Abstracts

Secondary Use of Government Statistical Surveys from a User's Perspective: Evaluation and Agenda

Masayuki Morikawa (Research Institute of Economy, Trade and Industry/Japan Society for the Promotion of Machine Industry)

This paper presents an evidence-based overview of the state of microdata use in empirical research in economics and discusses the benefits and challenges of secondary use of government statistics from the perspective of a user of government statistics. Over the past two decades, a framework for the use of microdata of government statistical surveys in academic research has been developed. Since the mid-2010s, evidence-based policymaking (EBPM) and statistical system reforms have been promoted in parallel, further improving the system of secondary use. In fact, the number of studies using government statistical microdata has grown. It is expected that the hurdles for secondary use of government statistics will be lowered further by shortening the time required for data provision and simplifying the screening process in order to increase empirical research performed using Japanese data that will be acclaimed internationally as well. To make further progress in EBPM, policy and administrative information should be widely disclosed and made available to many researchers while at the same time expanding the secondary use of government statistics.

Current Status and Challenges of Official Statistics in Japan from the Perspective of Statistical Production

Hiroe Tsubaki (Research Organization of Information and Systems)

This paper provides a comprehensive overview of the current state and challenges of Japan's official statistics, examined from the standpoint of a practitioner deeply involved in statistical production and quality management. The author, drawing from extensive experience in government statistical committees and research institutions, aims to promote understanding between data users and producers and ultimately improve the effectiveness of evidence-based policymaking (EBPM) in Japan. The paper is structured around three main pillars: (1) statistical planning and policy formulation; (2) quality management of the statistical production process; and (3) the promotion of secondary use of microdata. Firstly, the planning and management of fundamental statistical surveys are governed by national policies such as the "Basic Plan for the Development of Official Statistics," which reflects the PDCA (Plan-Do-Check-Act) and SDCA (Standardize-Do-Check-Act) cycles based on quality management frameworks. The latest (4th) plan emphasizes statistical integration across ministries, responsiveness to digital and social changes, user-oriented data services, and capacity building for statistical production staff. Secondly, the paper discusses the historical and ongoing application of quality management principles originating from Deming's statistical process control within official statistics. While international standards like ISO 9001 are applied in the statistical offices of certain countries, Japan has instead pursued internal improvements through guidelines, audits, and diagnostic tools inspired by Total Quality Management (TQM). Thirdly, the author highlights the institutional development of systems enabling secondary use of microdata collected via government surveys. Japan's unique onsite analysis platform (miripo) allows researchers to securely access and analyze anonymized microdata, supporting broader academic and policy research. Although privacy and data protection remain key challenges, the system has seen considerable progress, enabling exploratory data analysis using advanced methods such as machine learning.

Issues and Responses in Compiling Official Statistics

Fumio Funaoka (Professor Emeritus, Shinshu University)

In recent years, there have been a series of cases of inappropriate processing in the production of official statistics. The Ministry of Economy, Trade and Industry, the Ministry of Health, Labor and Welfare, and the Ministry of Land, Infrastructure, Transport and Tourism are different ministries in charge of statistics, but in all cases, inappropriate

processing continued for more than 10 years, and, even after it was discovered, the response was postponed for some time. Although the details of the cases differ, they share a common background: 1) statistical work had been neglected or performed carelessly, 2) persons without expert knowledge of statistics were put in charge of statistical work without undergoing sufficient training, 3) the personnel in charge of statistics were overloaded with work as a whole amid a trend of declining personnel and budgets for statistics, and 4) the work was divided not only among ministries and agencies, but also within ministries and agencies, and information was not shared between managers and practitioners, resulting in a lack of organizational governance. This is largely due to a significant change in the statistical production system around 2000, which also gave rise to these cases of inappropriate processing. The underlying cause is a failure to reform the provision and production of statistical information in response to changes in the economy and society. In this paper, we consider what measures should be taken to improve statistics and present the following for the production of necessary statistics: using administrative record information in statistics production and promoting digitalization, taking stock of statistics and utilizing private-sector information, reviewing investigator surveys, and working toward the widespread use of statistics.

Current State and Challenges in Data Utilization and Research Collaboration in Local Governments

Naomi Kodama (Meiji Gakuin University)
Miki Kohara (The University of Osaka)
Shinpei Sano (Kobe University)
Tomohiko Moriyama (The Japan Institute for Labour Policy and Training)

This paper reveals the current state and challenges in the use of administrative data by local governments and collaboration between policy-makers and academic researchers. It aims to provide guidance for future initiatives concerning the effective data utilization by government. Local governments face multiple obstacles in leveraging administrative data, including inconsistencies in data formats, regulatory constraints, and a shortage of skilled personnel both within the local government and among external partners. Effective coordination between departments implementing policy and departments handling data along with the sharing of knowledge and expertise between organizations are identified as critical factors for success. With the growing demand for in-house data analysis, further challenges have emerged, particularly in human resource development, resource allocation, and balancing data analysis with regular business operations. Collaborating with academic researchers not only provides access to specialized analytical skills but also helps enhance the transparency and objectivity of decision-making processes. While collaboration takes many forms, the sustainability of such initiatives depends on building long-term relationships and mutual trust. Given the divergent institutional goals and incentives of researchers and local governments, it is essential to establish flexible and adaptive frameworks grounded in mutual understanding. To support these efforts, this paper presents a set of support mechanisms and illustrative initiatives and offers practical insights that help local governments design and implement data governance policies.

The Current State of Utilization of Large Datasets by Public Institutions around the World

Shinsuke Ito (Chuo University)

In this paper, we describe how public institutions around the world create and release large datasets as well as the confidentiality measures they apply when releasing the data. We also summarize the trends that influence how public institutions create and release large datasets. We use the UK as an example to outline the trends in the creation of linked data in a way that protects individual information, then examine issues surrounding the use of large datasets by public institutions in Japan. In the US and EU, various types of large datasets that maintain a balance between security, confidentiality, and usefulness are created and released by public institutions. These can be classified into individual data and microdata that have been processed to ensure confidentiality. The former enables institutions to provide services that meet the various needs of users, such as access to linked data, by ensuring a secure analysis environment, including remote access, through

legal systems, statistical techniques and organizational measures. The latter includes Scientific Use File (SUF) and Public Use File (PUF), which are created and provided according to the level of confidentiality, the granularity of the information contained in the data, and the purpose of use of the data. In Japan, the linkage of large datasets by public institutions in order to further academic research needs to be discussed based on the laws and regulations covering the use of statistical data, assuming a relationship of trust between data creators and users. It is also necessary to investigate the applicability of perturbative methods, then consider the creation of data through on-demand aggregation as well as the creation and release of PUF.

Extended Years of Schooling and Changes in Enrollment Rates: The 1947 Reform of Compulsory Education in Japan

Fusae Okaniwa (Yamagata University)
Yoko Ibuka (Keio University)
Shiko Maruyama (The University of Osaka)

This study describes how the 1947 educational reform in Japan, which extended compulsory schooling from eight to nine years, affected the enrollment rate of 15-year-old children—equivalent to the final year of lower secondary school. In many existing statistics, it is not possible to uniformly compare the number of children across the pre- and post-reform periods. As a result, it remains unclear whether the reform effectively increased years of schooling or how many children were affected by this extension. Using data from the Annual Report of the Minister of State for Education and the Population Estimates by the Ministry of Internal Affairs and Communications, we align school categories and grade levels across the old and new systems to calculate the enrollment rate at age 15. A preliminary analysis shows that, even before the reform, around 90% of children had already completed eight years of education. Our results indicate that the enrollment rate at age 15 increased by 13.5 percentage points for males and 20.0 percentage points for females after the reform, with the overall rate reaching 94.0%. These findings suggest that nine-year compulsory education was effectively established in practice. The reform also helped reduce the gender gap in enrollment rates before its implementation.