Identifying the process of national knowledge creation and learning and evaluating its impact on gross domestic product, considering the intermediate role of national intelligence

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ABSTRACT

Knowledge creation and learning is the creation of new knowledge, or the replacement and improvement of the existing knowledge through social relations and organizational partnerships. The creation and application of knowledge has a major role in increasing wealth in a knowledge-based economy. The problem is that knowledge creation and learning has not been investigated at the national level yet. In this regard, by applying qualitative-quantitative methods, based on Delphi technique, the procedure of identifying and explaining the processes of national knowledge creation and learning has been discussed first. Then by using exploratory and confirmatory factor analysis, a significant t-value of more than 1.96, between the identified dimensions and the variable national knowledge creation and learning, was obtained which was acceptable. Additionally, the impact of the process of national knowledge creation and learning on GDP was measured through conducting a survey and using a questionnaire, while taking the mediating role of national intelligence into account by using Sobel test. It was found that by including the mediating variable of national intelligence, the standardized beta for the relationship between national knowledge creation and learning, and gross domestic product was reduced from 0.80 to 0.18, but it is significant. Therefore, the variable national intelligence plays the role of a partial mediator; in other words, while the impact of national knowledge creation and learning, as the main variable, is maintained, the mediating role of national intelligence also affects GDP.

Literature reviews show that no study has been conducted on creating knowledge at the national level yet; therefore, it was not possible to rely on literature review for determining the indicators of the process of national knowledge creation, and what had been obtained by reviewing the literature was merely the indicators of knowledge creation at an organizational and meta-organizational level. Accordingly, in order to identify the indicators of national knowledge creation, Delphi technique was used. Through delphi method and by using the opinions of experts in the field of knowledge management, the processes of socialization, externalization, combination, culturalization, application, and internalization have been identified. Then by using structural equation modelling, the effects of each factor on others were investigated. The exploratory factor analysis of the processes of national knowledge creation showed that socialization, externalization, combination, culturalization, application, and internalization are the dimensions of national knowledge creation. The results of the confirmatory factor analysis show that the process of national knowledge creation affects GDP, and any positive change in the process of national knowledge creation is associated with a positive change in GDP. The results show that the variable national intelligence affects GDP. Finally, the mediator variable is entered, and the results indicate that in the presence of the variable national intelligence, the standardized beta for the relationship between the national knowledge creation and GDP has been reduced and is also significant. Therefore, the process of national knowledge creation has an impact on GDP through the mediating effect of national intelligence, and the mediating role of national intelligence has been confirmed.