Patent Statistics and Economic Development Planning

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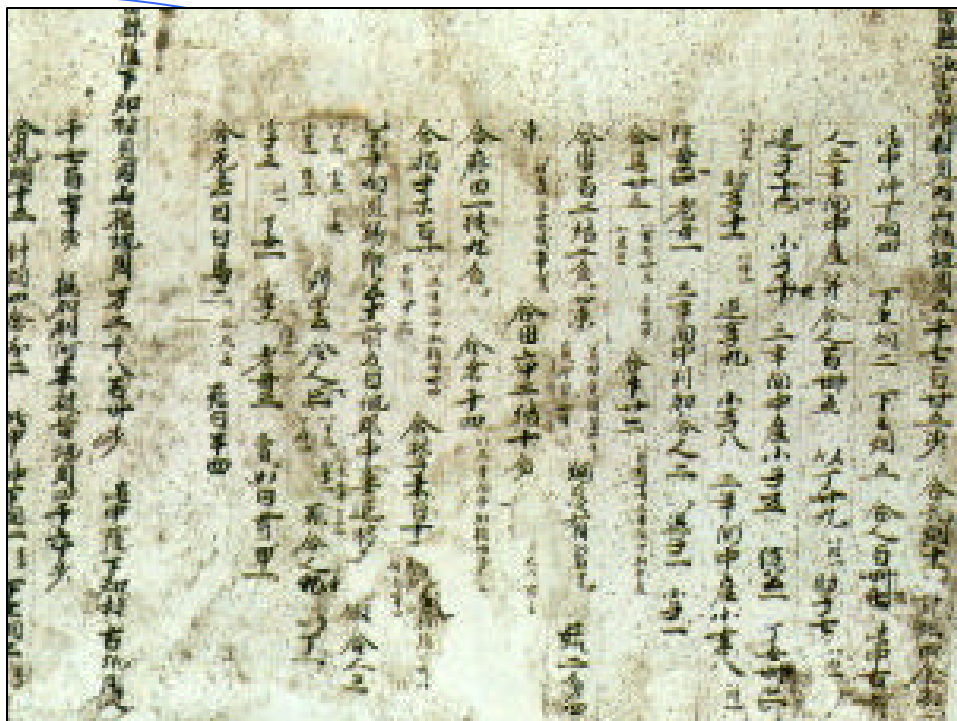# I. Introduction

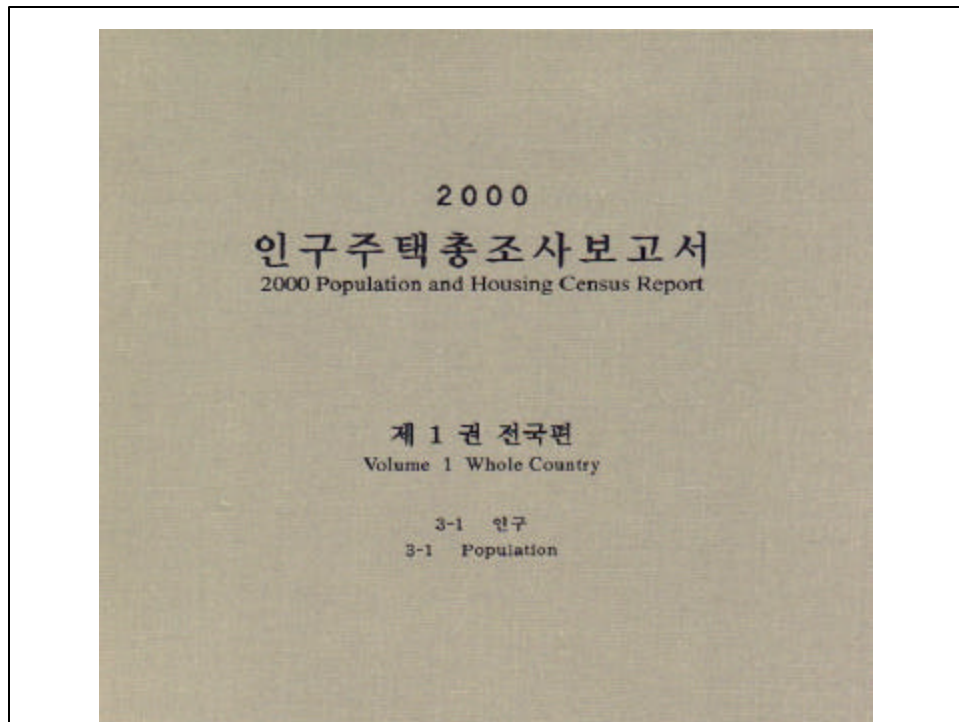θ **Two aspects to be discussed**

  1. Use of patent statistics

    ✴ How governments use patent statistics
      when they plan economic development

  2. Infrastructure of patent statistics

    ✴ How governments build the infrastructure of patent
      statistics to formulate economic development plan

2000

인구주택총조사보고서
2000 Population and Housing Census Report

제 1 권 전국편
Volume 1 Whole Country

3-1 인구
3-1 Population

II. Patent statistics as an indicator for planning economic development

θ Economic policies and indicators in Korea

- ♣ Indicators for industrial policy (selecting industries)
  - Macro-economic indicators
  - Insight of specialists

- ♣ Indicators for R&D policy (selecting technologies)
  - Input / output indicators
  - Patent information

II-1 Beginning of economic development-

- θ **Growth-oriented policies**
    - ♣ Creation and expansion of social infrastructure
    - ♣ Export-led industrialization
      rather than import-substitution industrialization
    - ♣ Economy based on heavy and chemical industries

II-1 Beginning of economic development-

- θ **Planning process**

    - ♣ Setting numerical goals

    - ♣ Selecting industries for investment

    - ♣ Fostering the industries with subsidies

II-2 Change of environment

θ **Threatened price competitiveness**
- ♣ <u>Rising wages</u>
- ♣ Industrialization of Southeast Asia and China

θ **Establishment of the World Trade Organization (WTO)**

II-2 Change of environment-the effects

θ **Restructure of industries**
- ♣ <u>Rapid growth of capital-intensive and technology-intensive industries</u>

θ **Rise of R&D policy**
- ♣ Recognizing the importance of R&D activities
- ♣ Industrial policy fading away

II-3 In search of new indicators

θ **Indicators for efficient R&D policies**

  ♣ **Indicators for evaluating R&D performance**
    · Tools for qualitative analysis

  ♣ **Indicators for R&D planning**
    · Transform IPC code into general terms
    · Yale Technology Concordance (YTC)
      OECD Technology Concordance (OTC)

II-4 Examples of patent statistics in Korea

θ Implications of application trends
  ♣ Case of automobile industry
  ♣ Maximum-application-year analysis
  ♣ Case of A61K

θ Examples
  ♣ Patent trends of Korea 2002 / 2003
  ♣ National Science & Technology Council
  ♣ 20,000 overseas patents (granted)

III. Infrastructure for patent statistics

- θ Tangible system
  - ♣ Database, data warehouse
  - ♣ <u>Fields to be included</u>

- θ Intangible system
  - ♣ <u>Criteria of statistics</u>
  - ♣ Organization

Examples of infrastructure (tangible)

- θ On-line statistics
  - ♣ Advantage: real-time data
  - ♣ Disadvantage: overloading the system

- θ Data warehouse
  - ♣ Multi-dimensional on-line analytical processing (M OLAP): relatively fixed structure
  - ♣ Relational on-line analytical processing (ROLAP): relatively flexible structure

Examples of infrastructure (intangible)

θ **Organization**
  ♣ Patent statistics team

θ **Regulation**
  ♣ Instructions of patent statistics

IV. Conclusion

θ **What else patent statistics can do**
  ♣ Estimate the value of patent
  ♣ Transform the IPC code
  ♣ <u>Higher level of patent information</u>

θ **What else WIPO can do**
  ♣ Enhance the comparability and availability of int ernational statistics (e.g. the Green Book)
  ♣ Advise developing countries

Thank you

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