

**A DESIGNED MODEL OF SUSTAINABLE COMPETITIVENESS  
FOR SLOVAK INDUSTRIAL COMPANIES IN THE GLOBAL  
CONTEXT OF SUSTAINABLE CORPORATE SOCIAL  
RESPONSIBILITY**

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**Abstract**

*In this article we introduce a model of sustainable competitiveness, which we created on the basis of a long term study of literature and analysis. This article is divided into several parts. In the first part, we will introduce the problem of competitiveness and sustainable competitiveness. The second part is focused on the basic aspects for the creation of the model. In the third part the model itself is introduced and also an explanation and description of the mode is given.*

**Key words**

*sustainable competitiveness, competitiveness, corporate social responsibility, sustainable development, competitive models*

**INTRODUCTION**

The business environment is changing rapidly. In the last decade we can observe market requirement changes and also changes in the market itself. We consider the economic crisis to be a very important and influential trigger of global market changes. We also believe that it is necessary to react to these changes. The best reaction is to transform the way how we think about business. Changes in the global environment are nowadays characterised by: an increased interest amongst people about the social, ecological and economic environment. The interest regarding these values defines new consumer equipment and also the way how competition is viewed. Our research is based on these ideas.

**COMPETITIVENESS IN TERMS OF SUSTAINABLE DEVELOPMENT**

As early as the 1970s, it was recognised that uncontrolled population growth, production, pollution, consumption, etc., results in an environment of unlimited unsustainable resources,

discussion about sustainability and sustainable development. The result of the adverse impact of the global crisis has created specific EU efforts to redress and increase the competitiveness of individual Member States in the form of documents that outline how states should go about achieving competitiveness. The documents of the EU aiming to mitigate the impact of the global crisis began to combine competitiveness with sustainable development. Thus, the suggestions and recommendations for improving the competitiveness of individual states began to align with sustainable development.

The view of competitiveness previously defined as rivalry or fighting, often between more or less equal rivals (Karlof, 2006) has diametrically changed by defining a new concept of sustainable competitiveness. There are three approaches to sustainable competitiveness in general. The first defines sustainable competitiveness as achieving a long lasting competitive advantage. The second one is also based on achieving advantage in the long term but simultaneously the company must observe the rules of sustainable development. **We define sustainable competitiveness as: fulfilling the competitive advantage in the long term but simultaneously the company must observe the rules of sustainable development and also must contribute to the creation of a social, ecological and economic environment.**

There are basic differences between competitiveness and sustainable competitiveness outlined in this part. Typical features of achieving sustainable competitiveness include: leadership with vision, integrity and inspiration, long-term contracts, building partnerships; sustainable management of quality, competitive strategies in line with CSR, customer orientation, developing the creativity of employees, building good internal relations, transfer of experience, taking care of the quality of the non-working life of employees, investment in the future workforce, continuous product innovation, patents, a dynamic product line, building relationships with suppliers, continuous evaluation of suppliers, efficient use of materials and energy, investment in eco solutions in logistics, relevant labour costs, building relationships with stakeholders, truthful advertising, product reliability etc. Typical features of achieving competitiveness include: a focus on cost, short-term profits, leadership without a vision of winning, a competitive strategy of rivalry, the creation of incentive packages, disregard for the needs of employees, the division of work and non-working life of employees, monotonous work without self-realisation, stimulating the competitive environment, a lack of investment in technology, outermost research centres, externalisation of costs, minimising costs, short-term relationships with suppliers, low labour costs, increasing performance at the expense of human resources, consumer advertising. These selected features we have chosen based on the study of literature from the author as Amadeo (2012), Antořová (2013), Birknerová (2012), Kádár, Kádárová (2010), Karpissová (2008), Nemcová (2012), Nosál' (2014).

## **THE MODEL OF SUSTAINABLE COMPETITIVENESS - BASIC ASPECTS FOR CREATION**

Company strategies proceed from two ways how to create competition. The first way is on the basis of price and the second one is based on differentiation. Innovation is at the forefront of this differentiation area. It means exactly: the creation of added value on the basis of innovation, education, creation of an infrastructure and process improvement. This opinion is one of the aspects for the creation of our model. A company, which enters a local or foreign market, is a part of the global market, but this company must respect the rules that are followed from the country in which it operates. This idea presents another important aspect for the model creation. Our sustainable competitiveness model has two forms of output. The first output is a graphical representation of the model; the second output is a

software application. The created model proceeds from a detailed study of literature and from the performed analysis. By reviewing the literature we came to several important conclusions, these conclusions constituted admission requirements to meet the model created by us for sustainable competitiveness.

- During the creation of the model we proceeded from the assumptions of the development of all components of the environment.
- Through the SC model we tried to contribute to building a more stable social environment.
- Through the SC model we tried at least in part to contribute to building a more stable ecological environment.
- We were dealing with the analysis of the global business environment.
- The sustainable competitiveness model respects the strengths and weaknesses of Slovak industrial companies.
- The sustainable competitiveness model consists of three research analyses. The first analysis is an analysis of global competitiveness of the Slovak Republic; we conducted a deeper processing of a GCI report. A second analysis was conducted through a questionnaire survey among active enterprises. The objective of this questionnaire was to provide the state of competitiveness of Slovak industrial companies and to state the concept of CSR. The last analysis was performed through a controlled interview. Its aim was to ensure the status and potential for the development of Slovak industrial companies in the field of sustainable competitiveness.
- The sustainable competitiveness model is based on challenges to strengthen the sustainable competitiveness of enterprises.
- The model focuses on creating competitive advantage through innovation.
- The model is based on the idea that, there is only one alternative for solving the problem of sustainable competitiveness and that is the acceptance of CSR concept on the global and local level.

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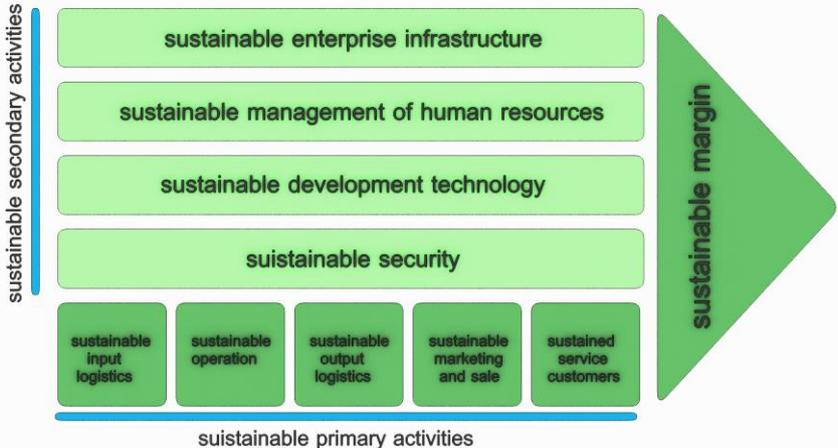
The sustainable competitiveness model consists of several parts (see Fig. 2). The basic model's elements are ecological, economic and social pillars. These three pillars are based on our understanding of sustainable competitiveness. Simultaneously, these three pillars are also pillars of sustainable development. These three pillars are displayed vertically in the proposed model. Every other element of this model is built on these three pillars.

Other building elements of the model are three horizontally arranged levels/spheres of influence. Spheres of influence determine factors of sustainable competitiveness in this way: Global policy is situated on the top of the model. Policy of the EU is situated under the global policy. A national economic policy leads off from the policy of the EU. This deployment shows us the impact of individual policies. These policies provide decision levels (the uppermost global politics and the lowermost local politics). The next element of the model represents the level of global competitiveness of the country. This level comes from the national policy of state. Global competitiveness of the Slovak Republic is defined by global competitiveness factors of the country whose factors are based on the global competitiveness report of countries. This report was created by the World Economic Forum. The result of this report is a chart. At the top of this chart is situated the best evaluated country, the country with the highest index of sustainable competitiveness.

This determinants represent: the level of innovation, business sophistication of the country, institutions, infrastructure, macroeconomic environment, health and elementary education, higher education, goods market efficiency, labour market efficiency, financial market development, technological readiness and market size. There is a relationship between the company and global competitiveness of the SR. That argument we have already confirmed through controlled interview. The level of global sustainable competitiveness determines the level of global sustainable competitiveness of a company. It is because the state creates conditions for development and the existence of companies and also the position of the state is dependent on the level of companies in the chart of global competitiveness. The force of the impact is determined by the size of enterprises.

At the beginning of this section, we introduced the building elements of the model. In the next part, we will focus on the importance of the elements and correctness of placement. The increased interest in the social pillar in the field of transnational, national and enterprise is an urgent need and one of the basic requirements for the operation of not only markets, but also the whole society. All new models based on modern economics, hence our model, must be supported and respect the requirements arising from improving the quality of the social environment. Global policy, policy of the EU, national policy of states and enterprises must respect these requirements. Questions of increasing the quality of the social environment at the enterprise must enter the decision-making process at each level of the organisation just as the requirements arising from the quality improvement of the economic and ecological environment. The economic, ecological and social pillars are essential to building sustainable development in the world, and therefore these pillars are integral parts of our model. Social, economic and environmental requirements have become part of global policies and are integrated into the EU (2020 Strategy) and economic policy. If the company wants to be successful in the global market and its goal is to increase sustainable competitiveness, these policies must respect and contribute to the sustainability of the social, economic and ecological environment. Enterprises should pay more attention to these policies, to increase their awareness of global changes, changes resulting from EU documents and economic changes of the country.

The enterprise in our model is shown in the form of a modified Porter’s value chain (see Fig. 1). This chain is created from primary and supporting sustained action. The modified Porter’s value chain was created by Šmída and Sakál (2011). The modified Porter’s value chain is based on M. Porter’s value chain.



*Fig. 1 Modified Porter's value chain (Šmída, Sakál., 2011)*

The enterprise is a living cell, not an isolated unit. An enterprise is defined by the environment of the company. The environment of the company is also characterised by the level of global sustainable competitiveness of the country. We focus on the global competitiveness of the SR and enterprises more deeply in the second form of output of our work. The model itself is shown in figure 2.

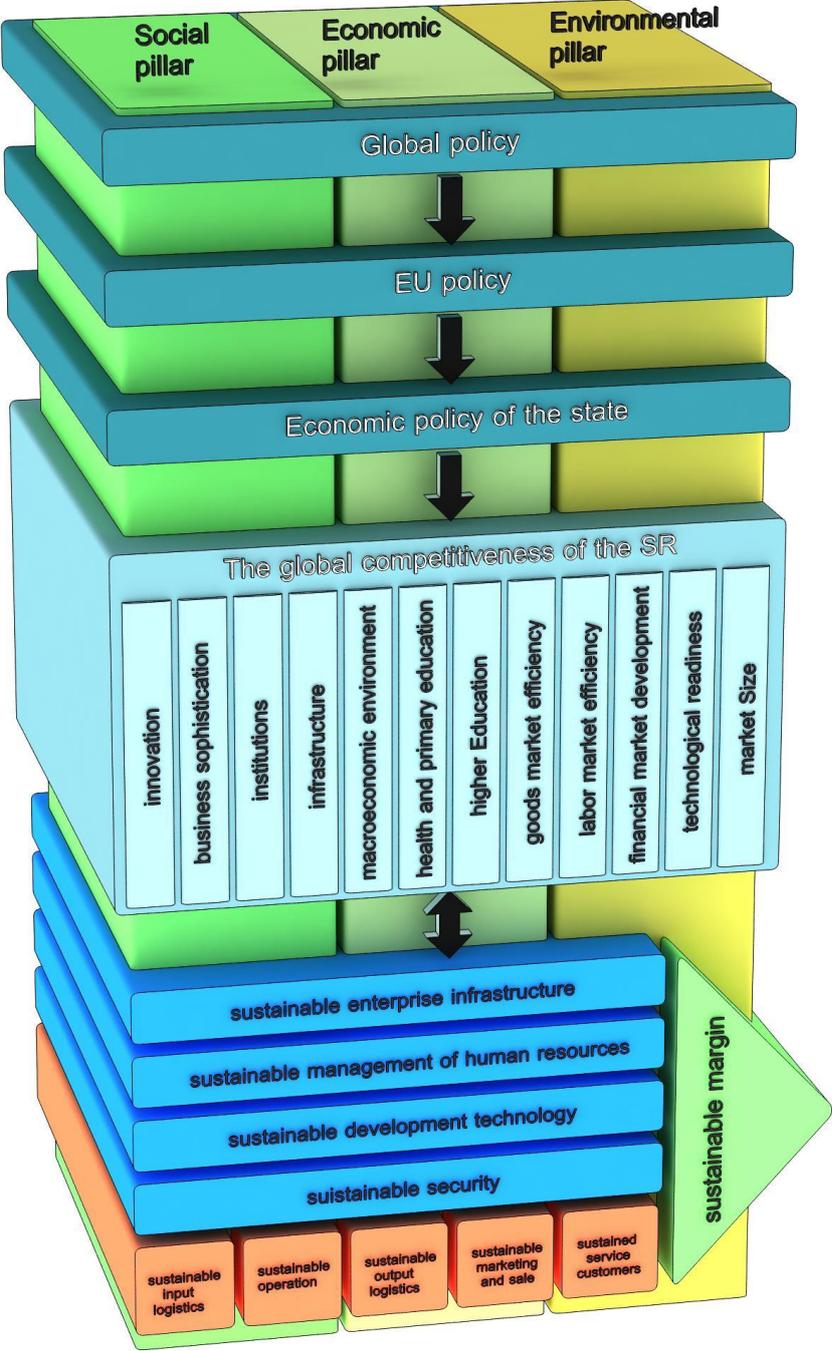
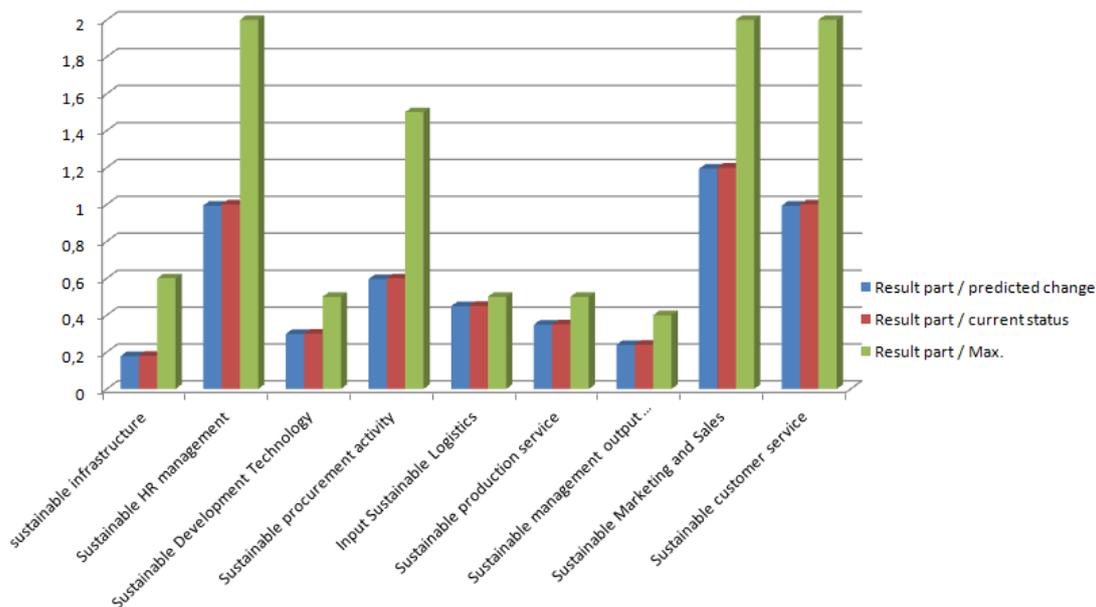


Fig. 2 Model of sustainable competitiveness (drawn by authors)

## **SOFTWARE APPLICATION FOR THE CALCULATION OF THE SUSTAINABLE COMPETITIVENESS INDEX**

The software application for the calculation of the sustainable competitiveness index is made in Microsoft Excel. Entries in the program are organised into five letters in order to improve transparency at work. Working with this software application is as follows. The user (company representative), will receive via e-mail the Excel file, which includes already pre-prepared entries. The user's task is to fill the first data - sheet program. The first list includes a set of questions that the users answer yes (in the form of registration 1) or no (0 enrolment form). These questions are set in advance by us identifying sustainable value-creating activities in the Slovak industrial companies. The outcome of the proposed platform is a graph. This graph is created on the basis of the results of the first questions. The graph shows the index of sustainable competitiveness of the company up to the present. The graph also shows the prediction of the future state of the index. Input data for the calculation of the sustainable competitiveness index is the initial evaluation of the activities already carried out by representatives of the company. Input data for the calculation of the sustainable competitiveness index is the initial evaluation of the activities already carried out by representatives of the company. The results are evaluated in the pre-prepared tables. The tables contain a set of formulas leading to calculation of the index.

The whole calculation is based on the existence of a relationship between the external environment and internal factors of increasing sustainable competitiveness of the company. The external environment is expressed by criteria based on the Global Competitiveness Report of countries, GCI index. The criteria are: innovation, business sophistication, institutions, infrastructure, macroeconomic environment, health and primary education, higher education, goods market efficiency, labour market efficiency, development of the financial market, technology readiness and market size. Internal factors increase sustainable competitiveness of businesses based on the modified Porter value chain. Numeric values for the fulfilment of pre-tables are based on interviews we conducted online with five representatives of various businesses. Through these interviews, we obtained the average value assessment, we determined weight - the importance of their internal operations and numerically evaluated the state between the external parameters and internal business venture. The result is a graph showing the development of individual major sustainable value-creating activities in the examined company in accordance with changes of various external parameters. For businesses more interesting, is the graph evaluating each of the main sustainable activities itself (Fig. 3). This chart compares the current status of the evaluation of the sustainable actions with the predicted state and the best possible achievable state.



**Fig. 3** Result chart (own processing)

## CONCLUSION

In the article, we introduced a new way how to think about competitiveness. We presented the new concept - sustainable competitiveness and we also presented the model of sustainable competitiveness. Our model collects very complex issues. Through the model, we try to show links between the external environment and sustainable competitiveness of companies. Apart from the graphical representation of the model we offered also practical application of the model in the form of a software application. The application was created in Microsoft Excel. We decided to use this program because of its accessibility for Slovak industrial companies.

## ACKNOWLEDGEMENTS

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