

본 연구가 제시하고 있는 개발도상국 노동시장 수요조사 방법 매뉴얼은 노동시장 조사 분야의 고도로 숙련된 전문가가 아니더라도 알기 쉬운 절차와 방법을 통해 개발도상국의 노동시장 수요에 대한 정보를 파악할 수 있도록 개발되었다. 본 매뉴얼이 국제협력 사업 중 특히 교육훈련 지원 사업에 적용된다면, 해당국의 산업수요와 부합되는 인재 양성이 가능해져서 취업률을 제고하는 등, TVET 사업의 효과성을 높일 수 있을 것으로 기대한다.

6. 결론 및 제언

본 연구의 목적은 직업교육훈련 분야 국제개발협력 사업 수행 시 수원국인 개발도상국의 노동시장 수요를 사회과학 연구방법론에 따라 파악하고 더 나아가서는 예측해 볼 수 있는 구체적 방법을 제공하는데 목적이 있다. 수원국에서의 인력 및 노동 수요를 객관적으로 파악하여 이를 교육훈련 사업, 특히 훈련 분야 선정 및 과정의 설계에 반영하게 되면, 훈련과 취업의 연계성이 높아지게 된다. 이는 결과적으로 TVET 지원 사업의 적절성 및 효과성, 그리고 지속가능성을 높일 수 있을 것으로 기대한다.

[Abstract]

1. Research overview

There are a number of projects that have contributed to the improvement of technical and vocational education and training(TVET) system and the quality of education and training in the developing countries through the support of TVET. It is not difficult to find the cases of being employed or starting up a business on an individual level, as well as the examples of being increased of household income. On the other hand, it can be easily pointed out that it is necessary to secure sustainability of the project by considering the labor market and TVET system in the developing countries to promote sustainable TVET projects.

This study aims to develop and disseminate ‘Labor market demand survey methodology for developing countries’ to support the formation

and implementation of TVET projects. By utilizing the methodology, it is expected to be possible to conduct more accurate labor demand survey/analysis and improve the performance and quality of TVET projects in developing countries.

2. Data analysis for methodology development and basic research

Statistical data are essential for quantitative outlook, and in particular, since the setting of reference statistics is the most fundamental, all countries are making prospects based on these reference statistics. In Korea, many statistical research institutes such as the National Statistical Office, the Ministry of Labor, the Bank of Korea, and the Korea Employment Information Service produce various employment-related statistics based on the purpose of each statistics survey.

However, there are differences in the concept of employment or the classification of industry or occupation, so employment prospects for each industry are difficult by using only specific statistics. Moreover, there are differences in reference statistics by prospective agencies that are causing confusion in the utilization or evaluation of the data. It is unreasonable to unify the standards since each of the statistics have their own purpose, but at least in the employment prospect, it is necessary to establish reference statistics that unify the concepts of labor by total amount, by occupation, and by industry. In conclusion, in order to make the employment prospect as detailed as possible, it is necessary to collect and maintain various detailed statistics for the subdivision and stability of the model.

In addition, labor market statistics provided by international organizations should be applied in common to all countries of the world. However, due to statistical constraints, especially in developing countries, it is inevitable to provide minimum statistical information. For example,

industrial statistics in each country are being provided in three categories: agriculture and fisheries, manufacturing and construction industry, and service industry. Thus, using statistics from international organizations is useful for overall comparisons of employment conditions in each country, but there is a limit to understanding the detailed employment situation in a particular country.

At this level, there is a limit to applying a rigorous quantitative research methodology based on official statistics in most developing countries. This is because, in order to grasp the demand for skilled skill, which is meaningful especially in the industrial field, at least official statistics of the sub-industry classification and occupational sub-classification level should be secured, because industrial and occupational statistics are available only at the classification level. Therefore, in order to grasp the labor market demand of the developing countries, it is necessary to check official statistics basically, and then to conduct industry sample surveys to identify industry-specific demand for labor, and to conduct qualitative surveys to supplement them.

3. Labor market demand survey methodology in developing countries

1) Quantitative demand survey by using official statistics

In order to investigate labor market demand using existing statistics of a country, first of all, the type of official statistics required for quantitative research should be checked as well as the availability of statistics in terms of industrial production, employment, and education and training. If required official statistics are secured, employment and training needs could be identified by following six steps below.

- ① Identifying production by industry
- ② Identifying employment by industry
- ③ Identifying employment by occupation
- ④ Creating industry-occupation matrix of employment
- ⑤ Creating occupation-skill matrix of employment
- ⑥ Identifying industrial demand for skills

In order to identify and forecast employment status by industry, occupation, and skill level in one country, it is necessary to identify official statistics available in the country. However, as in the case of Bangladesh, which was the case study of this research, it is almost impossible for developing countries to use official statistical data to identify labor demand at the division level of the industrial classification. In such cases, an informal quantitative statistical data should be used as an alternative method or a qualitative research method should be applied.

2) Quantitative demand survey by using informal statistics

If the official statistics of developing country's government have limitations in grasping the current status or labor demand of a particular industry, occupation or skill, another alternative quantitative statistics can be considered. As a quantitative survey method using the alternative informal statistics, we propose 'collecting data on labor demand and training demand in a specific industry', 'follow-up survey on trainees', 'survey on businesses'. The method of collecting data on workforce and training demand in a specific industry is as follows: ① government statistics (economic and industrial policy data, tax or social insurance statistics, etc.), ② statistics on public and private employment services (employment and recruitment) or job advertisement, ③ the statistics of sample survey in specific industry or region, ④ the survey

data that the industrial or occupational association of private sector owns and produces. In the case of 'follow-up survey on trainees', it is possible to utilize the survey method and the telephone survey method. In case of 'business survey', the door-to-door survey method by meeting the head of personnel department who understands the workforce and new recruitment status, or by meeting the head of technical department who understands the specific capacity of the employees is mostly applied.

3) Qualitative demand survey

In most developing countries, it is almost impossible to identify labor demand using official statistics. Therefore, various qualitative research methods are more realistic alternatives in developing countries in order to grasp labor demand and training demand in specific industries. In addition, the quantitative survey reveals that there is 'some demand for certain occupations', but since it presents 'ceilings' for training demand, qualitative survey methods should be applied to definitize the result. Qualitative demand surveys, in particular in developing countries where there is a limit to the reliability and validity of quantitative surveys due to insufficient formal data, are meaningful as a methodology as much as quantitative surveys. Therefore, quantitative and qualitative research methods should not be interchangeable but should be complementary.

FGI(Focus Group Interview) is a representative qualitative research methodology which is defined as an informal discussion between selected people related to a particular topic. FGI is conducted with a focus group led by a highly skilled operator, which has an advantage of being able to obtain hidden information in a relatively systematic and abundant manner which could not be gathered from quantitative method. However, it takes a lot of time and money to prepare, to organize, to wrap-up the interview. Also the researcher and the facilitator are required to be more

prepared and to have more expertise.

4. Case study for the labor market demand survey : Bangladesh

In this study, four researchers conducted a field investigation in Bangladesh from September 15 to September 28, 2018 in order to explore the applicability of the labor market demand survey methodology in the field. For the case study, the researchers carried out activities such as grasping the statistics and status of employment in Bangladesh, identifying the current state of economy, industry and labor in Bangladesh, identifying the status of major industries and training institutes, and conducting expert workshops to check local applicability. Through these activities, the researchers analyzed the applicability and limitations of labor market demand research methodology in developing countries.

In recent years, BIDS in Bangladesh has been conducting a demand survey of 10 industrial sectors with the support of ADB. By this survey, BIDS has found the occupation with high demand, as well as the approximate workforce status and demand for the occupation. It would be possible that labor force and training demand in particular industry can be grasped. After visiting several international organizations such as ILO and ADB, they are also conducting separate labor market or industry demand surveys according to the purpose and contents of their each business.

Overall, we found that in some developing countries including Bangladesh, government departments, affiliated organizations, or industrial associations are also establishing industrial and sectoral survey statistics at the industrial policy level or at the industry's own needs. These data are useful as sectoral statistics that can complement the lack of formal statistics. In particular, in case of MCCI(Metropolitan Chamber of Commerce and Industry), data collection through distributing

questionnaires to their member companies can be made if research expenses are supported. This method should also be considered to collect the relevant data.

In order to supplement the limitations of the quantitative survey methodology, qualitative survey methodology such as interviews, including FGI with field workers, experts, and policy-makers in relevant fields, and Delphi survey could be a reliable alternative to understand the actual demand. However, the importance of qualitative research is significant, because of the limitations of quantitative research, it is very important to design the research subjects, research contents and methods. To this end, it is very useful to apply qualitative research in the field by referring various qualitative methods (FGI, regional interviews, semi-structured questionnaires, etc.) to identify the needs of Korean industry and regional workforce and training.

5. Labor market demand survey manual in developing countries

The labor market demand survey methodology in developing countries is largely divided into the quantitative survey method and the qualitative survey method. The quantitative survey methods are ① using the labor and training demand survey based on government official statistics, ② collecting the labor and training demand data in particular industry, ③ conducting the follow-up survey of trainees(graduates), and ④ carrying out the survey of businesses. In addition, ⑤ Focus Group Interview(FGI) is used as a qualitative survey method that can be used when formal or informal statistics are not available. The following table summarizes the research methods and contents in this study.

A. Quantitative research method

- 1) Analyze of statistics in developing country to select research method
 - 1-1) Determine availability of official statistics
- 2) <Method A> Labor and training demand survey utilizing government official statistics
 - 2-1) Step 1 : Identify production by industry
 - 2-2) Step 2 : Identify employment by industry
 - 2-3) Step 3 : Identify employment by occupation
 - 2-4) Step 4 : Create industry-occupation matrix of employment
 - 2-5) Step 5 : Create occupation-skill matrix of employment
 - 2-6) Step 6 : Identify industrial demand for skills
- 3) <Method B> Informal statistics : Collecting data on labor and training demand in specific industries
 - 3-1) Investigate government administrative statistics and industrial policy
 - 3-2) Investigate statistics on public and private employment services (employment and recruitment)
 - 3-3) Confirm sample survey statistics in specific industry or region
 - 3-4) Confirm data of industrial or occupational association of private sector
- 4) <Method C> Informal statistics : Follow-up survey of graduates
 - 4-1) Design survey
 - 4-2) Conduct survey
- 5) <Method D> Informal statistics : Business survey
 - 5-1) Select research subject and method
 - 5-2) Conduct survey

B. Qualitative research method

1) Focus Group Interview(FGI)

- 1-1) Specify interview purpose and select interview subject
- 1-2) Prepare interview method and contents
- 1-3) Contact interviewee and share information
- 1-4) Conduct interview

The Labor market demand survey manual in developing countries presented in this study was developed to provide information on labor market demand in developing countries through easy-to-understand procedures and methods, even if they are not highly skilled in labor market research. If this manual is applied to international cooperation projects, especially in education and training projects, it is expected that the effectiveness of TVET project will be enhanced by raising the employment rate by making it possible to cultivate talent that meets the industrial demand of the country.

6. Conclusions and suggestions

The purpose of this study is to grasp the labor market demand of the developing countries which are the recipient countries in the international development cooperation project in the TVET field based on the social science research methodology and to provide a concrete method to predict the labor market needs. If it is possible to identify the workforce and labor demand in the country and reflect the result in the design of the TVET project, especially in the selection of training course and in the design of curriculum, the linkage between training and employment will be increased. As a result, it is expected that the appropriateness, effectiveness, and sustainability of TVET projects will be improved.