Assessment of the factors of sustainable competitiveness growth of the companies in Latvia and Lithuania

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Abstract: In the context of globalisation and rapid technological changes, competitiveness is closely related to productivity and sustainable competitiveness growth is possible only by the growth in productivity. It follows, that the objective of this article is to assess the growth of sustainable competitiveness in different industries' in Latvia and Lithuania. The following tasks have been implemented, to analyse the theoretical aspects of sustainability, productivity and competitiveness, and to reveal and assess the relationships between competitiveness and productivity. The following methods of analysis are used; an analysis and summary of the scientific literature, the theoretical and practical statements matching methods and analysis of the statistical data, total factor productivity and return on equity. Here are also methods, time and space limitations. The results show, that there is a link between the results of the competitiveness using various productivity assessment methods, but special attention should be given to technologies, innovation use and capital formation.

Keywords: capital; competitiveness; labour; regression; return on equity; ROE; total factor productivity; TFP; Latvia; Lithuania.

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1 Introduction

An important issue for every economist, policymaker or practitioner is the question, how to assess the competitiveness of companies and countries and how to ensure sustainable competitiveness development. Nowadays, competitiveness becomes a driving force of a country's development, so market players try to compete with others and are better. Competitiveness is seen as a broader category that includes productivity, profitability and uniqueness concepts and results. It is a highly controversial concept which defines a crucial policy target and strategies of activity, decision-makers' policy agendas (Aria et al., 2019). The concept of competitiveness emerged and developed in the USA at the end of the 20th century (Lotfi and Karim, 2016) and describes the satisfaction of the needs of consumers, even with strong internal and external influences and the need to efficiently use of available resources to maximise future returns. It is possible to compete with other companies (industries or countries) because the quality of the product will be greater or the application of new working methods and innovative technologies can be faster. Competitiveness can also be assessed using different valuation methods:

- Purpose – To reveal and assess the possibilities of the industry's sustainable competitiveness in Latvia and Lithuania. It is very important, because only investment to the most popular and productive sectors may lead to higher value-added and greater profit.
- Research methodology – To achieve the aim of the article the total factor productivity (TFP), return on equity (ROE) and comparative analysis methods are used.
- Findings – The most productive sectors in Lithuania are agriculture, forestry and fishing, manufacturing and wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities. In Latvia, the most productive industry is construction, financial and insurance activities and professional, scientific and technical activities, administrative and support service activities. It follows, that companies at mentioned sectors are working productively and purposefully use its equity and earns in comparison with the total shareholder's equity invested in it are greater.

- Research limitations – In this article, the time, methods and space limitations are applied: here are analysed the data of the 2008–2018 y.y. in Latvia and Lithuania using TFP and ROE methods.
- Practical implications – The improvement of the industry's competitiveness is possible due to the targeted management of the main productivity factors: labour and capital.
- Originality/value – Productivity is based on the maintenance of the industry's productivity due to the proper use of the production factors to create value-added. Also, are analysed the relation between TFP and ROE, which is very rarely described in other articles. It can be said, that there is no other similar analysis in the context of company's productivity assessment in Latvia and Lithuania, so here is the novelty of the article.

2 The features and concept of sustainable competitiveness

Economic development is the main objective of the business and key factors of the country's development. The purposeful use of existing workforce and capital and gain of profit is closely related to the ability to remain competitive. It follows, that competitiveness is one of the basic factors of economic development taking into account the situation and different areas and results of every sector activity.

Lotfi and Karim (2016) and Bondarenko et al. (2018) argue that competitiveness is related to three-dimension: time, place and form because it is defined as an ability to deliver services and products timely, inappropriate place and form. It follows, that competitiveness is a dimension of achievement motivation and empirical work to gain more profit (Spurk et al., 2019). At the same time, price should be lower than of their competitors and cover the costs of production, because competitiveness is defined as "the ability to profitably sell products/services and win or retain positions in their market compared with rivals (Aria et al., 2019) and achieve a higher market share (Topolyan et al., 2019)."

On the other hand, the OECD competitiveness defined as "the ability to pursue international competition at various levels (enterprises, industries, regions, countries or internationally), to be superior to others, to operate under a monopoly, to secure a high market share, an appropriate level of income and a relatively high level of employment (Borowski, 2015; Lotfi and Karim, 2016)." The long-term development at each sector and the higher profit is possible due to the innovation and innovative technology use because value creation directly affects competitiveness (Sánchez-Gutiérrez et al., 2017; Maheshwari and Vohra, 2018). In the context of globalisation, it leads to the preconditions for learning and applying modern technologies in activity (Zeibote et al., 2019). It follows, that here is the need for new skills and knowledge. Combining knowledge, skills, innovation and technologies, it is possible to compete in an uncertain and risky environment and create added value.

In this article, the competitiveness of the industries should be defined. The industry's competitiveness is perceived as the ability to increase its market share in the production and sale of high-quality products or services for the relevant market. It is competition between entities for the level of customer/raw material market, labour force and level of the innovation apply. This can be achieved by adaptation to the market needs, minimising

costs, expanding the product range or focusing on the niche chosen. Adaptation is characterised by four elements of the company's competitiveness: competitiveness potential, competitive advantage, competitive instruments and competitive position and it leads to sustainable development growth (Capps et al., 2019).

In economic terms, competition at company level is "a process where market participants, in pursuit of their own interests, try to make proposals that are more beneficial than others in terms of price, quality, delivery terms that affect decision making on transaction agreements (Soelaksono et al., 2018)." The application of competitive ability or potential by using the relevant competition instruments leads to the emergence of competitive advantage. Through the improvement of competitiveness factors better international trade outcomes, better use of production factors and quantity-quality evolution are ensured.

In this paper, the competitiveness at the industry's level is defined, where the competition takes place between companies of a similar profile when an available internal potential is used. Here are described main types of competitiveness, based on productivity, investment, innovation and property (capital). This is also complemented by key competitiveness theories: participation in competitiveness is based on participation in the world market, cost competitiveness theory based on costs, M. Porter's efficiency competitiveness theory based on efficiency (Borowski, 2015). In this case, the following factors are mentioned as essential aspects of competitiveness: institutional environment, macroeconomic situation, engineering infrastructure, which are purposefully managed for the overall growth of national competitiveness. In summary, competitiveness is a multifaceted category that can be analysed at different levels, but the article describes the competitiveness at the industry level and its specification.

2.1 Basic principles of sustainability and its relation with competitiveness

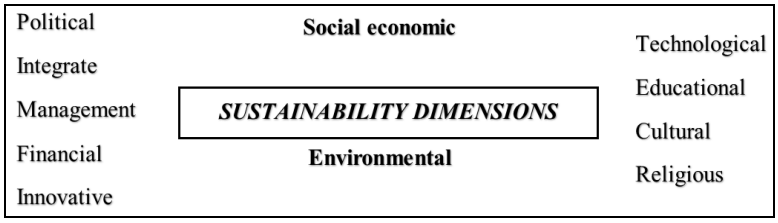
Competitiveness is a widely explored concept because it leads to welfare and a better economic situation, but nowadays more attention attracts the sustainable competitiveness concept. The concept of 'sustainability' is defined by the Brundtland Commission (United Nations, 1987) as "development that meets the needs of the present without compromising the ability to meet their own needs." It is possible only if is the interaction between the social, economic and ecological system and competitiveness development is achieved. Also, it is an important part of development, because include the integration of new approach and ideas at different levels: micro (business model, management system and intelligence project) or macro (country's development and economic situation) (Ordóñez de Pablos and Lytras, 2018).

Sustainability is a category that spread in different areas: economic, ecological, social, legal (political), financial and other. Many scientists explored sustainability multifaced and Figure 1 shows a set of sustainability components.

Figure 1 shows that there are different areas, which should be taken into account during the assessment of sustainability. In this case, here are 12 sustainability dimensions: political, integrate, management, financial, innovative, technological, educational, cultural, religious and three main (analysed in this paper) – social, economic and environmental. Trying to ensure sustainable development, it is necessary to ensure the representation of public interests, to unify the different interests of social groups and achieve the desired value. Also, it combines learning and creativity to achieve a balance

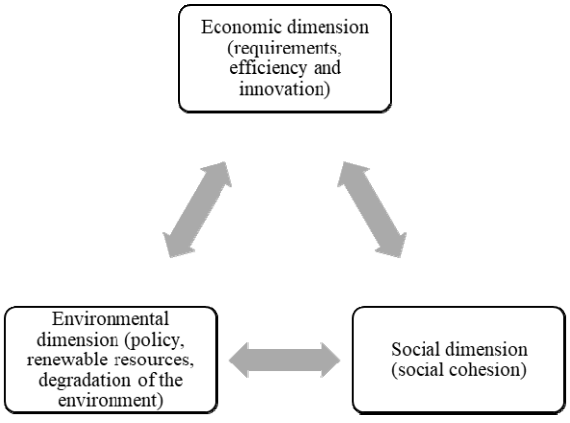
between supply and demand in the labour market and provide the financial resources for the meeting it needs.

Figure 1 Sustainability dimensions



Source: Compiled by authors based on Gupta and Racherla (2018)

Figure 2 Dimensions of sustainable competitiveness



Source: Compiled by authors based on Luo (2018), Ordóñez de Pablos and Lytras (2018), Despotovic et al. (2019) and Zatwarnicka-Madura et al. (2019)

World Economic Forum defines sustainable competitiveness as "the set of institutions, policies, and factors that make a national remain productive while ensuring social and environmental sustainability" and sustainable competitiveness is based on future competitiveness and ensures that society's present needs do not contradict the needs of future generations. It is a widely explored issue because it leads to welfare and better economic performance (Januškaitė and Užienė, 2018).

On the other hand, competitiveness is associated with the ability to maintain high living standards, create and maintain a high-quality product (Abreu-Novais et al., 2016; Ramlawati and Putra, 2018; Kalim et al., 2019). In this point of view, sustainable economic development and growth base on welfare creation. Here reveals the necessity to combine competitiveness principles and customer value. Sustainable competitiveness is related to customer value creation which is related to the combining relationship management, cost optimisation, profitability and technology use (Sánchez-Gutiérrez et al., 2017).

Nowadays, in the context of globalisation and innovation use, it is important to combine competitiveness and sustainable development. It can be realised applying

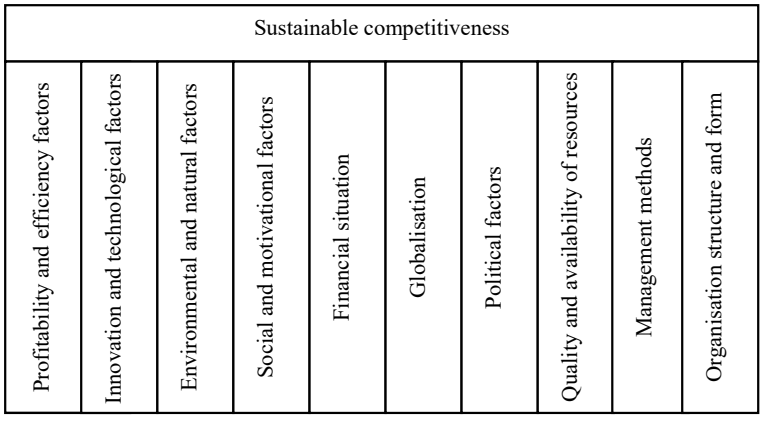
principles in different areas of sustainability. Talking about the three main components of sustainability (Figure 2): social responsibility, environmental protection and economic activity and its relations with competitiveness here are the main concepts that should be analysed – sustainable competitiveness.

Every dimension of sustainable competitiveness should be assessed in different ways. The social dimension is measured by social cohesion (Gini index and social mobility), access to basic necessities (healthcare and sanitation) and vulnerability to shocks (employment, informal economy, social safety and protection). The environmental dimension is assessed by a number of renewable resources and the environment situation) and economic dimension is measured by innovation level, employment level and capital amount (Ordóñez de Pablos and Lytras, 2018). Assessing the level of competitiveness many factors must be analysed. In this paper, sustainable competitiveness will be analysed mainly through the economic prism (also include environmental and social aspects) and its principles.

2.2 Relationship and influence of competitiveness and sustainability factors

Sustainable competitiveness ensures the 'fight' between service providers or producers of goods when they ensure the meet of customer's needs timely, in the appropriate form and at adequate price and at the same time paid the attention to the economic, environmental and social dimension. The ability to remain competitive (and also sustainable competitive) depends on many factors. Figure 3 shows the main factors that have a significant impact on sustainable competitiveness.

Figure 3 Factors impact on sustainable competitiveness



Source: Compiled by authors based on Gołębiewski and Podlińska (2015), Abreu-Novais et al. (2016), Lotfi and Karim (2016) and Toppinen et al. (2019)

Figure 3 shows that there are many factors that affect sustainable competitiveness. These factors can be internal and external (Gołębiewski and Podlińska, 2015; Abreu-Novais et al., 2016; Lotfi and Karim, 2016; Amin and Mohamad, 2017; Toppinen et al., 2019). The main internal factors, what is defined at firm-level: human capital, the feature of products and services, and company's/industry features. The main external factors, which

are defined on a global scale are productivity, efficiency factors, political factors, trade liberalisation, foreign influence, economic factors, demographic factors, technological and innovative factors, natural factors, cultural factors, globalisation, ecological factors, technological aspects and financial situation. At this article, based on Swab and Johnson (2019) and Toppinen et al. (2019), the main ten factors group are analysed: profitability and efficiency factors, innovation and technological factors, environmental and natural factors, motivational factors, financial factors, globalisation, political factors, quality and availability of resources, management methods, organisation structure and form. The main factors are the most important: innovation and technological factors, productivity, economic factors, social and motivational factors. These factors data are used for further assessment of certain industry competitiveness.

3 The assessment of sustainable competitiveness

Many scientists (Herciu and Ogrean, 2018) argue that competitiveness is conditional and not absolute and therefore depends on the advantages of competitiveness, technology, value for shareholders and customers and the company's competitiveness is a complex, deeply analysed concept. Porter (2004) argues that a company's competitiveness is a form of productivity because it defines the ability of companies to create added value from their core activity by using efficient methods and expressing that utility (Arroyo et al., 2017). Tan et al. (2016) complement this idea and claim that it is simply the ability to efficiently utilise the available resources to benefit themselves and better meet their customer's needs to increase their competitiveness. Because of this complexity and diversity, it is difficult to evaluate and define it.

Many authors (see Table 1) offer various methods to assess the competitiveness of different companies.

Table 1 Methods of the assessment of sustainable competitiveness

Methods of the assessment	*Authors of the sources (researchers)*
Return on equity	Hafez (2016), Arroyo et al. (2017), Gushchina and Privalova (2018), Maroro et al. (2018), Ramlawati and Putra (2018), Priyonoto et al. (2018), Soelaksono et al. (2018), Gupta and Krishnamurti (2019)
Return on assets	Hafez (2016), Herciu and Ogrean (2018)
Profitability ratio	Bieniasz (2016), Maroro et al. (2018), Ramlawati and Putra (2018), Gupta and Krishnamurti (2019)
Total factor productivity	Arroyo et al. (2017), Khokhlova et al. (2018), Ordóñez de Pablos and Lytras (2018), Soelaksono et al. (2018), Gupta and Krishnamurti (2019)
Revenues per employee	Herciu and Ogrean (2018), Khokhlova et al. (2018)
Dow Jones sustainability index	Herciu and Ogrean (2018)

Source: Compiled by authors based on a literature review

Based on the literature review (Bieniasz, 2016; Arroyo et al., 2017; Herciu and Ogrean, 2018; Maroro et al., 2018; Khokhlova et al., 2018; Ramlawati and Putra, 2018; Gupta and Krishnamurti, 2019) it can be said that in assessing competitiveness it is important to evaluate three factors: productivity, efficiency and profitability. Herciu and Ogrean

(2018) suggests evaluating the competitiveness of company's by defining its utility, innovation and sustainability, but these concepts have no unified definition and can be viewed from different perspectives as well as having different meanings and aspects of evaluation, so it is necessary to assess the company's competitiveness using two main methods (Hafez, 2016; Arroyo et al., 2017; Gushchina and Privalova, 2018; Maroro et al., 2018; Ordóñez de Pablos and Lytras, 2018; Priyonoto et al., 2018; Ramlawati and Putra, 2018; Soelaksono et al., 2018; Gupta and Krishnamurti, 2019): ROE and TFP as the methods, what include the main indicators of economic stability assessment.

3.1 Interpretation of the methods of assessment of sustainable competitiveness

Sustainable competitiveness can be interpreted in different ways at the micro or macro level and depends on the economic activity of companies. Based on deep analysis of different assessment methods in this article is decided to use most suitable method – TFP as an example of an analytical method. Competitiveness skills depends on management, strategic planning, investment, innovations, results of the company's activity and its competitiveness, therefore in order to improve the competitiveness of companies it is necessary to improve managerial skills and increase investments in innovations that help to compete with similar companies (Arroyo et al., 2017; Soelaksono et al., 2018).

Special scientists (Kaliuzhnyi, 2003; Dhehibi et al., 2016; Spolador and Roe, 2018; Gupta and Krishnamurti, 2019) attention is given to the TFP at macroeconomic researches. Labour productivity is one of the elements of TFP, because TFP is a measure of productivity and an important indicator of the political situation and a key driver of economic growth (Erken et al., 2018) or a method of "determining the contribution of capital, labour and total factor productivity to value-added growth" (Kaliuzhnyi, 2003). In a broader sense, TFP can also be understood as a measure of technical progress or changes in production technology (Levenko et al., 2019) and this growth is the share of economic growth which is closely related to the changes in productivity, efficiency and sustainability. These changes are based on human capital, innovation and tax principles and are defined as the main part of sustainable competitiveness growth (Cardarelli and Lusinyan, 2015; Fellnhofer, 2017; Spolador and Roe, 2018). In these terms, growth perspectives are possible only if their own capital and labour resources are invested in the productivity shifts from low to high level.

The growth of the overall productivity factor is a broader measure of innovation. Innovation is "process of application of specialized competencies, knowledge and skills achieved through activation of sets of resources" or as a use of new methods or searching for novel ways to gain the profit of achieving the growth (Salunke et al., 2019). Innovation is a multifaceted phenomenon and it is difficult to measure it. The dynamics of innovation are strictly technologically specific and differ from sector to sector, so here is the opportunity to use new knowledge to boost productivity growth. As a result, it is possible to produce new products in new ways and using technological innovations (Fassio et al., 2015).

TFP is one of the main parts of the Solow model and also part of the Cobb-Douglas production function (1) (Erken et al., 2018). The combined function of the Cobb-Douglas and Solow model defined the level of competitiveness of firms or countries at the same time including and assessing the human capital (its value, skills and education).

$$Y = K^{\alpha} \cdot H^{\beta} \cdot (A \cdot L)^{1-\alpha-\beta} \tag{1}$$

where:

Y gross domestic product

L labour

K capital (physical)

H human capital

A technological change (TFP).

The most important part here is the TFP which defined by equation (2) (Gupta and Krishnamurti, 2019). Here, due to the gross domestic product, the combination of input factors (labour and capital) over-capacity (U_L, U_K) and adjusted efficiency (E_L, E_K) are included.

$$TFP = \left(E_L^{\alpha} R_L^{1-\alpha}\right)\left(U_L^{\alpha} U_K^{1-\alpha}\right) \tag{2}$$

It also includes a technological level and input factors are measured in physical units. However, on the basis of the TFP, investments and their efficiency remain. The TFP trend is assessed by Solow balance using the Kalman filter method, which uses the link between the TFP cycle and capacity utilisation. Solow residue (Spolador and Roe, 2018) is calculated by predicting value-added (or GDP), labour costs and capital reserves, which allow the extension of the TFP series using two additional notes. Since no forecast is applied, the model estimates two missing estimates and the TFP are based on the monitoring.

Labour resources are the numerical expression of a busy professional skilled staff. Efficiency depends mainly on how many people are employed in that sphere: if the organisation has sufficient labour resources and rationally uses them, then a high level of productivity is achieved, production volumes increase and efficiency increases.

Productivity function shows the amount of output that can be obtained using the available amount of resources. Production factors may vary depending on the type of production. Most often, three groups of production factors are distinguished: work, capital and land. Since the land fund is virtually unchanged, this factor is often not concluded in the production function.

Solow (1957) defined the TFP as the efficiency with which companies available resources are translated into relevant outputs and have relevant results. It follows that three factors – capital, labour and intermediate goods are included in the calculations. Liu and Wu (2018) offer to include the use of technological resources, the value of vehicles and equipment as a means of measuring capital, how work is valued by the total compensation of employees (wages) and intermediate goods are based on raw material and material prices. These factors lead to explanations of the factors of production, which "may be employed to create higher value-added and increase technical efficiency" (Carlsson et al., 2015). Observing these determinants can find suitable ways to increase their productivity.

By maximising the benefits, a combination of work and capital is chosen that reduces the costs incurred and remain high expected profits (Alessandri et al., 2018). The index includes three factors: value-added, labour and capital. Productivity is measured in terms

of value-added and very often of gross domestic product. Productivity is an important indicator for policymakers to understand the strengths and weaknesses of the industry and is a basis for strategic policy development (Pham, 2019). Value-added and its dynamic shows the changes in labour productivity depending on a physical capital amount and quality, technology level, efficiency and flexibility in work organisation and management (Gupta and Krishnamurti, 2019). The economic downturn means lower profits and lower wages. Calculations require companies' data on the gross domestic product, average annual capital, use of fixed capital and the average annual number of employees.

Another method of assessing the competitiveness of companies is the ROE. ROE is one of the profitability measurement method, which takes into account and assesses the uncertainty and investor doubt (Zhang et al., 2019). It is a financial ratio, which can be used to the comparison of the company earns and the total equity ratio. ROE shows the situation in firms due to the macroeconomic indicators in different industry structures. Use data of GDP, lending rates, inflation, exchange rates and unemployment helps to assess the value of investments, capital turnover and finance management (Maroro et al., 2018; Ndlovu and Alagidede, 2018). ROE is calculated using equation (3) (Hafez, 2016; Gushchina and Privalova, 2018; Ndlovu and Alagidede, 2018; Priyonoto et al., 2018), which shows the results available to corporate executives from capital invested in a company that influences capital structure.

$$ROE = \frac{NI}{SE} \times 100\% \tag{3}$$

where

ROE return on equity

NI net income after tax

SE shareholders' equity.

It follows net profit and shareholder's equity data are also used in the calculation and evaluation of ROE, and so this indicator includes a somewhat narrower range of companies' competitiveness assessment. TFP and ROE are calculated for Lithuania and Latvia applying some research limitations – here are analysed the data (Eurostat, 2019) of the 2008–2018 y.y.

4 Sustainable competitiveness in Lithuania and Latvia

In this article, sustainable competitiveness by the industry is assessed using two methods: TFP and ROE. Table 2 shows the classification of industries which are used for the analysis. All industries are classified into 11 groups presented in Eurostat (2019).

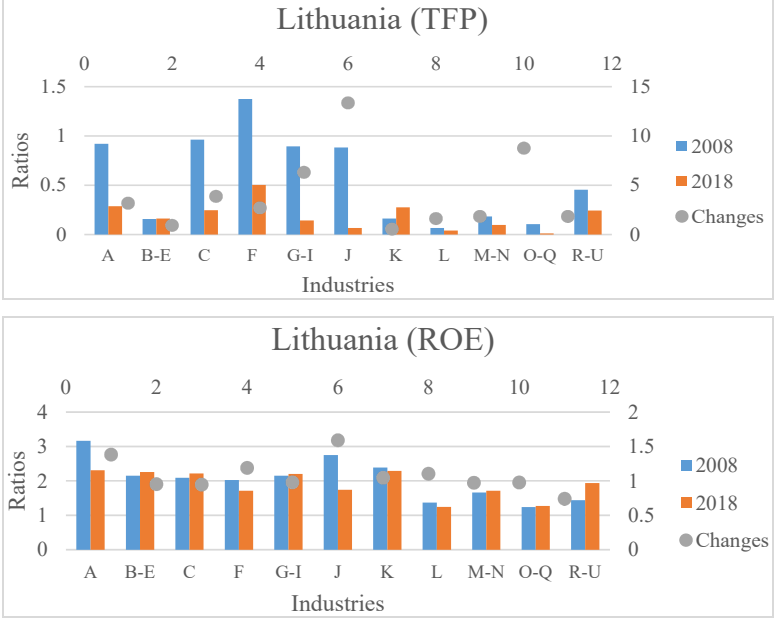
In this article, the modification of the production function – an analytical method is used. This method is used for the calculation of the factors influencing the growth in gross domestic product. Using equation (2), the TFP and using equation (3) ROE for the period 2008–2018 years in Lithuania and Latvia are calculated. Also, the main analysed areas are distinguished: gross domestic product, capital, labour (employment) and income. The results are shown in Figures 4 and 5.

Table 2 Classification of the analysed industries

A	*B–E*	*C*	*F*	*G–I*	*J*	*K*	*L*	*M–N*	*O–Q*	*R–U*
Agriculture, forestry and fishing	Mining and quarrying; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	Manufacturing	Construction	Wholesale and retail trade, repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	Information and communication	Financial and insurance activities	Real estate activities	Professional, scientific and technical activities; administrative and support service activities	Public administration and defence, compulsory social security; education; human health and social work activities	Arts, entertainment and recreation; other service activities; activities of households as employers, undifferentiated goods- and services-producing activities of households for own use

Source: Compiled by the author based on Eurostat (2019)

Figure 4 TFP and ROE 2008/2018 ratio in Lithuania (see online version for colours)



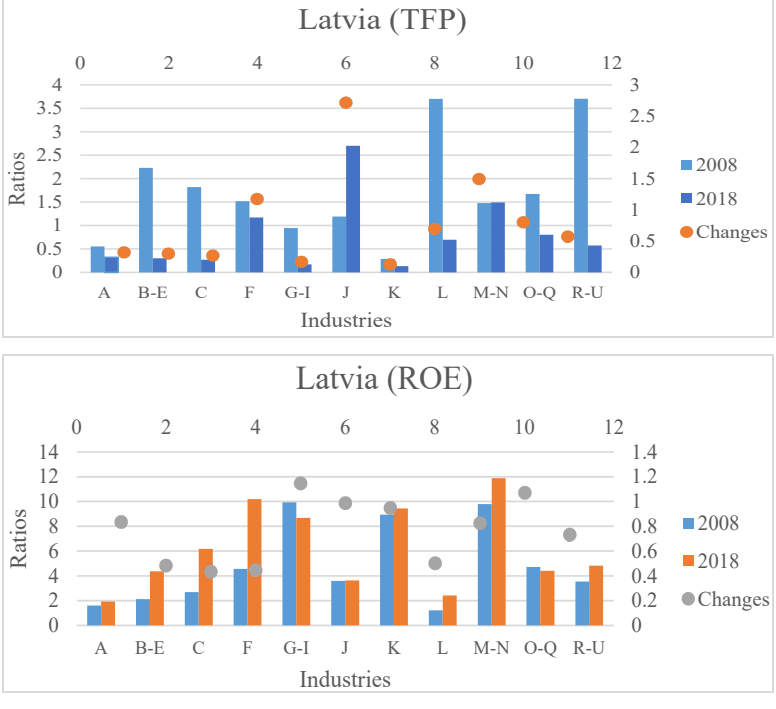
Source: Compiled by authors based on own calculations

Figure 4 shows that using the two mentioned methods results are different, but the ROE method is more reliable and dispersion is smaller. Productivity and also competitiveness assessment results show that the most productive sectors in Lithuania are: A (agriculture,

forestry and fishing), C (manufacturing) and G–I (wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, and accommodation and food service activities). It follows that capital invested in it is working productively and its purposefully use will generate greater profit.

Figure 5 shows that comparing assessment results in Latvia using TFP and ROE methods the most productive industries are: F (construction), K (financial and insurance activities) and M–N (professional, scientific and technical activities, and administrative and support service activities). It means that companies in these sectors earn in comparison with the total shareholder's equity invested in it are greater. In the context of Latvia, results are very similar and the dispersion of results is small.

Figure 5 TFP and ROE 2008/2018 ratio in Latvia (see online version for colours)



Source: Compiled by authors based on own calculations

In summary, very different sectors of activity are the most competitive in Latvia and Lithuania. It can be argued, that Lithuania is more sustainable competitive, because here the most productive sectors are also agriculture, as the main aspects of environmental sustainability growth. In the case of Latvia, here the most productive sectors depend on economic sustainable growth and also ensures sustainable competitiveness. The most appropriate method to assess the sustainable competitiveness level is the ROE method because it is more specified, but special attention should be given to other factors like technologies, innovation use and capital formation.

5 Conclusions

Competitiveness is perceived as the multifaceted category that describes the ability to maintain high living standards and present to the market the high-quality products and services and to ensure the adaptation to the market needs with minimum costs. Competitiveness is influenced by the development of technologies and innovation, so combining knowledge, skills, innovation and technologies it is possible to compete in an uncertain and risky environment and create added value.

Sustainable competitiveness includes three main components (dimensions): economic, environmental and social. A combination of the main principles of these dimensions ensures the customer value growth, cost optimisation, profitability and especially innovations and new technologies use.

Taking into account the complexity and diversity of sustainable competitiveness, the most suitable method to assess it is the TFP and ROE. ROE and TFP methods include the main indicators of economic stability assessment. TFP can measure technical progress or changes in production technology and this growth is the share of economic growth which is closely related to the changes in productivity, efficiency and sustainability. It also includes a technological level and input factors are measured in physical units. However, on the basis of the TFP, investments and their efficiency remain. ROE is one of the profitability measurement method, which takes into account and assesses the uncertainty and investor doubt. It is a financial ratio, which can be used to the comparison of the company earns and the total equity ratio. ROE shows the situation in firms due to the macroeconomic indicators in different industry structures.

For the sustainable competitiveness assessment, it is important to evaluate three factors: productivity, efficiency and profitability. It follows, net profit and equity data are also used in the calculation and evaluation of ROE, so this indicator includes a somewhat narrower range of industries' competitiveness assessment. TFP and ROE are calculated for Lithuania and Latvia applying some research limitations – here are analysed the data of the 2008–2018 y.y.

The results of the assessment competitiveness of industries using TFP and ROE methods in Lithuania shows that the most productive sectors in Lithuania are agriculture, forestry and fishing, manufacturing and wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, and accommodation and food service activities. In Latvia, the most productive industries are construction, financial and insurance activities and professional, scientific and technical activities; administrative and support service activities. It follows that at these industries, total equity invested in it is greater.

In summary, very different sectors of activity are the most competitive in Latvia and Lithuania. It can be argued that Lithuania is more sustainable competitive, because here the most productive sectors are also agriculture, as the main aspects of environmental sustainability growth. In the case of Latvia, here the most productive sectors depend on economic sustainable growth and also ensures sustainable competitiveness. The most appropriate method to assess the sustainable competitiveness level is the ROE method because it is more specified, but special attention should be given to other factors like technologies, innovation use and capital formation.

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