

ABSTRACT
Improvement of Data collection and Analysis
related with Faculty in Korea

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〈Research summary〉

The purpose of this research is to analyze major policy issues related to university faculty members as well as to provide improvement measures on increasing efficiency on data collection and utilization of data on faculty members. This research specifically pays attention on the needs of establishing systematic collection and utilization of faculty member data that can effectively support policy practice and its evaluation.

The research is composed of four major categories including 1) analysis framework, 2) review on the current status of faculty member data, 3) analysis of major issues on current policies related to university faculty members, 4) improvement measures on the collection and utilization of university faculty member data. Firstly, the analysis framework of this research is composed based on the life cycle perspective of university faculty member (before and after faculty appointment) and related system and activity areas were analyzed.

Also, current status and problems of collected data on university faculty members are pointed out to draw further improvement measures. Moreover, empirical analysis was conducted on major issues related to faculty members to check on validity of existing data. Lastly, the research suggests on the measures for improving various limitations of the university faculty data that were found during the process of analysis. Suggestions on data improvement may increase effectiveness of policy to assess and evaluate effectiveness of policy that are practiced.

To achieve these research goals, various previous studies and documents were reviewed and data on domestic and overseas university faculty members were investigated. Delphi analysis was conducted to draw major policy issues related to university faculty members and workshops with related experts were organized to explore more in-depth context. The policy issues that were drawn through delphi analysis and workshop were analyzed by set of teams that were designated for specific topics.

〈Major research findings〉

Chapter 2 provides analysis on major policy issues related to university faculty members. This research assumes on the close linkage between policy and data since effective evaluation on policy outcome cannot be achieved without implementing thorough data analysis. The research team has divided life cycle of faculty members into two major period- before and after being recruited by the university. Policy systems and academics' activities based on these two periods were reviewed as following which include 1) system and activities in prior to faculty appointment, 2) system after appointment, 3) activity areas after appointment. Specific components of analysis for each category are supply and demand of faculty members, experiences and activities undertook in prior to their appointment. Also, topics such as working environment factors (e.g. promotion, salary, performance evaluation) and academics' activities allocation after being appointed as university faculty were analyzed.

Firstly, the most critical issue that was raised in relation to the supply and demand and experiences of faculty members in prior to their appointment was that there is lack of clear regulation or legislation which specify on the type of faculty members and required

qualification. Although the 'faculty qualification standard regulation' provides official statement on the required qualification to be appointed as a university faculty, there are substantial differences from the actual qualification required by universities in reality. Another issue was related to the poor policy recognition on non-tenure track and part time faculty members' working conditions despite the number of non-regular faculty members are increasing rapidly in recent years. Also, in terms of supply and demand of university faculty members, more policy interests need to be paid on the differences that may be derived by the status of faculty (part time and full time), country where one obtained his or her doctoral degree from (foreign or domestic), gender, nationality and institution where academics earned their bachelor's degree.

Lastly, another core issue is about the experiences that university faculty members acquire in prior to their appointment. Although university faculty members' experiences in prior to their appointment has not been the major focus of the policy interest in the past, it has started to receive more attention recently due to the social recognition on the poor working environment of part time lecturers.

Next section introduces major policy issues related to university faculty members' salary, promotion and performance evaluation. Likewise with the ambiguous type and qualification of university faculty members in existing legal regulations, there lacks legal ground on faculty promotion and salary system too, and such weak legal recognition may become a major disturbance factor for improving working environment and compensation system for university faculty members.

Moreover, due to the recent trend in increased number of faculty members who are hired as contingent position by universities, there is a growing dispute on the validity and efficiency of the contract based employment and performance based salary regulation system. Also, there is also a growing doubt on the effectiveness of current performance based evaluation system since it may create performance oriented climate in the field of academia. Therefore provision on improved performance evaluation standard which has more precise objectivity and fairness is required.

Lastly, as for the activity areas after faculty appointment include teaching, research and service activities of university faculty members. The most notable trend in academics'

activities is that the required duty of academics are becoming more diversified. As well as fulfilling traditional duties (teaching, research and service), academics are now required to practice entrepreneurship by having close linkage with the industry and such new roles of academics are also related to how their performance is evaluated. In this sense, it would be meaningful to investigate on the actual status and trend of university faculty members' activities which reflect current changes. Investigating on the university faculty members' activities directly reflects on the areas that each individual academics are focusing on and it would help our understanding on how they are allocating their time on each duty. Through such analysis, more effective support can be provided to the academics to reduce burdens, and as a result, it may influence on improving teaching quality.

In chapter 3, data collection and utilization on university faculty members are reviewed. Data related to university faculty members include 1) faculty data in 'Basic education statistics', 2) University research activity investigation, 3) New PhD degree holder survey, 4) PhD workforce survey, 5) survey on teaching and learning process of university and etc. Although substantial amount of information can be partially traced by merging previous data sets, there are several limitations in these existing resources. Firstly, the survey targets are different in each survey data. For example, in 'basic educational statistics data', the university faculty members include broad range of positions including part time lecturer. On the other hand, in 'university research activity survey data' it only includes full time faculty members. Such differences in survey target groups reduce effective linkage among various dataset. Secondly, previous dataset does not provide sufficient information on part time faculty and non-tenure track academics. Also, there are lack of information on university faculty members' perspective on their personal life and values which may be useful to understand qualitative context of academics' working condition and their ethics. Thirdly, current data structure of each dataset is difficult to be linked with one another. Therefore, more systematic common coding scheme which can be applied to all survey resources need to be designed. Lastly, range of data analysis and utilization are very limited due to the ambiguity of used variables and indicators. In this context, more thorough development on creating meaningful indicators that can increase utilization is required since the quality of university faculty members is closely related to improving

quality of higher education service in general.

In chapter 4, possible measures on data utilization and improvement are discussed through empirical analysis by using existing dataset.

Firstly, according to the result of analysis on the factors influencing university faculty's appointment and employment path, factors such as parents' level of education, whether academic has received doctoral degree from abroad, research experience, time to degree and etc were found to be influential. There is a growing proportion of foreign doctoral degree holders' to be appointed as university faculty in recent years, and although the influence power of parents' educational level disappears, it still mediates via study abroad experience. In another word, when the level of parents' education becomes higher, there is more chance for one to obtain doctoral degree from overseas and to be appointed as faculty member in Korean universities.

In regard to university faculty members' working condition, analysis such as 'factors influencing on faculty salary and job turnover' was conducted. According to the analysis, first, faculty's salary increases as their academic rank rise but has negative correlation with their research performance. The fact that there's lower salary given to those who have higher academic performance indicates that junior academics have higher research productivity, and although senior academics have relatively less productivity, they receive higher salary once they obtain tenure. Secondly, it was found that there is higher job turnover rate for those academics who have less than 6 years of experience and factors such as salary, discipline area, academic's alma mater were found to influence on job turnover. Moreover, academics who work in private universities, small and medium size institution, and universities located in provincial areas had higher job turn over rate.

Lastly, as for university faculty members' duty fulfillment, analysis such as 'factors influencing on faculty member's research performance', and 'how faculty's research performance influence on students' satisfaction on their course' were conducted. According to the result of the analysis, factors such as age, discipline, degree level (whether one's final qualification is doctoral degree), number of teaching hours per week were found to be influential. The fact that longer teaching hours put negative impact on academics' research performance needs further policy attention. Students' satisfaction on their course is a barometer that indicate academics' performance on their teaching activity- however

it was found that when department's research performance is higher, students' satisfaction on their course becomes lower which hints that there is mutual confrontation relationship between teaching and research nexus of university faculty members.

Above analysis results may contribute as important resources for policy implications. However, in order to increase effectiveness and accuracy of the research findings, there needs to be more improvement made on the existing dataset. One of the most important improvement needs to be made on adding more necessary variables and to increase utility of existing data that are being poorly managed. Firstly, as for 'basic education statistics data' and 'university faculty research performance data', improvements can be made by collecting data that can enable time-series analysis. Also, improvement on data verification and investigation category and manuals should be made especially for variables that are omitted and have lack of consistency. Moreover, it would be meaningful to add survey items on time allocation of university faculty members' activities (teaching, research, service, administrative works etc) based on national standardized criteria.

Lastly, as for university teaching and learning data resources, further data on national level college education related resources need to be collected and analyzed by developing systematic classification standard. Also, it is important to increase linkage of various dataset on university faculty members for further improvement since one single dataset may be insufficient to conduct in-depth analysis. Since such data integration is difficult to be achieved by individual level, efforts from public research institution and government need to be increased.

Chapter 5 introduces various improvement measures on data collection and utilization on university faculty members in two categories which are 1) improvement and expansion measures on 'Basic education statistics data' and 2) creating new survey on university faculty members.

As for improvement measure on basic education statistics data, following suggestions were proposed including 1) to improve utilization on time-series data, 2) to improve data category and guideline to increase data reliability, 3) to add and adjust existing category. It is important to establish time-series data which will enable to conduct more in-depth analysis on university faculty members' such as their appointment and job turnover,

experience, activities and change in research performance. Such task can be realized through collecting 'researcher code' that can help distinguishing individual university faculty members. Also, further improvement needs to be made on the survey items with high ambiguity. For example, on question which asks whether the university has guaranteed on their retirement age, more clear guideline should be provided on defining various terms used in the question. Also, data can be expanded through creating or adjusting category especially on the fields that are not properly included in current surveys (e.g. job experience and research performance of academics before their appointment, exact data on their salary and performance, category which asks academics activities with more diversified range and etc).

Moreover, this research suggested on creating new survey for university faculty members by improving existing questions (through adding questions on academics' perception and attitude, time allocation, institutional policy and system and etc) as well as through benchmarking cases from advanced foreign countries such as NSOPF(National Study of Post-secondary Faculty) in US as well as Japan's survey on university faculty members' time allocation data. New data on university faculty members' perception and attitude and their time allocation can be used as important data source for many meaningful research topics.

On the other hand, more efforts are also needed to increase on the utilization of existing data. Such improvement can be made through increasing linkage between dataset that are collected and managed separately by various institutions. Also, the research suggests on publishing research analysis report on university faculty members regularly, which can provide more rich resources for policy makers and researchers.

In chapter 6, there are number of policy suggestions that are based on the findings from this research including providing programs that can help preparation and adjustment process of academics who have newly joined the university or those who plan to become one. Also, programs that can enhance university faculty members' teaching competency can be improved. Moreover, the research requested for more policy efforts on modifying current legislation and system related to university faculty members. Lastly, the research requested for government's attention and support that can help realizing improvement

on data collection and utilization that were discussed in this research.

Key words: None-tenure faculty member, University faculty data, Time allocation of university faculty, Faculty performance evaluation system, Survey etc