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National intellectual capital as an indicator of the wealth of nations: the case of the Baltic States

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Abstract

The aim of this study is to assess national intellectual capital of the Baltic States in the context of Europe and compare the results of assessment with other indicators of nations: GDP per capita, Human Development Index, rankings of the World Competitiveness Scoreboard. Results of empirical research carried out across 28 European countries in 2007-2011 are discussed in this paper. According to them, the overall national intellectual capital index of the three Baltic States among the European countries is relatively different: Estonia ranks 9th, Lithuania – 21st, and Latvia – 24th. The GDP per capita of all the Baltic States looks fairly similar. Contrary to it, the obvious Estonian gap according to the Human Development Index and the rankings of the World Competitiveness Scoreboard is observed. Consequently, trends of the national intellectual capital index, the Human Development Index and the rankings of the World Competitiveness Scoreboard can be considered as coincident.

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1. Introduction

National intellectual capital (IC) is now largely recognized as the most important source of the competitiveness and productivity of nations. It includes the hidden values of individuals, enterprises, institutions, communities and regions that are the sources for wealth creation, nourishment and the cultivation of future wellbeing (Bontis, 2004). The World Bank and other global organizations recognise investment in IC as a crucial factor in determining economic growth, job creation and living standards.

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Most researchers investigating measurement of national IC (Bontis, 2004; Bounfour and Edvinsson, 2005; Pasher and Shachar, 2005; Weziak, 2007; Hervas-Oliver and Dalmau-Porta, 2007; Lin and Edvinsson, 2008; Lin and Lin, 2008; Stam and Andriessen, 2009) acknowledge that there is a need to assess this kind of resource. Bontis (2004) emphasizes that it is essential to have a mapping system to describe the intellectual capital of nations and systematically to account and follow the evolution of intellectual capital development.

Over the past few decades, different initiatives of intellectual capital measurement have been implemented at national and regional levels (Sweden, Denmark, Israel, the Arab region, the Nordic countries, the EU projects, etc.). The number of regions investigated constantly increases. However, the Baltic countries are usually left outside the sample boundaries of different European studies.

The main goal of the present study is to assess national IC of the Baltic States in the context of Europe and compare the results of assessment with other indicators of the wealth and competitiveness of nations. In order to achieve this goal the following tasks are being solved:

1. The methodology of assessment of the national IC is being investigated.
2. The technique for the assessment of the national IC is being proposed.
3. The national IC level of the Baltic countries in the context of Europe is being assessed.
4. The values of the national IC level of the Baltic countries are being compared to other indicators of the wealth and competitiveness of nations: GDP per capita, Human Development Index (HDI), rankings of the World Competitiveness Scoreboard (WCS).

So, how could we measure the IC of nations? One of the most popular indicators designed to assess national IC is the National Intellectual Capital Index (NICI), introduced by Bontis in 2004. Most of the key methodological guidelines emerging during the last decade are based on the essence of NICI. In most of the research authors employ a set of indicators, both quantitative and qualitative. Usually, they group them into the four prevailing categories of IC: human capital, market capital, process capital and renewal capital. Different composite indices are calculated and causal interrelationships between them and a region's economic performance are investigated afterwards. Finally, different recommendations and suggestions are provided based on the acquired results.

In the most recent research which is being done by Weziak (2007), Hervas-Oliver and Dalmau-Porta (2007), Lin and Edvinsson (2008), Lin and Lin (2008), Stam and Andriessen (2009), distinctive sets of indicators explaining national IC are proposed. Selection of indicators is usually based on different factors: (1) popularity; (2) strong reasoning within different studies; (3) individual expert discretion; (4) interrelationships between composite IC indices and a region's economic productivity; etc. Of course, validity is a core desirable attribute for selected indicators. Unfortunately, application of the highly valid indicators in a large-scale sample research often faces problems of data availability.

Reasoning of IC indicators is often based on their links with economic productivity (usually GDP per capita or GDP per capita, PPP). It is usually assumed that strong interdependence between IC indicators and economic productivity refers to their significant impact on it. But for some reasons it can be treated otherwise. Misleading assumptions can be determined by the time lag that usually exists. A synergistic effect of indicators may also distort the assessment of impact. Factors unrelated with IC such as the level of natural resources or the efficiency of national strategy may have an influence on economic productivity. Hervas-Oliver and Dalmau-Porta (2007) argue that each nation has a distinctive knowledge platform associated with a certain level of IC stock and economic performance (GDP). The behaviour of a particular unique combination of IC components is usually quite difficult to assess and foresee within the unpredictable economic environment. Nevertheless, composite indices integrating different IC indicators provide useful information.

The Human Development Index and rakings of the World Competitiveness Scoreboard represent far more recent approach to assess wealth creation and competitiveness of nations. These rankings cover some issues related to the national IC. The HDI ranks nations according to the life expectancy, education and income. The World Competitiveness Scoreboard refers to the infrastructure, business and government efficiency as well economic performance of nations. Therefore, the reasoning of IC indicators based on their links with the mentioned rankings and comparison of composite IC indices with them make sense and can be of scientific interest.