Human Capital Management CRISIS for Indefinite-Term Contract Workers in Local Governments: Focusing on Education & Training and Performance

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Abstract

The human resources that make up the local government organizations in Korea can be broadly divided into local civil servants under the Local Public Officials Act and indefinite-term contract workers and fixed-term workers under the Labor Standards Act. The main purpose of this study is to statistically verify if the education and training provided to indefinite-term contract workers in local government organizations have a positive effect on their performance. In addition, this study performs an empirical analysis on the moderating effect of the variable of feedback of education and training on the relationship between education/training and the performance of the indefinite-term contract workers. As a result of analyzing perception survey data among local government organizations’ personnel managers, education and training provided to indefinite-term contract workers were found to have a statistically significant positive effect on the workers’ performance. Moreover, feedback of education and training, that is, the level at which result from education and training provided to indefinite-term contract workers reflected in the personnel management showed an effect as a moderating variable that controls the positive relationship between education/training and performance, although not statistically significant.

The analysis results of this study have the following importance and expected effects. First, theoretically expected effects of this study; majority of previous studies on the indefinite-term contract workers of local governments were exploratory studies discussing the concept, status, or related regulations of such workers. In contrast, this study contributes to the theoretical expansion of existing studies on the indefinite-term contract workers by providing empirical evidences through quantitative analysis on the relationship between education/training and performance, which is one of the main areas of personnel management. Second, practically expected effects of this study; the positive relationship between education/training and performance of indefinite-term contract workers and moderating effect of the feedback of education and training on the positive relationship make contribution to presenting concrete grounds for policy and institutional preparation for the design and operation of education/training programs for indefinite-term contract workers in local governments and linkage between results of education/training and personnel management.

[Keywords] Human Capital Management Crisis, Indefinite-term Contract Workers, Education & Training, Performance, Local Governments

1. Introduction

The human resources that make up the local government organizations in Korea can be broadly divided into local civil servants under the Local Civil Service Act and indefinite-term contract workers and fixed-term workers under the Labor Standards Act. In other words, local government organizations that carry out local public affairs and functions are jointly made up of civil servants and civilian workers[1]. The proportion of indefinite-term contract workers of local governments in Korea has
been increasing compared to the local government officials. This is also the case for central administrative agencies, performing state affairs and central administrative functions[2]. A further important consideration is that the quantitative scale of indefinite-term contract workers of local governments is highly expected to continue increasing in the future according to the government’s plans and guidelines for continuous conversion of fixed-term workers to indefinite-term contract workers[3].

Despite the quantitative increase in the number of infinite-term contract workers of local governments, current level of human resource management for the infinite-term contract workers is significantly low and it would not be exaggerating to say that infinite-term contract workers have faced a serious crisis of human capital management. This is not only for the local governments but the same goes for public organizations including central administrative agencies and public enterprises. In fact, the local governments in Korea lack systematic and unified human resource management guidelines for indefinite-term contract workers, resulting in human resource managements of indefinite-term contract workers based on each individual governmental organization’s own policy[2][3]. In other words, since local governments have varying personnel management policy for indefinite-term contract workers, personnel management, including working condition and welfare of indefinite-term contract workers with similar abilities and expertise, shows considerable differences among local governments[1]. In addition, due to the absence of uniform and systematic personnel managements and regulations for indefinite-term contract workers, those civil servants in charge of personnel management of indefinite-term contract workers in local governments have been overloaded with tasks, carrying significant level of confusion and stress which can be pointed out as a serious administrative waste.

Insufficient quantitative level of previous research based on academic and theoretical discussions on indefinite-term contract workers can also be pointed out as a limitation in establishing personnel management plans for indefinite-term contract workers. In fact, majority of previous studies on the indefinite-term or fixed-term contract workers of public organizations were mere conceptual and exploratory studies discussing the concept, related regulations or characteristics of indefinite-term contract workers[4][5][6]. Certainly, early research involving exploratory studies is necessary to some extent in all areas of study but there are not enough substantial nor empirical studies on personnel management of indefinite-term contract workers. The importance of continuing such research must be emphasized. In other words, the results of quantitative research analyzing the empirical relationship between the sub-factors of personnel management(e.g., recruitment and quota management, position and path design, training, remuneration, evaluation and ethics) and various important outcome variables(e.g. performance, job satisfaction and organizational commitment) are expected to play a very crucial role in the personnel management and implementation of guidelines for indefinite-term contract workers.

This study has a distinctive characteristic compared to other studies previous conducted on the indefinite-term contract workers in government organizations with its main objective of further developing academic and theoretical research on indefinite-term contract workers while making practical and political contribution for personnel contract management of indefinite-term contract workers. Specifically, this study has the following objectives and importance. First, this study analyzes the empirical relationship between the level of education & training provided to indefinite-term contract workers in local governments and the workers’ performance. In addition, this study also investigates the moderating effect of feedback of education & training on the relationship between education/training and performance. Subsequently, this study carries significant importance and necessity as it can be used as an important basis for the design of human resource management of indefinite-term contract workers in local governments not only by making contribution to the theoretical development of previous research on indefinite-term contract workers which was conducted at the exploratory and conceptual level but
also presenting empirical evidences among the variables of training/education, performance, and feedback of education & training.

2. Literature Review

2.1. The concepts and related regulations of indefinite-term contract workers

Indefinite-term contract workers of local governments can be briefly defined as the 'civilians working in a local government organization without a fixed working period in the organization'[2]. According to ‘the Operation Regulations of the Ministry of Public Administration and Security for the Indefinite-term or Fixed-term Contract Workers’(Article 106 of the Ministry of Public Administration and Security), an indefinite-term contract worker is “a non-public servant who has concluded a labor contract to assist the public servants in a regular and continuous basis without a fixed working period”[7]. The main affairs of indefinite-term contract workers in central departments and local governments include administrative affairs, park and green space management, roadside management, environment and hygiene management and management of other facilities[1][3].

The main differences among local civil servants, indefinite-term contract workers and fixed-term workers are as follows. First of all, civil servants are full-time employees subject to Local Public Officials Act which means they are public officials under the public service law. Whereas, indefinite-term contract workers are quasi-regular workers who are subject to the Labor Standards Act without a fixed working period and fixed-term workers are non-regular workers who are also subject to the Labor Standards Act with a fixed working period. In addition, civil servants and indefinite-contract workers have a guaranteed retirement age and status. On the other hand, fixed-term workers have no guaranteed status as the end of their contract signifies the date of their retirement, showing a distinct difference of having an indeterminate retirement age. The characteristics and differences among civil servants, indefinite-term contract workers and fixed-term workers in terms of personnel management can be summarized as in the table below.

Table 1. Comparison of civil servants, indefinite-term contract workers and fixed-term workers[6].

<table>
<thead>
<tr>
<th>Type</th>
<th>Civil servants (Full-time employees)</th>
<th>Indefinite-term contract workers (Quasi-regular workers)</th>
<th>Fixed-term workers (Non-regular workers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Public officials under the public service law</td>
<td>Employees without a fixed working period</td>
<td>Employees with a fixed working period</td>
</tr>
<tr>
<td>Applicable rules</td>
<td>Local public officials act</td>
<td>Labor relations act including labor standard act</td>
<td>Labor relations act including labor standard act</td>
</tr>
<tr>
<td>Job security</td>
<td>Guaranteed status</td>
<td>Guaranteed status - Dismissal after prior notice (Article 26 of the labor standards act)</td>
<td>No Guaranteed Status - Automatic retirement at the end of contract - Can be dismissed without prior notice(Article 24 of the labor standards act)</td>
</tr>
<tr>
<td>Employment condition</td>
<td>Specifically stipulated by the law(Civil officials uniform regulations, remuneration regulations and compensation regulations)</td>
<td>Internal regulation of individual organization (Application of anti-discrimination regulations) (Act on the protection, etc. of fixed-term and part-time employees)</td>
<td>Internal regulation of individual organization (Application of anti-discrimination regulations) (Act on the protection, etc. of fixed-term and part-time employees)</td>
</tr>
<tr>
<td>Retirement age</td>
<td>Guaranteed retirement age (Local public officials act)</td>
<td>Guaranteed retirement age (Internal regulation of)</td>
<td>Not guaranteed retirement age</td>
</tr>
<tr>
<td>Four major insurances</td>
<td>Severance pay</td>
<td>Organization</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Pension</td>
<td>Applied (Public officials pension act)</td>
<td>Applied (Law of employment retirement benefit security)</td>
<td>Applied (Excluding less than 1 year of employment) (Law of employment retirement benefit security)</td>
</tr>
<tr>
<td>Health</td>
<td>Applied (National pension act)</td>
<td>Applied (National health insurance act)</td>
<td>Applied (Excluding part-timers) (National health insurance act)</td>
</tr>
<tr>
<td>Employment</td>
<td>Not applied</td>
<td>Applied (Employment insurance act)</td>
<td>Applied (Excluding those who work less than 60 hours a month) (Employment insurance act)</td>
</tr>
<tr>
<td>Industrial accident</td>
<td>Accidents while working (Public officials pension act)</td>
<td>Applied (Industrial accident compensation insurance act)</td>
<td>Applied (Industrial accident compensation insurance act)</td>
</tr>
</tbody>
</table>

2.2. Relationship among education & training, performance and feedback of education & training in the public sector

Education refers to an effort made to improve an individual's competence whereas training refers to an effort made to increase the knowledge and skills needed to better perform a specific job and task given to the trainee[8]. When these definitions are applied to public officials who perform public affairs in government organizations, education and training can be described as a “human resource function that will sharpen the knowledge and skills necessary for the performance of officials and improve their values and attitudes”[9][3]. In other words, education and training in a government organization can be regarded as an activity that seeks to enhance the ability of public officials necessary to perform their duties to improve performance and develop desirable values, public ethics, attitude towards their duties as public officials performing public affairs. Education and training in government organizations can be classified into various types according to different standards, but they are typically classified according to the types of trainee and the method of training[8]. First of all, depending on the type of trainees there are many different types of training such as orientation training for new employees, training of specific roles, refresher and extension training, supervisory training, executive training and ethical training. In addition, there are different types of education & training depending on the method of education & training such as lectures, conferences, debates, case studies, role playing, simulation, sensitivity training, on-the-job-training, internship, observation, audio-visual aids, transfer, action learning, competency-based curriculum, e-learning, blended learning, brainstorming, in-basket exercise and boot-camp training. Among these various education and training methods, it is important to select and utilize the best education method by considering the core purpose of education and training, the characteristics and demands of the trainees and financial conditions.

The Operation Regulations of the Ministry of Public Administration and Security for the Indefinite-term or Fixed-term Contract Workers'(Article 106 of the Ministry of Public Administration and Security) requires local government organizations to provide appropriate job training to indefinite-term contract workers in order to cultivate the knowledge, skills and application skills related to their job and education to prevent sexual harassment in the workplace at least...
once a year[7]. However, what has been pointed out as a problem is that each local government organization has its own instructions and guidelines for the education and training of indefinite-term contract workers, leading to varying degree of education and training of such workers in different organizations[2][3]. For instance, most local governments stipulate in their directives that when providing training for indefinite-term contract workers is deemed necessary by the head of the organization, education/training can be carried out by establishing internal education/training plan. This suggests that local governments are not obliged to provide education or training for indefinite-term contract workers, rather, education/training is given by the individual choice of local governments. In other words, current local government education and training for the indefinite-term contract workers is not conducted without strictly systematical and unvarying enforcement of the central government.

Both public and private organizations make efforts for human resource development, including continuous and systematic education, training and self-development. This is based on the premise that education and training have the positive impact of improving work performance and ability of employees which, in turn, enhances the performance, productivity and competitiveness of the organization. Education/training in public organizations has positive effects both at individual and organizational level[8]. First of all, in terms of individuals, if effective and systematic education and training programs are continuously provided to public officials, their ability to perform the job will be improved through which they will have a high level of organizational commitment, self-efficacy and job satisfaction. This acts as an important driving force for public officials which enables themselves to design more suitable career path while further advancing career. Likewise, the positive effects of education/training at organizational level is that improved capacity of public officials through education and training can help improve organizational performance and productivity. In fact, appropriate and effective education and training has a positive effect on the organization’s development of an excellent workforce, which will act as an important driving force to achieve the ultimate goal of administration- providing the public with high quality administrative services. In summary, human resource development, including education and training, enhances the ability of public officials to better perform their jobs and their job values, creating the desired outcomes that government organizations pursue. Subsequently, this will create a positive impact on improving the life quality of people and contributing to the development of public good[10].

However, what should not be overlooked is that the positive effects of education and training on organizational performance mentioned above is not always guaranteed. In other words, when education or training is merely given to employees without the results directly linked to the work performance of the employees, the positive effects of training is only theoretical. When a work environment in which improved competence, knowledge and skills obtained through education/training can be directly linked to and applicable to employees’ work performance, the individual and organizational benefits of education and training described above can be expected[11]. What explains this concept is ‘training transfer’. Training transfer refers to the measurement of the level of impact of the effort and expense invested in education and training on employees’ job performance[10]. Training transfer can be defined by various perspectives, but in general, it refers to the “continuous and effective application of the knowledge, skills and attitudes acquired through education/training by the trainees to their work performance, based on the assumption that the performance of an individual is improved through a well-defined course of education or training”[12]. In summary, an effective education/training means a program that enables the participants to easily, directly and continuously utilize the improved skills they have gained through the training in their daily work; the higher the training transfer effects, the more effective education/training.

It is highly anticipated that when participants of education/training have a higher level of motivation and active attitude, the positive effects of the result from education/training on the
individual and organizational will be much greater. This means that efforts to improve the quality of education/training, such as developing high-quality education and training programs and appointing renowned instructors, cannot guarantee the positive effects of education/training. Unfortunately, the education and training in the public sectors of Korea has a variety of limitations and problems which have affected public officials to have relatively high level of resistance to education/training they participate and passive attitude toward the participation. A well-known problem of education and training for public officials in Korea is that the results of education and training are not properly reflected in the personnel management of participating public officials[8][13]. In such reality, most public officials participating in education and training recognize that there is no direct connection between the results of their training and personnel management, showing skeptical perspective on the effectiveness and necessity of education and training. For this reason, education/training has been provided to public officials as a formal one-off event; it has not been practically helpful in maximizing the training transfer effects described above. Considering every aspect, if institutional condition and organizational culture in which the results of education and training public officials obtain can be actively reflected in the personnel management are created, the positive effects of education and training on performance will be greatly increased.

3. Research Methodology and Results

3.1. Hypotheses and research model

Based on previous studies discussing the relationship among the variables of education & training, performance, and feedback of education & training in public organizations, this study attempts to verify the positive relationship between education & training and performance. In addition, this study also examines the moderating effect of feedback of education & training on the relationship between education & training and performance.

H1: Education and training of indefinite-term contract workers in local governments will have a significant positive impact on the performance of the workers.

H2: The feedback of education & training provided to the indefinite-term contract workers in local governments will have a moderating effect on the link between education & training and performance.

Figure 1. Research model.
3.2. Sample

To verify the hypotheses, this study used the survey data collected from local government officials who are in charge of indefinite-term contract workers in 243 municipalities nationwide.1 Among the 17 metropolitan councils and 226 local governments officials, 12 metropolitan councils and 167 local governments officials who are in charge of human resources responded, showing a final response rate of 73.7%. This survey composed a standardized questionnaire and listed civil servants in charge of human resources in local governments nationwide in advance to carry out a complete enumeration survey through e-mail.

3.3. Measures of variables

The survey data mentioned above consist of level of management awareness, employment and quota management, duty assignment and retirement management, evaluation management, education and training, remuneration management, and management priorities and others related to indefinite-term contract workers[3]. In other words, this study examined the level of human resource management for indefinite-term contract workers recognized by civil servants who are in charge of the complete spectrum of tasks related to indefinite-term contract workers. Among the survey data, this study selected the questionnaire items and measurement results necessary for the verification of hypotheses to quantitatively analyze this study. First, the measurement result of the questionnaire item, “Indefinite-term contract workers at the local government have demonstrated a good performance” was applied to the performance variable, which is also a dependent variable of this study. Second, the education and training variable, which is an independent variable of this study, used the measurement result of the questionnaire item, 'Education and training of the indefinite-term contract workers in the local government have been carried out relatively well'. Third, the measurement result of the questionnaire “the result of education and training has been reflected in personnel management”. the variable of feedback of education and training, which is the moderating variable of this study, was used.

All questions were measured based on a five-point Likert scale, ranging from 'not at all(1)' to 'very much(5)'. Prior to presenting the results of hypothesis verification, it must be acknowledged that the variables composing the analytical models of this study are not measured by objective indicators, but by the level of subjective recognition of public officials. This is based on numerous empirical studies of social science research which emphasize the similarity between respondents' subjective perception of a particular variable and measurements of objective indexes of the same variable[14][15].

3.4. Hypotheses test

Prior to presenting the hypothesis test results, <Tbaile2> shows the mean and standard values of variables(performance, education and training and feedback of education and training) included in the analysis models. As mentioned earlier in this paper, the total number of respondents in the survey is one hundred seventy-nine(179), and the level of awareness of the officials in charge of personnel management of the performance, education and training and feedback of education and training generally was found to be 'neutral(3)' Correlations among the main variables of this study are presented in Table 3 below. As shown in the table, the correlation between performance and education & training was .455, between performance and feedback of education & training was -.068 and between education & training and feedback of education and training was .023.

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1 This study used the survey data collected directly from the research on Management Plan for the Indefinite-term Contract Workers in the Local Governments[3] prepared by the Korea Research institute for Local Administration in 2017 for analysis.
Table 2. Descriptive statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>179</td>
<td>2.944</td>
<td>.904</td>
</tr>
<tr>
<td>Education &amp; training</td>
<td>179</td>
<td>3.061</td>
<td>.773</td>
</tr>
<tr>
<td>Feedback of education &amp; training</td>
<td>179</td>
<td>3.480</td>
<td>.844</td>
</tr>
</tbody>
</table>

Table 3. Correlations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Performance</td>
<td></td>
<td>.455</td>
<td></td>
</tr>
<tr>
<td>2.Education &amp; training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.Feedback of education &amp; training</td>
<td></td>
<td>- .068</td>
<td>.023</td>
</tr>
</tbody>
</table>

Note: *p<.05, **p<.01, ***p<.001

Regression analysis was conducted to statistically verify the first hypothesis of this study; education and training of indefinite-term contract workers in local governments will have a significant positive impact on the performance of the workers. As shown in below <Table 4>, education and training of indefinite-term contract workers were analyzed to have a positive effect($\beta = .532$, $p = .000$) on the performance of the workers. This indicates that the Hypothesis 1 of this study can be adopted. Similar to the discussions in previous studies, it showed that the personnel officers in local governments(respondents in this survey) recognize that the level of effectiveness of education and training provided to indefinite-term contract workers is proportionally related to the performance of the workers.

Table 4. Results of regression on the effect of education & training on performance.

<table>
<thead>
<tr>
<th>Performance (Dependent variable)</th>
<th>Coefficient</th>
<th>Standard errors</th>
<th>t-value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education &amp; training*</td>
<td>.532</td>
<td>.078</td>
<td>6.80</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td>1.314</td>
<td>.247</td>
<td>5.32</td>
<td>.000</td>
</tr>
</tbody>
</table>

$R^2=.207, F=46.28, p=.000$

Note: *p<.05

<Table 5> below summarizes the results of analysis conducted to verify the Hypothesis 2 in this study. The second hypothesis of this study is to verify that feedback of education & training provided to the indefinite-term contract workers in local governments has a statistically significant moderating effect. In order to do so, the independent variable of education & training, moderating variable of feedback of education and training and interaction term between independent and moderating variables(education & training and feedback of education and training) were added to the analysis models in sequence and regression analysis was performed for each model. The following three conditions must be satisfied to verify that a moderating variable has a statistically significant moderating effect on the relationship between independent and dependent variables[16][17]. First, the variations of significance probability F among model 1(independent variable and dependent variable), model 2(independent variable, moderating variable and dependent variable) and model 3(independent variable, moderating variable, independent variable * moderating variable, dependent variable) should be statistically significant. Second, the magnitude of the explanatory power($R^2$) in model 1, model 2 and model 3 should be gradually increased. Third, the regression coefficient of independent variable and interaction term of moderating variable(independent variable * moderating variable) should be statistically significant. As shown in <Table 5>, the changes in the significant probability F among Model 1,
Model 2 and Model 3 were all statistically significant \((p = 0.000)\). In addition, although the increase in magnitude of the explanatory power \((R^2)\) of each model was small, the magnitude was found to be sequentially increased \((\text{model 1} = .207, \text{model 2} = .213, \text{model 3} = .214)\). However, the regression coefficient of the interaction term (education & training * Feedback of education & training) in Model 3 was not statistically significant \((\beta = .033, p = .684)\). Based on the results of the statistical analyses, it can be understood that feedback of education training has moderating effects on the relationship between the education and training of indefinite-contract workers and their performance work; however, it is not statistically significant.

**Table 5. Results of regression on the moderating effect of feedback of education & training on performance.**

<table>
<thead>
<tr>
<th>Performance (Dependent variable)</th>
<th>F</th>
<th>(R^2)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Education &amp; training</td>
<td>46.28</td>
<td>.207</td>
<td>.000</td>
</tr>
<tr>
<td>Model 2: Education &amp; training + feedback of education &amp; training</td>
<td>23.88</td>
<td>.213</td>
<td>.000</td>
</tr>
<tr>
<td>Model 3: Education &amp; training + feedback of education &amp; training + education &amp; training * feedback of education &amp; training</td>
<td>15.90</td>
<td>.214</td>
<td>.000</td>
</tr>
</tbody>
</table>

### 4. Discussion

#### 4.1. Summary of the research findings

The main purpose of this study is to statistically verify whether the education and training of indefinite-term contract workers in local governments have a positive effect on their performance. In addition, this study conducted an empirical analysis on the moderating effect of the variable of feedback of education and training on the relationship between education and training of indefinite-term contract workers and their performance. As a result of analyzing recognition survey data collected from personnel officers in local governments, the education and training provided to indefinite-term contract workers were verified to have a statistically significant positive effect on their performance. In fact, although it was not statistically significant, feedback of education and training - the level at which results of education and training of indefinite-term contract workers were reflected in the personnel management - showed a moderating effect on the positive relationship between education & training and performance.

#### 4.2. Implications and contributions of the research

As discussed earlier, education/training of employees provided in public organization, including governmental organization, to improve job competency and attitudes towards their duty was verified to have a positive relationship with the level of employees’ performance. In other words, the results of this study showing a significant and positive relationship between education/training of indefinite-term contract workers in local governments and their performance can be considered to be in accordance with the analysis results of previous studies. Nevertheless, what is regretful is that personnel officers in local governments recognize that education and training of indefinite-term contract worker provided at the general level as illustrated in *Table 2*. It implies that the local and central government organizations need to actively develop education and training programs to improve the ability and job performance of indefinite-term contract workers in local governments along with the preparation of guidelines on effective management of education and training. Next, feedback of education and training, or the degree at which the result of education/training is reflected in the personnel management, was
observed to have a moderating effect of some degree on the positive relationship between education and training of indefinite-term contract workers and their performance. As discussed earlier, mere provision of education or training does not automatically guarantee a high level of performance of the trainees. Rather, if qualitative or quantitative evaluation of employees who participated in a training is not performed following the training or the evaluation results are not properly reflected in the personnel management, it will be difficult to expect to obtain the positive effects of education and training on the performance. Considering such findings, efforts should be made to develop guidelines for the development and operation of high-quality programs for indefinite-term contract workers in local governments as well as to establish an institutional system in which results of training are appropriately reflected in the personnel management for indefinite-term contract workers.

The analysis results of this study have the following importance and expected effects. First, theoretically expected effects of this study; majority of previous studies on the indefinite-term contract workers of local governments were exploratory studies discussing the concept, status, or related regulations of such workers. In contrast, this study contributes to the theoretical expansion of existing studies on the indefinite-term contract workers by providing empirical evidences through quantitative analysis on the relationship between education/training and performance, which is one of the main areas of personnel management. Second, practically expected effects of this study; the positive relationship between education/training and performance of indefinite-term contract workers and moderating effect of the feedback of education and training on the positive relationship make contribution to presenting concrete grounds for policy and institutional preparation for the design and operation of education/training programs for indefinite-term contract workers in local governments and linkage between results of education/training and personnel management.

4.3. Limitations of the study and recommendations for future research

The main limitations of this study, which also make recommendation for future research on indefinite-term contract workers are as follows. The survey subject is the most crucial limitation among other limitations of this study. The questionnaire used in the analysis of this study is based on the survey on the awareness of personnel officers in charge of indefinite-term contract workers, rather indefinite-term contract workers, in local governments. In other words, the core limitation of this study is that the measured values of the dependent, independent and moderating variables included in the analytical models do not reflect the self-recognition level of indefinite-term contract workers. Therefore, a quantitative analysis based on survey of indefinite-term contract workers in government organizations is recommended for the future research on indefinite-term contract workers. Also, the fact that the analysis result and hypothesis verification of this study were conducted based on the survey data collected in a single year is a limitation of this study. Considering that quantitative research on indefinite-term contract workers by government organizations has been initiated, future research on indefinite-term contract workers should make efforts to verify the relationship between key variables by collecting and analyzing data over several years.

5. References

5.1. Journal articles


5.2. Books


5.3. Additional references


6. Contribution

6.1. Authors contribution

<table>
<thead>
<tr>
<th>Author</th>
<th>SYJ</th>
<th>Initial name</th>
<th>Contribution</th>
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<td></td>
<td></td>
<td>-Set of concepts ☑</td>
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<td></td>
<td></td>
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<td>-Getting results ☑</td>
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<td>-Analysis ☑</td>
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<td></td>
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<td>-Corresponding ☑</td>
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</tbody>
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6.2. Author profile

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B.A. Korea University
M.A. Indiana University
Ph.D. University of Baltimore

Research field

Major career
- 2016~2018. Korea Research Institute for Local Administration, Associate Research Fellow
- 2018~present. Keimyung University, Assistant Professor

6.3. Funding agency

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