

THE CONTRIBUTION OF STUDENTS AND EDUCATORS TO ECONOMIC SUSTAINABILITY BASED ON THEIR AWARENESS OF THEIR OWN ROLE IN ECONOMIC DEVELOPMENT

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ABSTRACT

Economic sustainability based on the triple bottom line is not new, but topical in the scientific discussion on the development of economic growth. International organisations globally, together with governments, budget an increase in funding for education as the main tool for sustainable annual economic growth. On the other hand, it is difficult to measure the outcome of financial effort, as it is an intangible asset. The current research is based on interviews with 20 professors and 20 students at Klaipėda University and LCC International University, to learn how they understand their role in economic development, and to verify the dependency of their desire to contribute more to their awareness. The findings of the qualitative research show that productivity by both students and educators depends on their awareness of their economic role. On the other hand, as the study shows the limitation of participants' perception of their economic role, its promotion is suggested.

KEY WORDS: *economic sustainability, education, awareness of economic role, economic growth, productivity.*

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Introduction

The relevance of the research topic. The main goal of governments internationally is to increase gross domestic product (GDP), economic productivity and sustainability, as well taking the competitive advantage. Among the main tools to stimulate economic growth are capital investment, effective budgeting, efficient use of human resources, equal distribution of natural resources, and attracting external finance (Kulenovic, Cech, 2015). The educational background of society plays an important role in economic development and growth; it has been discussed and proven by researchers, economists and statisticians in their scientific work. The educational background of developed and prosperous countries historically is high; conversely, countries with a lower or a low level of education have weaker or even regressive economies (Transparency International, 2013). However, governments have the authority to control and initiate the development and popularity of education in order to develop economies (OECD, 2017); and, moreover, it is the responsibility of governments to promote universal education (Grudem, Asmus, 2013); 103 million young people around the world cannot read (Grant, 2017), and more than 114 million children aged six to 12 do not study (CGD, n.d.).

The problem: what should the education system be to increase the positive economic outcome from financial investment?

The object of the research: the education system at Klaipėda University and LCC International University.

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Scientific field: economic growth, impact of education on sustainability, application of triple bottom line

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The purpose of the study: to answer the research question, how do students and educators understand their own role in economic development, and what effect does their awareness have on their motivation and productivity?

Research tasks: 1) To define the terms applied to the economic development discussion; 2) To examine how the economic growth of countries depends on the education and literacy level of residents in scientific literature and theories; 3) To conduct qualitative primary research to study students' and educators' perception of their own role in economic development, as well as the relationship between their awareness and productivity; 4) To make a synthesis and applicable conclusions from the research findings; to recommend solutions to increase the positive economic outcome of financial investment in the educational sector.

Research methods: literature analysis, interview, data systematisation and interpretation of findings.

1. Discussion of terms

Economic development is defined as the creation of a sustainable business environment where success strategies are efficient in relation to people, the planet and profit. In this environment, educational institutions with other stakeholders, such as, for example, the government, should work together as partners, promoting knowledge and economic success, as well as becoming promoters of sustainability in order to maximise the efficiency of the human resource potential for the benefit of the world economy (UEDA, APLU, 2015).

Economic growth helps people around the world to reduce the level of poverty, transform societies, redistribute assets and resources, to decrease the level of unemployment, to receive additional GDP, to improve health and educational services, and to drive human development in general. Economic growth is created by capital and investment in education, the efficient production of both goods and services, and the implementation of technological progress and innovation stimulation (DFID, n.d.).

Economic sustainability is financial justice and stability which cannot be reached in the modern world without satisfying the needs of societies and the environment. Constant development is the common goal of economic sustainability worldwide, in order to make the world a better and prosperous place to live, not only now, but for future generations as a long-term goal and perspective (United Nations, 2012).

Economic gap explains not only inequality in the distribution of income, but also the unequal share of opportunities and resources, according to social class rather than the needs of societies. For economic growth, education is an opportunity to spread wealth among society and decrease the level of the economic gap (IZA, n.d.).

Social inclusion encourages people to initiate and stimulate improvements to society, and empowers individuals to contribute responsibly to the common good (World Bank, n.d.). In the context of social inclusion, education is the way to integrate individuals and society into the larger socio-political context and the global community (Slijepcevic, 2017).

Triple Bottom Line (TBL), also known as 3Ps (people, planet, profit), was introduced by John Elkington in the 1990s, and became a sustainability concept. It is an accounting framework, but without a unit of measurement; however, there are initiatives to monetarise TBL calculations by the implementation of international indices (Slapper, Hall, 2011).

2. Overview of literature

According to an overview of the thematic literature and academic sources, economic development, growth and sustainability depend on the educational level of people around the world. Grant (2017) states that one dollar spent on the improvement of education by government has an outcome of 15 dollars in economic growth.

Ozturk (2011) explains that due to the effect that education has on economic growth, regular investment in education is required to stimulate creative and innovative thinking, which consequently creates technological, entrepreneurship and economic progress. Conversely, uneducated human resources cause the limited

use of the developed technological production (Hulten, Ramney, 2018). Wayne Grudem and Berry Asmus (2013), in the book *The Poverty of Nations: A sustainable solution*, suggest: ‘...in an ideal economically productive society, knowledge will be important.’ Society will know how ‘to operate, manage, and build the instruments of production’, and also how ‘to create, adapt, and master new techniques on the technological frontier’. In addition, society will be ‘able to impart this knowledge and know-how to the young’. Investment in education has a short payback period: economies get productive skilled and educated people open to change with different lifestyles, who increase the circulation and turnover of money. Knowledge is also the way to social inclusion and the sustainability of the 3Ps; it has an influence on society at a micro-economic level, and is reflected in macro-economics (Ozturk, 2001). According to Grant (2017), education is a contribution to economic growth, because educated people work faster both physically and mentally, transfer information about innovations, and have a higher level of creativity to create, invent and innovate (Grant, 2017). According to quantitative studies analysed over 53 years at the South Asian Association for Regional Cooperation (SAARC) and data from the World Development Indicators, the development of education has a positive effect on economic growth. Education not only stimulates the need for constant development and prosperity, but also decreases crime statistics, as people who study develop better tolerance, responsibility and moral skills in relation to the family, society, country and the environment (Hanif, Arshed, 2016). Also, the quantitative research by Francisco Queir’o (2021) presented findings about the dependency of companies’ life cycles on the educational level of entrepreneurs: the educational level of entrepreneurs has a positive impact on the growing speed and productivity of organisations; while, conversely, lower education slows growth dynamics and weakens the exercise of accounting.

Hanushek and Wößman (2007) stress the quality of education, which is most important in order to get a positive economic outcome. The authors compare developed and developing countries, where there is the same number of educational organisations, but the economic outcome is different due to the quality of the knowledge provided (Hanushek, Wößmann, 2007). Quality higher education means more opportunities to apply the knowledge received at work, receive higher wages and salaries, have an interesting life, and be happier in general; these findings were presented in the research by Stryzhak in 2020 after the calculation of the product-moment, the Spearman rank and Kendall’s Tau correlations. The research was done based on data from Education, Happiness, Economic Freedom of the World and GDP indices for 145 countries (Stryzhak, 2020). Valero Anna discussed in her paper (2021) the main theories and studies on the relationship between education and economic growth, drawing the conclusion that the level of the quality of knowledge matters to economic growth, so institutions that are responsible for the development of education must take responsibility for the quality. Based on research by Miningou (2019), investment in education without quality is a waste of both financial and non-financial resources, but unfortunately 16% of goal-oriented investment in educational quality does not reach the intended purpose. The Sustainable Goals and Millennium Development Goals announce educational needs and stimulate international investment. For example, from 2007 to 2017, the money invested in education changed from 4.8 billion to 12.7 billion dollars in the world, and the GDP of developing countries improved by 0.4%; on the other hand, the productivity level finds 49% of potential still waiting for qualitative education to contribute to the world economy (Miningou, 2019). The study by Alsanuosi (2017), which measured the correlation between qualified education and economic growth in Libya quantitatively with linear regressions, concluded that in investment in economic growth, the educational return is the highest and the most applicable. An identical conclusion, that the educational quality of teaching impacts GDP growth positively, was made by the researcher Zabavina in 2017, who tested the dependency of the two variables according to the Solow model of Mankiw.

Of course, to have an efficient outcome of qualified education, educators must be fully provided with decent wages and salaries, educational resources, and materials, as well as opportunities to grow and learn from international experience. The supply of teachers is affected by the economic cycle of a country, and includes employment opportunities and financial rewards. According to the asymptotic theory used for research performed in the United Kingdom, the findings were negative, as, because of the low salaries teachers, have little motivation to teach, and there are not many graduates who are interested in a teaching career (Dolton,

Tremayne, Chung, 2004). Moreover, many educators are not interested in applying changes and updating their pedagogical methods (Damon, 2016). The survey performed in the UK among children aged six to 17 also concluded that 34.2% of participants wanted to become a YouTuber, and do not see themselves as educators (Dirnhuber, 2017). Moreover, the United Nations Children's Fund (UNICEF) says that education requires more investment in infrastructure and services than ever before, due to the recovery from the pandemic around the world and the expected poor learning outcomes, and the war in Ukraine. Additionally, according to the forecasts of the United Nations Educational, Scientific and Cultural Organization (Unesco), around 24 million young people from pre-primary to university level expected not to return to studying, and go on to do physical work, or are forced into early marriage, in order to have an income, due to low socio-economic factors (United Nations, 2022). Already in 2018, Šimelytė and Dudzevičiūtė encouraged the governments of European Union (EU) countries to provide funds, facilities and other supplies to the educational sector in order to stimulate economic growth. In their study, researchers applied statistics analysis and econometric techniques to prove that in European countries, such as Belgium, France, Ireland and the United Kingdom, the high GDP (for the period 1997 to 2016) is an outcome of the high quality of education. The same situation exists in developing countries, where the supply of teachers is low and the turnover of labour is too high. On the other hand, a comparison between Chile, where educational reforms were applied, with other Latin American countries showed the positive effect that the supply of teachers has on the quality of education and students' lives (Schneider, Mizalaa, 2019).

Educational institutions need to build a plan for economic development and sustainability engagement, to have strategies to promote knowledge as a tool to benefit from sustainable growth and competitive advantage, to establish partnerships internationally to get experience, and to develop productive networking with other stakeholders (UEDA, APLU, 2015). In addition, responsibility for economic progress rests with the progress of other social, political and economic institutions (Hulten, Ramney, 2018). As a result of the promotion of critical thinking and studying in progressive innovative countries where it is common practice, according to Burgess (2021), economic growth and financial stability are more visible.

3. The educational theories applicable to economic growth

On the other hand, economic growth and economic sustainability are interdependent not only with the level and quality of education, they also merge with economic theories such as Human Capital Theory, Functionalism, Connectionism and Humanism, as well as with the concept of the triple bottom line.

According to Human Capital Theory, both tangible and intangible assets are important for organisations and for countries' economies. Knowledge applied increases productivity, so theory encourages education and training (Wuttaphan, 2017). Societies that have more educational opportunities increase their income, decrease the unemployment rate, expect less financial support from the government, and consequently affect world economies positively (Swootland, 1996). Moreover, the modern economic environment requires the implementation of technological progress, and both knowledge and the quality of human capital are seen as drivers of innovation (Widarni, Suryaning, 2021).

Functionalism Theory states that functional education can supply the demands of society, to build social, ecological and economic sustainability, since educated people are more tolerant of each other and open to change. Functionalism Theory promotes functional education as education that teaches to think critically, to behave purposefully, and to understand causes and effects, in order to be able to reach the goals of the triple bottom line and benefit economies (Jackson, 2002). According to Functionalism Theory, society is an organism which has interrelated sub-systems, such as education and economics, that have to work harmoniously to have a beneficial impact on economic growth (Oyekunle, 2021).

Connectionism is a modern theory that justifies the opportunities arising to study, learn and lead economic growth globally that people experience due to the development of technology (Utecht, 2019). Although technological and digital progress has negative consequences, such as propaganda, hidden marketing tools and the assistance of artificial intelligence, a positive outcome of sustainability is the opportunity to update

knowledge every day as in the modern world without even reaching the top; but to be able to stay in the same place, people, organisations and countries have to run as fast as they can. Moreover, in today's fast-changing world, it is risky to have knowledge, because the information people have now might change tomorrow. To avoid pitfalls, and to experience only the benefits of technological innovation, people should learn about cyber security, to understand not only data, but also resources where information comes from, and to study how to learn and analyse. Educational institutions might take responsibility for teaching the skills listed. According to the historical meaning and translation from Latin, a 'school' means a place where people learn to think critically.

One more theory is Humanism, which also outlines the significance of critical thinking as an important precondition for economic development and growth. The theory says that thinking requires freedom to promote democracy, equality and self-knowledge. An awareness of self-importance stimulates the beneficial impact individuals have on society, economies and the environment (Unesco, 2020).

4. Data and methodology

Although the importance of education to economic growth and sustainability has been proven by many researchers, there was a literature gap in understanding how participants in the education process perceive their economic role, and how it motivates them to perform better, so the purpose of the research became to answer the stated question. According to the purpose of the current research in identifying the interconnection between students' and professors' perception of their own importance to economics and their desire to contribute to its development, the next research questions were formulated:

Research Question 1: How do students and educators understand their role in economic development?

Research Question 2: What is the relationship between the perception by students and educators of their economic role and their productivity (Moroz, 2022)?

In order to answer the research questions, criterion sampling for students and random sampling for professors were chosen. Firstly, inclusion and exclusion, as well as predetermined criteria, were applied to students (Ames, Glenton, Lewin, 2019). The requirement was to have the status of graduate student in order to be able to share educational experience in the international community for more than two years. Secondly, random sampling was chosen for the professors to avoid bias. The interviewees chosen for purposive sampling to become 'virtually synonymous with the qualitative research' (Palys, 2008) had enough experience for the efficiency of the qualitative study findings (Ames, Glenton, Lewin, 2019). The research comprehended three steps in the sampling framework: international universities for maximum variation, students and professors for data richness, and graduate students for the study's scope (Ames, Glenton, Lewin, 2019), in order to reach the 'largest potential for advancing understanding' for the purposes of the study (Palys, 2008).

The study was completed with the qualitative research method, based on data collection during 40 one-on-one interviews, a statistically reliable number, which consisted of 16 open questions to 20 students, and 16 open questions to 20 educators. The interviewees were from eight countries of origin from five continents, representatives of contrasting types of economies, and ten university study or teaching departments, which proves the validity of the findings. The interview questions covered five subtopics: studying and professional growth, overcoming poverty, the coherence of knowledge and economics, educational study and work experience, and motivation drivers and barriers. Yin's 5 Phased Cycle Procedure (Compile Database, Disassemble Data, Reassemble Data, Interpret Data and Conclude) was used for the analysis and structuring of the qualitative research (Yin, 2016). The narrative summary represents a synthesis of the collected data applied to the contextual analysis and the literature review context (Moroz, 2022).

5. Discussion of findings and suggestions

Pattern # 1 & Suggestions: When applicants choose a field of study and teachers choose a field of teaching, they are driven by the desire to benefit the world, and only later do they introduce their own interests in the form of financial benefits and prestige perspectives. On the other hand, student-participants say they do not learn enough from educational institutions, and as the research findings show, the students' knowledge of their own role in economic development is weak. Also, the professors have a limited perception of how they contribute to economics processes and economic sustainability on a daily basis. The majority of students and educators limit their answers to the importance of paying tax and partly the saving of resources.

However, in the context of the Literature Review, the role of participants in the educational process for the economy and sustainability is more meaningful and multifaceted: the ability to perform faster and more efficiently, to produce quality, to innovate, to transfer information, to apply critical thinking, to find creative solutions, and to make sustainable decisions (Grant, 2017). As education affects the lifestyle and influences the circulation of money (Ozturk, 2011), students and educators can decrease the poverty level, affect the lives of people around them, and understand the world better (Hanif, Arshed, 2016), and increase companies' life cycle (Queir'o, 2021).

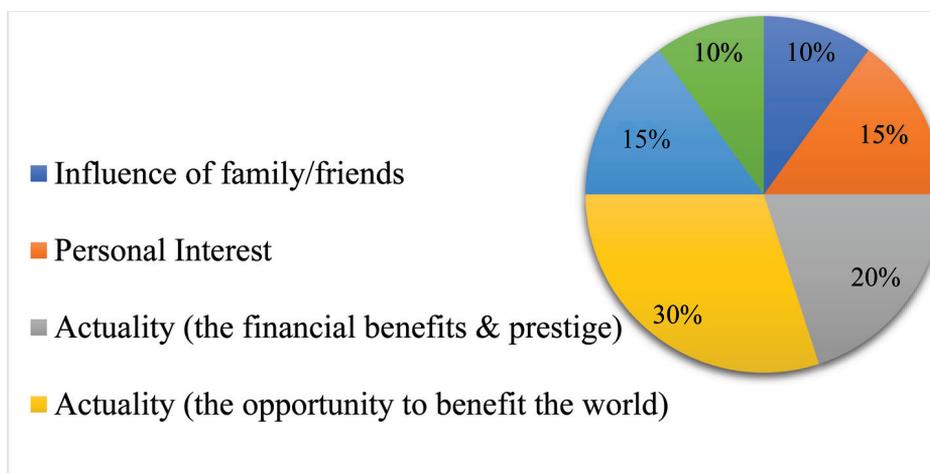


Figure 1. How was the field of study/teaching chosen (Moroz, 2022)?

In order to improve the perception of participants in educational processes of their role in economic development and sustainability, it is recommended:

- to promote positive statistics from prosperous nations; to tell success stories in social media, posters and online marketing;
- to model the potential outcomes framework;
- to develop the project management skills of both students and educators; workshops with managers from different industries who would share experience how educated people influence the life cycle of organisations;
- to organise small conferences on the importance of TBL sustainability, separately and common to both students and educators; to organise local competitions for both students and educators, or mixed study groups, to solve local economic issues or to propose innovative ways to increase the effective use of the economic potential of the regions; to subsidise the best projects, ideas and solutions, as well as to encourage participants to share updates of their projects with students and educators at educational events.

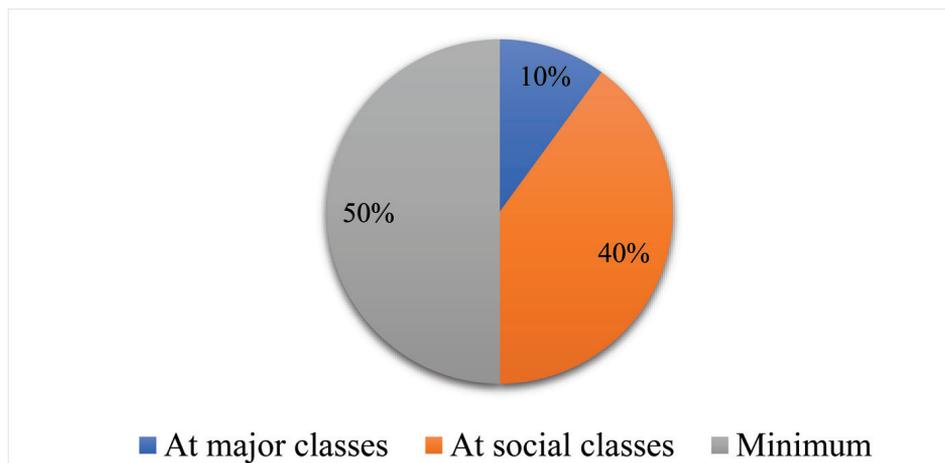


Figure 2. How do students learn from university about their responsibility to the world in terms of economics (Moroz, 2022)?

Pattern # 2 & Suggestions: Both students and professors think that knowledge is important. They also agree with Nelson Mandela, that ‘Education is the most powerful weapon that can be used to change the world.’ In addition, it is proven by world statistics and the economic situation, because governments use educational weapons to influence and change the world in different ways, both positive and negative (UNODC, 2020). On the other hand, 90% of students assume that professors do not explain to them why it is important to study well, and 80% of educators answer that they are not encouraged by educational institutions to promote the importance of knowledge from the perspective of economics.

However, studying well equals quality of knowledge (Valero, 2021), and it is needed for creativity and innovation as the strategy for economic development (Hanushek, Wößmann, 2007). Most interviewees agreed that it is the government’s responsibility to support and encourage educational institutions to promote knowledge as a way to develop the economy and strengthen sustainability, and 100% of students stated that they want to learn more about the application and value of knowledge from their professors and universities.

According to the research findings and the literature review, the next steps to be applied are recommended:

- government representatives should ‘revise the development strategy, paying special attention to the aspect of the promotion of knowledge and the role of the individual contribution’ (Moroz, 2022);
- university management teams should ‘take the initiative in sustainable economic development and promote knowledge and education’ (Moroz, 2022);
- educators should explain why studying well is important, in order to avoid the bias that most skills and knowledge are received in the work place;
- to award the most active educators-promoters financially and non-financially;
- to supply the best students with scholarships and opportunities;
- to provide project and internship opportunities for students inside and outside the country, in order to experience knowledge requirements in practice;
- to teach the chain of cause and effect: individual knowledge – contribution to the economic development of the country – the growth of the world economy.

Pattern # 3 and 4 & Suggestions: the research findings proved with 90% that awareness of their own significance to economic growth motivates students to make a greater effort to learn. Students are also interested in ways they can contribute to economic growth and sustainability individually, so it is advisable for governments to empower educational institutions to increase the attractiveness of knowledge; to promote professions that cause a significant increase in the economic level, and, additionally, to introduce the implementation of economics specialities, to present a vision of the potential economic outcome.

The research findings proved that an awareness of one's own importance to economic growth motivates professors to improve and develop constantly. However, educators find other drivers of motivation equally important; for example, financial compensation and a fully supplied educational process increase teaching productivity. According to the research findings, '19% of interviewed educators explain that motivation decreases with the years, because expectations are not always met, many innovative projects are rejected as the educational sphere is still not financed enough or educational processes are over-controlled by management and government' (Moroz, 2022). According to Tremmayne and Chung (2004), in the context of the Literature Review, supplying educators with the needed resources and financially is the responsibility of governments, who should assume that the rate of return from the perspective of economics is higher than the spending.

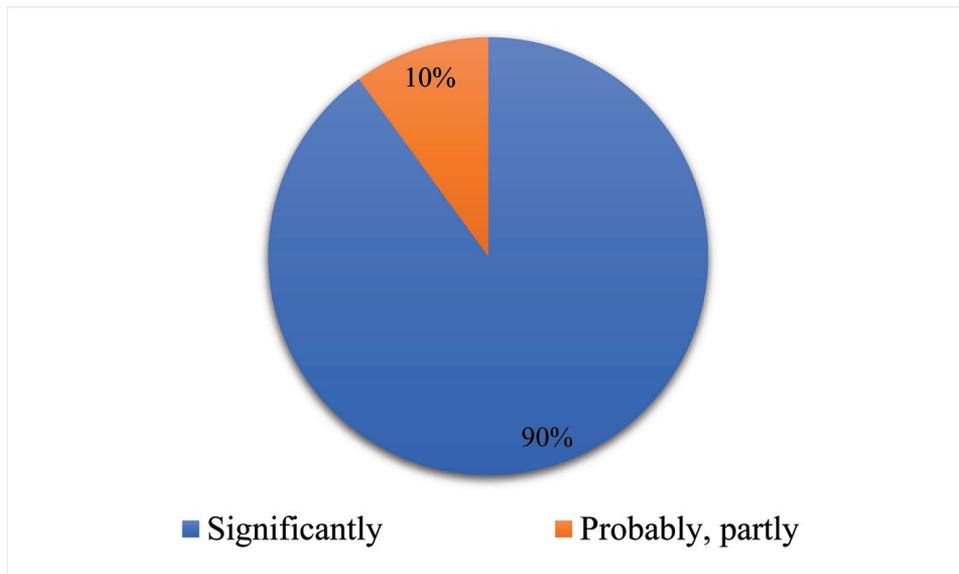


Figure 3. How does an awareness of one's own economic role increase productivity and students' motivation to study (Moroz, 2022)?

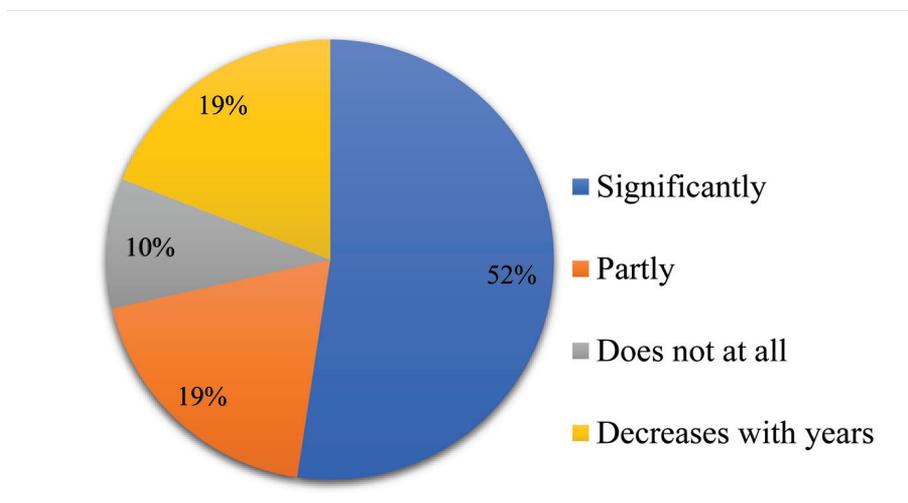


Figure 4. How does an awareness of one's own economic role increase professors' motivation and productivity (Moroz, 2022)?

Pattern # 5 & Suggestions: both the students and the professors who were interviewed for the research agreed on the need for limited power for governments: to supply students with scholarships and stipends, as well as to guarantee work places, to provide professors with salaries, and to provide universities with their needs. A total of 100% of interview participants agreed that governments should empower educators and supply them financially and with opportunities to develop. Talking about the value of the promotion of knowledge to economic development and sustainable growth, more students than professors find it useful and believe that government should take responsibility for promotion strategies. In the table below, the thoughts of students and educators on the role of government in the promotion of knowledge and education are presented.

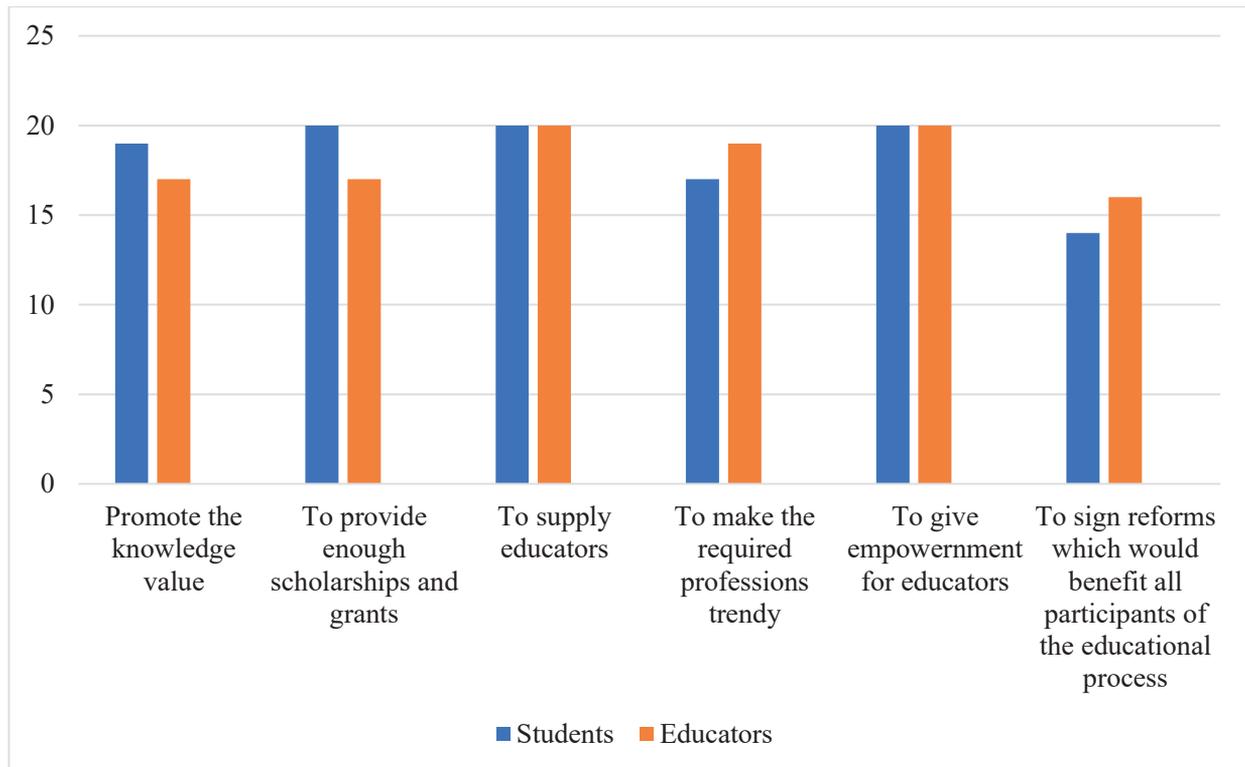


Figure 5. How should governments be involved in the promotion of knowledge and education (Moroz, 2022)?

On the other hand, a decentralised decision-making process and the delegation of responsibilities is needed: government as a follower-centered and democratic leader should set a mission and a vision, as well as controlling budgeting and anti-corruption actions, but educational institutions should be empowered to strategise their own specific, measurable, assignable, realistic and time-related (SMART) ways to lead the changes, to be transformational leaders, to find creative solutions, and accomplish government tasks in order to increase economic growth and sustainability. According to Grudem and Asmus (2013), governments should promote the value of knowledge, the individual benefits of education, and the opportunity to improve the world economic situation.

Conclusions

The structure of the article consists of an explanation of terms (economic development, economic growth, economic sustainability, the economic gap, social inclusion, and the triple bottom line); a review of literature; a discussion of theories (Human Capital Theory, Functionalism Theory, Connectionism, Humanism); the presentation of the methodology; and the research findings and suggestions.

The Literature Review background discussed how economic development, growth and sustainability depend on the educational level. The importance of quality education to sustainable economic growth and society was outlined. The role of government according to scientific literature was defined as very important. On the other hand, a gap in the understanding of how participants in the educational process realise their role and significance for economic and sustainable success was found. So the purpose of the study was to answer the research questions: How do students and professors understand their own role in economic development, and what effect does their awareness have on their motivation and productivity? The qualitative methodology was chosen for the primary research, and representatives of Klaipėda University and LCC International University participated in the interviews. A total of 20 students and 20 professors answered 16 questions in one-on-one interviews. The questions were divided thematically into groups, such as education and careers, nations and poverty, knowledge and economics, and university experience and motivation. The qualitative method was chosen for the collection of data, in order to get full answers and receive unexpected findings.

Based on the research findings, a limited awareness of their own economic role among students and professors was found; however, the dependency of students' and educators' motivation and productivity on the perception of their importance to sustainable economic growth was proven. According to the study's findings, patterns, conclusions and recommendations were suggested. Due to the weak perception of students' and educators' own impact on economic growth, the promotion of forms of individual contribution to economic development was recommended. It is suggested to discuss the positive statistics of prosperous nations in social media, posters and online marketing; to model the potential outcomes framework during the educational process; to develop the project management skills of both students and educators; to organise workshops on TBL sustainability; to have competitions to solve local economic issues or to increase the efficiency of the economic potential locally; and to subsidise the best projects. In addition, it is recommended to show how the quality of teaching and studying is beneficial to economic sustainability, and to award the best educators and learners. According to the research findings, the special role of government in the development of education as a tool to improve economic growth was discussed: to supply students and educators, to control anti-corruption policies, to set a vision, and promote the value of knowledge; on the other hand, effective government should become one which is able to empower educational institutions and set a decentralised decision-making process.

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MOKINIŲ IR PEDAGOGŲ INDĖLIS Į EKONOMIKOS TVARUMĄ, PAGRĪSTAS SAVO VAIDMENS PLĖTOJANT EKONOMIKĄ SUVOKIMU

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Santrauka

Ekonominis tvarumas, pagrįstas trejopu pelnu. Tai ne naujiena, bet aktuali tema mokslinėje ekonomikos augimo plėtros diskusijoje. Tarptautinės organizacijos kartu su vyriausybėmis kasmet numato didinti finansavimą švietimui, kaip pagrindinei tvaraus ekonomikos augimo priemonei. Vis dėlto sudėtinga išmatuoti finansinių pastangų rezultata, nes tai yra nematerialus turtas. Dabartinis tyrimas paremtas interviu su Klaipėdos universiteto ir LCC tarptautinio universiteto dėstytojais ir studentais, siekiant sužinoti, kaip jie supranta savo vaidmenį plėtojant ekonomiką ir kiek norėtų prisidėti prie informacijos sklaidos. Kokybinio tyrimo rezultatai atskleidė, kad tiek mokinių, tiek pedagogų produktyvumas priklauso nuo ekonominio vaidmens suvokimo. Kita vertus, kadangi tyrimas atskleidė ribotą dalyvių savo ekonominio vaidmens suvokimą, tai reikėtų skatinti.

PAGRINDINIAI ŽODŽIAI: *ekonominis tvarumas, švietimas, ekonominio vaidmens suvokimas, ekonomikos augimas, produktyvumas.*

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