Short-form knowledge-based economy scorecards

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Abstract

Research on knowledge-based economy has increased noticeably in recent years. Notably, how to evaluate the knowledge-based economy competitiveness has already attracted a lot of attention worldwide. However, some complex scorecards provide abundant information, but restricted to improper construct factors and weight allocation and cost and fit considerations, and few scorecards can meet the requirement of conciseness, accuracy, and efficiency. Thus, this work used the Knowledge-based Economy Scorecards (KES) of World Bank, applying the linear structural relation model to develop the short-form Knowledge-based Economy Scorecards (S-KES) and identify the cross-validation of the S-KES model. Overall, this finding reveals that the reliability and validation of the KES model are not satisfactory. In contrast, those of the S-KES model are improved though the observed variables in number of the S-KES model decrease. Moreover, the cross-validation of the S-KES model was accepted not only the loose replication strategy but the tight replication strategy. Overall, the S-KES model seems a concise, efficient, and substitutive scorecard for KES model.

Keywords and phrases: Knowledge-based economy scorecards, short-form, cross-validation.

1. Introduction

As noted by OECD [12], because of the innovative applications of information communication and technology (ICT), knowledge has become the key to national competitiveness instead of land and capital in the past decades. Notably, after the new economy paradigm the United States created the longest economic expansion in the 1990s, some countries have