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**The Influence of the Institutional Environment on Youth
Entrepreneurial Activity**

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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

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23/05/2018

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Introduction

Entrepreneurship is defined as “any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business” (Reynolds, 1999).

Entrepreneurship considered being one of the main drivers of the modern economy. Some researchers say that it has more potential than other economic and investment activities (Minniti, 2010). Both academics and politicians agree that entrepreneurship moves economic and social modernization of the society towards future. As one of the main generators of additional economic value entrepreneurship plays a major role in the economic growth, it is very important to understand which factors do affect entrepreneurial activity, in order to adjust existing institutions and policies and stimulate it.

Currently, small and medium enterprises give a major input in the innovations development, increasing government tax incomes, and creation of new workplaces. Moreover, entrepreneurship has significant macro-economic effects (Nitu-Antonie, 2017). However, inappropriate institutional environment may limit entrepreneurship development in both developed and developing countries. Consequently, there is a huge untapped capacity of economic growth and undeveloped competitive opportunities on the international market.

More than that, in some countries, in Russia particularly, average age of the entrepreneurs is increasing, first, because of the overall aging of population, but more because of low entrepreneurial activity of young population. Consequently, there is a great probability of an economy development slowdown in the future as a result of irrelevant government policies and incorrect institutional changes.

Overall active population (in terms of entrepreneurship) could be divided in several groups. Each of them will have its own characteristics and peculiarities, and, of course, various factors that affect different groups accordingly. Thus, each age group requires its own approach, because of the generation differences young entrepreneurs. Men and women who are aged 18-24 at the moment will be a group of major importance in the next few years, as the age gap between different groups of entrepreneurs is increasing.

On top of that, young entrepreneurs are believed to have great innovation potential, which could be transformed in additional value to the economy. This phenomenon is relevant for efficiency-driven economies, as it is a chance for a rapid economic development in a relatively short period of time.

Research gap. Institutional factors affecting young entrepreneurs intentions have not been analyzed sufficiently in the literature yet. Usually research in this field were focused either on student entrepreneurs group or non-institutional factors. Moreover, structural institutional differences between developed and developing countries requires a comparative analysis of the factors that has significant influence on the youth entrepreneurship, which has not been conducted before.

Research goal of this paper is to identify what institutional factors and institutional environment affect entrepreneurial activity of the youth and compare these factors between developed and developing countries. **Object** of the study is the youth entrepreneurship. In order to achieve research goal several **research objectives** were formulated:

- Analyze existing research in the entrepreneurship sphere
- Evaluate peculiarities of the youth entrepreneurship
- Compare and analyze existing institutional theories
- Choose appropriate institutional theory that fits research goals
- Observe previous applications of institutional theory in the entrepreneurship research
- Formulate possible factors that may have influence on the youth entrepreneurial activity and set hypotheses for quantitative research
- Collect, combine and restructure required data
- Analyze through a panel data regression model
- Interpret obtained results and compare factors between developed and developing economies

Research questions:

- Which institutional factors affect intentions of young entrepreneurs?
- What kind of institutional environment could be the most effective in terms of stimulating activity?
- What are the differences between developed and developing economies in terms of stimulating factors?

Research characteristics

This study will be based on a quantitative analysis. Global Entrepreneurship Monitor data will be used as a secondary data source. When assessing the effects of different institutional factors panel data regression analysis will be used as the main statistical method.

Chapter I. Theoretical analysis of institutional environment influencing youth entrepreneurship

Entrepreneurship definition

There is no generally accepted definition of entrepreneurship in modern entrepreneurship theory. Our understanding of what entrepreneurship really is has been under transformation for a long period, especially during last 2 decades when environment and basics of entrepreneurial activities changed, and some new types of entrepreneurship, such as social entrepreneurship, emerged and extended.

In order to understand current approaches, as well as to analyze major trends for the previous year it reasonable to make a glance overview on the development of the different entrepreneurship definitions and entrepreneurship theory as a whole.

Origins of the entrepreneurship research heads back into the previous century, to the one of the pioneers who tried to systemize knowledge about entrepreneurship and develop consistent theory – Joseph Schumpeter. He has created two basic entrepreneurship theories, which could be described as two additions to his major innovation theory and business cycles research. According to his definition (Schumpeter, 1943) entrepreneurs are those who works «to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on». Some of the modern researchers (Sledzik, 2013) say that his theory as partly relevant in today's realities.

Later entrepreneurship was a subject to Leibenstein's major work (Leibenstein, 1968), where he described the main dependencies between the economic growth and prosperity and entrepreneurship. He formulated a new theory of entrepreneurial economics and tried to use this theory to analyze the effects that entrepreneurship has on this economy. His research was heavily relied on the previous theories of Schumpeter, Knight and others. According to his view “entrepreneurial activity mainly implies decreasing organizational inefficiencies and reversing organizational entropy”, also in his work he was one of the first researchers who started to observe aspects of the corporate entrepreneurship and role that entrepreneurial managers play in the life of the company.

Talking about more modern stage of defining entrepreneurship and entrepreneurial activity, work of Ireland (Ireland et al. 2003) is worth mentioning. Although his work is focused

more on strategic entrepreneurship, he identifies major trends in the entrepreneurship sphere, as well as analyzes different dimensions of strategic entrepreneurship. According to his research, he defines entrepreneurship as “a context dependent social process through which individuals and teams create wealth by bringing together unique packages of resources to exploit marketplace opportunities”. This approach is more practical than previous theoretical definitions.

Different international organizations, as well as research communities have their own entrepreneurship definitions. Thus, according to Commission of the European Communities (Commission, 2003) entrepreneurship is the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization. OECD does one of the most complex research of entrepreneurship indicators, however, their statistics are limited mainly to OECD countries. In its research (Ahmad, 2008) OECD uses the following definition: “entrepreneurial activity is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets”.

Official definition that is used in Global Entrepreneurship Monitor states that entrepreneurship is “any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business”¹. This definition correlates with the previous ones, it takes into account not only creation of new ventures, but expanding already existing. In this paper GEM’s definition of entrepreneurship will be used as it corresponds with the main objectives and concept of the study.

Types of entrepreneurship

Before doing a deep analysis of youth entrepreneurship it is necessary to give an outlook to entrepreneurship in overall, in order to understand current practices in research and define peculiarities of youth entrepreneurship afterwards.

Entrepreneurship can be divided into two types based on the motivators that push a person to become an entrepreneur. While some people start their new ventures because they see some opportunity that can be exploited on the market, others create their businesses due to unfavorable life situation, when they should become an entrepreneur to raise their life conditions

¹ Global Entrepreneurship Monitor website (<http://www.gemconsortium.org/wiki/1149>)

in other words. This division is crucial for understanding, for a proper analysis of factors that influence youth entrepreneurs.

Initially, these two groups of factors were formulated by Catherine Hakim. According to her research (Hakim, 1989), there are two main motivators that pursues a person to become an entrepreneur. First group - “pull factors”, these are the opportunities that people see on the market, the unoccupied market niche that can be used. On the other hand, there is a second group - “push” factors, according to Kirkwood push factors are characterized by personal or external factors (including a marriage break-up, or being passed over for promotion), and often have negative connotations (Kirkwood, 2009).

Almost from the start of the project, GEM used the same concept but a bit different framework for the motivation determination. GEM academic team (Reynolds et al, 2001), developed the pull-push approach into necessity (push) and opportunity (pull) driven entrepreneurship framework. Today these terms are oftentimes interchangeable. In this research GEM’s terminology is used.

According to some studies (Shinnar, 2008) pull factors are more common motivators than push factors, more than that, these motivators have different consequences on the future of entrepreneurs. However, according to last research in this field (Tipu, 2016), different motivation has no effect in terms of arrangement, willingness, and ability cognitions during the start-up phase of the venture, but in the same time, Tipu’s research revealed that “opportunity driven entrepreneurs experienced counterfactual thinking. In contrast, necessity driven entrepreneurs were closer to the reality and did not imagine outcomes other than those which actually occurred”. This leads to a different effect on a business growth prospects. Zali, in his research (Zali, 2013), found out that opportunity driven entrepreneurs positively affect business growth and business growth expectations, while necessity driven entrepreneurship has the opposite effect.

Another interesting research in this field (van der Zwan, 2016) revealed more differences in profiles of opportunity and necessity driven entrepreneurs. On top of that, he comes to conclusion that these different groups have different perception of what factors do affect their entrepreneurial activity, for example, insufficient financial support is perceived as a big obstacle to start a business by necessity driven entrepreneurs, while opportunity driven name other factors as the main obstacles.

Different motivation also affects the strategy choice made by the new venture. Thus, in one of the latest research it was discovered that necessity entrepreneurs are more likely than

other entrepreneurs to pursue a cost leadership strategy and less likely to pursue a differentiation strategy (Block, 2015).

Investigating the macroeconomic effects of different motivation to start business, researchers found out that they have influence on the macroeconomy. For example Hessels (Hessels, 2008) concluded that countries with a higher proportion of opportunity motivated entrepreneurs have more new jobs creation potential and have more export oriented entrepreneurship, it is worth mentioning that this study was based on the GEM data. Based on the previous research Arcs (Arcs, 2006) advocates that necessity driven entrepreneurship has different effect on the economic growth than opportunity driven. However, the majority of authors agree that any type of entrepreneurship has a positive overall effect on economic growth for highly developed countries, however, for the developing economies the effect is opposite.

Important study conducted by Koellinger (Koellinger, 2012) he found dependencies between different entrepreneurship type and business cycle development. According to his research, OECD data indicates that opportunity entrepreneurship exceeds the business cycle by two years, while necessity entrepreneurship leads the cycle by only one year. This could be explained by the level of engagement of entrepreneurs, opportunity entrepreneurs are more passionate, consequently they spend a lot more effort for their business development and because of that they are one step ahead of the market. However, there is still a need for research that will explore deeper the interdependencies between entrepreneurial motives and business cycles in different economies.

One of the latest research that has analyzed revenue differences between different types of entrepreneurs shows (van Stel, 2017) that earnings of necessity entrepreneurs are significantly lower than those of opportunity entrepreneurs, irrespective of the type of necessity motive. First exploit market opportunities and oftentimes enter unsaturated or brand new market segments, this gives bigger margins than entering highly competitive markets, as necessity entrepreneurs do. This conclusion is based on the second statistical finding of this research, which shows that these differences remain rather stable over the course of the entrepreneur's business tenure, so they are permanent. Last but not least conclusion of van Stel's study is that there is no earning volatility among different subtypes of necessity driven entrepreneurs.

This division on opportunity and necessity driven entrepreneurs applies both for already established entrepreneurs and young entrepreneurs. Further it will be necessary to analyze how institutional factors influence youth entrepreneurship in overall and how they affect different types of young entrepreneurs particularly.

On top of that, there is a relevant division of entrepreneurs according to their age brackets. As these age groups act differently and have different intentions and capabilities they should be treated as different objects of study. This research will be focused on young entrepreneurs group as a special group that has unique characteristics and special aspects, thus should be analyzed separately. Due to this fact, it is necessary to identify young entrepreneurs group, evaluate differences and similarities with other entrepreneurs age groups.

Peculiarities of the youth entrepreneurship

Global economic recession in the late previous decade and first half of the 2010s brought up major challenges for both developed and developing countries and caused several pivotal changes in the economies, especially these changes could be observed on the labour market. According to the World Bank youth unemployment has been increasing constantly since year 1992, with a small decrease between 2004-2007, current youth unemployment rate is 13,8 percent.² Age group of 18-24 is one of the most sizable group in today's age pyramid, these facts together shows that this age group has a major unrealized potential in terms of economic development. Increasing entrepreneurial activity among young entrepreneurs gives enormous opportunities for economic growth, integrating them into the labor market at the same time.

According to the latest complex study about youth entrepreneurship (Schøtt et al., 2015), currently we undergo a global shift of social norms and values among young population. Previously it was a generally accepted statement that work experience is necessary stage of the entrepreneurial career. Young people did not even consider becoming entrepreneurs before having any job experience, but today entrepreneurial interest is perceived more as a mindset but not a set of specific skills, and this mindset can be developed through a relevant education. Consequently, as confirmed by another research (Schøtt & Cheraghi, 2015), new entrepreneurs nowadays are younger than those in previous generations.

When people start considering entrepreneurship as their future employment, they have to evaluate resources they have. Researchers agree that different age groups have various amount of resources and differently evaluate those resources. According to classical theory (Bourdieu, 1986) resources, relevant for any economic activity, could be divided in 3 categories: the social capital that people have in their valuable relations with others (e.g. connections with already established entrepreneurs), the financial capital (essentially available money that they have), and the human capital (skills, knowledge and experience they have).

² <https://data.worldbank.org/indicator/SL.UEM.1524.ZS>

Human capital basically consists of work experience or other professional expertise and skills obtained through education or other professional trainings. Second component is more interesting for understanding the peculiarities of young entrepreneurs group. OECD report, based on research in 27 European countries, shows that there is positive effect of education on development entrepreneurial intentions. GEM's young entrepreneurship outlook demonstrates that younger generation is generally more educated than previous one. Youth group has bigger share of those, who have primary and secondary education. And trends show that they are more likely to obtain post secondary education in the future than previous generations.

Another important aspect that should be reviewed is the entrepreneurial training and its incidence among relevant age group. Study shows that both in school and after school entrepreneurial training have positive effect, thus, the percentage of those who have not received any entrepreneurial training among the group of 18-24 years old is equal to 71%, compared to 79% for the 35-64 age group (Schøtt et al., 2015). Entrepreneurial education currently becomes more and more popular among youth, this forms necessary base for the future entrepreneurial activity development.

Some researchers (Schoon & Duckworth, 2012) claim that social capital, such as presence of entrepreneurial adults in the family or having friends entrepreneurs, has a positive effect on promoting entrepreneurial intentions among young population. However, latest studies (Geldhof et al, 2014) shows that there is no evident significant correlation between parental entrepreneurship, presence of adult mentors and entrepreneurial intentions. At the same time, Geldhof discovered that when parents or close friend play role of a model (e.g. "Who I want to become in the future"), this may give a strong support in developing entrepreneurial intent. Having entrepreneurs in the family does not affect entrepreneurial activity unless these persons are not perceived as desired models.

Social capital plays different role during different entrepreneurial development stages. Thus, having relationships with already established businessmen may play invaluable role in terms of possible experience sharing during early stages. Through communication with entrepreneurs, a nascent entrepreneur gathers expertise required for the new venture establishment for example, or expertise related to product development or possible marketing tools etc.

Access to financial resources is crucial factor for entrepreneurial activity. No matter if business is investment heavy or not, a person needs money to start his venture. This problem

especially arises for young entrepreneurs, who, in most cases, do not have enough accumulated own resources, and have limited access to external financing.

Latest works in this field (Wright, 2017) identify seven major financing sources, which are available to entrepreneurs: self-funding; friends, family, and colleagues; banks; accelerators; angel investors; peer-to-peer (P2P) lending; and crowdfunding. It is necessary to identify each of these options more precisely in order to understand which one is mostly feasible for the young entrepreneurs group.

Using own savings or credit to fund a new enterprise is one of the most accessible types of financing. It gives full control on the venture, as no equity dilution takes place. However, this type of financing, creates additional risks and stress factors, as failure will result in personal bankruptcy. Moreover, especially for young entrepreneurs, this method is limited in terms of amount of money that could be invested. Usually, entrepreneurs use personal financing as a part of complex financing solution, making their own investments just a small part. This practice, is mostly widespread. In US, for example, almost 93% of entrepreneurs contributed some own money in business funding (Daniels et al., 2016).

Involving friends, family or colleagues is the second most popular financing type. According to the GEMs research, half of the entrepreneurs obtain investments from at least one of these sources. Close family member is the most popular, then goes friends and work colleagues. Process of getting financing from these sources may vary in terms of formality. This method is one of the most relevant for young entrepreneurs in the age 18-24, and close family members, parents essentially, oftentimes provide with some initial investments. One more positive benefit of this type of financing, is that people who are initially involved in funding, may involve additional investors through their own network of contacts, and in this case risks become well diversified.

Third most prevalent source of financing is bank loans. As it is one of the so-called formal sources of financing, borrower has to meet several criteria, which are not easily reachable for nascent or low wealth entrepreneurs (Frid, 2016). Although these formalities may be shortened with a help of different special institutions, such as business associations, chambers of trade etc. Because of the favorable risk aversion for the entrepreneur, this type of capital usually is more expensive than others.

Accelerators are special institutions that offer assistance in start-up development and financing. For their services accelerators usually charge some share of equity or part of the cash flow (Wright, 2017). In exchange for that they support new ventures with their experience,

workspace, business model development and other services. On top of that, they provide great networking opportunities and truly young entrepreneurial spirit, because of that accelerators are relatively popular among young entrepreneurs.

Angel investors (or private/venture capital) are one of the most popular sources of financing among young entrepreneurs who has IT or another high growth potential business. As investors are ready to fund a vast amount of money for the exchange of equity, they are expecting high return on investment, consequently not all new ventures could expect becoming a point of interest for business angels.

Peer-to-peer lending is a new approach, somewhat between angel investors and crowdfunding. Basically peer-to-peer platform provides cooperation between borrowers and lenders without any intermediaries, such as banks for example (Ma et al, 2017). This results in higher risks for lenders but gives higher return on their capital.

According to GEM data, crowdfunding is the least popular source of financing in all regions except North America. This could be partly explained by the novelty of this segment. But what is more important is the uniqueness of the business idea that may achieve success using this type of financing. Entrepreneur has to offer definitely new product in order to raise sufficient funds. As socially important projects drive more attention, crowdfunding is often used by social entrepreneurs for the fundraising (Calic & Mosakowski, 2016).

In addition to different sources of financing, entrepreneurs need different amounts of financing to start their business. And these amounts are unequal in different age groups. Therefore, initial investment that is required to start a business in the age group of 18-24 is the smallest and equal to \$11,000, and increases with each age bracket accordingly, up to \$17,500 for the 55 to 64 age group. What causes this kind of differences is still subject to a deep research.

Summarizing the aforementioned it is possible to say that youth entrepreneurship has been intensively analyzed in the academic literature in these latter years. However, there is an evident scarcity of studies related to the motivational factors of young entrepreneurs, as well as studies that apply institutional theory for these researches.

Above that, after analysis of recent studies that were dedicated to young entrepreneurship, it is possible to conclude that this group of entrepreneurs is special and have major differences compared to other groups. This will have several implications during research, as there are different unusual factors that influence entrepreneurial activity of the youth. This

should be taken into account further, during analysis of these factors through a perspective of institutional theory.

Institutional theory

As social and economic systems got more complex and interdependent it brought up a demand for a theory that will somehow structure and explain different ties in this structures. As a result so-called institutional theory emerged.

Before the analysis of most relevant institutional theory frameworks it is necessary to determine what is an institution, identify nature of institutions and briefly describe principles of institutional change.

According to North (North, 1989), “institutions are rules, enforcement characteristics of rules, and norms of behavior that structure repeated human interaction”. They may be both formal (laws, property rights, constitutions) and informal (traditions, sanctions, customs, taboos), main idea is that the institution should structure political, economic and social interaction (North, 1991).

As society develops and becomes more and more complex, new types of economic activities emerge. New types of transactions have to be bounded in the special regulatory brackets, in order to systemize them and reduce risks related to uncertainty. Regulated systems are more stable, predictable and consistent, this regulativity is achieved through a special institutional environment, which is formed by the actors of such systems.

Today institutions serve to set the “rules of the game”. Consequently, they are the main determinants of the economic environment of the country. Effect that institutions have directly on the entrepreneurship has been an object for studies for the past years (Pinho, 2016; Valdez & Richardson, 2013; Sambharya & Musteen, 2014), academics agree that institutions have a strong impact on entrepreneurship. Consequently, it is reasonable to analyze entrepreneurial activities through the institutional environment perspective. There are several institutional frameworks that are applicable to this type of analysis.

Whitley introduced his institutional approach (Whitley, 1991) in order to analyze differences between several business systems. First he used this theory to analyze distinctions between East-Asian states, but then (Whitley, 1994) developed his theory and made it applicable to all industrialized market economies. His theory is also known as a business systems approach (Hotho & Saka-Helmhout, 2017; Judge et al., 2014).

As Whitley introduced his theory it was three major groups that categorized various social norms and practices: the system of authority relations, including the degree of vertical integration of loyalties, the importance of personal ties and conceptions of appropriate behaviour; trust, reciprocity and enterprise loyalty, which was the system for establishing trust and obligation relations between exchange partners and its impact on enterprise loyalties and commitment; state policies and financial systems, in other words it is the organization and policies of political and bureaucratic state elites, including the extent to which the state dominates the economic system and controls banks as well as coordinating firms' strategies.

Each of these group consists of more exact institutional factors. Therefore, system of authority relations, for example, consists of several parameters, such as vertical integration of loyalties, significance of collective non-personal authority, differentiation of family authority, omnicompetence of father. All these characteristics may be analyzed using quantitative (using scale of intensity) or qualitative approach.

Comparing various business systems using these groups helps to determine which factors have more influence on the systems' development. After introducing this concept, Whitley developed it, in order to make it feasible for analysis of the majority of the countries, not only East-Asian economies with their specificity. This main framework included three groups as well, but they were slightly adjusted to become more universe. Institutional environment, according to Whitley (Whitley, 1994), includes the following components:

- The Nature of Firms as Economic Actors
 - Extent of decentralization of economic power to private interests
 - Remoteness of property-rights' owners from management of economic activities
 - Self-sufficiency of economic actors
 - Diversity of activities and resources controlled by leading firms
- Market relations
 - Extent of long-term, reciprocal obligations between firms
 - Significance of intermediary organizations on coordinating flows and strategies
 - Dependence of market relations upon personal ties
- Authoritative Coordination and Control Systems
 - Impersonality of authority relations
 - Distance of superiors from subordinates and tasks
 - Centralization of coordination and control
 - Integration and interdependence of activities and resources
 - Specialization of tasks, roles, skills and authority

- Employer-employee commitment and the nature of the employment system

It is necessary to specify what role do these three pivotal components play. In order to identify the nature of firms, first of all it is essential to understand the role of government in the particular economy, level of governmental regulations of economy. It is evident that the level of decentralization of economy to private sector will be different in China and in US, for example, and it is obvious that this difference will have its effect on the business environment.

Economic self-sustainability also varies in the majority of economies. Thus, high level of autonomy, ability to centralize and internalize main activities and risks, is more common in Anglo-Saxon economies. Companies in this type of economies are tend to differentiate their economic role and responsibility in order to operate as a separated, independent economic actor. On the other hand, strong interdependence of actors, financial institutions, government structures are common for eastern economies (Truong & Rowley, 2016). This is highly related to a cultural aspects, as some societies support individualistic values, while other are more collectivist.

Market relations factor suffered almost no change comparing to the first version of Whitley's theory. How market is organized in terms of intermediaries role has a significant effect on business environment, for example such forms of intermediaries as Sogo Shoshu in Japan are so widespread that makes it hard for new entrants act independently (Abdellatif et al. 2010).

Dependence of market relations upon personal ties have the same correlation as economic self-sustainability in the previous factor. While personal contacts play a great role in paternalistic societies, or highly contextual cultures (most eastern states), in individualistic societies with low level of contextuality (most western states) personal contacts have no serious effect.

Effect of the long term orientation in the firm's' internal and external relations has been a subject for a study lately (Eggers et al., 2017; Flammer & Bansal, 2016). Short term orientation prevalence strongly affects entrepreneurial environment as it brings volatility and uncertainty to the market, on top of that, economic transactions between firms suffer from unpredictable risks.

Last component of the Whitley's business systems framework, authoritative coordination and control systems, focuses more on the common internal characteristics of the companies. Inner communications and hierarchy are highly related to cultural peculiarities, and may be mostly determined by the Hofstede's power distance concept (Hofstede, 2010). However, it includes additional dimensions, such as the nature of employment system and interdependence of activities and resources. Employment system affects the cultural perception

of wage labor and entrepreneurship, thus, affecting business system as a whole and entrepreneurial environment particularly.

All of the components of the business system are interrelated in either positive or negative way, however, depending on the economy specifics, some elements may be autonomous or even absent. Depending on different mixture of the components mentioned above, Whitley identifies five distinct business system types.

Table 1. Whitley's business system types. Source: Whitley, 1994

Business system type	Description
Centrifugal	Dominated by largely self-reliant firms in societies with low levels of institutionalized trust and weak institutional mechanisms for managing market disputes
Partitioned	Economies with high levels of institutional differentiation and pluralism which have much stronger impersonal mechanisms for ordering economic relationships
Collaborative	Collaborative economies not coordinated centrally by the state agencies, but where banks and/or other important institutional actors, such as Chambers of Commerce and regional governments generate business systems in which firms develop cooperative relations with key institutions and form part of relatively dense networks of collaboration
Coordinated	Firms retain a considerable amount of autonomy but the state plays a more active developmental role, produce business systems that are more centrally integrated and where maintaining good connections with state elites is an important activity for top management
State dependent	The political executive and the bureaucratic elite play the leading role in coordinating investment strategies and resource allocation priorities lead to the establishment of state-dependent business systems,

Whitley's theory is applicable for evaluation of the institutional interdependencies in the economy and institutional environment, which is relevant for this paper. It is also possible to use business systems theory for the analysis of the general business environment. However, it is difficult to apply to an institutional change research (Hotho, 2017). Because of that, Whitley developed his framework into one that can be used for such studies (Whitley & Zhang, 2016).

One of the most influencing institutional theories was described by Oliver Williamson (Williamson, 2000). Williamson constructs institutions in institutional levels and then puts them in a hierarchical structure. As Bylund (Bylund, 2017) describes it as a system that “consists of four conceptual levels, each of which constitutes a different level of economizing: the top level L1 contains the norms and culture of society; the second level L2 is made up of political regulations and policies; L3 consists of governance, organizations, and long-term contracting; L4 includes the everyday bidding for resources in the market. Institutions are related horizontally and vertically: in particular, higher-level institutions constrain lower levels by formulating “rules” through which lower-level institutions are ordered”.

So here we see that the first level can be named as social embeddedness level, Williamson put such factors as social norms, mores, traditions, customs and religion in this level. One interesting peculiarity of this group is that it has the most inertia and changes very slowly. Here we can see that this level correlates with the Scott’s normative pillar of his institutional theory. It is possible to say that culture is the main concept behind this institutional level in both theories.

Second level, according to Williamson, consists of formal rules. So here such formal institutions as law, property rights, constitutions are situated. Talking from another perspective second level includes governmental institutions, executive, judicial, legislative and bureaucratic functions of government in terms of horizontal division, and distribution of power across different levels of government in terms of vertical division. This group of institutions is more volatile than the first, social, group but still relatively stable. Second level of institutions almost fully correlates with the regulative pillar of Scott’s theory.

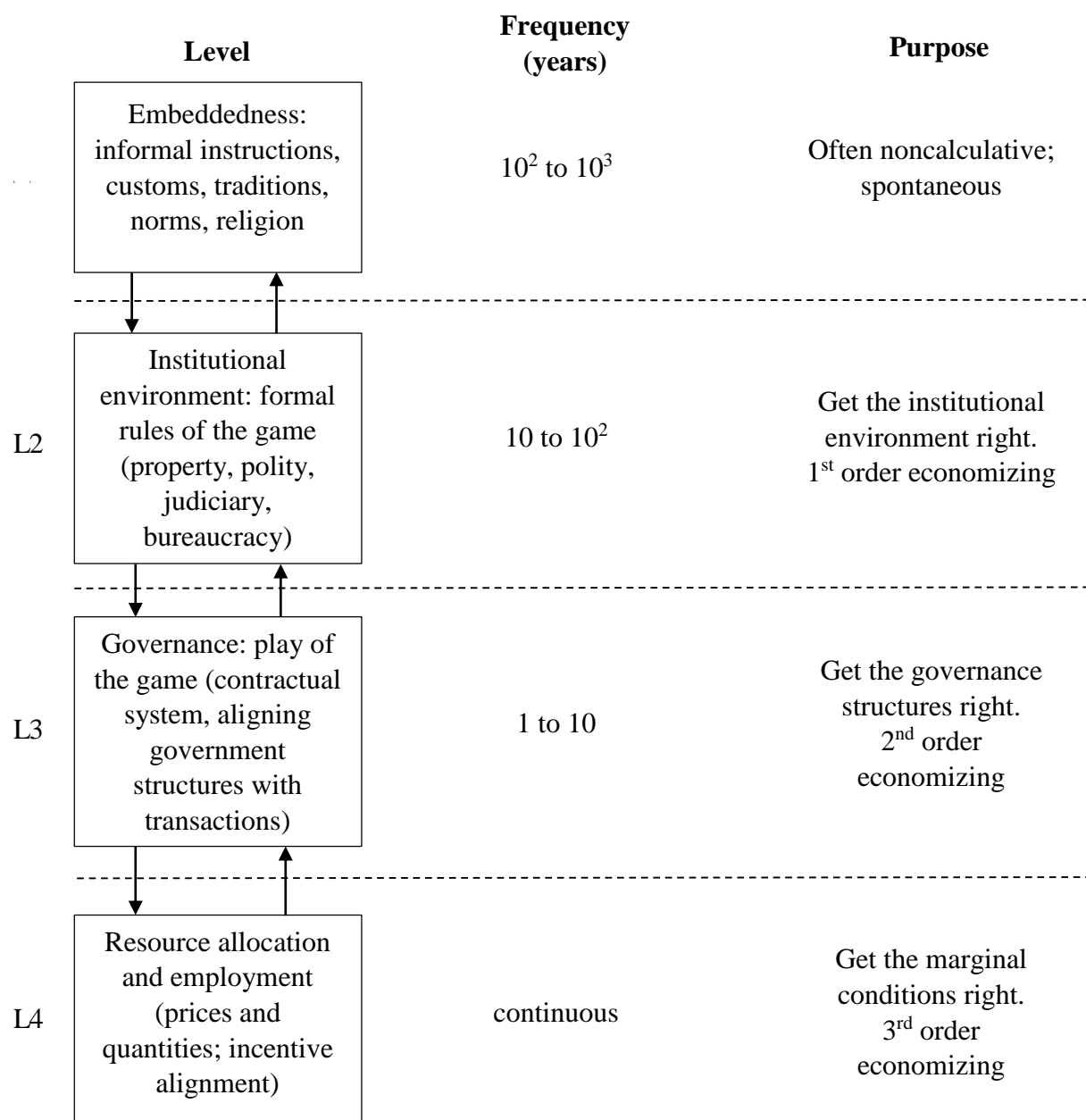
It is worth mentioning to say that there is a vast amount of research made in the field of property rights and its institutional impact on the economy as a whole and entrepreneurship particularly.

It is very important to understand the difference between the second and the third institutional levels of Williamson’s theory. While second institutional level deals with rules of the game (property rights for example), third level includes the play of the game (contracts and transactions). It includes governance (not government) institutions. The main aspect of this level is so-called contractual law and its implementation. This level focuses on dispute settlement action, as it is very important in terms of economic regulations the effort to maintain order, mitigate conflict and realize mutual gains. As this level deals with execution and implementation of concrete government policies and structures it has a high level of volatility, as this

implementation process may easily be changed in a very short period of time. This level correlates with cognitive pillar of Scott's theory but not absolutely overlaps.

The last, fourth level, includes functions of the firms. The logic behind this component of the theory is that the production and, what is more important, the output of the firm sufficiently influences the institutional context in which other firms operate. Adjustments to resource pricing and production output occur almost every day, so this is the most volatile and uncertain component of the hierarchy but it has the least influence in the long term.

Williamson present a graphical explanation of his theory for the better understanding.



L1: social theory

L2: economies of property rights/positive political theory

L3: transaction cost economics

L4: neoclassical economics/ agency theory

Figure 1. Williamson's institutional economics. Source: Williamson, 2000

Scott (Scott, 2008) presents three main components of his theory: normative, regulative and cognitive. Regulative institutions could be described as government rules and standards that an entrepreneur should take into account and comply with. These regulations essentially formulate and create a special environment or context in which all objects should operate. These types of norms can be described as external as they are created by the government and cannot be avoided.

Normative institutions are not government created, but emerged from the society. These institutions are basically different norms and internal values that are determined by a society. They show what is permitted and what is prohibited, what is legal or illegal particularly in social context. In this group we can include several kind of rules: professional norms, social norms, established traditions, old practices and generally accepted values. A major difference with the first type of institutions is that in case of not following normative institutions punishment will be more informal than formal.

Effah (Effah, 2003) describes third class of institutions, cognitive institutions, as “taken-for-granted customs and traditions that control the sense-making and decision-making processes of social actors”. These institutions are highly affected by morals, habits and culture of the society and of the actors particularly (as they may differ from the society’s). This type is the most individual as it may differ from one decision-maker to another. And more than that, it is worth mentioning to say that according to Scott (Scott, 1995), in reality these institutions are not fully independent and often cannot be divided, they may overlap with each other.

Scott’s theory components could be represented as a table.

Table 2. Scott’s three pillars. Sources: Scott, 1995; Scott, 2008.

Theory element	Regulative	Normative	Cognitive
Basis of compliance	Expedience	Social obligation	Taken for granted
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules laws and sanctions	Certification and accreditation	Prevalence and isomorphism
Basis of legitimacy	Legally sanctioned	Morally governed	Culturally supported and conceptually correct

Mark Hanson (Hanson, 2001) gives a bit briefer interpretation of the theory’s components. According to his research “regulative pillar plays a stabilizing role by prescribing actions through formal and/or informal rules that establish, monitor, and sanction activities. For example, school rules, state laws, court decisions. The normative pillar emphasizes values and norms about how people should pursue valued ends through legitimate means. The cognitive pillar shapes the filter through which people view reality and gives meaning to them as they

interpret their world”. It is necessary to clearly distinguish difference between cognitive and normative pillars. As can be seen from descriptions, normative pillar mainly consists of social norms that people are ought to obey. While cognitive pillar is more an inside feature. Institutions form a vision of how people perceive world around them, of course social norms are also play some role in this but the main aspects that have a major influence are education and upbringing.

Another, and more logical in some extent, description of Scott’s theory is presented by Jennifer Palthe (Palthe, 2014). It is necessary to present this theory in a more practical way, as it will be used in a further research. So according to Palthe institutional theory could be represented in the following way:

Table 3. Scott’s three pillars. Sources: Palthe, 2014.

	Regulative	Normative	Cognitive
Legitimacy	Legal systems	Moral and ethical systems	Cultural systems
Central Rudiments	Policies and rules	Work roles, habits and norms	Values, beliefs and assumptions
System Change Drivers	Legal obligation	Moral obligation	Change values are internalized
Sustainers	Fear and coercion	Duty and responsibility	Social identity and personal desire
Behavioral Reasoning	Have to	Ought to	Want to

Taking both of these main approaches, it is possible to say that Scott’s theory is more sociology based while Williamson’s is more economics based, because of this Williamson’s theory is oftentimes called institutional economics theory. This represents the main 2 streams of institutional entrepreneurship research.

Analysing the review of two theories done by Pacheco (Pacheco et al., 2010) it is possible to represent the main differences in two theories as follow:

Table 4. Institutional theory and institutional economic theory. Source: Pacheco et al., 2010

Comparison Across Institutional Theory and Institutional Economics-Based Theory

Dimension	Similarities	Differences	
		Institutional Theory	Institutional Economics
Nature of the entrepreneur	<ul style="list-style-type: none"> • Entrepreneur as innovator and a change agent 	<ul style="list-style-type: none"> • Institutional entrepreneur is broadly defined as a change agent 	<ul style="list-style-type: none"> • Institutional entrepreneur is a change agent driven by economic motivation (profit-seeker; exploiter of economic opportunity)
Types of institutions	<ul style="list-style-type: none"> • Study formation of governance institutions: organizing for coordination problems (e.g., private agreements, self-enforcement, contracts, standards, etc.) 	<ul style="list-style-type: none"> • Focus on informal and socially embedded institutions: <ul style="list-style-type: none"> ○ Institutionalized practices, belief systems 	<ul style="list-style-type: none"> • Focus on formal institutions: <ul style="list-style-type: none"> ○ Property rights, government policy • Codependence between informal and formal institutions and the transition from one type to the other
Determinants of institutional entrepreneurship	<ul style="list-style-type: none"> • Self-interested seeking • Functional pressures • Role of ideology and culture 	<ul style="list-style-type: none"> • Political and social pressures • Legitimacy and power • Structure of the organizational field • Individual-level characteristics 	<ul style="list-style-type: none"> • Focus on functional and economic pressures: <ul style="list-style-type: none"> ○ Market conditions and transaction costs ○ Technological change
Mechanisms for institutional change	<ul style="list-style-type: none"> • Political process of change • Role of interest groups and collective action 	<ul style="list-style-type: none"> • Focus on: <ul style="list-style-type: none"> ○ Theorization ○ Framing • Emphasis on collective action 	<ul style="list-style-type: none"> • Focus on contractual and self-enforcement strategies
Empirical focus	<ul style="list-style-type: none"> • Emphasis on qualitative studies 	<ul style="list-style-type: none"> • Organizational field as the level of analysis • Focus on the process of institutionalization and strategies employed 	<ul style="list-style-type: none"> • Emphasis on the outcome of institutionalization • Attention to unintended and negative consequences

Applications of institutional theory in entrepreneurship research

Institutional theory is more often used as a framework for analysis of different factors that affect entrepreneurship activity. Some (Ahlstorm, 2010) analyze effects of institutional change on economic activity. De Clercq (De Clercq, 2013) uses institutional theory investigating the dependencies between resource availability and entrepreneurial effort of individuals. Krasniqi (Krasniqi, 2016) research search for institutional drivers of high-growth firms, he uses the theory for analyzing cases form transition economies. Garcia-Cabrera in her paper (Garcia-Cabrera, 2016) found interdependency between the development of multinational enterprises and institution's development, also in her works she explores institutional effects on the entrepreneurship in emerging economies (Garcia-Cabrera, 2015). Influence of institutional factors on small and medium enterprises was analyzed in the works of Ding (Ding, 2016), in his work he advocates that complexity of institutional environment affects the strategic behavior of the companies.

Effect of social institutional environment on the entrepreneurial cognitions was analyzed by Lim (Lim, 2010). Institutional theory is one of the theoretical frameworks applied by Mazzei (Mazzei, 2017) fundamental research; he concluded that institutional environment has a significant effect on the strategic entrepreneurship in long term.

Institutional theory was used several times in investigating different effects of entrepreneurship. Urbano (Urbano, 2014), Dheer (Dheer, 2017) explored the effect on the overall entrepreneurship activity level. Others (Muralidharan, 2017), (Urbano, 2016), (Mohamadi, 2017), (Belitsky, 2017) analyzed effect of one or several institutional components on the entrepreneurship. Horisch (Horisch, 2017) used institutional theory combined with GEM data in order to find out what may influence environmental entrepreneurship. The institutional theory framework was used to investigate the determinants of necessity-driven entrepreneurship (Aleksandrova & Verkhovskaya, 2015).

Researchers uses institutional theory approach in such popular research field as social entrepreneurship. Munoz (Munoz, 2016) analyses how a complex institutional environment affects social entrepreneurship.

It is evident from the analysis of existing literature, that previous research were mainly focused on a separate institutional component, but not the whole institutional environment.

Institutional factors selection and hypotheses setting

As the research goal of this paper is to evaluate which institutional factors do influence youth entrepreneurship, it is necessary to identify which factors have such probability and whether they fit particular institutional theory or not. Two main features should be taken into account during factors selection and hypotheses setting: peculiarities of youth entrepreneurship as a special object of study and the correct usage of institutional theory.

It was already mentioned above that research in this study will be based on Scott's institutional theory, which provides a framework consisting of 3 pillars: regulative, normative and cognitive. In order to measure the influence of institutional environment on entrepreneurship in particular country, it is essential to consider all three institutional pillars of that society.

It is obvious that each pillar may have several components within itself. For example, regulatory component may consist of the availability of financial resources, presence and quality of assisting SME programs, costs or time required to start a business, taxation system etc. Normative pillar may include in itself such factors as corruption incidence, high social status of entrepreneurs, desirable career choice and so on. The third pillar, cognitive, mainly consist of cultural aspects and may include several factors, such as power distance, perception of opportunities and capabilities, fear of failure incidence.

Peculiarities of the youth entrepreneurship. Summarizing the literature analysis that was done in previous paragraphs, peculiarities of the youth entrepreneurship are the following: scarcity of financial resources, as they have never worked before; insufficient professional experience of young entrepreneurs; high percentage of opportunity motivated entrepreneurs; innovation oriented businesses; incomplete personal socialization of entrepreneurs; popularity of alternative sources of financing. Based on these aspects, different variables were chosen and hypotheses were formulated in order to take into account these peculiarities.

Variables of the model should represent all three pillars of institutional environment. Thus, first group of hypotheses will reflect the regulative component. Influence of such factors as government programs, taxation systems, funding availability, costs of starting a business, amount of procedures and time required to register an enterprise were separately tested in some previous research (Conchada et al., 2017; Davari & Farokhmanesh, 2017; Giriuniene, 2016; Haufler, 2014; Khan & Anuar 2017). However these research focus on a single case of one particular country or on qualitative analysis mostly.

It is necessary to consider previous experience and develop more suitable approach in order to create a relevant model. Regulative factors should be diversified in order to consider different aspects of regulative pillar as well as peculiarities of youth entrepreneurs as a special

object of study, based on this assumption the following regulative factors were chosen: market entry burdens, government entrepreneurship programs and sufficient financing available.

Financial factor could possibly be significant for several reasons: first of all, young entrepreneurs only start their professional life, due to this fact they may not have sufficient capital to start their own venture, secondly, as they have no professional experience or any possession that could be used as a guarantee for the bank loans, they have more difficulties in obtaining financing that regular entrepreneurs.

Countries with small market entry barriers should have more young entrepreneurs. As they look for opportunities that could be exploited, accessible market would be considered as a more favorable business environment among the youth. As they have less professional experience, young people are more sensitive to any possible difficulties that may arise while setting up a business, and market barriers (both market saturation and government barriers) would be considered as additional obstacles.

Government programs are relevant for the youth as they provide additional assistance on the initial stages of running a business. There are different types of government programs: financing or administrative help, government contracts or even public-private partnership. As young entrepreneurs have limited administrative and financial resources, as well as unpredictable demand, this factor should be significant for them.

Researchers of cognitive institutions mainly refer to such factors as education, different Hofstede indexes and inner culture (Nwambam et al., 2018; Manimala, 2017; Deepali, 2017; Cahayani, 2016). These components describe cognitive pillar from different perspectives. However, educational aspect should be more relevant for the age group of this study. As the relevant group for this paper is entrepreneurs in the 18-24 age brackets, it can be assumed that education should be the most significant factor for them.

It should be taken into account, that almost in all countries educational process is divided into two stages, primary and higher education. As the abundance of these educational degrees may be different the effect may be different accordingly. On top of that, GEM methodology indicates not only the level of abundance of education, but the incidence of entrepreneurial level of education, which is more relevant to the current study. Consequently, for the cognitive pillar two variables were chosen: incidence of entrepreneurial education in primary and secondary level, incidence of entrepreneurial education in higher degree level.

Most of the young people in the relevant research age group (18-24) are just graduated from the school or attend higher education institutions. Due to this fact, education plays a key role in setting up entrepreneurial values within the personality of the young people. Consequently, education as a factor should have more influence on the young entrepreneurs than on overall group of entrepreneurs.

Finally normative pillar is primarily formulated by the cultural and social norms. Entrepreneurial framework conditions include several aspects of particular factors and summarize them. Cultural and social norms should be taken as a main normative factor. It includes such components as perception of entrepreneurship as a good career path, high social status of entrepreneurs, media coverage of entrepreneurship etc.

This factor is relevant for the young entrepreneurs as they are at the last stage of socialization, thus, social environment has a major impact on their personalities. Young people are more sensitive to the existing social values as their personality is not completely established.

Based on the chosen factors several hypotheses were formulated. The following hypotheses should be tested in two groups of economies, in order to evaluate what factors mostly affect young entrepreneurship in different types of economies:

Incidence of primary entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).

Incidence of post-school entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).

The logic behind this hypothesis is that young people will tend to get involved in the entrepreneurial life if they have at least some basic knowledge in that sphere. Some authors (Geldhof et al, 2014) advocate that even those, who have entrepreneurial intentions, do not start their business because of lack of training, absence of minimal knowledge of legislation and because of insufficient basic practical skills that help to understand simplest business processes.

Most European countries promote entrepreneurship through different educational programs on the higher education level. However, entrepreneurial courses on pre-higher education level are also popular in some states and even influence innovative entrepreneurship in those societies (Mayhew et al, 2012).

It is not clear, what level of education has higher effect on entrepreneurial intentions and activity. First guess is that entrepreneurial education during tertiary studies has more effect, as it is much more deep and gives practical knowledge of how to start and maintain your own

enterprise. But on the other hand, entrepreneurial mindset is a personal characteristic, and personality is formed during initial stages of education. Because of this it is very possible that entrepreneurial courses taken in primary and secondary school will have a high impact on entrepreneurial intentions and activity in the research age group.

Because of the aforementioned, it is necessary to test both factors, both levels of education and their influence on the entrepreneurial activity.

Government entrepreneurship programs positively affect entrepreneurial activity of the youth (18-24 age old).

Nowadays the majority of entrepreneurship programs are focused on young entrepreneurs and their startups. There are different types of such programs: special tax regimes, additional quotas for import/export activities, government financing, public private partnership, state orders etc. Some research has been done in this field (Conchada et al., 2017) and government programs were found a significant factor that influences the activity of the youth. But existing research mainly focuses on a particular country or special programs, thus more complex and cross cultural analysis is required. Youth, as a social group that could be defined as the most opportunities-seeking, is the main target group and the main user of such programs.

Consequently, it is reasonable to expect that the abundance of such programs will support and stimulate entrepreneurial activity among young people. However, it is probable that these programs mostly developed for entrepreneurs with some experience, or there are other filters for potential participants of these programs. In this case youth entrepreneurship will not be correlated with this factor.

Social norms that promote entrepreneurship in the society positively affects entrepreneurial activity of the youth (18-24 age old).

Social norms as an influencing factor were a subject of study in some research (Afandi et al., 2017; Lauzikas & Dailydaite, 2015). This research found social capital as a significant influencer on entrepreneurial process. However, previous studies were focused on entrepreneurship as a whole, not youth entrepreneurship particularly.

When choosing a career path, one considers not only future perspectives in terms of welfare, but considers prestige and position in the society structure as well. Thus, high position of entrepreneurs in the society, and, consequently, high perception of entrepreneurship as a good career path will motivate young people to become self-employed entrepreneurs in their future, increasing entrepreneurial activity in the 18-24 age group.

Accessibility to the market positively affects entrepreneurial activity of the youth (18-24 age old).

Market accessibility and market dynamics were considered as a factor that influences entrepreneurship in recent studies (Escriba-Perez, 2017; Holienka et al., 2016), but the main focus of these papers was on different factors. However, their findings show that market dynamics have significant effect on entrepreneurial activity and productivity.

The logic behind this hypothesis is that young people will refuse to become entrepreneurs in case the market they are seeking to enter is blocked, saturated or burdened. On the other hand, if market barriers are not high, people, especially young people, see clear opportunities for starting a business.

Sufficient funding available positively affects entrepreneurial activity of the youth (18-24 age old).

Financial capital refers to the funds that a person can access to invest in starting, running and expanding a business. Influence of finance accessibility on the entrepreneurial activity was analyzed in previous studies (Khan & Anuar, 2017; Okello et al., 2017). But existing research do not take into account differences between developed and developing countries and do not consider youth as a special object of study.

Most probably, capital is the main issue for the young nascent entrepreneurs. Both loans and equity market are not favourable for the youth, as most of the times there are high filters for the borrowers, such as different provisions, credit history or even previous experience and expertise in the relevant industry. Young startups are usually risky, but rewarding. More sophisticated capital solutions should be considered as relevant for the young entrepreneurs. Venture capital provides different requirements, which are more applicable to the type of businesses that young people usually run.

Consequently, it is possible to say that chosen variables form almost complete picture of institutional environment. Model, based on these factors, will provide significant results and will help to understand what aspects of institutional environment play a major role for stimulating youth entrepreneurs.

Summary

Summarizing the abovementioned it will be reasonable to say that institutional theory can be divided in two major approaches, institutional theory itself and institutional economics

theory. In this research sociology based institutional theory formulated by Scott (Scott, 1995) will be used.

This theory has a substantive list of previous applications in the entrepreneurship research field. Thus, it can be concluded that this theory is applicable to my research field. More than that, institutional theory framework was applied in the analysis of the GEM dataset.

Entrepreneurship has been a relatively popular object of study for the past decades. Youth entrepreneurship is considered to have several distinctions and peculiarities, compared to the overall entrepreneurship.

Although there is a lot of research done in the field of entrepreneurship, there is a gap in exploring the young entrepreneurship, particularly using the institutional framework. Unique dataset will allow to partly fill this space in academic literature.

Based on the analysis of the existing literature and modern stage of research of this field, together with analysis of the peculiarities of the youth entrepreneurship, 6 hypotheses were formulated. They could be summarized in the following way:

Table 4. Research hypotheses

Null hypotheses	
1.	Sufficient funding available positively affects entrepreneurial activity of the youth (18-24 age old).
2.	Government entrepreneurship programs positively affect entrepreneurial activity of the youth (18-24 age old).
3.	Incidence of primary entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).
4.	Incidence of post-school entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).
5.	Accessibility to the market positively affects entrepreneurial activity of the youth (18-24 age old).
6.	Social norms that promote entrepreneurship in the society positively affects entrepreneurial activity of the youth (18-24 age old).

Chapter II. Research methodology

Research strategy

This research paper is based on the Global Entrepreneurship Monitor data. GEM is one of the most developed and explicit studies of entrepreneurship. It contains data of more than 100 economies in a 18 years' time period. The main goal of this project is to estimate different entrepreneurship indicators, such as total entrepreneurial activity, or willingness to start a new venture, as well as to measure main characteristics of economy, that may influence entrepreneurship development in the country.

GEM identifies itself in the following statement: “through a vast, centrally coordinated, internationally executed data collection effort, GEM is able to provide high quality information, comprehensive reports and interesting stories, which greatly enhance the understanding of the entrepreneurial phenomenon. GEM began in 1999 as a joint project between Babson College (USA) and London Business School (UK). The aim was to consider why some countries are more 'entrepreneurial' than others.”³

GEM data could be divided in two parts. First – Adult Population Survey (APS), that looks at the characteristics, motivations and ambitions of individuals starting businesses, as well as social attitudes towards entrepreneurship.⁴ This data shows insight from the entrepreneurs and population perspectives on the economic and social environment surrounding them. Surveys are conducted based on the probability sampling among adults of the countries that participate in the project, by a local GEM teams. Second – National Expert Survey (NES), that looks at the national context in which individuals start businesses.⁵ This data is collected through deep interviews with representatives of local business community or among entrepreneurship specialists. Experts are chosen from different industries, different social groups and different regions.

Research goal of this paper is to find out which factors do affect entrepreneurial activity in the young entrepreneurs group; it will be necessary to test several hypotheses, in order to find dependencies between institutional environment and entrepreneurial activity of young entrepreneurs. Consequently, conclusive research design will be used as the main in this work.

Developed and developing countries form a completely different institutional environment, because of that these two different country groups will be analysed separately and

³ Global Entrepreneurship Monitor website <http://www.gemconsortium.org/data>

⁴ Ibid.

⁵ Ibid.

at the second stage of analysis the results will be compared. The distinction between developed and developing countries is taken from the International Monetary Fund methodology.

This research will be based on quantitative analysis. According to Muijs (Muijs, 2010), quantitative research means explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics). As this paper's main goal is to find out dependencies that influence youth entrepreneurial activity, regression analysis will be used as the main statistical method.

For the hypothesis testing dependent variable will be entrepreneurial activity in the research age group (18-24) and independent variables will be relevant corresponding metrics from the GEM data (aforementioned EFCs). Each variable will represent one special institutional factor. As 6 hypotheses were identified based on six unique institutional factors, 6 variables should be introduced:

Table 5. Hypotheses and linked variables

Hypotheses	Corresponding variable in the model
Sufficient funding available positively affects entrepreneurial activity of the youth (18-24 age old).	Access to financing
Government entrepreneurship programs positively affect entrepreneurial activity of the youth (18-24 age old).	Government programs
Incidence of primary entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	Primary and secondary entrepreneurial education
Incidence of post-school entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	Higher entrepreneurial education
Accessibility to the market positively affects entrepreneurial activity of the youth (18-24 age old).	Market entry regulations
Social norms that promote entrepreneurship in the society positively affects entrepreneurial activity of the youth (18-24 age old).	Social norms

Two software tools will be used for this research: IBM SPSS and Stata 13. Both of them are statistical software packages with comparable sets of functions. However, SPSS is more "user-friendly" when it comes to the data transformation and data construction, but Stata has more opportunities for analysis of panel data. Because of these factors, author used SPSS for data gathering and transformation, and Stata for the main statistical analysis.

Variables and data description

According to the formulated hypotheses 1 dependent variable and 6 independent variables should be introduced. Most of them are taken from APS and NES surveys conducted by Global Entrepreneurship Monitor team for the years 2015, 2016 and 2017. Historical data for a total of 76 countries were taken, but not all observations for each year are present.

All GEM variables except TEA are taken from the NES survey and represents the summary of different blocks. For example, in order to estimate the development of social norms in the society, experts are asked several questions related to that topic.

Table 6. Variables description

Variable	Name in the dataset	Description	Institutional Pillar (Scott theory)	Source
Dependent variable				
TEA among 18-24	YOUTH	% of the population in the 18-24 age group that are involved in the entrepreneurial activity	-	GEM APS
Independent variables				
Access to financing	ASUM	There is sufficient overall funding available for new and growing firms (1-9)	Regulative	GEM NES
Government programs	CSUM	Government supports entrepreneurship through a different programs (1-9)	Regulative	GEM NES
Primary and secondary entrepreneurial education	D1SUM	Primary education pays attention to entrepreneurship aspects (1-9)	Cognitive	GEM NES
Higher entrepreneurial education	D2SUM	Higher education provides necessary competences for starting a business (1-9)	Cognitive	GEM NES
Market entry regulations	G2SUM	Market entry barriers (1-9)	Regulative	GEM NES
Social norms	ISUM	National social norms support entrepreneurship (1-9)	Normative	GEM NES

Data is divided into two parts, first is a list of developed countries, second is a list of developing countries. As not all countries participate in the GEM research every year, time-series cross-sectional dataset used for the research is unbalanced.

Model description

As the analysis will include several years of observation (2015-2017) cross-sectional time-series data will be used (also referred as panel data). According to Torres-Reyna (Torres-Reyna, 2007) panel data is a dataset in which the behavior of entities are observed across time, which is completely applicable to the GEM dataset, used in this study.

Panel data rises some difficulties, as it is not obvious which method of regression analysis should be applied. There are 3 relevant models that can be used to formulate the regression equation for panel data. Discussion about what model is the most suitable for the cross country analysis is still open (Aleksandrova & Verkhovskaya, 2016). Model, used in this study, was chosen on the basis of special tests and procedures (Torres-Reyna, 2007).

Fixed-effects model. Fixed-effects model is used for analyzing the impact of variables that vary over time. Fixed-effects explore the relationship between predictor and outcome variables within an entity (country, person, company, etc.). Each entity has its own individual characteristics that may or may not influence the predictor variables. When using FE we assume that something within the individual may impact or bias the predictor or outcome variables and we need to control for this (Torres-Reyna, 2007). However, the variance between the entities is not taken into account, so this method is not perfectly suitable in this research.

Random-effects model. Random effects models are also known as multilevel or mixed models (Clark et al., 2010) The rationale behind random effects model is that, unlike the fixed effects model, the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model (Torres-Reyna, 2007). The crucial distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model, not whether these effects are stochastic or not (Greene, 2012). At the first glance this model is applicable to the research, although some tests should be taken in order to decide.

Pooled OLS regression. Regular ordinary least square regression approach adopted to panel data. Greene (Greene, 2012) argues that this method is not the most accurate and does not fully incorporate variance across entities. When choosing between this model and random-

effects model variance across entities should be checked through a Breusch-Pagan Lagrange multiplier.

Analysis of the Developed economies group

According to Greene (Greene, 2012) the Hausman test is a useful device for determining the preferred specification of the common effects model. In other words it can be used in order to determine whether the fixed-effects model should be used. It basically tests whether the unique errors are correlated with the regressors, the null hypothesis is they are not.

Hausmann test for developed countries is not significant, consequently it is not correct to use the fixed-effects model. (Stata outputs for Hausmann tests are in the Appendix 1).

Now it is necessary to estimate whether a random effect regression or simple pooled OLS regression should be used. Breusch-Pagan Lagrangian multiplier test can be used for this purpose. According to Wooldridge (Wooldridge, 2013) the null hypothesis of Breusch-Pagan test is that there is no variance difference between entities, e.g. there is homoscedasticity. This means that if this test is not significant then we can use simple pooled OLS regression. (Breusch-Pagan test output could be found in Appendix 2.)

Running this test tells us that OLS is not applicable here as data turns out to be more complex. After running two steps of analysis it is possible to say that the random-effects model is the most applicable to this research.

Therefore, random effects model (for both developed and developing groups) will look the following way:

$$Y_{it} = \mu + \sum_j \beta_j RF_{jit} + \sum_z \alpha_z CF_{zit} + \gamma NF_{it} + u_{it} + \varepsilon_{it}$$

Where: Y_{it} - dependent variable, Entrepreneurial Activity of the youth; i - country; t - time period; RF – regulative factors (j represents particular factor); CF – cognitive factors (z represents particular factor); NF – normative factor (as there is only one normative factor in the model); u_{it} - between-group error; ε_{it} - within-group error.

Before running the regression, one more assumption should be checked. As in a usual multivariate regression, the aspect of multicollinearity should be reviewed. According to Andy Field (Field, 2013) multicollinearity is a strong correlation between two or more predictors. Collinearity diagnostics can be done by calculating Variance Influence Factor (VIF). But

running the VIF analysis is not appropriate for panel data, in this case it is possible to evaluate multicollinearity by checking the covariance matrix of coefficients.

Results show that assumption regarding the multicollinearity is not violated as all coefficients are less than $\pm 0,6$. (Full covariance matrix could be found in Appendix 3.)

Finally it is possible to proceed to the main regression analysis.

```
. xtreg YOUTH ASUM CSUM D1SUM D2SUM G2SUM ISUM, re

Random-effects GLS regression              Number of obs   =          71
Group variable: CountryNum                Number of groups =          28

R-sq:                                     Obs per group:
    within = 0.2341                        min =           1
    between = 0.3258                       avg =           2.5
    overall = 0.3049                       max =           3

corr(u_i, X) = 0 (assumed)                Wald chi2(6)    =          23.30
                                           Prob > chi2     =          0.0007
```

YOUTH	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ASUM	1.428648	.7488728	1.91	0.056	-.0391157	2.896412
CSUM	-1.267558	.9974691	-1.27	0.204	-3.222561	.687446
D1SUM	.2408504	1.051558	0.23	0.819	-1.820164	2.301865
D2SUM	-.2819858	1.240593	-0.23	0.820	-2.713503	2.149532
G2SUM	2.082674	.8823636	2.36	0.018	.353273	3.812075
ISUM	1.676233	.8789658	1.91	0.057	-.0465087	3.398974
_cons	-9.960197	5.964816	-1.67	0.095	-21.65102	1.730627
sigma_u	4.1254619					
sigma_e	2.7485155					
rho	.69258538	(fraction of variance due to u_i)				

Figure 3. Developed economies regression results

Based on the previous studies that use similar statistical tools to analyze GEM data author decided to set Pvalue at the 10% significance level. Regression results show that the model as a whole is significant and on top of that there are 3 variables that have significant positive influence on the entrepreneurial activity in the 18-24 age group for the developed economies. Therefore, it is possible to accept 3 hypotheses for the developed countries:

Table 7. Hypotheses for developed economies

Sufficient funding available positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓
Government entrepreneurship programs positively affect entrepreneurial activity of the youth (18-24 age old).	REJECT ✗

Incidence of primary entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	REJECT ✗
Incidence of post-school entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	REJECT ✗
Accessibility to the market positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓
Social norms that promote entrepreneurship in the society positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓

Analysis of the Developing economies group

Regression analysis of the developing countries follows the same sequence as for the developed countries:

1. Hausman test
2. Breusch-Pagan Lagrangian multiplier test
3. Multicollinearity check
4. Regression

Despite the fact that data for the developing economies is the same in terms of datasource and time period, it is still necessary to go through all steps of analysis as the sample size is not the same.

The result is non-significant as for the previous group. (For Hausman test Stata output see Appendix 1.) Thus, it is not possible to use fixed effects model and it is necessary to proceed to the next step.

BPL test is not significant as well, so it is not possible to use Pooled OLS regression model. (Breusch-Pagan test output could be found in Appendix 2.) Random effects model should be used instead (the same as for the developed countries). The last step before running regression is the multicollinearity check.

Multicollinearity assumption is not violated so it is permitted to run a regression model (all values are less than $\pm 0,6$). (Full covariance matrix could be found in Appendix 3.)

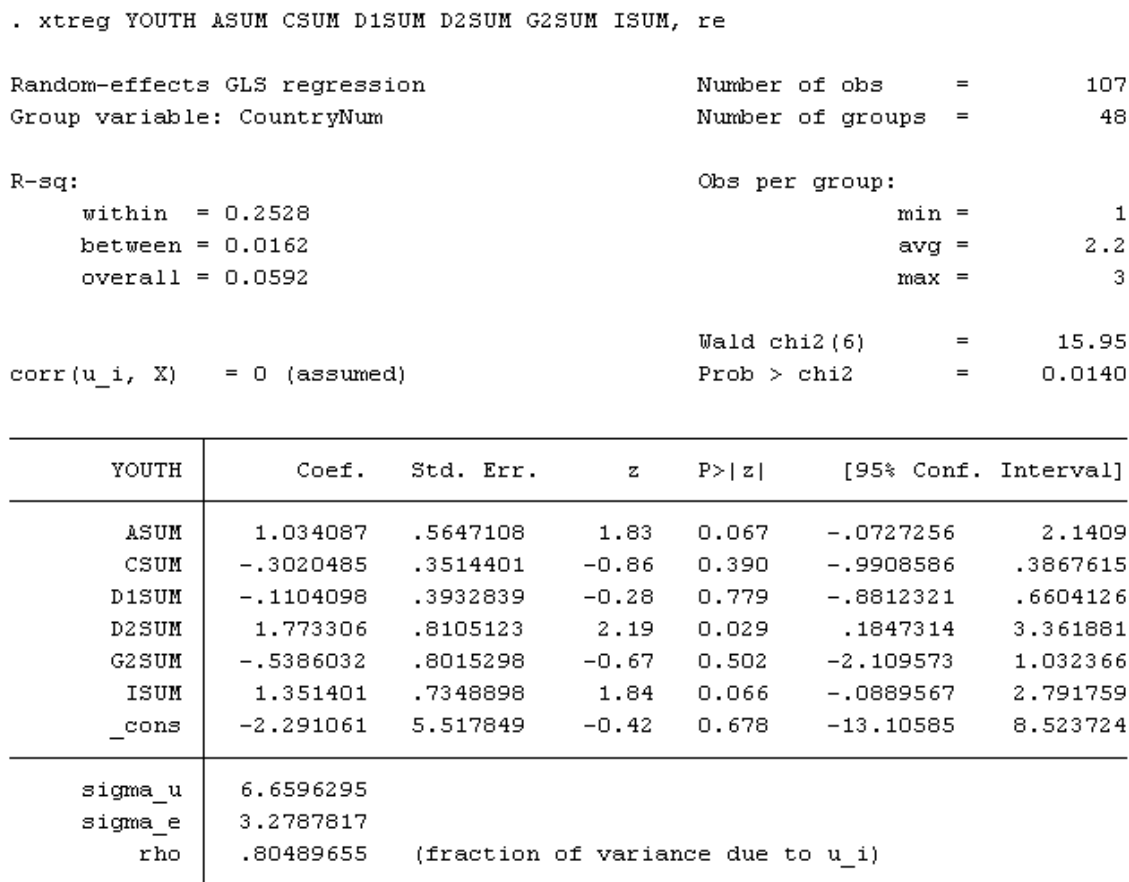


Figure 4. Developing economies regression output

Regression for the developing countries shows different results. The overall model is significant (even more significant because of the different amount of observations and countries). Financial factor and social values are also significant as for the developed economies. But the accessibility to the market seems to be insignificant predictor for the entrepreneurial activity of the 18-24 age group in developing countries, while higher education is a significant predictor. These results are opposite to the developed economies, and they are definitely a subject for a deeper analysis. For the developing countries group it is possible to accept 3 hypotheses:

Table 8. Hypotheses for Developing economies

Sufficient funding available positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓
Government entrepreneurship programs positively affect entrepreneurial activity of the youth (18-24 age old).	REJECT X

Incidence of primary entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	REJECT X
Incidence of post-school entrepreneurial education positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓
Accessibility to the market positively affects entrepreneurial activity of the youth (18-24 age old).	REJECT X
Social norms that promote entrepreneurship in the society positively affects entrepreneurial activity of the youth (18-24 age old).	ACCEPT ✓

Summary

Obtained results show that institutional environment plays a significant role in stimulating entrepreneurial activity among the 18-24 age group. Such factors as funding availability, accessibility to the market, social values and entrepreneurial education play a major role for youth entrepreneurship development. However, there is difference between developed and developing economies, in terms of what factors do have significant effect.

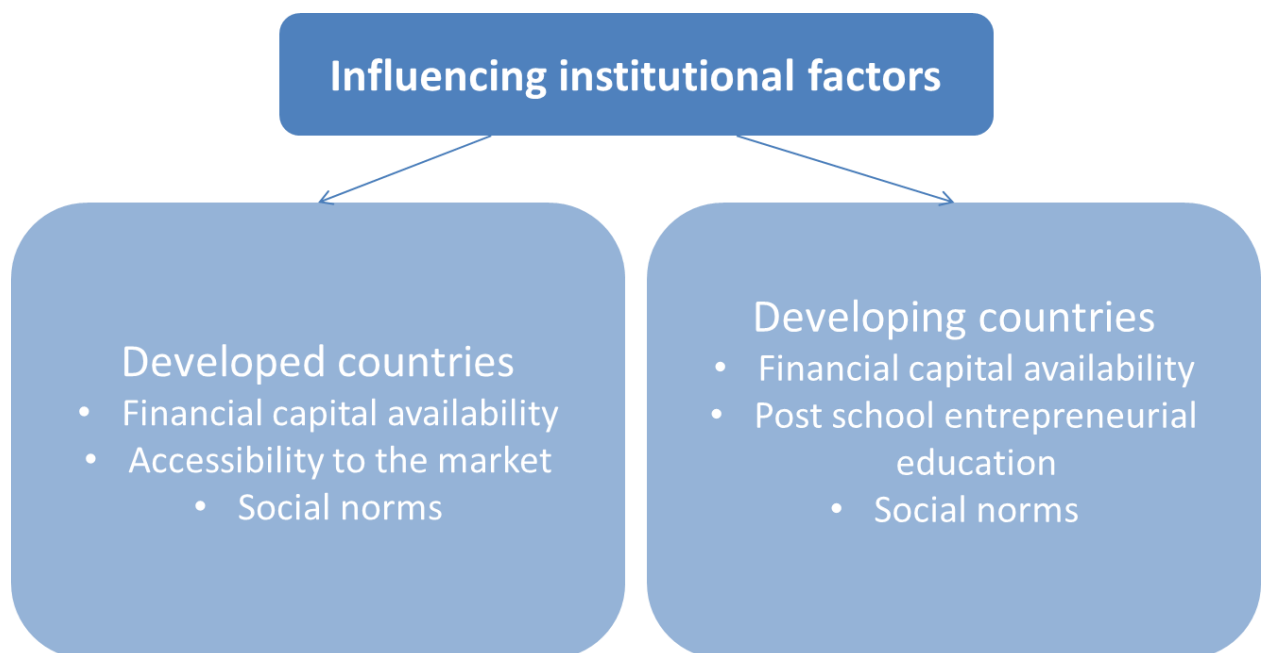
More detailed analysis of the obtained results is presented in the last chapter.

Chapter III. Analysis of the obtained results

Study's research model provides information that can be applicable in several spheres. First, it is necessary to mention how this research contribute to the theoretical studies of entrepreneurship and institutional theory. Second, obtained results do have practical implications, that could be considered as measures that are focused on youth entrepreneurship development. Practical contribution should be analyzed for several groups of stakeholders, such as government bodies that are interested in entrepreneurship development, or potential young entrepreneurs who are at the stage of considering self-employment as a future career path.

Theoretical input

In the first chapter it has been already mentioned that there is a significant research gap in the narrow sphere of youth entrepreneurship research and institutional theory. Current paper partly fills this gap, by introducing a new model that takes into account all three pillars of institutional environment, according to the Scott's theory.



Results of the regression analysis could be summarized in the following way:

Figure 5. Influencing factors

As can be seen from the graph above, there are several similarities between developed and developing countries, as well as some distinctions in terms of influencing institutional environment. But it would be more reasonable first to analyze these two groups of countries separately and then compare similarities or differences.

Financial factor plays a major role for youth entrepreneurs in both developed and developing countries. In this case it is necessary to compare not only significance of the regression coefficients but the coefficients themselves. For developing countries beta equals to 2.3 while for the developed countries group it is around 1.5. Consequently affordability of the financial resources play a bigger role in developing countries, as it significantly increases TEA among young entrepreneurs group.

This could be partly explained by the fact that the financing in developing countries is not that abundant by itself, so a slight increase in the financing availability has a serious impact on entrepreneurial activity. This is a result of a low base in other words. This finding partly corresponds with some research (Khan & Anuar, 2017).

In developed countries there is no shortage of capital, however, the majority of the financing institutions are so-called conservative sources of financing (bank loans, equity financing etc.). This type of institutions usually are not interested in high risk investments, such as different entrepreneurial projects. Considering entrepreneurial projects of the youth as even more risky projects (as the founders of such enterprises do not have much experience or even a clear business model) it is possible to conclude that youth entrepreneurs can not fully use the abundance of capital in developed countries. Because of these factors financing still plays a great role as an institutional factor for the young entrepreneurs. Decrease or increase of financing availability affects total entrepreneurial activity among the 18-24 age group. Similar dependencies were partly studied in the Wright's research (Wright, 2017), however it was limited due to qualitative analysis.

Level of accessibility to the market plays significant role only in developed country. This is interesting finding that could be explained through the market differences between developed and developing countries. The major part of this indicator accounts for the market status, if market is emerging (it is much easier to enter growing market) market accessibility is high, on the contrary when market is collapsing or saturated (it is harder to capture part of the market when it is not expanding) accessibility will be low. In the developing countries market, in the vast majority of times, is growing (or "developing" as the country status says). Because of this, market accessibility does not play a significant role in term of stimulating entrepreneurial activity, simply because of the fact that market in developing countries is favourable for the entry.

It is obvious that capturing market niche for new enterprises is way more easy when market is growing. But in developed countries, most of the times market is saturated, and it is

extremely hard to find an empty spot for the new venture or even brand new product. Because of this, entrepreneurial activity of the youth is very sensitive to the level of market accessibility in the developed countries. Every new market opportunity is instantly exploited in the developed economies, this idea could be supplemented by the fact that the ratio between opportunity and necessity driven entrepreneurs in developed countries is in favour for the opportunity entrepreneurs.

Next interesting finding is the significance of the entrepreneurial post school education for the entrepreneurial activity of the youth. The fact that this component of cognitive pillar is significant only for the developing countries could be explained from different perspectives. First of all it is necessary to look on the ration of young people with higher education both in developed and developing countries. According to the World Bank research, more than 50% of the population in the developed countries have higher education, while for the developing countries this number is below 20% on average. This means that higher education in developing countries could be perceived as a real competitive advantage. Knowledge, contacts and practical skills that are obtained during post school studies helps young people to understand the basics of business processes and gives them expertise required to start their own venture. It is also worth mentioning that the regression coefficient is around 2.1, which means that the influence of this factor is high, it is the second highest after financing for the developing countries.

While in the developed countries, where the percentage of people with higher education is really high, it does not play a major role, as both entrepreneurs and non-entrepreneurs have it. Higher education does not give significant advantage inside developed countries group as it is common within this group. According to the latest studies (Bergmann et al., 2018) it is necessary to look deeper in this factor to understand how higher education stimulates entrepreneurial activity of the youth in developed economies. GEM index is not enough for understanding this phenomena, as it is necessary to look for the quality of this education and particular programs, abundance and ratings of business schools in developed countries and other aspects.

Normative component plays similar significant role in the countries with both developed and developing economies. Comparing to the adult population, it is evident that social norms have much more serious impact on the youth. As young people only go through the process of socialization, social norms essentially form their inner vision on personal and professional life. Thus, social norms form a perception of entrepreneurship in the eyes of youth. High regression coefficients in both country groups tell that this factor is one of the high importance.

Hypotheses regarding influence of government programs and primary entrepreneurial education on the youth entrepreneurship were not confirmed. Regarding primary entrepreneurial education it is reasonable to assume that it has no impact because of incorrect timing. During primary studies young people overcome only first steps of socialization, career and professional life vision is formed during next socialization levels. But it is necessary to mention that primary education has influence on social norms that a person carries through all of his life, consequently, primary education has some indirect influence through a different institutional component.

Rejected hypotheses about government programs influence could be explained by the fact that the majority of the government programs target not the youth, but entrepreneurs with some experience or already established SMEs. Most of these programs use only financial help, while young nascent entrepreneurs need not only financial capital, but knowledge of how to overcome different bureaucratic barriers and obtain necessary business contacts to expand on the market. On top of that, usually government programs are focused on some particular industry (for example agriculture or logistics etc.), due to this fact youth can not always fully exploit government programs.

Practical contribution

Recommendations to several groups of stakeholders could be made based on the results of this research. First group is government bodies that construct the major part of the institutional environment. Second group is young entrepreneurs. On top of that it is necessary to review overall managerial implications of the research.

Latest studies say that entrepreneurship contributes not only to the economic development, but to the economic globalization and overall growth as well (Coulibaly et al., 2018). Entrepreneurship increases nation's wealth through creating new product, increasing effectiveness of labour, and creating new workplaces. Youth entrepreneurship has an innovation focus, this leads to a new technologies that can possibly increase overall welfare.

Due to this and many more factors government should be interested in promoting entrepreneurship among young people. According to obtained results of this study it is possible to formulate several recommendations in order to increase total entrepreneurial activity among young people.

First of all it is possible to stimulate entrepreneurial activity by reforming financial system. Removing unnecessary financing barriers for young people will boost their

entrepreneurial performance. Several financing methods should be considered in order to capture all possible financing model. Including conservative, low risk, bank loans and more risky venture capital. According to the model this measure will have a high impact on entrepreneurs in developing countries and moderate effect in developed economies.

In developed countries regulators should analyze market accessibility for the new ventures and increase it if possible. This could be achieved through different methods. First of all by developing anti trust legislation that will decrease market power of big players. Oftentimes it is hard for new firms to enter the market, as already established ventures have more market power and can even influence potential customers, this phenomena plays significant role for new SMEs that are not innovative and try to compete on already existing market. Second, government could set a favourable exporting regime, thus creating new market possibilities for new ventures. Simply lowering entry regulations in some industries would also give a stimulating effect on entrepreneurial activity of the youth.

For developing countries government should focus on entrepreneurial higher education, as it plays a significant role in influencing institutions. Making it more affordable or even free will have a huge impact. As the overall level of education will rise, young entrepreneurs will see more and more opportunities for self employment. New business skills will allow not only to set up their own ventures but increase the overall efficiency of the economy. Besides that, focusing on the entrepreneurial education will have an impact on the young people, but in the future it will work like a long term investments as they will grow up. In a long run these entrepreneurially educated people will reconstruct the social norms of society and make it more favourable for entrepreneurs. So developing higher education transforms into next recommendation dedicated to the social norms improvement.

According to the research, social norms have a big role as a normative institution in both developed and developing countries. Although this factor is one of the crucial in the model, it is extremely hard to affect or change it in a short term (Kinzig et al., 2013). Government should work towards creating a special cultural environment that will promote individualism, proactiveness, innovativeness and entrepreneurial spirit itself. In addition, through different channels, especially through mass media it is possible to create a favourable image of entrepreneurship, an image that will be attractive to the major part of the society (Nieto & Gonzalez, 2016). Consequently, young people will look at entrepreneurship as a good career path, that will give them not only wealth but social status in the future.

Study provides insights on what should be taken into account in order to stimulate entrepreneurial activity of the youth. Economic growth could be achieved through the improvement of particular factors, as well as efficiency of labour improvement and overall welfare increase.

Obtained results propose two more findings that could be used by entrepreneurs. First is the educational opportunities in developing countries. Results of the model show that entrepreneurial education in developing economies is a serious influencing factor that stimulates entrepreneurial activity. Considering existing studies in this field, it is possible to state that business education in such countries values a lot, but there are not enough educational centers to fulfill the demand. Consequently, there is an open entrepreneurial opportunity for starting different educational business programs for young people. There is almost guaranteed demand for business education in developing countries.

Moreover, already established educational centers with entrepreneurial education programs, may attract young people from developing countries by giving them special conditions (different tuition conditions for example). On top of that, study says that entrepreneurial education in developed countries become less influencing, it is logical to conclude that the drop of popularity of such education in developed countries could be expected. Combination of these two factors shows an open opportunity for existing educational centers, shows how they can expand their market and increase demand and popularity of their programs.

As the youth face difficulties with financing when starting a business (in both developed and developing economies), different types of investors should consider youth entrepreneurs as a new investment possibility. However, providing financing for the youth requires additional risk analysis, as young business owners do not have much expertise and most of the times their ideas are not standard. But besides that, the innovative focus of young entrepreneurs provides higher possible returns on investments than already established non-risky ventures.

Young entrepreneurs could use findings of this study in order to increase their competitiveness as an entrepreneurs in their countries. They should focus on cognitive and normative components of the model, as regulative pillar is more about external conditions which are independent form them.

On the other side, cognitive component which consists of educational factor, plays a major role in stimulating entrepreneurial activity of the youth in developing countries. As it was already mentioned, entrepreneurial education gives basic expertise that is required for understanding business processes, consequently increasing potential of new ventures. In

developing countries higher education gives a major competitive advantage in professional life, as it provides a broader image of the society and economy. On top of that, according to latest research (Bergmann, 2018), higher education institutions may provide a relevant entrepreneurial climate within universities or other institutions.

However, in countries with developed economies, entrepreneurial higher education is not a significant factor of entrepreneurial activity. Although, as it was discovered in one of the latest papers (Licha & Brem, 2018), it is necessary to analyse each entrepreneurial educational program more precisely, in order to understand what potential it has. Some institutions may provide irrelevant knowledge or unnecessary business skills which are outdated and unclaimed in the modern economic system.

Social norms are proved to be relevant for young entrepreneurs in both developed and developing economies. Although it is more independent factor, it still may be useful for young entrepreneurs. Through analysis of social environment, young entrepreneurs have an opportunity to understand whether it is favourable to be an entrepreneur in their country. And in case they have a serious intention on being an entrepreneur, they should consider changing their country in order to act in more suitable society. In today's globalized world this practice is becoming more and more popular.

Conclusion

Entrepreneurship is proved to be a strong mechanism of economic growth. Modern stage of theoretical development of institutional theory and entrepreneurship theory provides almost complete view on the entrepreneurship as economic phenomena.

Deep literature analysis showed that current topic has strong theoretical base. A lot of research about youth entrepreneurship has been done in the previous years, nevertheless, there is still a research gap that could be distinguished in the abovementioned fields.

Youth entrepreneurship could not be studied in the framework of regular entrepreneurship research because of the major differences between them. After theoretical analysis author concluded that youth entrepreneurship should be perceived as a special object of study due to various peculiarities.

There are several special aspects of the youth entrepreneurship that were defined, it is reasonable to mention three main of them. First, youth is more innovation oriented and opportunity motivated. Second, young entrepreneurs do not have sufficient professional experience. Thirdly, the process of socialization is not complete among members of 18-24 age group. Due to salient features of the youth entrepreneurs, special institutional factors that may have influence were identified.

Using the concept of Scott's institutional theory and taking into consideration peculiarities of the youth entrepreneurship, 6 possible factors of influence were distinguished, namely: access to financing, government entrepreneurship programs, primary and higher entrepreneurial education (separately), market entry burdens and social norms. These factors represent all three institutional pillars (regulative, normative and cognitive), thus it is possible to say that they form institutional environment of the particular country.

Based on the chosen factors, 6 hypotheses were formulated and tested for two country groups (with developed and developing economies). Such a division allowed to compare different types of societies and provided interested results that were analyzed from theoretical and practical points of view.

Paper rests upon quantitative research. Global Entrepreneurship Monitor dataset for the three last consecutive years was used. Unique cross-sectional time-series dataset allowed to choose relevant variables that fully corresponded with the initial hypotheses. During preliminary analysis of the data random effects GLS regression model was chosen as the main statistical tool.

Research was executed according to all rules of statistical analysis and results proved to be significant and relevant for the current study.

Model indicates that the following factors have a significant influence on entrepreneurial activity of the youth: access to financial resources, incidence of higher entrepreneurial education (for developing countries only), market burdens (for developed countries only), and social norms.

Obtained results give a decent basis for further interpretation and provide significant value in both theoretical and practical spheres. From theoretical perspective, study partly fill the research gap in the youth entrepreneurship research field and contributes to the previous assumptions and conjectures. From practical perspective, results of the study could be used for developing recommendations for different stakeholders, such as government structures or entrepreneurs and others.

Results of the work solve the goal of the study and research objectives that were formulated in the introduction. Model represents a substantial part of the social environment and takes into account all the components of the institutional theory.

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Appendixes

Appendix 1. Hausman tests

Developed countries:

```
. hausman fixed random
```

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random		
ASUM	1.297558	1.428648	-.1310902	.5787111
CSUM	-2.780096	-1.267558	-1.512538	1.854465
D1SUM	-.6242488	.2408504	-.8650992	1.142954
D2SUM	-.1793571	-.2819858	.1026287	1.190942
G2SUM	2.141252	2.082674	.0585781	.6348087
ISUM	2.428842	1.676233	.7526093	2.111817

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)' [(V_b-V_B)^(-1)] (b-B)
 = 1.70
 Prob>chi2 = 0.9454

Developing countries:

```
. hausman fixed random
```

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random		
ASUM	1.550218	1.034087	.5161308	.2384879
CSUM	-.2173842	-.3020485	.0846644	.0824916
D1SUM	.0770794	-.1104098	.1874892	.1422431
D2SUM	2.564131	1.773306	.790825	.6016622
G2SUM	-.3379766	-.5386032	.2006266	.3265292
ISUM	1.369024	1.351401	.0176227	.4484567

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)' [(V_b-V_B)^(-1)] (b-B)
 = 9.25
 Prob>chi2 = 0.1599

Appendix 2. Breusch and Pagan Lagrangian multiplier tests

Developed countries:

Breusch and Pagan Lagrangian multiplier test for random effects

$$\text{YOUTH}[\text{CountryNum},t] = Xb + u[\text{CountryNum}] + e[\text{CountryNum},t]$$

Estimated results:

	Var	sd = sqrt(Var)
YOUTH	31.63109	5.624152
e	7.554337	2.748515
u	17.01944	4.125462

Test: $\text{Var}(u) = 0$

$$\begin{aligned} \underline{\text{chibar2}}(01) &= 34.30 \\ \text{Prob} > \text{chibar2} &= 0.0000 \end{aligned}$$

Developing countries:

Breusch and Pagan Lagrangian multiplier test for random effects

$$\text{YOUTH}[\text{CountryNum},t] = Xb + u[\text{CountryNum}] + e[\text{CountryNum},t]$$

Estimated results:

	Var	sd = sqrt(Var)
YOUTH	51.62354	7.184952
e	10.75041	3.278782
u	44.35066	6.659629

Test: $\text{Var}(u) = 0$

$$\begin{aligned} \underline{\text{chibar2}}(01) &= 27.86 \\ \text{Prob} > \text{chibar2} &= 0.0000 \end{aligned}$$

Appendix 3. Covariance matrices

Developed countries:

. vce, corr

Correlation matrix of coefficients of xtreg model

e(V)	ASUM	CSUM	D1SUM	D2SUM	G2SUM	ISUM	_cons
ASUM	1.0000						
CSUM	0.0037	1.0000					
D1SUM	0.0217	0.0632	1.0000				
D2SUM	-0.2640	-0.3132	-0.3367	1.0000			
G2SUM	-0.3428	-0.3378	-0.2133	0.1326	1.0000		
ISUM	0.0087	-0.1807	-0.5060	0.0536	0.0251	1.0000	
_cons	-0.0914	-0.1568	0.1712	-0.5130	-0.2481	-0.3349	1.0000

Developing countries:

. vce, corr

Correlation matrix of coefficients of xtreg model

e(V)	ASUM	CSUM	D1SUM	D2SUM	G2SUM	ISUM	_cons
ASUM	1.0000						
CSUM	-0.0238	1.0000					
D1SUM	-0.1192	0.0601	1.0000				
D2SUM	-0.0994	0.0368	-0.1201	1.0000			
G2SUM	-0.1399	0.0237	0.0670	0.0223	1.0000		
ISUM	-0.0005	-0.0532	-0.0544	-0.2289	-0.2157	1.0000	
_cons	-0.2368	-0.2663	-0.1090	-0.4888	-0.4008	-0.3370	1.0000

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Appendix 4. Stata regression outputs

Developed countries:

```
. xtreg YOUTH ASUM CSUM D1SUM D2SUM G2SUM ISUM, re

Random-effects GLS regression           Number of obs   =       71
Group variable: CountryNum             Number of groups =       28

R-sq:                                   Obs per group:
    within = 0.2341                      min =           1
    between = 0.3258                     avg =           2.5
    overall = 0.3049                     max =           3

Wald chi2(6) =       23.30
corr(u_i, X) = 0 (assumed)              Prob > chi2     =       0.0007
```

YOUTH	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ASUM	1.428648	.7488728	1.91	0.056	-.0391157 2.896412	
CSUM	-1.267558	.9974691	-1.27	0.204	-3.222561 .687446	
D1SUM	.2408504	1.051558	0.23	0.819	-1.820164 2.301865	
D2SUM	-.2819858	1.240593	-0.23	0.820	-2.713503 2.149532	
G2SUM	2.082674	.8823636	2.36	0.018	.353273 3.812075	
ISUM	1.676233	.8789658	1.91	0.057	-.0465087 3.398974	
_cons	-9.960197	5.964816	-1.67	0.095	-21.65102 1.730627	
sigma_u	4.1254619					
sigma_e	2.7485155					
rho	.69258538	(fraction of variance due to u_i)				

Developing countries:

```
. xtreg YOUTH ASUM CSUM D1SUM D2SUM G2SUM ISUM, re

Random-effects GLS regression           Number of obs   =      107
Group variable: CountryNum             Number of groups =       48

R-sq:                                   Obs per group:
    within = 0.2528                      min =           1
    between = 0.0162                     avg =           2.2
    overall = 0.0592                     max =           3

Wald chi2(6) =      15.95
corr(u_i, X) = 0 (assumed)              Prob > chi2     =       0.0140
```

YOUTH	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ASUM	1.034087	.5647108	1.83	0.067	-.0727256 2.1409	
CSUM	-.3020485	.3514401	-0.86	0.390	-.9908586 .3867615	
D1SUM	-.1104098	.3932839	-0.28	0.779	-.8812321 .6604126	
D2SUM	1.773306	.8105123	2.19	0.029	.1847314 3.361881	
G2SUM	-.5386032	.8015298	-0.67	0.502	-2.109573 1.032366	
ISUM	1.351401	.7348898	1.84	0.066	-.0889567 2.791759	
_cons	-2.291061	5.517849	-0.42	0.678	-13.10585 8.523724	
sigma_u	6.6596295					
sigma_e	3.2787817					
rho	.80489655	(fraction of variance due to u_i)				