

# Knowledge as a Main Factor Influencing National Competitiveness

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**Abstract** Under conditions of globalization every country wonders about national competitiveness. Competitiveness is a multidimensional feature of an economic entity that operates in a market economy describing its economic performance. The final goal of national competitiveness is to create welfare which the most general indicator is a level of earnings. Other indicators identified in many studies, such as ability to export, attractiveness, ability to adjust, etc., should be seen as factors, which lie in the bottom of the national competitiveness hierarchy. The factor of knowledge in this hierarchy takes important place between basic factors and the final goal of country's competitiveness.

This paper analyzes a meaning of the national competitiveness and represents the most important influencing factors.

**Keywords** – national competitiveness, factors of competitiveness, knowledge.

## I. INTRODUCTION

Many studies have been done analyzing national competitiveness in different aspects. Also there are many attempts to define this phenomenon and to identify the main factors influencing the national competitiveness, but still, there is no accredited theory and classification of factors. Under conditions of rapid environment changes this attempt becomes more and more difficult. The understanding about competitiveness has changed during centuries and today its meaning is broader and involves more aspects. The factors influencing competitiveness also have changed over the centuries – in earlier times the competitiveness was related just to natural recourses, production costs and trade, but today knowledge has a great significance as well.

The aim of this paper is to identify factors, which influence competitiveness of a country and to determine the importance of knowledge which is the main factor on the national competitiveness. In order to achieve the stated aim a meaning of national competitiveness, as the basis for further analysis, must be determined.

## II. NATIONAL COMPETITIVENESS DEFINITION

Many scientists [1, 2, 3, 4, 5] agrees that national competitiveness and it's influencing factors where started to analyze in XVI century. Still there is no pure competitiveness theory, but many different concepts, trying to provide a framework for competitiveness, were proposed. However these concepts have changed during centuries and nowadays a meaning of national competitiveness is broader and involves more aspects.

Among many attempts to define national competitiveness the work of Trabold (1995) [7] looks the most systematic [4]. The author highlights four important aspects defining national competitiveness:

- ability to sell (export ability);
- ability to attract (location);
- ability to adjust;
- ability to earn.

These aspects later were used by many other authors [4, 6] trying to broader and more clearly define the national competitiveness. More definitions of national competitiveness are presented in Table 1.

TABLE 1. Definitions of national competitiveness

Author/source (year)	Definition of national competitiveness	The main aspects
Scott and Lodge (1985) [8]	a nation state's ability to produce, distribute and service goods in the international economy...., and to do so in a way that earns a rising standard of living	Ability to service goods; rising standard of living
Fagerberg (1988) [9]	the ability of a country to realize central economic policy goals, especially growth in income and employment, without running into balance of payment difficulties	Policy goals; growth in income and employment
Porter (1990) [10]	the only meaningful concept of competitiveness at the national level is national productivity	Productivity
Oughton and Whittam (1997) [11]	long run growth in productivity and hence rising living standards, consistent with increasing employment or the maintenance of near full employment	Productivity, rising living standards, increasing or full employment
European Commission (2001) [12]	the ability of an economy to provide its population with high and rising standards of living and high rates of employment on a sustainable basis	High standards of living; high rates of employment
IMD's World Competitiveness Yearbook (2003) [13]	the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people.	Value creation for enterprises; prosperity for people
Aiginger (2006) [14]	the ability of a country or location to create welfare	Ability to create welfare
World Economic Forum (2008) [15]	the set of institutions, policies and factors that determine the level of productivity of a country	Institutions, policies and factors; productivity

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It seems that the most important aspects mentioned in defining the national competitiveness are related to country's productivity and welfare of its citizens. Trabold (1995) [7] specifies that ability to create wealth is more important than the wealth itself, because it guarantees the substitution in case the wealth is lost. Aiginger (2006) [14] agrees that competitiveness should be defined as the "ability to create welfare" and furthermore that any comprehensive application of this concept has to include and "outcome assessment" and a "process assessment". Thus, the welfare of a nation is assumed to correlate primarily with its per capita income. The second most important component could probably be the employment/unemployment prospects. Oughton and Whittam (1997) [11] highlighted a long run growth in productivity as a condition for rising living standards, also emphasized the importance of increasing employment.

Many scientists evaluating rise in living standards highlighted country's and its capita income. According to Porter (1990) [10] the resource of income is country's productivity gains. Productivity in its turn requires growth of export. Thus competitiveness of a country could be defined as an ability to compete for export markets [16].

However, there is opinion [17] that the use of these and other aspects defining the national competitiveness is just identification of factors influencing competitiveness.

### III. FACTORS INFLUENCING NATIONAL COMPETITIVENESS AND KNOWLEDGE AS THE MAIN ONE

There are many different factors influencing the national competitiveness which were identified in the literature. But there is no generally received classification system of them. As it was mentioned before, the most important of these factors are often used to define the national competitiveness meaning.

The understanding, what influences the national competitiveness, has changed over the years. The ideas, or theoretical foundations, that underlie policies which aim at securing the economic superiority of a nation over other nations (whether criteria are "economic wealth", "goods", "trade" or "productive power") can be traced to the times of mercantilism [2]. The *zero-sum* theory of trade under mercantilism (XVI-XVIII) was gradually replaced by classical economists Adam Smith's stress on the value of the free market. In his theory of absolute advantage A. Smith (1776) states that the one who is able to produce with the lowest cost in the world has the absolute advantage and thereby it determines basis of competitiveness.

In the century XX competitiveness of country started to be identifying with developing resources. Important factors such as culture (Weber, 1905), businessmen's role (Schumpeter (1942)), effective management (Sloan (1963) and Drucker (1969)), science, innovations and technologies (Solow (1957) et. al.) information and knowledge (Negroponte (1995) et al.) [18] were identified.

Thus, different factors influencing the competitiveness of a country have been stressed according to different levels of development of production processes and economic thought.

In the past countries achieved success with the existence of natural resources, more modern technology or greater capital and skills that made them wealthier than their competitors. Optimum combination of these four factors was of cardinal importance when defining the level of competitiveness. At the present day the quality of labor, its education and skills has become an essential key for success [19], as a success of the country means high living standards of its citizens.

As it was mentioned before, defining the national competitiveness usually the main factors influencing it are highlighted. Kitzmantel E. (1995) even suggests to see competitiveness as "general welfare" and all other interpretations, including trade issues, –as major factors of competitiveness [17]. The most often mentioned factors of the national competitiveness by many authors are [4, 7, 20]: level of savings and investment rate, level of the real exchange rate, export and import, size of the domestic market, attractiveness, economic environment and production costs, productivity et al.

Trabold's (1995) [7] in his work systemized all factors into groups. Using these groups the author formed a hierarchic system, whereas "ability to earn" rests on the three other aspects (see Fig. 1). This approach sees ability to earn (level of earnings) as the most general indicator of country's competitiveness, whereas ability to export, attractiveness (location) and ability to adjust are seen as factors. At the same time, in regard to (foreign) investment, ability to export and attractiveness function as sophisticated phenomena are independent indicators of competitiveness of a country. Their level and dynamics is determined by the wider complex of factors with complicated internal structure. Knowledge in this hierarchic system takes place between basic factors and the final goal of country's competitiveness – ability to earn.

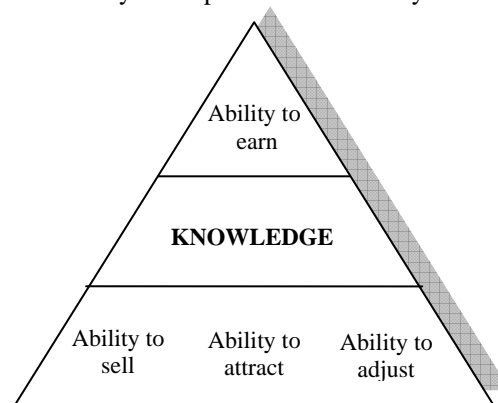


Fig. 1. Hierarchy of the national competitiveness [7]

Ability to sell has significant influence to countries competitiveness – country become more or less competitive if, as a result of cost-and-price developments or other factors, her ability to sell in foreign or domestic markets has deteriorated or improved (Balassa, 1962) [6].

Countries attractiveness is understood as the possibility to attract outside investments such as financial capital and even human capital. One of the most important single indicators to assess place attractiveness for investments is the level of foreign direct investment [21]. Investors, in regard to

investing capital, will look for the best location to invest the money and will choose the place which will yield the highest possible returns. The inflows of capital from abroad therefore stand for competitiveness as the places with the highest possible returns will be more competitive and therefore will attract more investments.

The competitiveness also significantly depends on the ability to react on the various challenges of the modern society. Thus the ability to adjust to changes in the environment is seen as being crucial for the competitiveness of countries as a whole. Two different concepts here can be summarized: the ability to adjust political procedures as well as the economic system as a whole (social level) and the ability to adjust via innovations and technological change (business level) [6].

In one hand an ability to earn is understood as one of the factors influencing country's competitiveness, and on the other hand, it is the main goal of the competitiveness. As a factor, it defines the "result" of an economy. It is assumed that a higher degree of competitiveness leads to a higher GDP or income and, therefore, to the main goal of competitiveness – increase of living standards level.

Under conditions of changing environment to stay competitive countries must continuously look for the ways of improvement in use of all productive inputs – people, raw materials, technologies etc. To make the decision right the importance of knowledge arises. Investing in knowledge is certainly the best, and maybe the only, way to foster economic growth and create more and better jobs, and, at the same time, to ensure social progress and environmental sustainability.

Thus knowledge factor (called most critical factor [18]) without other well known basic factors has an increasingly significant influence on the competitiveness increase. The rate of country's competitiveness increase depends on the abilities to acquire and manage knowledge.

#### IV. CONCLUSIONS

There is no pure national competitiveness theory, but there are many different concepts trying to define it. The analysis of many authors' works showed that there are a lot of different understandings about the national competitiveness. Usually authors define national competitiveness according to their research aspects. However, many of these definitions, instead defining the phenomenon, identify factors influencing the national competitiveness.

There is a strong opinion that the national competitiveness must be understood as an ability of country to create welfare for people. So this could be defined as the main goal of competitiveness while other aspects, such as an ability to sell, attract and adjust are the basic factors.

Achieving the main national competitiveness goal, without mentioned basic influencing factors, knowledge takes a significant importance. Today knowledge is the most important developing resource in every country, which guarantees a steady progress.

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