> <li>- Austria (Statistical Council)</li> </ul>

# Tendency of Centralization

- U.S.A. has “centralized” much of the collection of data from households through the reimbursable agreements.
- Many CSOs in a decentralized system tries to establish “One-stop Data Shopping” for users.
- More utilization of administrative records is being made, including linking and matching records on individuals for statistical purposes.
- UK merged three organizations (CSO, OPCS, BSO in 1989) into ONS in 1996.
- Bangladesh merged 4 (BOS, Agriculture, 2 Commissions for Censuses) into BBS in 1974.

# Stronger Coordination Role is Required in Decentralized System

- In France, Director-General of INSEE is empowered to **transfer** senior statistical staff between ministries.
- In Japan, Statistics Bureau seems to be involved in the **budget allocation** for all other ministries.
- In UK, ONS is responsible for **recruiting and training** statistical personnel for the GSS.
- In Sri Lanka, the CSO has **dispatched** statistical staff to about 50 Government Ministries and Departments.





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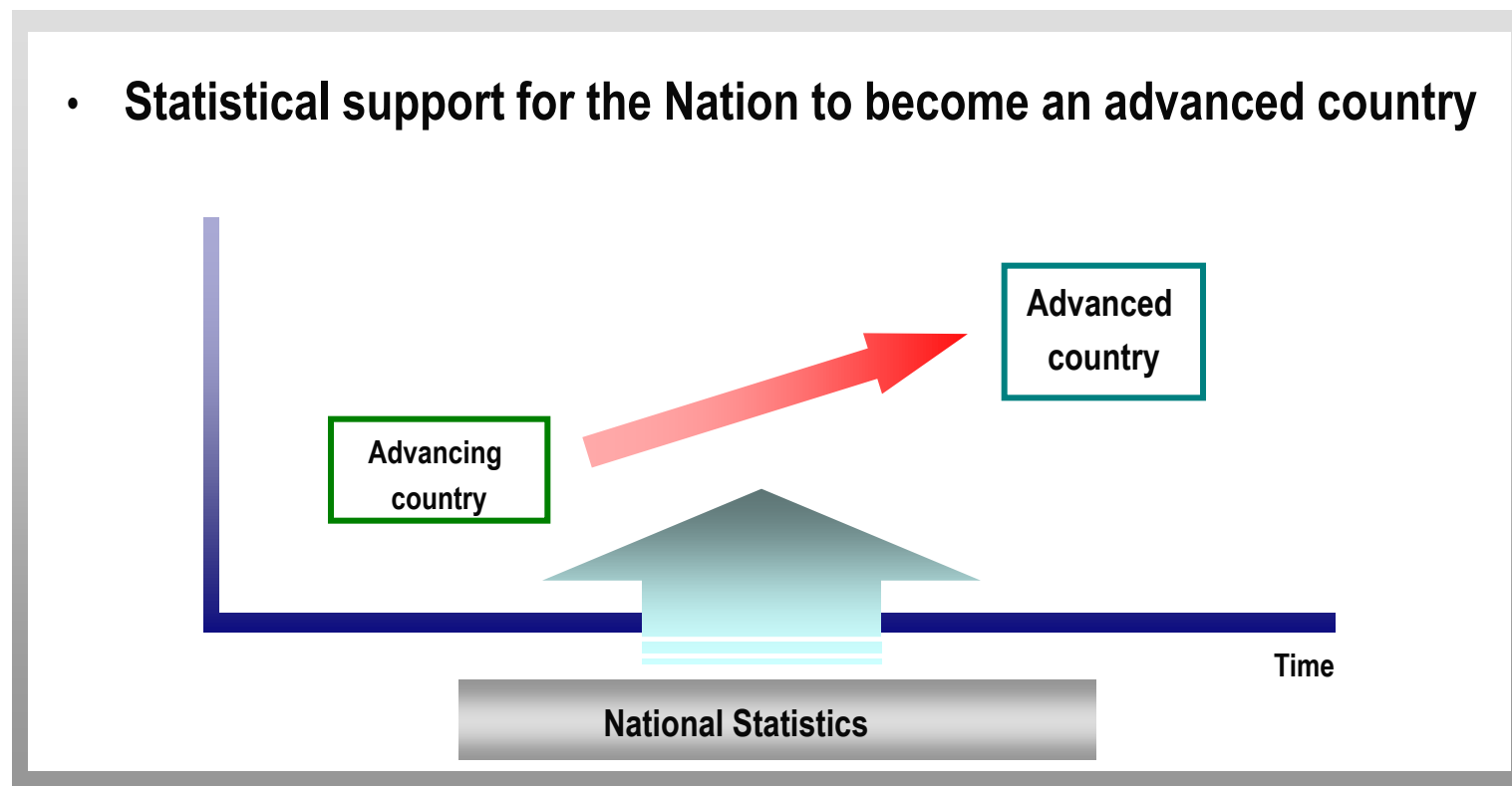
## Strategies For Advancement of Statistics

- Objectives of the strategy
- Core Strategy

# Objectives of the Strategy

## Objective of National Statistics

- Statistical support for the Nation to become an advanced country



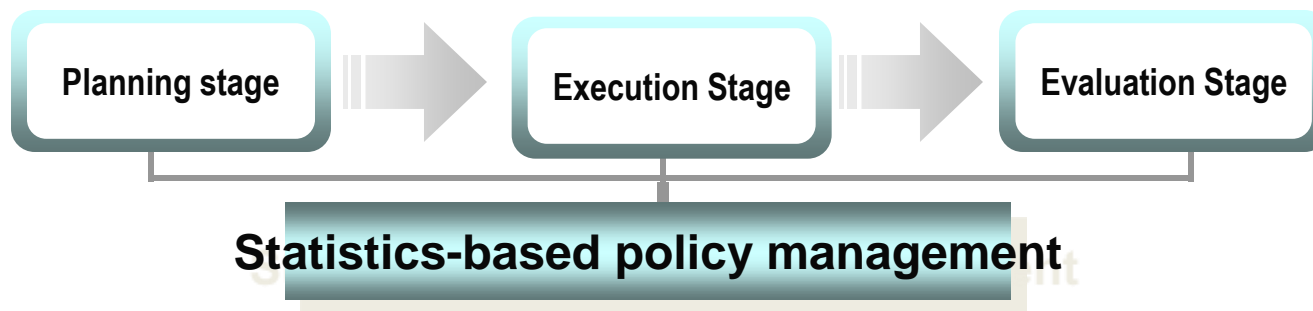
# Objectives of the Strategy (continued)

## Put in place statistics-based policy management

- Presidential Decree revised in 2007

“Government agencies shall submit relevant statistics or plans to develop them when they revise acts.”

- Crucial role in evaluating policies



## Advance National Statistics

**Develop relevant  
statistics**

**Enhance efficiency**

**Improve user's  
trust**

**Ensure  
convenient  
access**

## Produce more policy-based statistics

- Produce income inequality indicators at diverse dimensions
- Compile supplementary indicators of unemployment rate
- Produce statistics of newly emerging global agenda (quality of life, green growth, climate change...)

# Develop Relevant Statistics for Supporting Policies

## Switch to centralized statistical system

- To Enhance Policy responsiveness of Statistics

- Conduct Surveys by KOSTAT
  - Use superior infrastructure of KOSTAT  
(Interviewers, IT system, etc.)

Maintain decentralized system for administrative data

- Improve accuracy and confidence of official statistics



# Develop Relevant Statistics for Supporting Policies

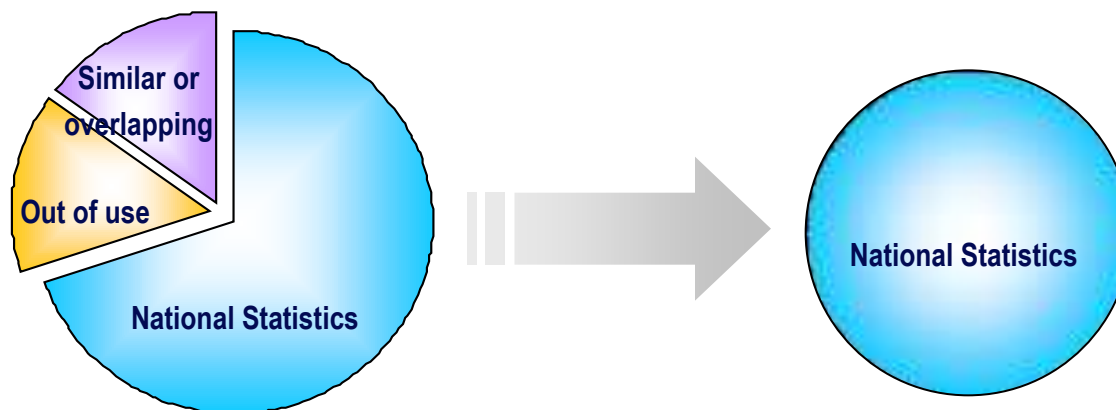
## Major indicators used to evaluate local governments

Category	Indicators
Physical Capital	<ul style="list-style-type: none"><li>· Population change</li><li>· Paved roads</li></ul>
Economy	<ul style="list-style-type: none"><li>· GRDP (per capita)</li><li>· Unemployment rate</li></ul>
Local governance	<ul style="list-style-type: none"><li>· The fiscal self-reliance ratio</li><li>· Number of public officials</li></ul>
Society and culture	<ul style="list-style-type: none"><li>· The numbers of crime</li><li>· Number of social welfare institutions and inmates</li></ul>
Globalization	<ul style="list-style-type: none"><li>· Foreigner registration</li><li>· Internet usage</li></ul>
Environment	<ul style="list-style-type: none"><li>· Air pollutants emission</li><li>· Urban park area</li></ul>

# Enhance Efficiency

## Abolish or combine overlapping surveys and statistics

- Main targets: similar, overlapping, or out-of-use statistics
- Able to save about \$2 mil. per year





## More use of administrative data

- Some statistics can be replaced by administrative data.  
ex) Population Census, business surveys
- The revised Statistics Act provided **the legal basis to use administrative data for producing statistics.** ( 2007)
- Many issues remain to be resolved
  - Conflicts between agencies, technical problems to protect privacy, different classifications, etc.

## Use of administrative data

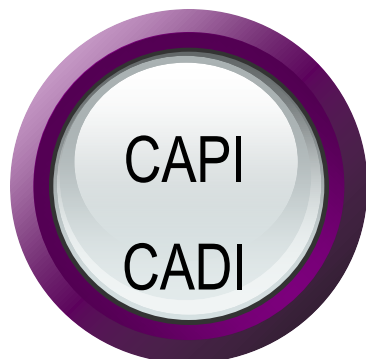
- Revise the tax law in order to use tax data
  - “Statistics Korea may use tax data to compile statistics” (in tax law)
- Strengthen the electronic security for confidentiality of tax data
  - separate intranet from internet
  - management of log files
- Various tax data to be accessed
  - Business register (name, address, tel., activity, etc.)
  - Data of VAT, income tax and cooperate tax data)

## Increase the use of ICT

- Statistics Korea has applied Web-based data processing techniques through ICT infrastructure.
  - CADI (Computer-Assisted Data Input)
  - CAPI (Computer-Assisted Personal Interviewing)
- Electronic survey methods are used for interviews and data input for a higher response rate.
  - CASI (Computer-Assisted Self Interview)
  - CATI (Computer-Assisted Telephone Interview)
  - PDA (Personal digital assistant)

## Respondent-friendly survey techniques

Households preferring  
interview surveys  
(Rotation, In-migrating and  
non-respondent households)



Households preferring  
Internet surveys



Households impossible  
to interview in the daytime  
and households  
preferring CATI  
(One-person and  
dual income households)





# To gain Users' Trust

## Statistical quality management

- Monitor quality in each stage of data production to guarantee quality of national statistics
- Statistics Law gives the authority (Articles 9-11)

	Rotational SQM	Ad-hoc SQM	Self SQM
Who	KOSTAT	KOSTAT	each agency
How often	every five years	as needed	annually
What	all statistics	low quality statistics	own statistics

# To gain Users' Trust

## Conduct surveys on behalf of other statistical offices

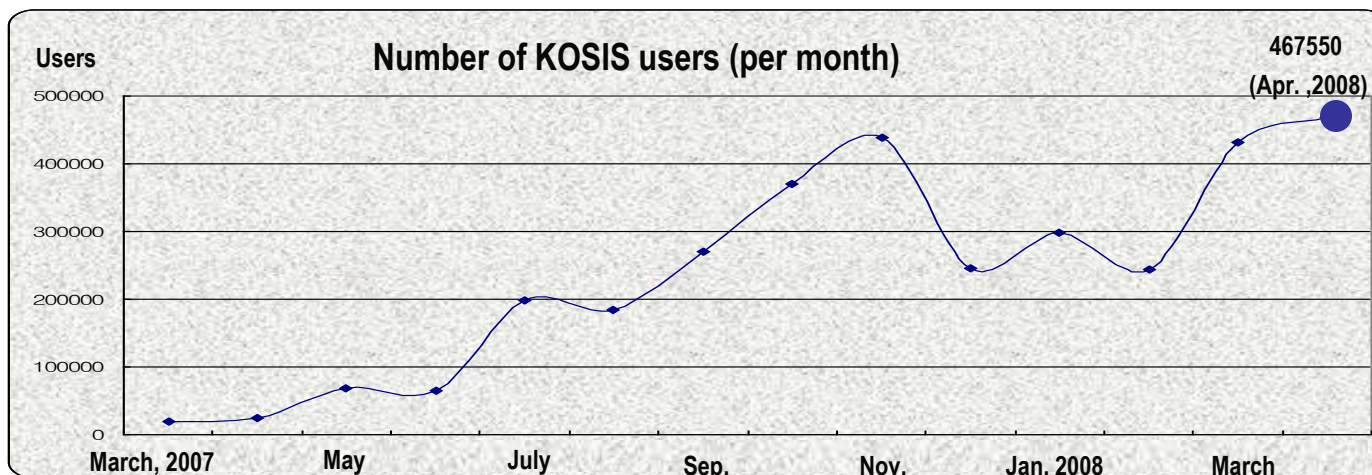
- Weak survey infrastructure at many statistical offices
- Survey on behalf of other statistics offices utilizing KOSTAT interviewers.

Ex) OECD International Assessment of Adult Competencies survey contracted out by the Education Ministry (2010)

# Convenient Accessibility

## One-stop statistics service

- KOSIS : Korean Statistical Information Service
- Store 170 million data cells
- Planning to integrate all national statistics to KOSIS.



# Convenient Accessibility

## E - National indicators service

- Include 835 key indicators to understand the status of Korea  
Ex) employment, industrial production, price, GDP, etc.
- Info on the meaning of each indicator and relevant policies
- Useful information for :

**Policy makers**

- **Formulate better policies**

**Citizens**

- **Fully understand status of Korea**

# Convenient Accessibility

## Statistical Geographic Information Service (S-GIS)

- Provide map-based small-area statistics
  - individual structures displayed; convenient for market analysis
- Useful information for :

### Individuals

- Find location for residence  
ex) baby care centers,  
schools, etc.

### Business

- Find location to open  
business  
ex) consumers,  
competitors, etc.

### Government

- Effective welfare policy  
ex) the poor, the old

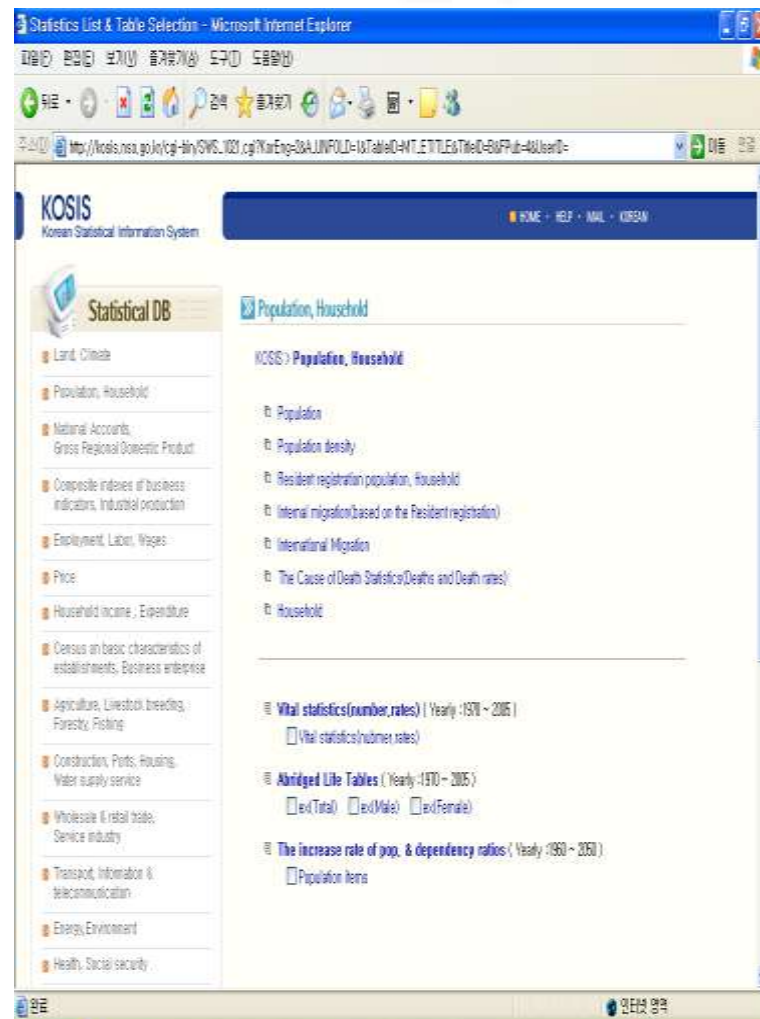
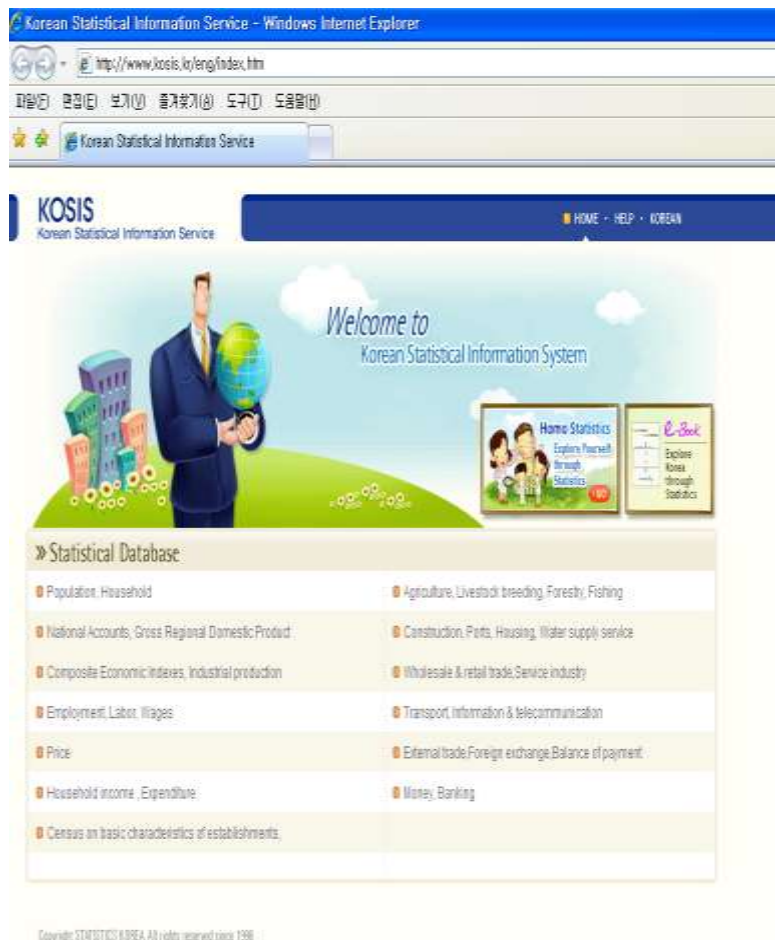


- v KOSIS (Korean Statistical Information Service)
  - Ø Most representative statistical DB in Korea for international statistics and domestic statistics produced by KOSTAT and other statistical domestic agencies
  
- v Domestic and foreign data service
  - Ø Provide 1.35 million time-series data in 22 subject groups
  - Ø Supply data obtained from international organizations (UN, IMF, OECD)
  - Ø Monthly visits 377 thousand, monthly pageview 11,793K
  
- v Search criteria in KOSIS
  - v By year, frequency, producer, subject group, topic



# (Reference) KOSIS (<http://www.kosis.kr>)

In KOSIS, any people can find the requested data by himself and On-line Publication Service is also available



# (Reference) Statistics Tables

In KOSIS, any people can generate dynamic statistics tables by himself.

The screen after clicking on the title of statistics table is composed of an statistics table and functions of data adjustment.

The screenshot displays the KOSIS web interface for generating dynamic statistics tables. The interface includes several numbered callouts (1-10) highlighting key features:

- 1 Search Object:** Checkboxes for "By administrative district", "By age", and "Item".
- 2 Search Period:** Dropdowns for "Irregularly", "2005", and "Term (1925 ~ 2005)".
- 3 Decimal Point:** A dropdown menu set to "English".
- 4 Data Reload:** A button to refresh the data.
- 5 Zoom In/Out:** Buttons for zooming in and out of the table.
- 6 Save:** A button to save the current view.
- 7 Analysis:** A button to perform analysis on the data.
- 8 Axis:** A section for selecting the X and Y axes, currently set to "By administrative district" and "By age".
- 9 Source:** A note indicating the data source is the National Statistical Office.
- 10 Service:** A note indicating the service is provided by the National Statistical Office.

The main table is titled "Summary of Census population(By administrative district/sex/age)". It displays data for the year 2005, categorized by administrative district (Whole country) and age groups. The table includes columns for Population (Person), Male (Person), Female (Person), and Sex ratio (Percent).

By administrative district	* By age	2005			
		Population(Person)	Male(Person)	Female(Person)	Sex ratio(Percent)
Whole country	Total	47,041,434	23,465,650	23,575,784	99.53
	0-4 Years old	2,382,350	1,237,301	1,145,049	108.06
	5-9 Years old	3,168,887	1,654,228	1,514,659	109.21
	10-14 Years old	3,434,891	1,816,318	1,618,573	112.22
	15-19 Years old	3,100,523	1,626,378	1,474,145	110.33
	20-24 Years old	3,662,123	1,915,902	1,746,221	109.72
	25-29 Years old	3,671,847	1,858,332	1,813,515	102.47
	30-34 Years old	4,096,282	2,059,913	2,036,369	101.16
	35-39 Years old	4,112,785	2,065,668	2,047,117	100.91
	40-44 Years old	4,123,041	2,082,427	2,040,614	102.05
	45-49 Years old	3,900,899	1,961,859	1,939,040	101.18
	50-54 Years old	2,855,297	1,426,597	1,428,700	99.85
	55-59 Years old	2,278,438	1,126,997	1,151,441	97.88
	60-64 Years old	1,888,853	897,384	991,469	90.51
	65-69 Years old	1,680,067	755,949	924,118	81.80
	70-74 Years old	1,252,734	514,241	738,493	69.63
75 Years old & over	0	0	0	0.00	

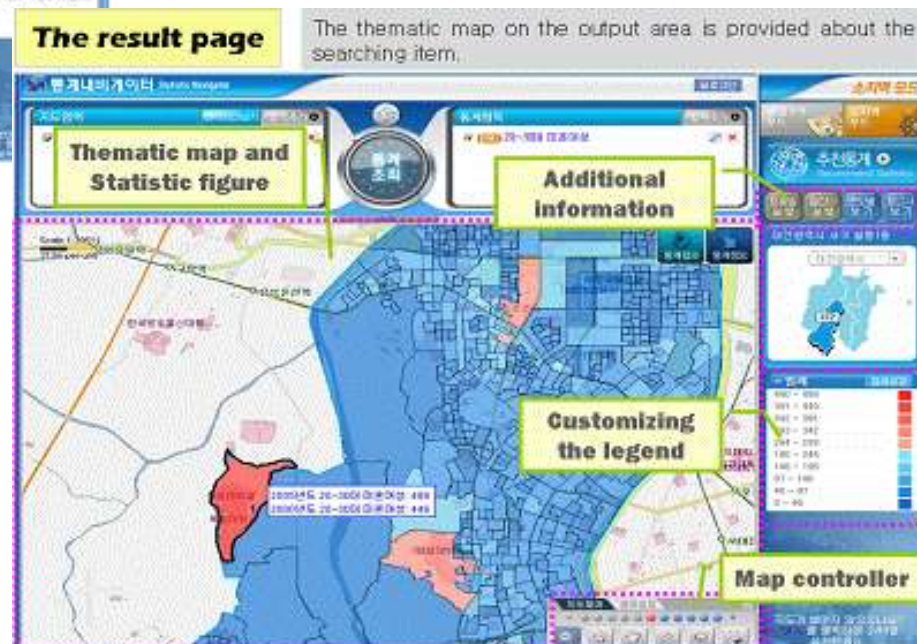
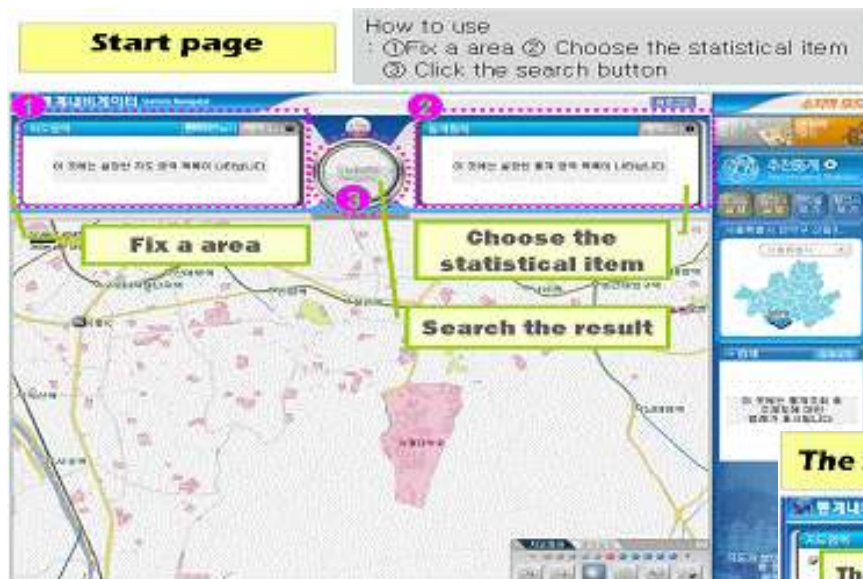
# SGIS (Statistical Geographic Information System)

- v Customized service for regional analysts of small-area data
- v Utilize census maps and individual information on 27 census topics, covering 13.5 mil households and 3.2 mil businesses nationwide
- v Statistical Data + Geographic information on a map
  - Ø Display small-area statistics visually and spatially (down to 1 km<sup>2</sup>)
  - Ø Provide the Statistical Navigator which is an useful and convenient tool for market analysis
  - Ø Special value for market analysis

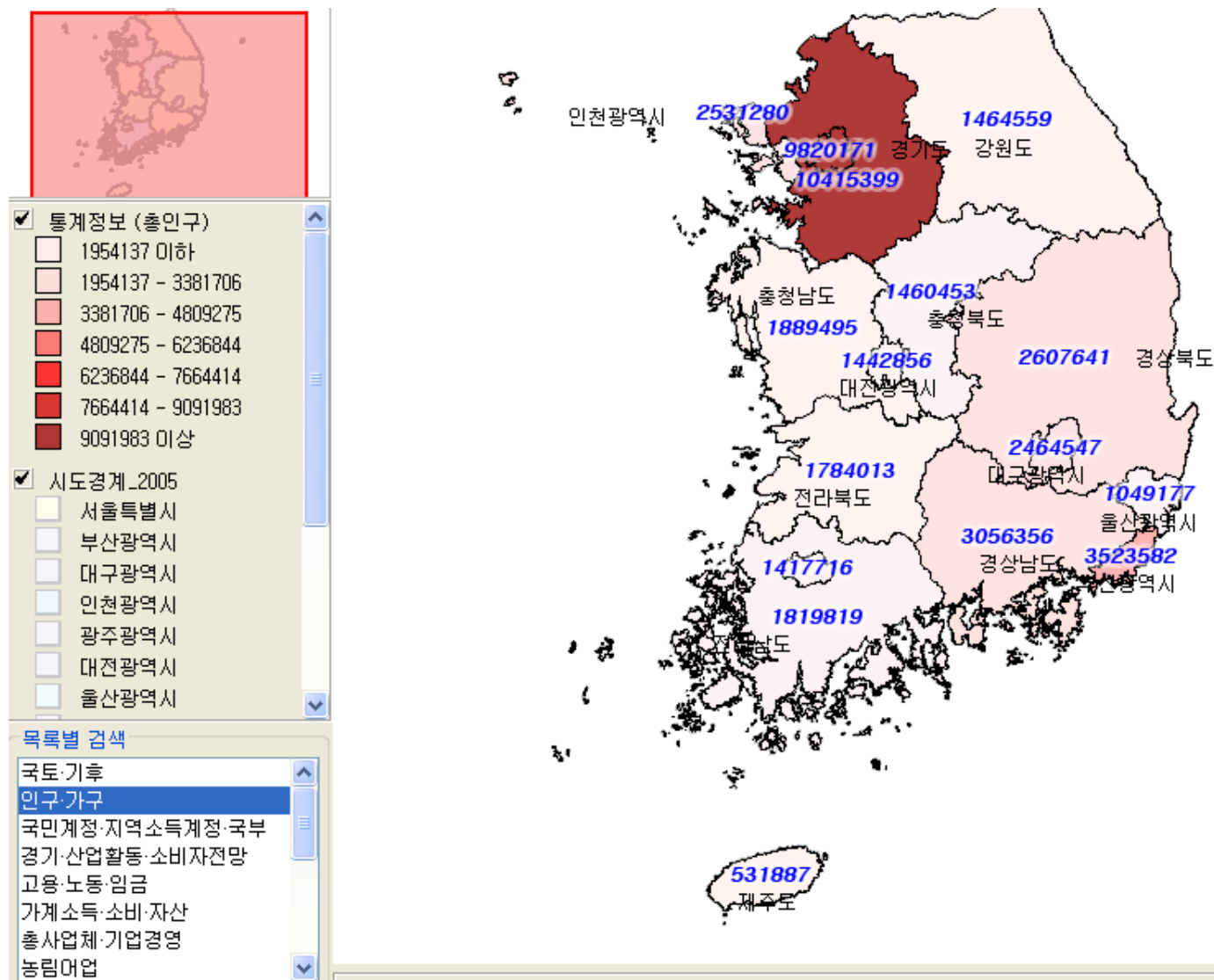




# SGIS Example 1 (Small Areas)

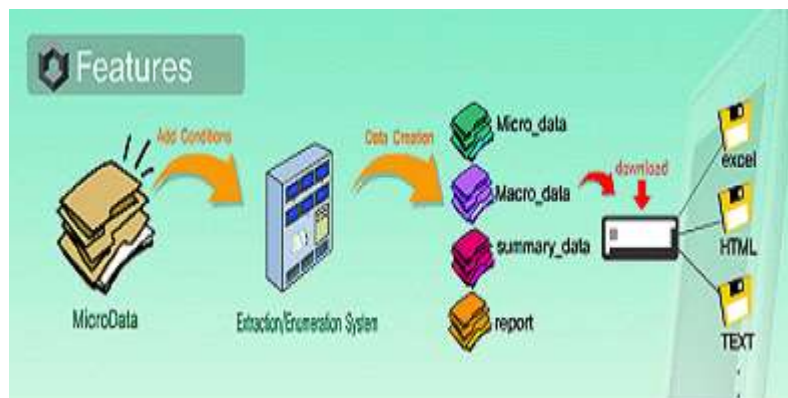


# SGIS Example 2 (Population)



# MDSS (Micro Date Service System)


- v Allow users to access microdata protected by statistical disclosure control methods for in depth analysis through the Internet
- v Microdata coverage: establishments, households, industry ...





# Steps to Use the Service

-  Visit the website  
(<http://mdss.nso.go.kr>)
-  Apply for membership/login
-  Select a service and input  
its categories
-  Implement
-  Data processed and generated
-  Pay by credit card or  
bank transfer
-  Download data



MDSS  
마이크로데이터서비스시스템

자료제공범위 | 자료가공 | 위탁처리신청 | 처리결과

추출 | 집계 | 비용계산 | 교육용 데이터 | 추출맛보기

추출

메타자료  
(조사개요, 코드표 등)

제 목 :

일반검색 | 항목기준검색

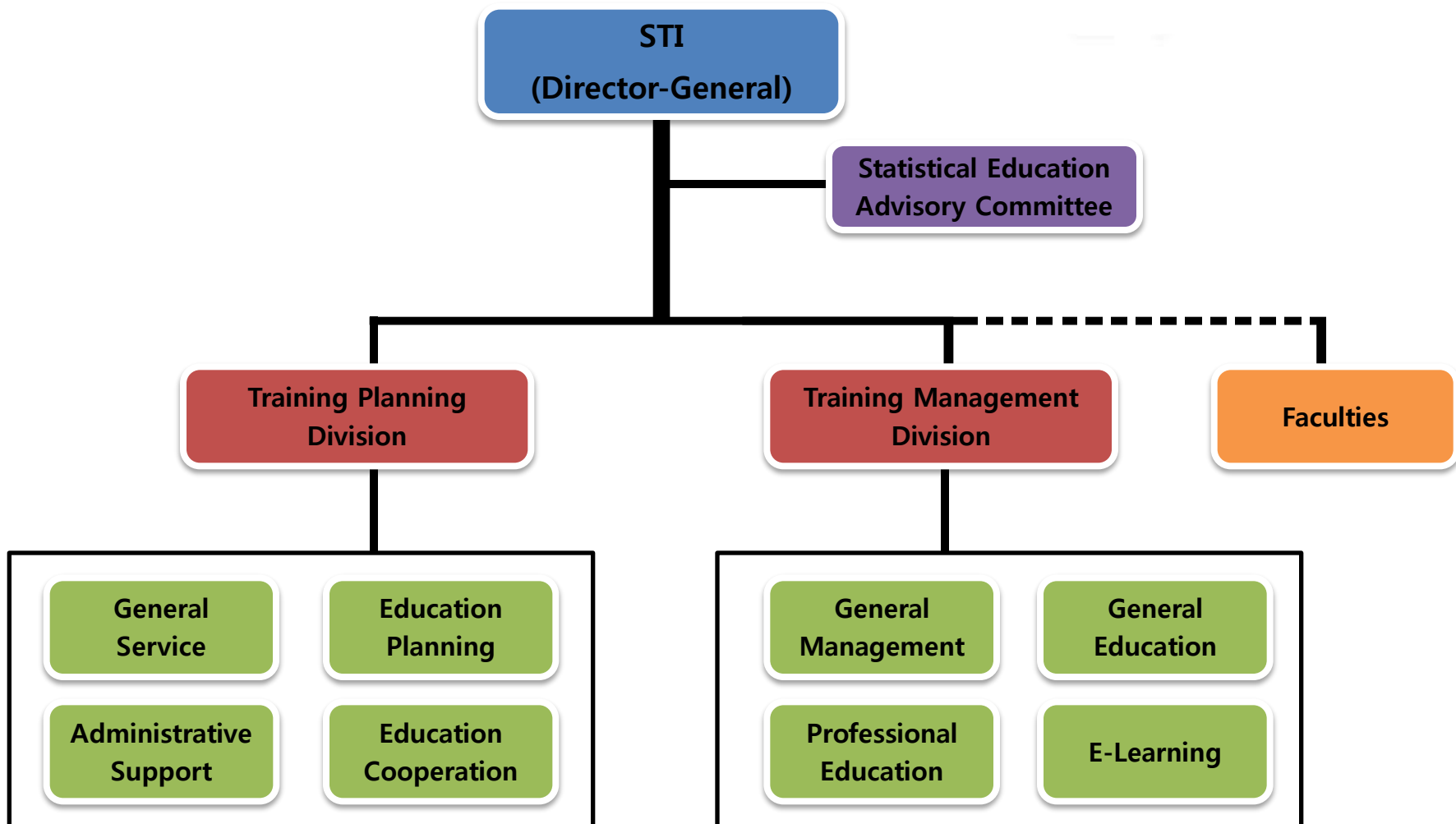
▶ 인구부문 ▼ ▶ 선택하세요 ▼ ▶ 선택하세요

형태	항목
<input type="checkbox"/>	<input type="text"/>



## **Statistical Training Institute**

# STI Organization



# Vision & Mission

## Vision

The World's Leading Statistical Training Institute

## Mission

To nurture statistical experts  
To promote public understanding of statistics

## Goals

To advance the capabilities of statistical personnel  
To implement education of statistics users

## Strategy

Support  
regular  
courses  
effectively

e-Learning Blended  
Learning

Provide  
intensive  
statistical  
courses

Certification System

Expand  
statistical  
training for  
target  
groups

Producers Users

Replenish  
statistical  
training  
infrastructure

Person Budget Facility  
STATISTICAL  
TRAINING INSTITUTE





# Thank You !