# How to measure the results of university education

## -Global trends on the survey of graduates across the country-

## Explanation of the aim

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# 1. Interest and context of the problem

# Policy background (1)

- Policy issues regarding higher education

  - (Example) “Future Concept of Higher Education in Japan” (Consultation with The Central Council for Education, March 2017)

    1. Measures toward strengthening of functions of each higher education institution
    2. Ideal system aiming to improve the quality of learning
       - Ideal establishment standards, certified evaluation and accreditation, information disclosure = quality assurance
    3. Scale of overall higher education, securing ideal opportunities for higher education of quality in the region
       - Realization of higher education based on the mission of each organ and the needs of society
    4. Ideal support measures for higher education reform
       - Establishment of stable funding for higher education under the severe financial situation, ideal economic support for students

# Policy background (2)

- Request for “Evidence-Based Policy Making (EBPM)”
  - In order to solve the policy issues indicated in the previous slide, it is essential to disseminate the results of higher education to society and promote research that can be factual evidence
- Although the importance of EBPM is much talked about, there is a lack in actual feeling that research on higher education is contributing to policy making
  - Ushiogi (2007) points out the following:
    - The “evidence,” which is considered to be the grounds for policy recommendations, is only a result of a research conducted by an individual and not examined and verified by any third party
    - The society cannot judge whether the research result is reliable or not

# Premise of the “Evidence-Based Policy Making”

- Presentation of “evidence” that is correct and reliable (Ushiogi, aforenamed)
  - Improvement of information infrastructure
  - Construction of a basic data base
  - Fixed point observation based on these

-> Issues and responsibility imposed on research groups

- In the meantime, refer to the role of administrative agencies as “information-providing organs”
  - There is a limit to preparing reliable, large-scale data at a nationwide level by only researchers (researcher groups)
  - In particular, the collection and preparation of primary data

# 2. Current situation of statistics and surveys regarding the “achievements of university education” in Japan

# Official statistical surveys regarding university education

- Mainly surveys targeting educational institutions
  - “School Basic Survey”
  - “School Teacher Statistical Survey”
  - “Academic Information Infrastructure Factual Survey” (former University Library Factual Survey)
  - ”Survey on the Status, etc. of Informal Job Offers to Students Graduating from Universities, etc.” and so on
- Data on observable educational research conditions of higher education institutions are abundant to some extent, however, there are few national surveys aiming to directly grasp results of education through actual conditions of education and learning activities, as well as students and graduates
  - “Student Life Survey” (Japan Student Services Organization)
  - “Survey Regarding Actual Conditions of Learning Among University Students” (conducted jointly with the above-mentioned survey by the National Institute for Educational Policy Research, targeting about 20,000 people)
- Dependence on surveys by education-related industries and research groups

# Statistics regarding the results of university education (1)

- The results of university education have not been disregarded
  - Situation after graduation based on “School Basic Survey”
    - Number of graduates by related course and by career path (employment rate, education continuance rate to graduate school)
    - Number of employed graduates by related course, by industry and by occupation
  - Under the custom of a labor market that simultaneously recruits new graduates and premises long-time employment at the same company, the career path situation at the time of graduation (employment rate, employment rate for professional and technical jobs, employment rate in an industry related to the course, and so on) has been emphasized as the index of results
    -> Flow model of educational population (Yano 1993)
    - Under the “shift without intermission” from school to occupation, there are occasions where institutional surveys are more efficient than follow-up surveys targeting individuals.

# Statistics regarding the results of university education (2)

- Sufficient official statistics regarding income and employment status (including occupation, type of industry, etc.) by academic background
  - “Basic Survey on Wage Structure” (targeting offices)
  - “Employment Status Survey” (targeting households)
  - “Comprehensive Survey of Living Conditions” (targeting households), etc.
- Estimate the difference in lifetime income by academic background and calculate cost-effectiveness of higher education
  -> Earning rate approach (Yano, aforenamed)
- Improvement of labor productivity (vocational skills) through higher education = assume as the results of education
- Factors causing differences within the same academic background are unknown and the difference in the performance of individual educational institutions is disregarded

# Limitations of the existing official statistics

- In measuring the results of university (higher education), there are limitations in the approach with existing official statistics
  - Focus on the timing of graduation is insufficient
    - Part of the premise of the “flow model of educational population” to function effectively is not fulfilled
      - Increased mobility of employment (30% of university graduates leave and change jobs within three years)
      - Changes in industrial and occupational structure (changes in correlation between education and industry and occupation)
  - Analysis on the connection between the contents of education /learning experience and economic and social achievements afterwards is necessary
    - How vocational skills (competency) are being formed through higher education is questioned
    - Necessity of focusing on the effect of matters other than formation of occupational career (such as cultivation of sociality and citizenship)

-> Surveys targeting the “individual” are necessary

# Examples of nationwide academic surveys on graduates (1)

- University of Tokyo Center of Research on University Management and Policy “Survey on Professionals regarding University Education” (2009)
  - Targeted 50,000 private enterprises across the country. Requested response of five employees who graduated from university at each enterprise (N=25,203)
- Kyushu University “Japan-Europe Survey Regarding the Careers of Graduates and Evaluation of University Education (survey conducted by Reflex)” (2006)
  - Comparative study with 14 European countries (participated as an associate member in the joint research adopted as the priority policy science research of the European Commission)
  - Japan: 60 universities, 82 departments, targeting people graduated from graduate school five years ago, N=2,501

# Examples of nationwide academic surveys on graduates (2)

- Japan Institute of Labor “Japan-Europe Comparison Survey Regarding Higher Education and Occupation” (1998)
  - Comparative study with 11 European countries (survey conducted by CHEERS, Japan participated as an associate member)
  - Japan: 45 universities, 106 departments, three years after graduation, N=3,421
- Same as above. “Survey on Career After University Graduation” (1992)
  - 35 universities, 63 departments, 1-10 year(s) after graduation, N=20,335
  - A follow-up survey was conducted on (some of) the same targets in 1998 (N=2,369)

# Surveys on graduates at each university

- In recent years, each university has been actively conducting surveys on graduates
  - Response to certified evaluation, construction of the IR system
  - From inspection and evaluation of the “education achievements” of each university to education improvement (Yoshimoto, 2007)
  - Reference group to compare and evaluate the survey results is necessary
    - Conduct a survey based on collaboration between universities (such as consortiums)
    - Necessity of a nationwide survey for comparison
      - Provision of framework for analysis, standardization of items in the survey
- Example of a survey by an education-related industry
  - Benesse Educational Research and Development Institute “Reflection Survey Regarding Learning and Growth at University” (2015)
    - Online monitor survey, N=19,833

# 3. Surveys on graduates in foreign countries

# Situation in foreign countries: The United States of America (1)

- National Survey of College Graduate : NSCG, every 2-3 years
  - Implementation body
    - U.S. Census Bureau -> National Science Foundation (NSF) National Center for Science and Engineering Statistics (NCSES)
  - Survey Target
    - Extract graduates with a Bachelor’s degree or higher from respondents of the American Community Survey (ACS), about 135,000 people
    - Part of the target traces respondents of the previous survey
  - Characteristics
    - Detailed codes of majors at university and occupations

# Situation in foreign countries: The United States of America (2)

- Baccalaureate and Beyond Longitudinal Study (B&B) Implemented three times during 1993 -> 2003, 2000 -> 2001, 2008 -> 2012
  - Implementation body
    - National Center for Education Statistics (NCES)
  - Survey Target
    - Extract graduates of the base year from the respondents of NPSAS in the previous year (10,000-20,000 people)
  - Characteristics
    - In addition to responses from the graduates themselves, compare them with administrative data, such as federal scholarship usage situation.

* National Postsecondary Student Aid Study (NPSAS)

Equivalent to Japan's Student Life Survey (conducted every four years) 100,000 people for Bachelor's degree programs

# Situation in foreign countries: The UK

- Destination of Leavers from Higher Education (DLHE)
  Implemented every year
  - Implementation body
    - Higher Education Statistics Agency (HESA)
  - Target
    - All graduates of the relevant year (six months after graduation)
  - Characteristics
    - Linked with student records
- Evaluation of Longitudinal Destinations of Leavers from Higher Education (LDLHE) Implemented every two years
  - Target
    - Extract from the respondents of the DLHE survey. Examine the situation in 3.5 years after graduation. Valid responses from 107,000 respondents (graduates in 2012/13)

* Shift to Graduate Outcome Survey from 2018
    - Background and purpose of the shift, and main changes?

# Situation in foreign countries: South Korea

- Graduates Occupational Mobility Survey (GOMS)
  - Implementation body
    - Korea Employment Information Service (KEIS)
  - Target
    - University graduates in 2005 and in and after 2007 (4-5% of graduates)
    - Follow-up survey will be implemented within three years for graduates in 2005, and after two years for graduates in and after 2007
  - Characteristics
    - Rather than the collection and preparation of basic data regarding higher education, (it can be said that) it works more as a response to a specific policy issue, which is the difficulty for graduates to secure employment
- Korean Education & Employment Panel Survey (KEEP)
    - Implemented by Korea Research Institute for Vocational Education and Training (KRIVET)
    - Follow-up survey from junior/senior high school students
    - Modeled after HS&B, NELS, and ELS in the U.S.

# Situation in foreign countries: The EU

- EUROGRADUATE feasibility study
  - Liberalization of movement of human resources within the EU -> Traced graduates from higher education institutions and grasped the situation of acquired knowledge and skills of graduates beyond the difference of education system of each country
  - Released the final report in May 2016
  - Implemented nationwide surveys on graduates in 27 countries and regions out of 34
  - Coordinate items in existing nationwide surveys on graduates in each country, their implementation methods, and so on, and aim to formulate comparable data (Reference: EUROSTUDENT International Comparison of Student Surveys)

# 4. Issues (from a perspective of international comparison)

# Issue 1 : Implementation body and authority of the survey

- National or governmental organizations, or university or non-governmental organizations, etc.
  - Existence or non-existence of legal basis
    - Cooperation of graduates and people related to the higher education institutions -> reliability
  - Financial resources
    - Constant organization and budgets, or research funds with a time limit -> continuity
  - Possibility of a link with other statistical surveys and administrative record information
    - If the survey is conducted on graduates alone, the possible analysis will be limited or it will need an enormous amount of questionnaires
  - Protection and management of personal information

# Issue 2 : Implementation method of the survey

- How to acquire graduates (survey subjects)
  - Dependent on the implementation body and authority of the survey
    - Contact graduates through higher education institutions (using alumni lists, etc.)
    - Utilization of respondents of other statistical surveys and administrative record information
    - Trace from school students, which is relatively easy to acquire
- Scale of the survey
  - Dependent on the purpose and utilization method of the survey
    - Preparation of fundamental data regarding higher education -> large-scale, comprehensive
    - Verification of theoretical hypothesis on achievements of education -> the scale required for statistical estimation is sufficient

# Issue 3：Application of survey results and data

- Application for policy making and policy evaluation
  - Prerequisite for conducting surveys by a national or governmental organization
- Application for inspection and evaluation as well as improvement of university education
  - Feedback to institutions such as universities participating in the survey
- Information disclosure regarding each higher education institution
  - Submission of data to University Portrait Japan, etc.
- Approval/disapproval of secondary use of individual data by researchers, etc.
  - Terms of use, scope of data to be disclosed

⇒Discuss the necessity, feasibility, etc. of surveys in Japan for the above-mentioned content while referring to the situation in each country

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