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THE FACTORS AFFECTING ENTREPRENEURSHIP INTENTION

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ABSTRACT

This research examined the effects of family environment, self concept, motivation and risk taking propensity on entrepreneurship intention in Merauke, the border area of Indonesia. Conducted by collecting data from 382 college student through questionnaire. This study applied linear regression analysis. The results showed family environment, self concept, motivation and risk taking propensity significantly affected entrepreneurship intention. The study implies that individual factor such as self-concept, motivation, and risk taking propensity together with social factor, family environment affect entrepreneurial intention.

KEYWORD

entrepreneur, family, intention, motivation, risk, self-concept,

JEL: A10, A22

INTRODUCTION

Nowadays, many college graduates prefer to work as employee in a company or becoming government employee. Only few of them think to create self-employment or become entrepreneur due to lack of confidence in their skill and capital.

According to the employment in 2013, the amount of unemployment reached 8,286 people and 6,613 people in 2014. Meanwhile, the amount of labor force increased into 114,331 people in 2014 and 106,596 in 2013. In percentage, Open Unemployment Rate (OUR) in 2013 reached 7.77%, and decreased 5.78% in 2014. The employment in 2013 reached 98,310 people, it has increased into 107,718 people. While, the unemployment rate with high education level in Merauke in 2014 amounted 306 people with labor force amounted 9,628 people and employment level amounted 9,322 people. In percentage, the Open Unemployment Rate (OUR) reached 3.18%.

The amount of government employee vertically or autonomously in 2013 amounted 3,937 people and 9,085 people in 2014. Meanwhile, the amount of formal, informal, and medium enterprise in 2014 amounted 851 units and 804 units in 2013. This condition shows both the total amount of formal, informal, medium enterprise and government employee vertically and autonomously.

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Unemployment occurs due to many factors, one of them is because of the limitation of job opportunities. Many college graduates become unemployment because practically they want to become government employee or in other words be a job seeker instead of a job creator.

According to the unemployment condition in Merauke and one of the effort to overcome is by encouraging individual to be a job creator, so the purpose of this research is to examined the effects of family environment, self concept, motivation and risk taking propensity on entrepreneurship intention in Merauke, the border area of Indonesia. The study adds to literature of entrepreneurship intention in emerging countries especieally in border are of a country. The border area usually has problem living in education and economy that's needed to explore factors that solve the problem through entrepreneurship.

LITERATURE REVIEW

The willingness in becoming entrepreneurship are determined by some factors such as family, motivation, risk taking propensity or the courage to take a risk, and self-concept as individual factor (Tyszka et. al., 2011, Belas and Klujnikov, 2016). Belas and Klujnikov (2016) conclude that entrepreneurs consider expertise, responsibility and perseverance to be the most important personal characteristics, skills, propensity to risk and decisiveness.

1. FAMILY ENVIRONMENT

Shapero (1982) conclude that father or mother have powerful role in establishing the desirability of the entrepreneurial behavior. Entrepreneurial intentions increases through socialization process. Family environment and all conditions within its family including how parents educate, family members relation, house condition, family's financial condition, parents understanding, and cultural background will support, guide, and encourage children to their future life, Aldrich & Cliff (2003) present conceptual framework based on a family embeddedness perspective on new venture creation. The framework emphasizes how the characteristics of entrepreneurs' family systems (i.e., transitions, resources, and norms, attitudes, and values) can influence the processes involved in venture creation (i.e., opportunity recognition, the launch decision, resource mobilization, and the implementation of founding strategies, processes, and structures).

Research done by Lindquist et al., (2015), Fatoki (2015) state that family environment gives positive influence on the willingness in entrepreneurship. Parental support will influence the willingness in doing entrepreneurship.

2. SELF-CONCEPT

Self concept is the concept the individual has of himself as a physical, social, and spiritual or moral being (Gecas, 1982).Self-concept has three components-perceptual, conceptual attitudinal (Kumari and Chamundeswari, 2013). Perceptual Component mostly called as physical concept which is an image on someone about physical appearance and impression about others. Conceptual Component is someone's concept about special characteristic, strength and weakness, future background, and so on. It is called as psychology self-concept. Attitude Concept is more likely a feeling felt by someone about himself, attitude about his current or future condition, attitude about self-pride, proud, ashamed feeling, etc. After he grown up, this attitude concept involves believes, aspiration value, commitment, and so on which forms his philosophy as well.

Research done by Simanjutak et al., (2016) states that self-concept influence potential entrepreneurship. The better the self-concept, the more motivation in doing entrepreneurship and vice versa. Positive self-concept leads to optimism about the future and courageous if having a failure. Entrepreneurs revealed more confidence than employees (Tyszka et al., 2011).

3. ENTREPRENEURSHIP MOTIVATION

Motivation in entrepreneurship including directed motivation to achieve the purpose of entrepreneurship, like the purpose that involves introduction and exploitation about business opportunity (Baum, 2007). Motivation is an encouragement to work hard to obtain many things such as earning profit, freedom, personal dream, and independent.

Four motivations to do entrepreneurship; profit, personal freedom, personal dream, and independent. Profit can motivate someone to be an entrepreneur because it can be used to determine how much profit he wants, the benefit received, and how much the cost will be paid to other parties or employee. The freedom to manage time, set the rule/intervention, and freedom from cultural rule in organization or company. Personal dream is something that individual desired about, including the freedom to achieve the expected life standard, tired routine work because he has to follow vision, mission, and others dream. The reward to determine its vision, mission, and dream. Independent can motivate a person in doing entrepreneurship because the absence of dependent on others. Independency can cause a sense of pride because it creates self-sufficient in all respects such as capital, management, supervision, as well as become a manager against himself.

Motivation influences positively on the willingness in doing entrepreneurship because it can trigger enthusiasm or interest in doing certain activity so it will trigger innovative thinking in making profit business. Entrepreneurs' motivation are the need for independence and the need for achievement (Tyszka et al.2011)

4. RISK TAKING PROPENSITY (COURAGE TO TAKE RISK)

The willingness and ability to take risk is one of the main point in entrepreneurship. Entrepreneur who dislikes risk will have difficulty in initiate. Entrepreneur is not afraid in taking chances with respect to risk by evaluating the size of risk. In every opportunity, an entrepreneur will always avoid high risk. They realize that high achievement occurs when they are willing to take risk as the consequence in achieving purpose. Risk taking is related with self-confidence. It means that the greater the person's belief in his ability, the greater the person's belief in its competency to influence result and decision, and the greater the person's readiness to try what the others perceive as risk.

In decision making, a business people or an entrepreneur should consider the possibility of risk. An entrepreneur is called as risk averse, loss averse, and risk profile.

1. Risk Aversion and Loss Aversion

Risk aversion is a concept that described about how large someone's willingness to sacrifice its resources in order to get uncertain results. Risk aversion can be illustrated as individual decision to choose to get \$50 instead of getting \$100 with probability 50%. In other words, risk aversion is a tendency to avoid risk or taking opportunity without risk.

Loss aversion is an individual decision to avoid loss on the effort to earn profit or in other words the unwillingness to bear the risk.

2. Entrepreneur and Risk Profile

Risk profile is a different perception between investor and employee because different experience had by them. Investors' experience will increase his ability to measure risk. Investor often experience a situation that required himself to make a decision. Different condition happens for employee who doesn't allow himself to make decision because it depends on the boss or shareholders.

Risk taking propensity or the courage to take risk is a courage to take chances with respect to risk by always measuring the size of the risk, so that individual can make decision not to take on too high or low risk. According Bezzina (2010), risk taking propensity is a tendency to take risk after analyzing each situation carefully and they have developed a strategy to minimize the impact of its risk. Bezzina (2010) mentions several indicators of risk taking propensity such as:

- a. The intention to take risk
 1. Investing higher capital to take business opportunity
 2. Taking risk to earn benefit
- b. Develop a strategy to minimize the impact of its risk
 1. High risk for high return
 2. Risk free business plan

Risk taking propensity or the degree to which an entity is willing to take chances with respect to risk can create opportunity and give people opportunity as well. Risk taking propensity or the willingness to take chances with respect to risk is one of the factor in encouraging people to be an entrepreneur rather than people who dislike risk or risk aversion. Furthermore, better self-concept and supportive environment can drive motivation to become a successful entrepreneur.

Research done by Bezzina (2010) finds that risk taking propensity or the willingness to take chances with respect to risk gives positive and significant impact toward intention to do entrepreneurship, an entrepreneur will take risk after analyzing the situation carefully and develop a strategy to minimize the effect of its risk. An entrepreneur is risk aversion and loss aversion. Risk aversion means the intention to avoid risk while loss aversion means the unwillingness to bear the risk.

People who have the interest in entrepreneurship are necessary to have risk taking propensity so that the capital is not the most important thing to start entrepreneurship. An entrepreneur should have an intention to have a good risk profile compare with an employee, so that an entrepreneur is aware that future business growth is the result of current business opportunity to achieve business objectives. Therefore, to start an entrepreneurship it needs risk taking propensity. If an entrepreneur is unwilling to take risk (risk aversion), then he will never be able to realize the talent and spirit of entrepreneurship. Belas et al. (2015) conclude that the most important business risk is market risk.

RESEARCH METHOD

1. Hypothesize

a. The affect of Family Environment on the Entrepreneurship Intention

Family environment that may affect children's behavior in achieving the successfulness in entrepreneurship is by working hard and never give up are the best way to train children's interest in choosing job. Parent's condition as a condition in the family environment can be a figure in selecting children's occupation. Children's interest will not be strong enough if it is only nurtured and molded through the experience without the encouragement and guidance from parents. Although there is a strong interest in children and they are able to be an entrepreneur, without

strong parental support on their area, then there is a chance that children will feel less confident or even no longer want to pursue their desires.

Family environment has positive influence on the willingness of doing entrepreneurship (Lindquist et al., 2015, Fatoki, 2015). Parental support like supporting entrepreneurship activity will influence the willingness in doing entrepreneurship. From those explanations, so the hypothesis can be formulated as follows:

H1: Family environment effect entrepreneurship intention

b. The effect of Self-Concept on the Entrepreneurship Intention

Self concept influenced the entrepreneurship potential (Simanjutank et al., 2016, Utsch and Rauch, 2000; Mueller and Thomas, 2001; Nga and Shanmuganathan, 2010). There were two self-concept which is positive self-concept in which a person is more likely has high self-confidence, he views a failure as a delayed success. Therefore, it makes a person believes in the successfulness of entrepreneurship because he is able to see every business opportunity. Having negative self-concept like having no self-confidence making it difficult to put his interest in entrepreneurship and always pessimistic about the future which indirectly prepared himself for failing. Through this positive concept, it is useful to recognize the environment, see the opportunity, and use resources in order to take advantage of these opportunities and believes that the products and services offered have advantages over the others.

Based on that explanations, so hypothesis can be developed into:

H2: Self-concept effect the entrepreneurship intention

c. The Effect of Motivation on the Entrepreneurship Intention

Motivation is the encouragement to work hard in order to obtain many things such as the desire to become successful entrepreneur, so that it can induces passion in giving positive response on the opportunity in obtaining the maximum benefit for himself so he doesn't depend on others. That advantage can be achieved by always serving customer nicely and create more efficient working system to create creative and innovative products. The higher the motivation in entrepreneurship, the more business successfulness will be supported. Because higher motivation will make a person be able to overcome any difficulties and he also be able to create the solution.

H3: Motivation effect the entrepreneurship intention

d. The Influence of Risk Taking Propensity on the Interest in Entrepreneurship

Liles (1974) argued that entrepreneurs often must accept uncertainty with respect to financial well-being, psychic well-being, career security, and family relations. Entrepreneurs tend to take risk after analyzing the situation carefully and they have developed a strategy to minimize the impact of it's risk (Bezzina, 2010). In general, a group with entrepreneurial activity has more prominent characteristics of risk taking propensity than the other groups. Result from Bezzina (2010), Hmieleski and Corbett (2006), Gürol and Atsan (2006) shows a positive and significant correlation between risk taking and the intention of entrepreneurship.

H4: Risk taking propensity influences the interest in entrepreneurship

2. Variables and Measurement

Variables in this study consisted of four independent variables and one dependent variable. Variable definition and measurement presented in Table 1.

Table 1. Operational Definitions Variables

Variables	Definition
A. Independent a. Family Environment b. Self Concept c. Motivation d. Risk Taking Propensity	Insitution that the firs and major influence on life, growth and development of children through interact with members of family, attention given , situation of the house and family's economic circumstances The concept the individual has of himself as a physical, social, and spiritual or moral being encouragement to work hard to obtain many things such as earning profit, freedom, personal dream, and independent a courage to take chances with respect to risk by always measuring the size of the risk
B. Dependent Entrepreneurship Intention (Khuong, Huu An, 2016)	The growing conscious state of mind that a person desires to start a new enterprise or create new core value in existing organization

3. Data Collecting Method

This research uses primary data that are collected using the enclosed questionnaire about family environment, self-concept, entrepreneurship motivation and interest in entrepreneurship. Self concept were adapted from (Kumari and Chamundeswari, 2013), entrepreneurship motivation were adapted form (Baum, 2007), 2014), risk taking propensity were adapted from Bezzina (2010) and entrepreneurial intention were adapted from Khuong, Huu An (2016). All measures collected based on a five point Likert scale in which 1 represents "strongly disagree" and 5 is "strongly agree".

4. Population and Sample

2010-2014 forces that are still active in the lecturing process is the selected population. 2010-2014 forces were the selected population because this forces had followed the entrepreneurship courses. In this research the sample was taken using purposive sampling technique. The sample size of this research was determined using the slovin's formula. Total population 8.432 students and the sample 382 students.

5. Analysis Method

The analytical method used in this research is multiple linier regression. According to the number of variables in this research, the regression equation used is :

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Y = Entrepreneurship intention

a = intercept

β_1 = coefficient X1

β_2 = coefficient X2

β_3 = coefficient X3

β_4 = coefficient X4

X1 = Family Environment

X2 = Self Concept

X3 = Motivation

X4 = Risk Taking Propensity**RESULT AND DISCUSSION****RESULT**

To understand the characteristics of the variables in terms of minimum value, maximum, average, and standard deviation, the below is the presented descriptive statistical data.

Table 2. Descriptive Statistic

Variable	Minimum	Maximum	Mean	Std. Deviation
Family Environment	38	55	47.59	3.15
Self Concept	28	55	40.08	5.49
Motivation	26	65	46.95	7.55
Risk Taking Propensity	8	20	16.84	2.10
Entrepreneurship Intention	21	40	33.95	2.69

Based on Table 2, the average Family Environment (X1) is 47.59 with the lowest value 38 and the highest was 55. The Standard deviation of the Family Environment is 3.15, lower than the mean value, thus it can be said that the deviations of data that occurs is relatively small.

The average Self Concept (X2) is 40.08 with the lowest value 28 and the highest was 55. The Standard deviation of the Self Concept is 5,49, lower than the mean value, thus it can be said that the deviations of data that occurs is relatively small.

The average Motivation (X3) is 46.95 with the lowest value 26 and the highest was 65. The Standard deviation of the Motivation is 7,55, lower than the mean value, thus it can be said that the deviations of data that occurs is relatively small.

The average Risk Taking Propensity (X4) is 16.84 with the lowest value 8 and the highest was 20. The Standard deviation of the Risk Taking Propensity is 2,10, lower than the mean value, thus it can be said that the deviations of data that occurs is relatively small.

The average Entrepreneurship Intention (Y) is 33.95 with the lowest value 21 and the highest was 40. The Standard deviation of the Entrepreneurship Intention is 2,69, lower than the mean value, thus it can be said that the deviations of data that occurs is relatively small.

MULTIPLE REGRESSION ANALYSIS

In this study, the multiple linear regression model is developed to determine the effect of family environment, self-concept, entrepreneurship motivation, risk taking propensity on entrepreneurial intention.

The multiple regression result is shown in Table 3.

Table 3. Multiple Regression Analysis

No.	Variable	Coefficient	T	Sig.
1.	Cosntrant	10,564		
2.	Family Environment	0,174	4,672*	0,000
3.	Self Concept	0,104	5,377*	0,000

4.	Motivation	0,153	9,992*	0,000
5.	Risk taking propensity	0,224	4,368*	0,000

Notes: *Significant at 5 percent level.

Source: Own development

Multiple regression equation as follows:

$$Y = 10,564 + 0,174 (X_1) + 1,104 (X_2) + 0,153 (X_3) + 0,224 (X_4) + e$$

From Table 3 it can be seen that the influence of each independent variable to the dependent variable is as follows: The regression analysis of the family environment, self concept, motivation and risk taking propensity are significant in level of 0,000, indicate that family environment self concept, motivation and risk taking propensity have significant and positive effect to the entrepreneurship intention.

DISCUSSION

a. Influence of Family Environment (X_1) on the Interests in Entrepreneurship

The result proves that family environment has significant and positive effect to the entrepreneurship intention. Family environment is the first and foremost media that influence behavior in a child's development. It is called the main environment, because most of their lives are in family, so that the most widely accepted of education are from the family.

Family environment is the environment that covers all interactions and conditions in relation to the implementation of learning efforts and influence on the interests and behavior of children. Therefore, family environment also affects the children's interest in entrepreneurship with the encouragement from the family. Interaction within the family environment such as learning to work together and help each other both in the family and social environment.

Based on the discussion above, family environment can be said as student first social group, the first to provide the planting of values and attitudes for their development. Related with the interest in doing entrepreneurship, family environment with every conditions within it including how parents educate, relationship between family members, house situation, parents understanding, and cultural background will guide and encourage students in doing entrepreneurship.

The results of this study is consistent with the results of the research conducted by (Lindquist et al., 2015, Fatoki, 2014), which states that the parent's support such as support for entrepreneurship activities can affect student interest in doing entrepreneurship. This study also inline with (Ozaralli and Rivenburgh, 2016; Liñán et al. 2005; Mueller 2006) that conclude parental role modeling to be a significant familial factor on entrepreneurial intention.

b. Effect of self-concept (X_2) on the Interest in Entrepreneurship

The result proves that self concept has significant and positive effect to the entrepreneurship intention. A person who has interest in entrepreneurship needs to understand his self-concept because self-concept covers the perceptual component which is about appearance, conceptual component of the ability and inability and lastly, the attitude component such as self-esteem, pride and shame.

If a person manages to identify his personality and self-competence well then it will be valuable for his entrepreneurship life. Because for entrepreneurs, self-knowledge is important to recognize the environment and see business opportunities.

Therefore, in order to encourage a person's interest in entrepreneurship, in this case student, positive self-concept is required as one of the factors that may affect. This is because with a positive self-concept, they will be able to recognize themselves well in terms of attitude, ability, disability, feelings, and emotions so that they have a strong belief that they can see the opportunities around to get the chance that is beneficial.

The results of this study is consistent with the result of the research conducted by Simanjutank et al., (2016), Utsch and Rauch (2000), Mueller and Thomas (2001), Nga and Shanmuganathan (2010), that self-concept is positively affect interest in entrepreneurship, in entrepreneurship self-concept is useful to recognize environment, see opportunities and use the resources to take advantage of these opportunities and self-confidence.

c. Effect of Motivation (X₃) on the Interest in Entrepreneurship

The result proves that motivation has significant and positive effect to the entrepreneurship intention. Motivation is important because it is the encouragement to work hard to get many things such as the desire to be a successful entrepreneur, so it can raise the spirit in giving a positive response to the opportunities in obtaining profit for themselves to be independent. Such advantage can be obtained by always trying to create a more efficient way of working to create creative and innovative products.

The results of this research is consistent with the results of research that is conducted by Baum (2007), that motivation has positive effect on interest in entrepreneurship, high motivation in entrepreneurship will support the success of the business. Because higher motivation will make a person be able to overcome any difficulties and he also be able to create the solution.

d. Effect of risk taking propensity (X₄) on the Interest in Entrepreneurship

The result proves that risk taking propensity has significant and positive effect to the entrepreneurship intention. From the results of questionnaire research of risk taking propensity (X₄), it can be seen that students have interest in entrepreneurship in taking risks because high risks will grant high rewards, but the risk is already taken with a strategy to minimize its risk.

The results of this research is consistent with the results of the research conducted by Bezzina (2010) that risk taking propensity (X₄) has significant and positive effect on the interest in entrepreneurship, an entrepreneur will take the risk after analyzing the situation carefully and have developed a strategy to minimize the impact of the risks.

CONCLUSION AND SUGGESTION

Family environment, self concept, motivation and risk taking propensity have significant and positive effect on university students on interest in entrepreneurship. Family environment has high effect to encourage university student on the interest in doing entrepreneurship. Self-concept makes a person recognizing the environment easier and quickly and view business opportunities better. Motivation is booster for individual to work hard in order to raise a passion to become entrepreneurs. Risk can be a strategic contributing factor that capable of analyzing the progress of an entrepreneur. Another factor to increase entrepreneurial intention is education (Souitaris et al., 2007, Nakayama, 2016). Next research can consider entrepreneurship education to test the effect on increase entrepreneurial intention

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AN INVESTIGATION OF ENTREPRENEURIAL INTENTION AMONG ENTREPRENEURSHIP STUDENTS IN SOUTH-WEST NIGERIA POLYTECHNICS

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ABSTRACT

This study was undertaken to explore the entrepreneurial intention of Polytechnic Students in Nigeria with case study of the Federal Polytechnic Ilaro. The population for the study was all students from various department undergoing entrepreneurship education/training in the polytechnics in south-west Nigeria. The sample size for the study is 3000 respondents. The respondent were selected by using simple random sampling. Logistic regression model was used for the hypothesis tested. The two environmental factors examined were Family environment and Nigeria environment. The impact/significant of these factors were examined to know how they can impact on students entrepreneurship intention. The study revealed that parental entrepreneurship skill directly influence students' entrepreneurial intention and that opportunities that exist in Nigeria affect students' entrepreneurial intention. Hence, the researcher suggest that schools should involve the services of psychologist and motivational speakers in Nigeria entrepreneurship curriculum in order to work on the students' reasoning mentality about entrepreneurship.

KEYWORDS

Entrepreneurship, Intention, Education, Polytechnic

1. INTRODUCTION

The history of entrepreneurship education can be dated back to 1938 while Shigeru Fijii, who turned into the teaching pioneer at Kobe University, Japan had initiated schooling in entrepreneurship (Alberti, 2004). Notwithstanding the maximum of the entrepreneurship guides and programs had been pioneered and added in American universities. Many American universities has relatively long lifestyle as entrepreneurship training providers through its business colleges and have well documented entrepreneurship courses, paving the manner for entrepreneurship research as a legitimate area of educational programs (Franke and Luthje, 2004; Raichaudhuri, 2005). Entrepreneurship education, according to Binks (2005), refers back to the pedagogical manner concerned inside the encouragement of entrepreneurial activities behaviours and mindsets. Feature of entrepreneurship training has been lauded as being capable to create and increase awareness as well as promote self-employment as a profession desired amongst young people (Clayton 1989; Fleming 1996). Therefore the position of entrepreneurship training is to build an entrepreneurial

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culture among young humans that, in flip, could improve their career picks towards entrepreneurship (Deakins, and Glancey 2005).

In other phrases, the targets of entrepreneurship education are aimed in converting students' state of behaviours and even goals that makes them to apprehend entrepreneurship, to turn out to be entrepreneurial and to grow to be an entrepreneur that in the end results in the formation of new organizations in addition to new process possibilities (Fayolle and Gailly 2005; Hannon 2005; Venkatachalam and Waqif 2005). In reaching this, the design of entrepreneurship training curriculum want to be innovative and creative and most significantly is 'tying academic getting to know to the real global' (Robinson and Haynes, 1991). Studies have been considerably centered on the sector of entrepreneurship schooling, which has enjoyed exponential boom degree internationally (Hill and Cinneide 2003; Raichaudhuri 2005). That is evident from the strands of studies which have been carried out on the ability of entrepreneurship to create new jobs and the importance of entrepreneurship training in generating capacity entrepreneurs from the instructional machine (Kuratko, 2005; Venkatachalam and Waqif 2005). For instance, Volery and Mueller (2006) spotlight the opportunity of the position of entrepreneurship education in influencing a character's selection to become an entrepreneur. Participation in entrepreneurship education, in this regard, has been related to the growing interest towards deciding on entrepreneurship as a feasible career option (Gorman and Hanlon, 1997).

To this end, Universities and different institutions were given the mandate to play a leading function in inculcating students with the entrepreneurial knowledge and capabilities so as to be useful in their destiny profession endeavours (Nurmi and Paasio, 2007). Entrepreneurship schooling has been identified as one of the critical determinants that might have an effect on college students' profession decisions (Kolvereid and Moen, 1997; Peterman and Kennedy, 2003). Due to that effect, there may be a want to take a look at how entrepreneurship education should have an impact on polytechnic college students' propensity to entrepreneurship. notwithstanding the exponential growing research interest in the location of entrepreneurship training (Wong and Lena, 2005; Menzies and Tatroff, 2006), as some distance as the researchers is aware, very little research has been particularly investigated the relationship among entrepreneurship training and entrepreneurial inclination particularly on Nigerian tertiary establishments students.

Edwards and Muir (2005) opined that entrepreneurial curriculum develops otherwise across universities, both as a non-obligatory module inside commercial enterprise publications or a selected guides on entrepreneurship. Levie (1999) in his observation on entrepreneurship training in England found that entrepreneurship coaching and guides are commonly categorized into two strategies: publications for entrepreneurship and guides approximately entrepreneurship. The decisions on teaching methodologies in entrepreneurship courses are therefore influenced with the aid of the intention of the academic goal.

Entrepreneurship schooling keeps attracting interest from each public, private sectors with the commitment from both academicians and coverage makers. This is why the ministry of education has made it compulsory for Universities, Polytechnics and colleges of education to include entrepreneurship education in their numerous curricula.

2. STATEMENT OF THE PROBLEM

The impact of entrepreneurship education is yet to be felt on Nigeria's economy, hence there is a serious and urgent need to access the impact of such entrepreneurship education on entrepreneurial intention among students. Also, there is need to investigate such factors that can ignite entrepreneurial intention among students so that relevant facilities will be put in place.

It is observed that the family members did not encourage their wards to engage in entrepreneurship. This is not good for entrepreneurial intentions.

For long the Nigeria environment expects their educated young children to seek for paid employment in corporation's government parastatals or civil service. This is an indication that the society does not support the entrepreneurial intentions of graduates about to enter into world of work.

Another factor that may account for variation in students' entrepreneurial intention is situational factors which simply means perceived unemployment after graduation and family commitments on entrepreneurial intentions. It is a worrying situation in Nigeria to note that there are various environmental factors militating against student's intention to be entrepreneur.

Since the introduction of entrepreneurship education in schools; colleges, polytechnic and universities, for continuous effort to encourage young graduates to have entrepreneurial skills and initiatives; it requires acquisition of knowledge, skills, attitudes and in making sure that the skills acquired are well utilized for progress, create employments which will at long run transform the economy. This skills appears not to be well utilized.

3. OBJECTIVES

The main objectives of this study are:

- To determine the influence of perceived support and barriers on students' entrepreneurial intention.
- To determine the extent to which locus of control contribute to students' entrepreneurial intention.
- To determine the extent to which need for achievement contribute to students' entrepreneurial intention.
- To determine whether students has entrepreneurial intention to own a company.
- To determine the extent which instrumental readiness contribute to the students' entrepreneurial intention.
- To examine how subjective norms contribute to students' entrepreneurial intention.

4. RESEARCH METHODOLOGY

A. POPULATION AND SAMPLE OF THE STUDY

The target population for this study was Polytechnic students in South-West Nigeria. South-West Nigeria is one of the six geo-political zones of Nigeria. It comprise Ogun State, Lagos State, Osun State, Ekiti State, Oyo State and Ondo States. The population of the study is, therefore, all the ND II and HND II Students offering entrepreneurship course in all the Polytechnics in the six States. The choice of South-West geo-political zone is informed by the fact that the researchers have been living and working in one of the States (Ogun) for the past ten years on the average. More also, entrepreneurship education has being introduce in to tertiary institutions in the South-West for about ten years.

Six of the government owned Polytechnics in the South-West were randomly selected for the survey. This selection was done in such a way that one Polytechnic emerged from each of the states. Also, in each of the six Polytechnics, sampling frame of entrepreneurship students were obtained

and 20% of the counted student population were selected for the study using simple random sampling techniques. Therefore the sample size for this study is 3000 students.

B. DATA COLLECTION

Data were collected by using a structured questionnaire adopted from Salwah, Siti and Norhatta (2015) on factors affecting entrepreneurial intention which comprised of the following sections; that is, personal details of the respondents, past experience, family background, entrepreneurial intention, attitude towards entrepreneurship, perceived support and barriers, locus of control, need for achievement, instrumental readiness and subjective norms.

C. DATA ANALYSIS

The descriptive statistics, frequencies and percentages and tabulation techniques were used to describe the profile information of the study. However, in order to achieve the objectives of the study, binary logistic regression model was used because of the dichotomous nature of the dependent variable.

In Logistic regression model the expected value of Y is conditional to X, but not a linear relationship; this implies the residue cannot be normally distributed. The dependent variable is qualitative with two value (1 for an intention to be an entrepreneur or 0 otherwise).

$$\log \left[\frac{p_i}{1-p_i} \right] = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik} \quad \dots 1$$

$$\text{Where, } p_i = P(Y_i = 1) \quad \dots 2$$

$$\Pr(Y = 1) = \frac{1}{1 + \exp[-(\beta_0 + \beta_1 X_{f1} + \beta_2 X_{f2} + \dots + \beta_k X_{fk})]} \quad \dots 3$$

5. RESULT AND DISCUSSION

This section provides a brief account of the studied sample and the interpretation and discussion of the outputs of binary logistic regression model used.

A. PROFILE OF THE SAMPLE

The 3000 questionnaires were keyed in into SPSS version 20 for analysis. Table 1 shows the distribution of the students with respect to their response on their intention to own a business or not. The reliability of the questionnaire was examined using Cronbach's Alpha value of 0.854. This indicates that the questionnaire is highly reliable.

Table 1: Distribution of the respondents with respect to schools

Count		School						Total	
		fpi	ibadan poly	yabatech	ede poly	ondopoly	osunpoly		adopoly
I wish to have my own business	No	253	379	204	179	160	129	97	1401
	Yes	357	435	233	194	146	135	99	1599
Total		610	814	437	373	306	264	196	3000

In all, 1401 students affirmed no on their intention to own a business representing 46.7% of the population as seen in table 2, while the remaining 1599 out of the 3000 respondents affirmed yes representing 53% of the entire sample surveyed.

Table 2: Overall responses of respondents on their entrepreneurial intention

	Frequency	Percent	Valid Percent	Cumulative Percent
No	1401	46.7	46.7	46.7
Valid Yes	1599	53.3	53.3	100.0
Total	3000	100.0	100.0	

B. ENTREPRENEURIAL INTENTION

H_{01} : Perceived support and barriers does not significantly influenced students' intention to become an entrepreneur.

Goodness-of-fit statistics help to determine whether the model adequately describes the data as seen in table 3. The Hosmer and Lemeshow statistic indicates a good fit since the p-value is greater than 0.05. Hence we can go ahead with the model specification and other tests.

Table 3: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	38.457	8	.124

From table 4, Omnibus tests of model coefficients' chi-square value is statistically significant, since the p-value is less than 0.05. This implies that there is significant improvement in the model when compared to the null model. Moreover, table 5 shows the explanatory capacity of the model varies from 2.3 % to 3.0%.

Table 4: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	68.854	6	.000
Step 1 Block	68.854	6	.000
Model	68.854	6	.000

Table 5: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4076.952 ^a	.023	.030

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 6 is used for model specification and to test significant of any of the thirteen factors. The result indicates that six of the factors under the perceived support and barriers are statistically significant. This is an indication that students' intention to become an entrepreneur influenced by six factors on perceived support and barriers

$$SEI = 1.602 - 0.205PSB8 + 0.201PSB10 - 0.158PSB11 - 0.119PSB13 - 0.160PSB15 - 0.087PSB33$$

Where,

SEI stands for Students Entrepreneurial Intention

PSB8 stands for item 8 in the questionnaire on perceived support and barriers

PSB10 stands for item 10 in the questionnaire on perceived support and barriers

PSB11 stands for item 11 in the questionnaire on perceived support and barriers

PSB13 stands for item 13 in the questionnaire on perceived support and barriers

PSB15 stands for item 15 in the questionnaire on perceived support and barriers

PSB33 stands for item 33 in the questionnaire on perceived support and barriers

Table 6: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
PSB8	-.205	.050	16.960	1	.000	.815
PSB10	.201	.051	15.347	1	.000	1.223
PSB11	-.158	.045	12.243	1	.000	.854
Step 1 ^a PSB13	-.119	.046	6.805	1	.009	.888
PSB15	-.160	.041	15.302	1	.000	.852
PSB33	-.087	.038	5.318	1	.021	.916
Constant	1.602	.245	42.645	1	.000	4.964

a. Variable(s) entered on step 1: PSB8, PSB10, PSB11, PSB13, PSB15, PSB33

This result suggests that all the six factors are statistically significant with p-values less than 0.05. However, except for PSB10 (item 10) in the questionnaire “my family encourages me to set up my own business” that has positive effect on entrepreneurial intention of the students with odds of 0.201 and this set of students are 1.223 times more likely to be an entrepreneur if all other things remain constant. But, other factors contribute negatively to their intention in becoming an entrepreneur with less probability.

H_{02} : Locus of control does not significantly influenced students intention to be an entrepreneur.

The Hosmer and Lemeshow statistic (table 7) indicates a good fit since the p-value is greater than 0.05 (p=0.245). Hence we can go ahead with the model specification and other tests.

Table 7: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	93.740	8	.245

From table 8, Omnibus tests of model coefficients’, the Chi-square value is statistically significant (p-value = 0.000) since the p-value is less than 0.05. This implies that there is significant improvement in the model when compared to the null model. Moreover, table 9 shows the explanatory capacity of the model varies from 2.8 % to 3.8%.

Table 8: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	85.711	4	.000
Step 1 Block	85.711	4	.000
Model	85.711	4	.000

Table 10 is used for model specification and to test significant of any of the twelve factors. The result indicates that only four of the factors under locus of control are statistically significant. This is an indication that students’ intention to become an entrepreneur is influenced by the four factors under locus of control.

Table 9: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4060.095 ^a	.028	.038

a. Estimation terminated at iteration number 3
because parameter estimates changed by less than
.001.

$$SEI = 1.605 - 0.204LC21 - 0.155LC24 + 0.081LC26 - 0.226LC29$$

Where,

LC21 stands for item 21 in the questionnaire on locus of control

LC24 stands for item 24 in the questionnaire on locus of control

LC26 stands for item 26 in the questionnaire on locus of control

LC29 stands for item 29 in the questionnaire on locus of control

Only four of the factors are statistically significant with p-values less than 0.05. Items 21, 24, 26 and 29 (when everything goes right, I think it is a question of luck, do you try new things, do you develop any strategy to detect opportunities and I am confident of my skills and abilities to start a business). Three of the factors contribute negatively with odds -0.204, -0.155 and -0.226 but item 26 (do you develop any strategy to detect opportunities) contributing positively with odd value of 0.081 and this sets of students that detect opportunities are 1.084 times more likely to be an entrepreneur if all other things remain constant. But, other factors contribute negatively to their intention in becoming an entrepreneur with high probability.

Table 10: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
LC21	-.204	.039	26.797	1	.000	.816
LC24	-.155	.048	10.680	1	.001	.856
Step 1 ^a LC26	.081	.044	3.316	1	.042	1.084
LC29	-.226	.046	24.578	1	.000	.797
Constant	1.605	.217	54.874	1	.000	4.980

a. Variable(s) entered on step 1: LC21, LC24, LC26, LC29

H₀₃: Need for achievement does not significantly influenced students intention to be an entrepreneur.

The Hosmer and Lemeshow statistic indicates a good since the p-value of the analysis is 0.064 (table 11) which is greater than 0.05. Here, the model adequately fits the data since the significance value ($p > 0.05$) is greater than 0.05. Hence we can go ahead with the model specification and other tests.

Table 11: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	94.654	8	.064

From table 12, which is the tests of model specification, the Chi-square (122.603) shows that the model is significant with ($p < 0.05$). Thus, it implies that there is a significant improvement in the model when compared with null model.

Table 12: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	122.603	5	.000
Step 1 Block	122.603	5	.000
Model	122.603	5	.000

Table 13 shows the explanatory capacity of the model is 4% and 6.3% indicating that there is a very weak relationship between students' intention to be an entrepreneur and joint effect of factors on need for achievement.

Table 13: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4023.203 ^a	.040	.053

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

From table 14 showing the variables in the equation, only two of the factors; item 33 and 36, are statistically significant with odds 0.149 and -0.450. The result indicates that, most students that believe that they will do well in difficult task relating to their study and work are 1.161 times more likely to be an entrepreneur because this factor contributes positively to their entrepreneurial intention, however leadership skills that are needed to be an entrepreneur contributes negatively to their intention and this set of students has 0.638 chance of being an entrepreneur.

The model is:

$$SEI = 1.152 + 0.149NA33 - 0.042NA34 - 0.045NA35 - 0.450NA36 + 0.057NA37$$

Where,

NA33 stands for item 33 in the questionnaire

NA34 stands for item 34 in the questionnaire

NA35 stands for item 35 in the questionnaire

NA36 stands for item 36 in the questionnaire

NA37 stands for item 37 in the questionnaire

Table 14: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
NA33	.149	.044	11.339	1	.001	1.161
NA34	-.042	.051	.687	1	.407	.959
NA35	-.045	.051	.780	1	.377	.956
NA36	-.450	.050	82.537	1	.000	.638
NA37	.057	.047	1.501	1	.220	1.059
Constant	1.152	.190	36.578	1	.000	3.164

a. Variable(s) entered on step 1: NA33, NA34, NA35, NA36, NA37

H_{04} : Need to own a company does not significantly influenced students intention to be an entrepreneur.

The Hosmer and Lemeshow statistic indicates a good fit of the model with significance value greater than 0.05 (Table 15). Hence we can go ahead with the model specification and other tests.

Table 15: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	37.948	8	.720

From table 16, the Omnibus tests of model coefficients' Chi-square value is (82.021) with significant value less than 0.05 (p-value = 0.000). This indicates significant improvement in the model when compared to the null model.

Table 16: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	82.021	3	.000
Step 1			
Block	82.021	3	.000
Model	82.021	3	.000

Moreover, table 17 shows the explanatory capacity of the model varies from 2.7% to 3.6% with loglikelihood value of 4063.784.

Table 17: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4063.784 ^a	.027	.036

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

The results suggests that there is a very weak relationship between students' intention to be an entrepreneur and joint effect of factors on ownership of a company. However, out of the nine items used to test the hypothesis, only three of them are statistically significant.

Table 18: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1 ^a	EI40	-.240	.047	26.365	1	.000	.787
	EI43	.148	.045	10.811	1	.001	1.160
	EI45	-.272	.048	31.785	1	.000	.762
	Constant	1.196	.183	42.561	1	.000	3.306

a. Variable(s) entered on step 1: EI40, EI43, EI45.

$$SEI = 1.196 - 0.240EI40 + 0.148EI43 - 0.272EI45$$

Where,

EI40 is item 40 in the questionnaire

EI43 is item 43 in the questionnaire

EI45 is item 45 in the questionnaire

From table 18, item 40 preference to own a company has negative effect on students' entrepreneurial intention with odd value of -0.240. Also, item 45 which is creation of new job has negative effect with odd -0.272. The two items has probability 0.787 and 0.762 respectively. Moreover, item 43 which is on freedom to express themselves in their business contributes positively with odd of 0.148 and this set of students are 1.160 times likely to be an entrepreneur.

H₀₅: Instrumental readiness does not significantly influenced students intention to be an entrepreneur.

The Hosmer and Lemeshow statistic indicates a good fit with significance value greater than 0.05 (table 19). Here, the model adequately fits the data since the significance value (Sig. = 0.091) is greater than 0.05. Hence we can go ahead with the model specification and other tests.

Table 19: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	13.652	8	.091

From the Omnibus test of model coefficients in table 20, the Chi-square value (37.838) is significant as p-value is 0.000 which is less than 5% significant level.

Table 20: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	37.838	3	.000
Step 1 Block	37.838	3	.000
Model	37.838	3	.000

From table 21, the result of Cox & Snell R square which is 0.013 and Nagelkerke R square which is 0.017; this implies that the explanatory capacity of the model varied between 1.3% and 1.7%. The results indicates that there is a very weak relationship between students' intention to be an entrepreneur and joint effect of factors on instrumental readiness.

Table 21: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4107.968 ^a	.013	.017

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 18 shows model specification and to test significant of any of the three factors. Similar results were obtained as none of the factors under instrumental readiness is significant.

Table 22: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1 ^a	IR47	-.116	.038	9.124	1	.003	.891
	IR48	-.122	.046	6.979	1	.008	.885
	IR49	-.104	.047	4.895	1	.027	.902
	Constant	1.105	.165	44.861	1	.000	3.018

a. Variable(s) entered on step 1: IR47, IR48, IR49.

The model,

$$SEI = 1.105 - 0.116IR47 - 0.122IR48 - 0.104IR49$$

Where,

IR47 stands for item 47 in the questionnaire

IR48 stands for item 48 in the questionnaire

IR49 stands for item 49 in the questionnaire

Here all the variables on instrumental readiness are significant with odds of -0.116, -0.122 and -0.104 with p-values 0.003, 0.008 and 0.027. Items on instrumental readiness are; access to capital to start up as an entrepreneur, access to social networks that can be utilized for entrepreneurial decision and access to supporting information to start up a business. Students' are 0.891 times likely to be an entrepreneur with item 47 holding other factors constant, 0.885 times likely to be an entrepreneur with item 48 holding other factors constant and 0.902 times likely to be an entrepreneur with item 49 holding other factors constant.

H_{06} : Students' subjective norms does not significantly influenced students' intention to be an entrepreneur.

From the Hosmer and Lemeshow statistic in table 23, indicates a good fit since the significance value is greater than 0.05 (p-value = 0.078). Hence, the model adequately fits the data we proceed with the model specification and other tests.

Table 23: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	99.161	7	.078

The Omnibus test of model coefficients in table 24, the Chi-square value (22.994) is significant as p-value is 0.000 which is less than 5% significant level. Thus, it implies that there is significant improvement in the model when compared to the null model.

Table 24: Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	22.994	3	.000
Step 1 Block	22.994	3	.000
Model	22.994	3	.000

From table 25, the result of Cox & Snell R square which is 0.8% and Nagelkerke R square which is 1.0, the results indicates that there is a weak relationship between students' intention to be an entrepreneur and joint effect of factors on subjective norms.

Table 25: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	4122.812 ^a	.008	.010

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 26, is used for model specification and to test significant of any of the three factors. Only two of the three factors are statistically significant. Item 50 which is on students belief on their leadership skills that are needed to be an entrepreneur contributes positively and has an odd of 0.160 with these sets of students having 1.174 times likely to start their own business. While item 51, on mental maturity to start a business contributes negatively and has an odd of -0.215 with such students having 0.807 times likely to be an entrepreneur with other factors being constant. This indicates that these sets of students despite their leadership ability in being an entrepreneur still have doubt about their ability.

The model,

$$SIE = 0.300 + 0.160SN50 - 0.215SN51 - 0.002SN52$$

Where,

SN50 stands for item 50 in the questionnaire

SN51 stands for item 51 in the questionnaire

SN52 stands for item 52 in the questionnaire

Table 26: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a SN50	.160	.049	10.571	1	.001	1.174
SN51	-.215	.051	18.089	1	.000	.807
SN52	-.002	.046	.001	1	.972	.998
Constant	.300	.151	3.923	1	.048	1.350

a. Variable(s) entered on step 1: SN50, SN51, SN52.

CONCLUSION/RECOMMENDATION

This research work examined critically entrepreneurship intention among students in the Polytechnic with reference to Family and Nigeria Environmental Factors. It is clearly seen that parental guide is highly needed to increase the students' interest for entrepreneurship and also the opportunity that is clearly available in Nigeria contributes negatively to students' entrepreneurial

intention. This suggests that most opportunities in the Nigerian business environment is not commensurate with the required enabling infrastructure needed by emerging entrepreneur. The findings suggest that students despite their entrepreneurial knowledge still have doubt about their ability to engage in entrepreneurship.

It is however recommended that enough motivational talk should be incorporated into entrepreneurship education in all our institutions so that the major purpose of this programme can be achieved. Because the programme as of today still seems not to have gotten to the desired level.

SUGGESTION FOR FURTHER READING/STUDIES

This research work further suggest a longitudinal research in order to measure students' entrepreneurial intention before and after entrepreneurship education in Nigeria tertiary institutions. However, it also suggest that there is need for ministry of education to have monitoring section to measure the level of achievement so far in this programme.

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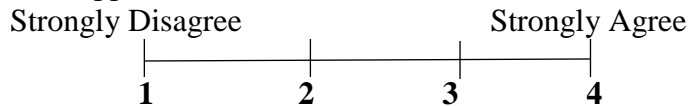
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CODE ____

QUESTIONNAIRE ON ENTERPRENEURIAL INTENTION

The purpose of this Questionnaire is to assess your entrepreneurial intention and factors that would influence your intention. Work as quickly as you can and do not stop to think too deeply about the answers. Please answer all questions by TICKING the number which best represent your choice. Your cooperation is appreciated.



PART A: PERSONAL DETAILS

1. Age:

Below 18	[]	21-23	[]
18-20	[]	Above 23	[]
2. Gender:

Male	[]	Female	[]
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3. Ethnic Group:

Yoruba	[]	Hausa	[]
Igbo	[]	Others	[]
4. Religion:

Muslim	[]	Others	[]
Christian	[]		
5. The longest residing area:

City	[]	Village	[]
Town	[]		
6. Level:

ND	[]	HND	[]
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7. Area of study:

Engineering	[]	Environmental	[]
Management	[]	Science	[]

PART B: PAST EXPERIENCE

1. Do you have experience in the following area?

	YES
a. Sales experience	[]
b. Supervisory role	[]
c. Handling business account	[]
d. Running some own businesses (excluding family businesses)	[]
e. Running some businesses for others	[]
i. Attended some formal class or workshop on entrepreneurship	[]

PART C: FAMILY BACKGROUND

1. Father's highest education level

No formal education	[]	Primary	[]	Secondary	[]	Tertiary	[]
---------------------	-----	---------	-----	-----------	-----	----------	-----
2. Mother's highest education level

No formal education	[]	Primary	[]	Secondary	[]	Tertiary	[]
---------------------	-----	---------	-----	-----------	-----	----------	-----
3. Guardian's highest education level

No formal education	[]	Primary	[]	Secondary	[]	Tertiary	[]
---------------------	-----	---------	-----	-----------	-----	----------	-----

4. Occupation/Profession of Father
 Salary [] Non Salary [] Retiree []
5. Occupation/Profession of Mother
 Salary [] Non Salary [] Retiree []
6. Occupation/Profession of Guardian
 Salary [] Non Salary [] Retiree []

PART D: ENTREPRENEURIAL INTENTION

- Please answer all questions

I wish to have my own business.
 Yes [] No []

Questions	Response			
	Strongly Disagree (SD)	Disagree (D)	Agree (A)	Strongly Agree (SA)
Attitude towards Entrepreneurship				
1. I have always worked hard in order to be among the best in my field.				
2. Concrete results are necessary in order to judge business success.				
3. I spend a considerable amount of time making the organization I belong to function better.				
4. Motivation I have in business is due mainly to my expertise in certain areas.				
5. I often sacrifice personal comfort in order to take advantage of business opportunities.				
6. I get my biggest thrills when my work is among the best.				
7. I feel energetic working with innovative colleagues in dynamic business climates.				

Perceived Support & Barriers	SD	D	A	SA
8. Entrepreneurs have a positive image within the society.				
9. The creative Polytechnic atmosphere inspires me to develop ideas for new business.				
10. My family encourages me to set up my own business.				
11. I am aware of the start-up support.				
12. Qualified consultants and service support for new companies is made available for me to access.				
13. Do you think your experience and knowledge gained stimulate you to become an entrepreneur?				
14. Banks do not readily give credit to startup companies.				
15. The law is not in favor to running a company.				
16. It is hard to find a business idea that has not been realized before.				
17. I don't have the necessary skills to start my own business.				
18. I have to struggle to raise the capital necessary to start a business.				
19. I lack the confidence to start my own business				
20. The risks involved in setting up a business are too high.				
Locus of Control	SD	D	A	SA
21. When everything goes right, I think it is mostly a question of luck.				
22. I often feel that is just the way things are and there's nothing I can do about it.				
23. I like to try new things.				
24. Do you try new things?				
25. Have you ever made any invention?				
26. Do you develop any strategy to detect opportunities?				
27. Do you think you possess the required qualities to implement an opportunity?				
28. I will create my own business once an opportunity is detected.				
29. I am confident of my skills and abilities to start a business.				
30. Diligence and hard work usually lead to success.				
31. I do not really believe in luck.				
32. If I do not succeed on a task, I tend to give up.				
Need for Achievement	SD	D	A	SA
33. I will do very well in fairly difficult tasks relating to my study and my work.				
34. I will try hard to improve on past work performance.				
35. I will seek added responsibilities in job assigned to me.				
36. I have leadership skills that are needed to be an entrepreneur.				
37. I have mental maturity to start to be an entrepreneur.				
Intention to own a company	SD	D	A	SA
38. I will choose a career as an entrepreneur.				

39. I will choose a career as an employee in a company/an organization.				
40. I prefer to be an entrepreneur rather than to be an employee in a company/an organization.				
41. The idea of starting your own business is appealing.				
42. I would rather found/form a company than to be a manager of an existing one.				
43. I want the freedom to express myself in my own business.				
44. I would rather be my own boss than have a secure job				
45. I relish the challenge of creating a new business.				
46. You can only make big money if you are self-employed.				
Instrumental Readiness	SD	D	A	SA
47. I have access to capital to start up as an entrepreneur.				
48. I have good social networks that can be utilized when I decide to be an entrepreneur.				
49. I have access to supporting information to start to be an entrepreneur.				
Subjective Norms	SD	D	A	SA
50. My closest family thinks that I should pursue a career as an entrepreneur.				
51. My closest friends think that I should pursue a career as an entrepreneur.				
52. People who are important to me think that I should pursue a career as an entrepreneur.				

USAGE OF ICT IN EU CULTURE SECTOR AS A TOOL OF CULTURAL PARTICIPATION

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ABSTRACT

Culture is not only an inherent part of human life but it also creates the potential for economic growth, employment and innovation. For this reason, the European Union considers the development of culture sector and Cultural and creative industries as very important. Nowadays the culture sector is confronted with the penetration of Information and communication technologies. The widespread use of Internet and Information and communication technologies implies more participatory behaviours on the side of users, who are increasingly involved in cultural activities electronically.

The presented article is focused on the issue of electronic cultural participation in European Union member countries. The aim is to evaluate the usage of Information and communication technologies for cultural purpose. For the purpose of this aim the selected multi-criteria decision-making method MAPPAC is applied. In the result is presented the ranking of European Union member countries according to the participation of citizens in culture through Information and communication technologies. In the research there was confirmed the importance of Information and communication technologies in European Union culture sector. High involvement of individuals in electronic cultural participation is obvious in developed European Union countries; in less developed countries the electronic cultural participation is habitually lower.

KEY WORDS

Cultural and Creative Industries, European Union, ICT, MAPPAC, participation

JEL CLASSIFICATION

H440, O300, Z110

INTRODUCTION

Information and communication technologies (ICTs) are an inherent part of the contemporary world. They are gaining importance also in the European Union (EU) member countries as a means of cultural participation (UNESCO, 2009a). Nowadays, the Internet allows people to take part in cultural activities that were previously inconceivable, such as creating, downloading and sharing

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cultural content, watching films and videos online, streaming live concerts and other activities (European Commission, 2013). Cultural institutions and other providers of cultural services are also adapting their products and services to new technological tools (Eurostat, 2016).

This paper is focused on the issue of electronic cultural participation in EU countries. Cultural participation is an essential dimension and driving force for the development of cultural sector of every country. It contributes to personal well-being and to the integration of individuals in society (Morrone, 2006; Brook, 2011). The cultural participation covers cultural activities as reading habits (books and newspapers), going to the cinema, attending live performances (plays, concerts, operas, ballet and dance) and visiting cultural sites (historical monuments, museums, art galleries or archaeological sites), etc. (Eurostat, 2016).

Across the EU member countries we can see nowadays the significant decline in some fields of cultural participation (European Commission, 2013). For example the share of book readers fell from 2007 to 2011 on about 10 percentage points (the indicator “Number of books read in the last 12 months”), see Eurostat (2016). Moreover the statistical data document the new trend on EU book market – increasing share of e-books and decreasing trend of printed books. However the share of e-books in EU countries remains relatively small. In 2014 the e-book market in the leading EU markets represented 1.6% of the total book market (European Commission, 2012; IDATE, 2011). Also reading newspapers (newspapers are also considered as the form of cultural participation, as the press is a privileged source of information on international and local events as well as societal - including cultural – phenomena) loses its significance. The paper form is replaced by the online form that is connected with the development of new ICTs platforms for news dissemination (online press). Same going to the cinema and visiting live performances is significantly influenced by the entry of ICTs. Nowadays the electronic form of cultural participation is gaining importance in all developed countries what covers also the EU countries. According to Pilik et al. (2016) the Internet has become in the past years one of the most popular shopping channels. Its importance was demonstrated also in the sector of culture, where the cultural goods and services are increasingly purchased through Internet.

The aim of this paper is to describe the trend of electronic cultural participation in EU member countries and to evaluate the state of electronic cultural participation in the EU according to the usage of ICTs for cultural purpose in individual EU countries by the application of selected MCDM method – MAPPAC (Multi criteria Analysis of Preferences by means of Pair Actions and Criteria comparisons).

1 CULTURE SECTOR IN THE EU AND ELECTRONIC PARTICIPATION

The culture sector is nowadays increasingly becoming the important component of the modern economy and knowledge-based society (UNESCO, 2009a). The cultural industries generates not only the non-economic impacts as social cohesion, affirmation of creativity, talents and excellence, or development of cultural diversity but also the economic impacts as GDP (gross domestic product) or GVA (gross value added) growth, increasing of employment and competitiveness of the country. The importance of the culture sector in the modern economy is thus currently indisputable (Eurostat, 2016; European Commission, 2006). Cultural and Creative Industries (CCIs) are in EU considered as an engine for economic growth. CCIs are estimated to be responsible for over 3 % of the EU's gross domestic product and jobs (Europa, 2017). Beyond their significant economic contribution, CCIs have built a bridge between arts, culture, business and technology. From this reason EU promotes the development of the overall culture sector and CCIs in EU member countries and aims in this area significant financial resources through EU structural funds and

special programmes supporting the culture and cultural activities (e.g. Creative Europe Programme).

1.1 Trend of Digital Culture

The 21st century is characterized by digital culture. The penetration of ICTs into society or the relationship between culture and new media is called a digital culture or e-culture. The emergence of this phenomenon dates back to the 1990s, when the Internet became a mass affair and opened up to commerce, and thus to the creative industry (Tribe, 2006). The Internet has become a place not only of commerce, but also of personal communications and distribution possibilities outside of the existing centralized system. Digital culture has been conceptualized by Manovich (2001), introducing the concept of an information culture as manifested in the convergence of media content and form, of national and cultural traditions, characters and sensibilities, as well as a mixing of culture and computers. Digital culture is the product of contemporary phase of communication technologies deeply amplified and accelerated by the popularity of networked computers, personalised technologies and digital images. The emergence of digital culture is usually associated with a set of practices based on the ever more intensive use of communication technologies. These uses imply more participatory behaviours on the user side which is called participatory culture (Gere, 2008).

Participatory culture is an opposite concept to consumer culture — in other words a culture in which private individuals (the public) do not act as consumers only, but also as contributors or producers (prosumers). The term is most often applied to the production or creation of some type of published media. Recent advances in technologies (mostly personal computers and the Internet) have enabled private persons to create and publish such media, usually through the Internet (Gardiner & Gere, 2010). This new culture as it relates to the Internet has been described as Web 2.0 (Willis, 2003). This marks a new type of web site dominated by centralized service systems where consumers create their own content. With web services such as eBay, Blogger, Wikipedia, Photobucket, Facebook, and YouTube, it is no wonder that culture has become more participatory nowadays. Participatory culture empowers humans to be active contributors in personally meaningful activities.

1.2 Electronic Cultural Participation in the European Union

According to Council of Europe the right to take part in cultural life is - and shall be recognised as being - pivotal to the system of human rights (Compendium, 2017). Participation in cultural activities is a fundamental human behaviour and is promoting human well-being (Brook, 2011, Schuster, 2007). Wider participation in cultural life is a major concern of national cultural policies in different countries around the world (Compendium, 2017). Cultural practices can be defined according to three categories (Morrone, 2006):

- **Home-based** - watching TV, listening to the radio, watching and listening to recorded sound and images, reading and using computer and the Internet.
- **Going out** - visits to cultural venues such as cinema, theatre, concerts, museums, monuments and heritage sites.
- **Identity building** - covers amateur cultural practices, membership of cultural associations, popular culture, ethnic culture, community practices and youth culture.

However according to studies of European Commission from 2007 and 2013 (European Commission, 2013) the cultural participation is decreasing in the EU. The main reasons to participate in cultural activities are lack of interest, lack of time and expense. Electronic or online cultural participation is quite new form of cultural participation that has been developed thanks to

the increased number of households with Internet access at home. As evidenced by Eurostat (2016) between 2010 and 2015, the percentage of EU households with Internet access increased by 13 percentage points from 70 % to 83 %.

Nowadays the use of ICTs and Internet for cultural purposes is quite common in EU. The Internet can be used in many different ways to discover, research, purchase and participate in cultural activities (European Commission, 2013). The people are reading online news, playing and downloading games, images, films or music, listening to web radio and creating websites or blogs. More captivated by entertainment activities via Internet are then according to statistics (Eurostat, 2016) more men than women (about 6 %). A relatively new phenomenon is the use of cloud services for storing and/or sharing cultural content. Services based on cloud computing technology allow users to store files or use software on a server run over the Internet. Another way to monitor electronic cultural participation is to analyse data on the use of the Internet to purchase the cultural goods and services as films/music, books/magazines/e-learning material or tickets for cultural and sporting events.

2 PROBLEM DESCRIPTION

Access to and participation in various cultural activities can be measured, and levels of involvement and barriers to participation are assessed (European Commission, 2013; Morrone, 2006). To help identify levels of engagement in cultural activities among citizens from the 27 EU member states, a simple index of cultural practice has been built based on frequency of participation and access to the different cultural activities (European Commission, 2013). Very often are used the surveys and questionnaires to assess the frequency of cultural participation (Eurostat, 2016; UNESCO, 2009b). The example is the survey of Eurobarometr from 2007 and 2013 (European Commission, 2013), which includes also the electronic cultural participation or other surveys in the United States (Bradshaw & Mosier, 1999), United Kingdom (DCMS, 2010), Malta (NSOM, 2012) or other analysis as Diniz & Machado (2011), Wiesand (2002), Brook (2011) or Merli (2002). The need of measurement is connected with the activities of developing cultural indicators and cultural statistics (Allin, 2000, ESSnet, 2012, UNESCO, 2009c).

2.1 Definition of research objectives

Main objective of the research is to assess the state of electronic cultural participation in EU member countries. In the research there are analyzed the indicators describing the usage of ICTs for cultural purpose by individuals in individual EU countries. The EU countries are ranked by usage of MAPPAC method from the best to the worst. The area of interest is to find out which countries are placed in the best places or in the worst places and what they could have in common. In this article above all the question of economic development of the country will be monitored and the relation to the electronic cultural participation. The hypothesis of the research is that the more developed EU countries are characterized by higher values of selected indicators. This means that it is possible to argue that the citizens of these countries are more involved in electronic cultural participation than citizens of less developed EU countries. In the article there is explored the ranking of individual EU countries according to the state of electronic cultural participation and discussed the link with the country's development.

2.2 Contribution to academic debate

The presented research enriches and brings new impetus to the academic debate. This issue is not currently adequately dealt with on the international level and reliably results are only available in the studies made by Eurobarometer surveys from 2007 and 2011 (European Commission, 2013).

Studies of this issue are not available due to insufficient statistical data. Above all, there is a small number of indicators describing direct electronic cultural participation and usually this area is not monitored primarily, but as a part of a wider survey, or within the evaluation of cultural participation or use of ICT by individuals where this area is also partially covered. Or the number of indicators monitored is wider, but only within one country without international comparison. The problem is also that indicators are not monitored annually and systematically. They are available data only for some years or some indicators. When evaluating in this area, there is also the misuse of the multicriteria evaluation methods. The results are mostly presented only in the form of graphs or tables for individual indicators and individual EU countries and using the percent.

The intention of this article is therefore to bring acquisition to investigated area and, using the exact method of economic decision making, to make an assessment of electronic cultural participation at international level. In this way the author is offering the reliable results for academic debate.

2.3 Appropriateness of research method and data

In this paper was performed the evaluation of electronic cultural participation in EU member countries based on 4 culture indicators (consist from 10 criteria) selected from the Eurostat database (Eurostat, 2016). The evaluation is based on the application of MCDM method MAPPAC. The observation is corresponding to the year 2014. The purpose was to obtain the ranking of EU countries according to selected criteria. MCDM methods are nowadays widely used for the evaluations in wide scope of economic areas. MAPPAC is one of operations research methods that is used for multi-criteria decision-making. The application of this method is obvious in different economic fields for the evaluation of performance or assessing of options in business and management, for example performance measurements of container terminals (Jafari, 2013), spatial planning (Sabokbar, 2014) or health insurance (Guo, 2017). Also Saeidi & Rezapour (2015) used MAPPAC and AHP for determining the effective factors in competitiveness rate of container ports. In the presented research was used the MAPPAC method for the evaluation of electronic cultural participation in EU member countries.

The research was based on the selected indicators from the dataset of Eurostat related to the "Culture statistics". Culture statistics present a selection of indicators on culture pertaining to the following topics: cultural employment, international trade in cultural goods, cultural enterprises, cultural participation, use of internet for cultural purposes and private cultural expenditure (Eurostat, 2016). From this dataset were selected 4 culture indicators connected with electronic cultural participation and selected the comparable data of the year 2014 or when not available of the year 2015. Selected indicators and the data source with characteristics are described below:

- Households with access to the Internet, 2015 (% of all households) – data were collected by "Community survey on ICT usage". The aim of this survey was to provide the relevant statistics on the information society: access to and use of ICTs, purposes of use of Internet, ICT security and trust, ICT competence and skills, etc. The population of surveyed households consists of all households having at least one member in the 16–74 age group. The population of individuals consists of all individuals aged 16–74. Different breakdowns by socio-demographic variables are available: sex, age, educational attainment level, working status etc. (Eurostat, 2016).
- Use of Internet for cultural purposes, 2014 (% of individuals who used the Internet in the last 3 months) - Eurostat's statistics on the use of ICTs for cultural purposes are gathered from the annual "Community survey on ICT usage" in households and by individuals and its specific modules carried out at irregular intervals. The data are collected by the national statistical institutes with the help of Eurostat's annual model questionnaires (Eurostat,

2016). The identification of cultural items in the variables of the ICT surveys was based on the methodology of cultural participation as exposed in the ESSnet (2012). Regarding the usage of ICT by individuals, the following online cultural activities have been identified for which the data are available on annual basis: reading online news sites (newspapers or news magazines); playing or downloading games, images, films or music; listening to web radio; creating websites or blogs; consulting wikis (to obtain knowledge on any subject).

- Use of cloud services for storing or sharing cultural content, 2014 - the results of the ICT 2014 survey module on cloud computing provided information on the use of cloud services for storing and/or sharing cultural content and in particular for storing and/or sharing of: e-books or e-magazines; music; photo; videos including films and TV programmes.
- Use of Internet for purchasing cultural goods and services, 2015 (% of individuals who used the internet within the last year) - the e-commerce is monitored through ICT annual survey and the culture related items are as follow: books/magazines/e-learning material; films/music; tickets for events (including sport events).

The four above mentioned indicators consist of 10 criteria. All the criteria were of maximizing type. The appropriateness of the method was confirmed by test of non-dominance of alternatives. If all the criteria are maximizing, variant a_i is dominating the variant a_j if there is at least one criterion k_l to which for $y_{il} > y_{jl}$ and for the other criteria: $(y_{i1}, y_{i2}, \dots, y_{in})$ is $>$ or $= (y_{j1}, y_{j2}, \dots, y_{jn})$.

If there is only one non-dominant alternative in the decision-making situation, it is an optimal option. If the non-dominant alternatives are more, then is needed to be applied the method to choose a compromise alternative.

The alternatives were marked according to the results of the non-dominance test as dominated or non-dominated, see table 2, where are illustrated the input data (all alternatives and criteria).

3 METHODS

MAPPAC method together with the PROMETHEE method or ELECTRE method are the example of MCDM methods based on the preference relation (Fiala, 2013, Brans et al, 1984). The MAPPAC method was chosen because, apart from the information from the multi-criteria matrix and the vector of weights, it does not need any additional information, such as threshold values or the choice of generalized criteria.

The MAPPAC method is based on paired comparisons of the alternatives, whereby each pair of individual criteria results in a decision on which of the two objects is the more important, or whether they are indistinguishable in terms of the selected criteria (Matarazzo, 1991). The MAPPAC method algorithm is composed of 3 phases: definition of input data (alternatives, criteria), pairwise comparison of alternatives for each pair of criteria resulting in the definition of indifference and preference relations and aggregation of preferences constructing the final ranking (Martel & Matarazzo, 2005).

The MAPPAC method works with the criterion matrix and weights of the criteria. The method splits the alternatives into several preferential classes. MAPPAC method uses a normalized multi-criteria matrix $C = (c_{ij})$, where r -th row corresponds to alternative a_r and s -th row corresponds to alternative a_s .

First the paired comparison of alternatives is processed. On the basis of the results there are possible two relationships between alternatives. Either preference (alternative a_r was rated better than

alternative a_s) or indifference (alternative a_r and alternative a_s are assessed in the same way). This method also allows the presence of fuzzy relations, which allow taking into account when assessing the uncertainty associated with measurement or arising from the different nature of the criteria.

Then the basic preferential index $\pi_{ij}(a_r, a_s)$ of variants a_r, a_s is calculated, according to the pairs of criteria f_i and f_j . After the preferential indexes calculation is performed, the basic preferential indexes are arranged into the matrix π_{ij} . Following is the calculation of the aggregate matrix according to the formula (1), see Matarazzo (1986):

$$\pi(a_r, a_s) = \sum_{i=1}^{k-1} \sum_{j=i+1}^k \pi_{ij}(a_r, a_s) \frac{v_i + v_j}{k-1} \quad (1)$$

where $r = 1, 2, \dots, p, s = 1, 2, \dots, p$.

In the last step preferences are aggregated, resulting in a final order. The row totals of the aggregated matrix π are calculated according to the equation (2):

$$\sigma^l(a_i) = \sum_{j=1}^p \pi(a_i, a_j), \quad i \in J^l \quad (2)$$

where $i = 1, 2, \dots, p$.

Alternatives with the highest σ^l values are placed on the first place in the arrangement. The set of alternatives is reduced from these alternatives, new set of alternatives A^l is created, the set of indexes of alternatives from A^l are marked as J^l . The procedure is repeated for m steps where m is the number of preferential classes by the arrangement from top.

In a similar procedure is reached the value of $\tau^1, \tau^2, \dots, \tau^n$, where n is the number of preferential classes in the arrangement from bottom, by usage of equation (3):

$$\tau^t(a_i) = \sum_{j \in J^t} \pi(a_j, a_i), \quad i \in J^t \quad (3)$$

where $t = 1, 2, \dots, n$.

The output is the arrangement of alternatives into the preferential classes. The overall arrangement of alternatives is reached by averaging of the serial numbers of alternatives by the arrangement from top and from bottom. In the column from top, the order of the alternatives is sequentially sorted into the indifferent classes according to successive values σ^l . Similarly, the column from bottom shows the arrangement of individual alternatives into indifferent classes by values τ^t .

As the best evaluated is the alternative which has the lowest overall serial number. Some alternatives can be ranked in the same place, although they were ranked differently from top and from bottom, because their average serial numbers are the same.

4 RESULTS AND INTERPRETATIONS

In the research, there was selected the final list of alternatives (EU-28 countries) and criteria (10 culture criteria) as the input for applying of MAPPAC method. The summarization of monitored indicators and their weights are shown in Table 1. The weights of selected 10 criteria were established by usage of scoring method. These weighted values were used for the calculation.

Table 1 Weights of criteria processed by scoring method

Indicator	Criteria ($C_1 - C_{10}$)	Weight of criteria	Weight of indicator
Households with access to the internet, 2015 (%) – C_1		0,18182	0,18182
Use of internet for cultural purposes, 2014 (%)	Reading online news sites/ newspapers – C_2	0,09091	0,45455
	Playing/downloading films or music – C_3	0,09091	
	Listening to web radio – C_4	0,09091	
	Consulting wikis – C_5	0,09091	
	Creating websites or blogs – C_6	0,09091	
Use of cloud services for storing or sharing cultural content, 2014 – C_7		0,09091	0,09091
Use of internet for purchasing cultural goods and services, 2015 (%)	Books/magazines/e-learning material – C_8	0,09091	0,27273
	Films/music – C_9	0,09091	
	Tickets for events – C_{10}	0,09091	

(Source: Eurostat, 2016, own calculations)

The input data are summarized below in Table 2 in the form of criterion matrix.

Table 2 Input data

Criteria	C_1	C_2	C_3	C_4	C_5	C_6	C_7	C_8	C_9	C_{10}	NON-DOMINANCE
Austria	81	67	42	26	68	6	29	34	19	26	Dominant
Belgium	83	62	65	28	51	7	33	19	13	23	Non-dominant
Bulgaria	57	74	57	35	42	8	21	5	2	6	Dominant
Croatia	68	79	34	23	65	4	22	8	4	11	Dominant
Cyprus	69	72	55	32	62	4	19	5	3	3	Dominant
Czech Republic	78	86	57	28	46	10	21	9	2	21	Dominant
Denmark	93	74	57	37	63	7	46	25	22	57	Non-dominant
Estonia	83	90	49	35	62	20	31	22	11	38	Non-dominant
Finland	90	85	70	33	77	31	27	27	24	46	Non-dominant
France	83	46	47	34	32	5	25	22	14	18	Dominant
Germany	89	70	53	30	75	7	24	36	27	33	Dominant
Greece	66	85	52	52	50	7	19	6	3	5	Non-dominant
Hungary	73	86	47	27	60	12	16	13	4	13	Dominant
Ireland	82	46	43	23	33	8	35	23	16	35	Dominant
Italy	73	60	52	26	58	5	30	11	4	7	Dominant
Latvia	73	86	52	26	28	4	19	4	3	14	Dominant
Lithuania	66	94	46	30	46	6	12	5	3	15	Non-dominant
Luxembourg	96	85	59	37	82	7	37	44	29	39	Non-dominant
Malta	81	74	56	28	61	9	32	25	11	21	Dominant
Netherlands	96	61	65	40	61	18	36	36	18	41	Non-dominant
Poland	75	71	41	28	44	4	13	12	4	9	Dominant
Portugal	65	74	49	34	60	11	26	15	10	14	Dominant
Romania	61	70	46	26	31	5	15	5	2	3	Dominant
Slovakia	78	65	35	23	46	4	20	16	5	17	Dominant
Slovenia	77	82	47	42	51	8	25	7	3	11	Dominant
Spain	74	78	52	37	67	10	32	16	8	23	Dominant
Sweden	90	88	57	49	67	10	39	33	30	49	Non-dominant
United Kingdom	90	65	52	27	58	33	42	38	37	41	Non-dominant

(Source: Eurostat, 2016, own calculations)

$C_1 - C_{10}$ are the selected culture criteria (10 criteria), the alternatives are the 28 EU member countries. There are also marked the dominant and non-dominant alternatives according to the results of the non-dominance test.

The output of MAPPAC method is the arrangement according to preferential classes. In Table 3, it is possible to see the alternatives in the order according to the average serial numbers and rankings from the top and bottom. It can be seen that the first two alternatives (Luxembourg and Sweden) are placed in the same preferential class. Average serial numbers of these alternatives are the same. These two countries are placed on the 1. and 2. position together. For the third place the rank is clearly given – it is Finland. It is ranked in the same place as when ranking from top and from bottom. For the fourth place, there was sorting match. From top ranking it is Denmark, from bottom ranking it is Netherlands. On the other hand on the worst four positions ranked Latvia, Croatia, Poland and Romania. The Czech Republic ranked on the 13. position. It means that the level of electronic cultural participation is in comparison with other countries of the EU satisfactory. It is comparable to Belgium and Austria (11. and 12. position) or Slovenia and Ireland (13. and 14. position).

Table 3 Results of electronic cultural participation evaluation in EU countries by MAPPAC method (2014)

Class	Country	Rank from top	Rank from bottom	Average serial number	Final arrangement of countries
1	Luxembourg	2	1	1,5	1./2.
	Sweden	1	2	1,5	1./2.
2	Finland	3	3	3	3.
3	Denmark	4	5	4,5	4./5.
	Netherlands	5	4	4,5	4./5.
4	United Kingdom	6	6	6	6.
5	Estonia	7	8	7,5	7./8.
	Germany	8	7	7,5	7./8.
6	Malta	9	10	9,5	9./10.
	Spain	10	9	9,5	9./10.
7	Belgium	11	11	11	11.
8	Austria	12	12	12	12.
9	Czech Republic	13	14	13,5	13.
10	Slovenia	14	15	14,5	14.
11	Ireland	17	13	15	15.
12	Portugal	15	16	15,5	16.
13	Hungary	16	19	17,5	17.
14	France	18	18	18	18.
15	Greece	20	17	18,5	19.
16	Italy	19	21	20	20.
17	Cyprus	22	20	21	21.
18	Slovakia	21	24	22,5	22.
19	Lithuania	23	23	23	23.
20	Bulgaria	26	22	24	24.
21	Latvia	24	25	24,5	25.
22	Croatia	25	26	25,5	26.
23	Poland	27	27	27	27.
24	Romania	28	28	28	28.

(Source: Eurostat, 2016, own calculations)

5 DISCUSSION

Nowadays ICTs enable new avenues for communication, collaboration, and circulation of ideas. They have also given rise to new opportunities for culture consumers to create their own content. Barriers like time and money are beginning to become less significant to large groups of consumers. For example, the creation of movies once required large amounts of expensive equipment, but now movie clips can be made with equipment that is affordable to a growing number of people. The ease with which consumers create new material has also grown. Extensive knowledge of computer programming is no longer necessary to create content on the Internet. Media sharing over the Internet acts as a platform to invite users to participate and create communities that share similar interests through duplicated sources, original content, and repurposed material.

In the research there was confirmed the increased involvement of people to participate in culture using online technologies and ICTs in more developed countries of EU like Luxembourg, Sweden, Finland, Denmark, Netherlands, United Kingdom or Germany. These countries are among the most competitive countries in the world and hold primacy in the EU. According to The Global Competitiveness Index ranked the Netherlands on the 4. position worldwide, Germany on the 5. position, Sweden on the 6. position and United Kingdom on the 7. position, see Schwab (2016). Among top countries is also Finland (10. position), Denmark (12. position) and Luxembourg (20. position). On the other hand in the countries as Lithuania, Bulgaria, Latvia, Croatia, Poland, Romania was found out the low involvement of people in electronic cultural participation using online technologies and ICTs. All of these countries belong to less developed countries than the EU average and joined the EU also later.

According to Eurobarometer survey (European Commission, 2013) the cultural participation across EU countries differ significantly. In northern European countries are the most engaged people in a range of cultural activities (Sweden, Netherlands, Denmark). By contrast, southern and eastern countries are often the least engaged in cultural activities (Romania, Greece). This results correspond with the results of Brook (2011) and also with own research in this article. It is possible to assume, that the engaged people in cultural activities are using also online and electronic forms for cultural participation. Moreover the respondents from northern countries are most likely to use the Internet for cultural purposes than those from southern and central-eastern European countries (European Commission, 2013).

A significant fact that affects the use of ICTs in culture is the access to the Internet and its availability. In this area the best countries in EU are again Luxembourg, Netherlands, Denmark, Sweden and United Kingdom, they ranked on the best positions when evaluating the Internet access of households in EU countries (Eurostat, 2016) and also when evaluating the daily use of Internet (Denmark, Luxembourg, United Kingdom, Finland). The worst Internet access is in Lithuania, Romania, Greece and Bulgaria. In United Kingdom, Denmark, Luxembourg and Sweden are the individuals also more keen to use Internet when ordering goods or services. On the other hand in Italy, Cyprus, Bulgaria and Romania is this form of purchase not very obvious. This was also reflected in the statistics of purchase of cultural goods and services.

In the Eurobarometer survey from 2007 (European Commission, 2013), it was suggested that the disparity in cultural participation may be narrowed in time by increased Internet access, and that this could transform the cultural sphere. In this survey, 56 % of Europeans say they use the Internet for cultural purposes, 30 % doing so at least once a week. The most popular activities are reading newspaper articles (53 %), searching for cultural information (44 %) and listening to the radio or music (42 %). The Internet is changing the way both “consumers” and “creators” of cultural

activities access cultural content and its influence is increasing in importance for all categories of the population (European Commission, 2013).

According to major organizations such as the EU, UNESCO or OECD, the importance of ICTs in culture is undeniable and it is needed to pay on this area the scientific attention. As stated by UNESCO (2016) ICTs have a direct impact on the way cultural expressions are created, produced, disseminated and accessed and play an increasingly pertinent role in the safeguarding and transmission of cultural heritage, can respond to major global challenges through the exercise of freedom of expression and the promotion cultural diversity. Karaganis (2007) considers digital technologies as engines of cultural innovation, or the necessary tool for digital preservation of cultural content (Digital Meets Culture, 2017). ICTs can also help in the area of cultural sustainability. As stated by Loach & Rowley & Griffiths (2017) cultural sustainability has become a growing priority within sustainable development agendas and is now often depicted as a fourth pillar, equal to social, economic, and environmental concerns.

CONCLUSIONS

Nowadays are ICTs the everyday reality in the culture sector. ICTs are fostering cultural entrepreneurship in the Cultural and creative industries and play important role in developing countries and at the local level. New forms of media and technologies are strengthening platforms for dialogue, exchange and building capacities of local populations. In developing countries ICTs allow a greater access to cultural goods and services and allow creators to engage with the audience and to co-create. In this research, there was confirmed, that ICTs are progressively more incorporated into the EU culture sector and are actively used by individuals for participation in culture. The higher involvement of individuals was found out in the more developed EU countries. In this research was by MAPPAC method confirmed the top position of Luxembourg, Sweden, Finland, Denmark, Netherlands and United Kingdom. The hypothesis of the research was also confirmed. Regularly the more developed EU countries are characterized by higher values of selected indicators of electronic cultural participation and it is possible to conclude that the citizens of more developed EU countries are also more involved in electronic cultural participation than citizens of less developed EU countries. However ICTs are very important also in less developed EU countries (Bulgaria, Romania and Croatia) and are leading to positive innovative models and creativity (creating cultural content, access and distribution of culture). ICTs can help in the situations when marginalized groups are not engaged to foster social cohesion by sharing knowledge. The ICTs in culture are also the driving force for increasing initiatives in digitization of cultural content and heritage. These initiatives can help to preserve culture content for future generations (e.g. digital libraries and museums).

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ENTREPRENEURS IN WHITE-COLLAR CRIME: A CONVENIENCE PERSPECTIVE

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ABSTRACT

White-collar crime can be a convenient alternative for privileged individuals who want to enrich themselves. Their occupational positions enable them to commit and conceal offenses among legal activities. This is especially the case, when the offender has sole responsibility for entrepreneurial tasks that involve substantial amounts of money, as illustrated by the four executives presented in this article. One simple learning point from this article is that nobody – including chair persons, chief executives, and presidents – should ever have sole responsibility for tasks involving money on behalf of the organization.

KEYWORDS

Deviant behavior, organizational opportunity, white-collar crime, convenience theory, agency theory.

BIOGRAPHY

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INTRODUCTION

Entrepreneurs are often seen as important economic agents, driving forward employment, opportunities and economic development. Entrepreneurship is associated with innovation, adaptation, change and dynamism, hard work, willpower, and overcoming challenges and struggles. According to Welter et al. (2017), entrepreneurship is a broadly available social technology for creating organizations that may pursue a myriad of goals. They argue that entrepreneurship research can and should be a window into and a tool for shaping social and economic equity.

In this line of reasoning, financial crime by white-collar criminals is an alternative tool for pursuing a large spectrum of social and economic goals. A typical example is corruption, where entrepreneurs on behalf of the organization bribe vendors, public officials and others to achieve

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goals. Another example is embezzlement, where entrepreneurs abuse their positions in organizations to enrich themselves.

In this article, we present four case studies from Norway, where entrepreneurship was exercised by key executives for personal benefit. All case studies have in common that executives enriched themselves through embezzlement when they had exclusive rights in money matters for the organization. After a relevant literature review on entrepreneurship (Tonoyan et al., 2010), a description of white-collar crime (Sutherland, 1939), and a presentation of convenience theory (Gottschalk, 2017), then four case studies are presented and discussed in this article. The purpose is to demonstrate how executives apply their entrepreneurial skills to gain personal profit by abusing their organizational positions. In the discussion section, cases are discussed in terms of principals and agents according to agency theory (Bosse and Phillips, 2016).

LITERATURE REVIEW

Tonoyan et al. (2010) explored the determinants of corruption in transition economies and looked at the East-West gap in corruption in Europe. They found that viewing illegal business activities as a widespread business practice provides the rationale for entrepreneurs to justify their own corrupt activities. Moreover, closed social networks with family, friends, and national bureaucrats reduce the opportunism of the contracting party of the corrupt deal, thus providing breeding grounds for corruption.

Eddleston and Kidwell (2012) studied deviant behavior in family firms that violates organizational norms. Examples are theft, embezzlement and corruption. Given that only 30% of family firms make it to the second generation, understanding how parents encourage children to act in deviant ways in the firm seems important. Rather than focusing on the child's personality as the cause of deviance, the study shows the importance of examining family relationships.

Entrepreneurs in white-collar crime demonstrate deviant behavior. Similar to moral entrepreneurs as discussed by Ryan (1994), white-collar crime requires both "technicians" who develop techniques of business-level enforcement of rules; and "interpreters", who legitimate the work of technicians by providing expansive readings of applicable legal limitations.

Entrepreneurs in white-collar crime are different from criminal entrepreneurs, when criminal entrepreneurs are defined as entrepreneurs who are mainly on the wrong side of the law in their business endeavors. Entrepreneurs in white-collar crime demonstrate deviant behavior to benefit the organization, often labelled corporate crime, or to benefit the individual, often labelled occupational crime (Kang and Thosuwandchrot, 2017). McElwee and Smith (2015) argue that illegal and criminal entrepreneurship is particularly context specific, where they operate in the shadow economy. The shadow economy comprises those economic activities and the income derived from them that circumvent or otherwise avoid government regulation, taxation or observation (Schneider and Williams, 2013).

WHITE-COLLAR CRIME

Sutherland's (1939) concept of white-collar crime stresses the importance of crime of the powerful and influential members of the elite in society. Sutherland emphasized the disproportionate extent of harm caused by the crime of the wealthy in comparison to the much researched and popular focus on crime by the poor, and the equally disproportionate level of social control responses. White-collar crime is defined in its relationship to status, opportunity, and access. This is the

offender-based perspective. In contrast, offense-based approaches to white-collar crime emphasize the actions and nature of the illegal act as the defining agent. In their comparison of the two approaches, Benson and Simpson (2015) discuss how offender-based definitions emphasize societal characteristics such as high social status, power, and respectability of the actor. Because status is not included in the definition of offense-based approaches and status is free to vary independently from the definition in most legislation, an offense-based approach allows measures of status to become external explanatory variables.

In the offender-based perspective, white-collar criminals tend to possess many characteristics that are consistent to expectations of high status in society. There is both attained status and ascribed status among white-collar offenders. Attained status refers to status that is accrued over time and with some degree of effort, such as education and income. Ascribed status refers to status that does not require any specific action or merit but rather is based on more physically observable characteristics, such as race, age, and gender.

The main offender characteristics remain privilege and upper class. Early perception studies suggest that the public think that white-collar crime is not as serious as other forms of crime. Most people think that street criminals should receive harsher punishments. One explanation for this view is self-interest (Dearden, 2017: 311):

Closely tied to rational choice, self-interest suggests that people have views that selfishly affect themselves. Significant scholarly research has been devoted to self-interest-based views. In laboratory conditions, people often favor redistribution taxes when they would benefit from such a tax. This self-interest extends into non-experimental settings as well. For example, smokers often view increasing smoking taxes less favorably than non-smokers.

In this line of thinking, people may be more concerned about burglary and physical violence that may hurt them. They may be less concerned about white-collar crime that does not affect them directly. Maybe those who are financially concerned with their own economic well-being will be more concerned with white-collar crime (Dearden, 2017).

THEORY OF CONVENIENCE

As suggested by Gottschalk (2017), white-collar crime can be a convenient option to avoid threats and exploit opportunities. Convenience is a concept that was theoretically mainly associated with efficiency in timesaving. Today, convenience is associated with a number of other characteristics, such as reduced effort and reduced pain. Convenience is associated with terms such as fast, easy, and safe. Convenience says something about attractiveness and accessibility (Sundström and Radon, 2015).

Convenience is characterized by some comfortable practicality. It is simple and not necessarily bad or illegal. For example, ship-owners can register their boats under flags of convenience, which is to sail under false flags to reap economic benefits that might otherwise not be achievable. Convenience can be tricking out without traces of obvious crime, lying in the gray zone and exploiting the system for organizational or personal gain and pleasure. Convenience can be to cause enrichment in an easy and comfortable manner without losing face or reputation (as long as offender is not revealed). In academic research, some researchers use convenience samples for their empirical studies, which consist of readily available respondents. The selection is not random and cannot be said to be representative of the population. It is unacceptable to generalize research results based on such convenience samples. Another example is the convenience store in terms of a

grocery shop or a gas station, where consumer goods are easily available and accessible, but prices are higher and the selection is more limited (Sari et al., 2017).

Convenience orientation is the value that individuals and organizations place on actions with inherent characteristics of saving time and effort. Convenience orientation is a value-like construct that influences behavior and decision-making. Mai and Olsen (2016) measured convenience orientation in terms of a desire to spend as little time as possible on the task, in terms of an attitude that the less effort needed the better, as well as in terms of a consideration that it is a waste of time to spend a long time on the task. Convenience orientation toward illegal actions increases as negative attitudes towards legal actions increase. The basic elements in convenience orientation are the executive attitudes toward the saving of time, effort and discomfort in the planning, action and achievement of goals. Generally, convenience orientation is the degree to which an executive is inclined to save time and effort to reach goals. Convenience orientation refers to person's general preference for convenient maneuvers. A convenience-oriented person is one who seeks to accomplish a task in the shortest time with the least expenditure of human energy (Berry et al., 2002).

The actual convenience is not necessarily important in convenience theory. Rather, the perceived, expected and assumed convenience influences choice of action. Berry et al. (2002) make this distinction explicit by conceptualizing convenience as individuals' time and effort perceptions related to an action. White-collar criminals probably vary in their perceived convenience of their actions. Low expected convenience could be one of the reasons why not more members of the elite commit white-collar offenses.

Opportunism is part of convenience theory, where opportunism can be defined as self-interested behavior with guile.

CASE STUDIES

In the following, four case studies of convicted offenders illustrate entrepreneurs in white-collar crime based on convenience theory. Table 1 lists the four cases. The two first cases are presented extensively since there are internal investigations reports publicly available.

White-Collar Criminal	White-Collar Crime	Economical Dimension Motive	Organizational Dimension Opportunity	Behavioral Dimension Deviance
<i>Are Blomhoff</i> CEO Priest 52 years old	Embezzlement Betanien Foundation 3 years prison	Greed to buy private apartment and expensive parties	Exclusive responsibility for money transfers between mother company and subsidiary	Different behavior in Spain from Norway
<i>Lars Brorson</i> CFO 40 years old	Embezzlement Hadeland Broadband 4.5 years prison	Greed to buy expensive property and consumer goods	Exclusive responsibility for money transfers between Norway and Spain	Blamed lacking control mechanisms for his fraud
<i>Marius Schatvet</i>	Embezzlement	Divorced and	Exclusive	Dissatisfied with

CFO 50 years old	Aschehoug Publishing 3 years prison	wanted to keep house and cabin	responsibility for money transfers in chain of bookstores	his salary level, where owner made much more than him
<i>Kjell Staddeland</i> CEO 50 years old	Embezzlement Ugland Shipping 3.5 years prison	Greed to live in the best house with parking space for 5 cars	Exclusive responsibility for money transfers in joint venture	Dissatisfied with his salary level, where owner made much than him

Table 1 White-collar criminals convicted of convenient embezzlement in Norway

Are Blomhoff was educated as a priest and became chief executive officer (CEO) at the religiously-based social foundation Betanien in Bergen, Norway. The foundation operates several nursing homes, kindergartens and health institutions associated with the Methodist Church. When he was 52 years old, CEO Blomhoff was in charge of developing a nursing home in Spain for older Norwegians. He got money transferred from Spain to Norway for the project. He had exclusive responsibility for all money transfers to Spain. He embezzled some of the transferred money to buy himself an apartment in Spain and to arrange expensive parties with prostitutes in Spain. Two whistleblowers in Spain sent notice to the chairman at Betanien in Norway, but the chairman would not believe that a priest could do such a thing. When the whistleblowers threatened to tell Norwegian media about the case, then the chairman confronted the CEO with the allegations, and Blomhoff confessed to embezzlement. Fraud examiners from accounting firm BDO (2014) were hired by the chairman to find out if there was more money embezzled by the CEO than he already had confessed. The private investigators found evidence of more embezzlement. In terms of convenience theory, we find evidence of all three dimensions:

1. *Motive in the economical dimension: Greed to buy private apartment and expensive parties in Spain.* While being a priest and CEO in Norway, he had suppressed all his desires for a wild life that could be enabled by money. Finally, he could enjoy life the way he really wanted.
2. *Opportunity in the organizational dimension: Exclusive responsibility for money transfers and no control by others.* He was handling large sums of money for the construction project, and only an invisible fraction of the money was taken by him. He did not really conceal his illegal transactions, but he knew that nobody else had access to the relevant accounts. The abused accounts were neither part of the Betanien Foundation in Norway nor the Fundacion Betanien in Spain. Money transfers from Norway were conducted by employees after instructions from the CEO. The transfers were based on fake offers and invoices from Spanish suppliers. Blomhoff got travel and other personal expenses refunded by both Stiftelsen Betanien and Fundacion Betanien. Some of the money transfers occurred via a bank account in Luxembourg.
3. *Deviance in the behavioral dimension: Different behavior in Spain from Norway.* He would never have done it at home. While in Spain, he became a different person and was willing to embezzle money and hire prostitutes for parties with friends. His willingness increased as he did not notice any damage or any victims of his crime. Blomhoff had problems with substance abuse, which was noticed by the whistleblowers.

In the report of investigation, fraud examiners at BDO (2014: 7) write: "According to the assessment of BDO, the Foundations organizational and internal control is characterized by a situation where the chief executive has enjoyed substantial trust among board members and employees of the foundation and thus had wide powers"..

Fraud examiners also criticize the board for not reacting timely to whistleblowing and to other information (BDO, 2014: 10):

Information has come to our attention about a safe that was removed from the former CEO's house in Spain, in addition to another safe that was allegedly stolen during a burglary. This happened in the days after the former CEO was confronted with the embezzlement claims. It is our opinion that the case could possibly have been far better documented if the board had chosen to contact the police before the former CEO was confronted with the issue.

Lars Brorson was chief financial officer (CFO) at Hadeland Broadband, a subsidiary of Hadeland Energy. He came from a position at Hadeland Energy and had for a long time been in charge of financial transaction between Hadeland Energy and Hadeland Broadband. Brorson sent, according to investigators from PwC (2014), a total of 18 million Norwegian kroner (about US \$3 million) to his own accounts from Hadeland Broadband's overdraft account. Half of the amount was transferred in 2012, divided into 42 payments. Between 2011 and 2014, 66 such transactions were recorded.

During the same period, the Deloitte auditor wrote that financial statements were prepared in accordance with Norwegian laws and regulations. Auditor Ragnar Nesdal was one of six from Deloitte interviewed by investigator Gunnar Holm Ringen at auditing firm PwC (2014). In the interview, Nesdal felt that the company was so small that there was no requirement for annual meetings between the board and the company's auditors in accordance with Norwegian auditing act. The auditor had not attended board meetings or general assembly meetings. The only communication with the board had therefore been through written auditing statements from Deloitte.

For a long time, the PwC (2014) report was attempted to be kept secret for the public. The local newspaper Hadeland was active in getting disclosure. The newspaper argued for transparency and wrote in its editorial on July 13, 2014:

The newspaper Hadeland has requested access to investigation reports prepared after the embezzlement in Hadeland and Rngerike Broadband (HRB) and Hadeland Energy (HE). The answer has been no, by referencing to the Norwegian freedom of information act section 24, which states that documents can be exempted if they deal with offenses.

Finally, the owners agreed to public insight into the report. Soon after, Lars Brorson was convicted in Norwegian district court to 4 years and 6 months in prison. In terms of convenience theory, we find evidence of all three dimensions:

1. *Motive in the economical dimension: Personal finances were a mess.* He wanted to impress his new girlfriend, and he enjoyed the luxury himself. He bought expensive cars, a cabin, and a house, and he maintained a high consumption of expensive cognacs and other consumer goods.
2. *Opportunity in the organizational dimension: In charge of financial matters between parent and daughter companies.* Since he came from a position in the parent company Hadeland Energy, nobody at the subsidiary Hadeland Broadband dared to question his actions or behavior. They all assumed that Brorson had good contacts at the highest levels in Hadeland Energy, and that people at the highest levels had approved his way of doing financial management. Brorson had himself introduced formal routines at Hadeland Broadband while at Hadeland Energy, and he followed those routines when he joined Hadeland Broadband.
3. *Deviance in the behavioral dimension: Lack of control by auditor invited him to commit fraud.* He applied the neutralization technique that no damage had occurred as Hadeland Broadband still made a substantial profit. He admitted to lack of self-control when he explained himself in the court. The impression in the court room was that Brorson perceived himself as a victim of his own desires and lack of self-control.

The Brorson case was uncovered on March 10, 2014, in connection with police investigations of another firm for tax and accounting offenses in a neighboring police district. Lars Brorson had done accounting for this firm in addition to his job as CFO at Hadeland Broadband. He was also charged for these offenses, making the total add up to more than 20 million NOK. During the police investigation, it became known that Brorson had been convicted of embezzlement before, in combination with tax evasion, and that he had spent three years behind bars for it. The previous offense was committed while he was management for hire. It turned out that board members at Hadeland Energy were familiar with Brorson's past economic crime when he was hired in 2009.

Marius Schatvet was chief financial officer at publishing house Aschehoug. When he was alone in the entrepreneurial task of refinancing the publishing house's involvement in a chain of bookstores, he was able to transfer some of the money to his own account without anybody noticing. He did so for many years. Unfortunately for him, he finally typed in his own bank account number with a wrong digit, thereby creating attention. An employee in the accounting department noticed the transaction and blew the whistle on CFO Schatvet. Schatvet was sentenced to 3 years in prison (Silvolva et al., 2014).

Kjell Rune Staddeland was chief executive officer at Ugland Shipping. The Ugland family had owned the company for generations, and the family was rich. Staddeland made the family even richer, while at the same time receiving a modest CEO compensation. When he was handling an entrepreneurial joint venture agreement for the company on his own, he found a way to embezzle. After a while, however, he did regret his crime and told the owner, who reported Staddeland to the police (Berglihn and Fosse, 2013).

DISCUSSION

Agency theory suggests that problems occur between principal and agent when there are (i) conflicting preferences, (ii) different knowledge and information, and (iii) different attitudes towards risks (Bosse and Phillips, 2016). In their entrepreneurial activities, the sample of four convicted executives abused their powers. Mr. Blomhoff at Betanien was charged with the entrepreneurial task of establishing a nursing home in Spain. Mr. Brorson at Hadeland was charged with the entrepreneurial task of running broadband development while interacting with the energy company. Mr. Schatvet at Aschehoug was to reorganize the publishing house's involvement in a chain of bookstores, while Mr. Staddeland at Ugland was to reshape a joint venture. In all four cases, there were alone in the endeavor. In all four cases, the executives enriched themselves by committing white-collar crime and concealing their illegal transactions among legal transactions.

Obviously, the first problem in the agency relationship occurred, since no principal has a preference for embezzlement by agents. The second problem in principal-agent theory is the dominating one in the cases, where the principal had little or no means to control what the agent was doing. The third and final problem in agency theory seems less relevant, as the action of embezzlement is not a matter of risk where principal and agent disagree.

Based on this article, there are several avenues for future research. First, there should be a stronger link between the study of white-collar crime and entrepreneurship. Second, there is a need to develop new theory and test existing theory by combining convenience theory and agency theory. Third, research questions or research propositions should be developed based on this exploratory research. Finally, future case study research should enable some forms of generalization. An adequate explanation if needed for how future researchers select their case studies, what information they seek to extract, what information they are able to obtain, and how they analyze the data.

CONCLUSION

White-collar crime is a convenient alternative for privileged individuals who want to enrich themselves. Their occupational positions enable them to commit and conceal offenses among legal activities. This is especially the case, when the offender has sole responsibility for a task involving substantial amounts of money, as illustrated by the four executives presented in this article. One simple learning point from this article is that nobody – including chair persons, chief executives, and presidents – should ever have sole responsibility for tasks involving money on behalf of the organization. Interest divergence and information asymmetry require that the principal monitors the agent to reduce information asymmetry and provide incentives to align interests.

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EFFECT OF GLOBALIZATION ON SMALL AND MEDIUM ENTERPRISES (SMES) PERFORMANCE IN NIGERIA

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ABSTRACT

This paper studies the effect of globalization on small and medium enterprises (SMEs) performance in Nigeria. The study adopts an ex post-facto type of descriptive research design. In carrying out this study, the secondary statistics data was used. Data was extracted from CBN bulletin on relevant information which depicts globalization and its effect on SMEs performance in Nigeria. A co-integration model was used to investigate the effect of globalization on SMEs performance in Nigeria. To capture the activities of globalization, three proxies were used to capture the activities of globalization; they include interest rate, bank credit and trade openness while on the other hand, output of SMEs to GDP was used to capture SMEs performance covering the period of 1992 to 2014. It was observed that interest rate, bank credit and trade openness do not improve the performance of SMEs output. The overall effect as shown by the F-statistics reveals that the variables considered in this study are not significant in explaining the level of improvement in SMEs output and performance in Nigeria.

KEYWORDS

Globalization, SMEs, Bank credit, Trade openness, and Interest rate.

1. INTRODUCTION

Today's business environment is extremely dynamic and experiencing rapid changes as a result of technological improvement, increased awareness and demands of electronic trade concept of globalization. Globalization could be defined in simple terms as the easy access or reach of a certain resource the world over. In this context, globalization is a way of removing trade barriers. Globalization is a phenomenon that no development agenda can afford to ignore. The economic activities are saturated with globalization process and the driving force of his process in small scale business.

Small scale businesses are the backbone of the nations and they consist of the largest section of businesses in most economies as well as frequently offer the greatest potential for job creation (Adeleke, 2003). SMEs can be defined based on certain criteria which include, turnover, number of employees, profit, capital employed, market share, asset value and relative size within the industry.

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One of the major focuses on small scale businesses is that these enterprises make remarkable contributions to the economies of both developing and developed countries.

According to Usman (2001), the development of small and medium enterprises must be seen as an attempt towards the achievement of a wider economic and socio-economic objective, as well as poverty alleviation. The enterprise also drives the country's development as they create employment and contribute to the gross domestic product (GDP). Small and medium scale enterprises are expected to facilitate the growth and development of human and capital resources towards general economic development and the rural sector in particular. In view of these expected roles from SMEs, the Nigerian Government had in the past devised policies and incentives for the development of small and medium scale enterprises.

According to Adewuyi (2011), globalization is the process of opening up of economies to the outside world to aid trade, fall in physical and other barriers to enhance mobility of goods and factors of production as well as labour force. With the removal of barriers to trade, competition has intensified and has presented both opportunity and challenges to domestic firms to innovate and improve their competitive position.

The act of small and medium scale enterprises (SMEs) in the post trade liberation era in developing countries has fascinated the attention of scholars, nevertheless, their interest has been on financial, output, export, and marketing performance of firm in Nigeria, SMEs are beset with a countless of challenges on the strength of internet facilities and information technology which are in no small measure affecting their growth, the most distinct is defective infrastructure, in particular electricity and use of obsolete equipment and methods of production because of owner's inability to access new technology (Adewuyi, 2004).

However in most developing economies like Nigeria, ICT lacks the necessary infrastructure to support it. Many studies have been done on globalization relating to small scale businesses especially in developed countries. Surprisingly, reviewed literatures show that many scholars in Nigeria have expressed interest in examining the conceptual issues of globalization as it affects Africa in general and Nigeria in particular. Interestingly, few attempts have been made in empirically relating globalization to small scale business performance. Therefore, there is need to examine the effects of globalization on the performance of small scale businesses in Nigeria in order to fill the gap in knowledge.

In light of the above statement, the broad objective of this study is thus to examine the effect of globalization on small and medium scale business performance in Nigeria, while the specific objectives are; to ascertain the factors that affect SMEs development in Nigeria; examine the trend of trade openness in Nigeria on performance of SMEs development in Nigeria; and to examine the impact of bank credit on the performance of SME's in Nigeria. This research is significant because it provide answers to factors militating against the improvement of advance information technology, trade openness and also proved the success and growth associated with implementation of exportation and importation in the areas of SMEs operations that can be enhanced.

2. LITERATURE REVIEW

2.1 Concept of Globalization

Globalization is the spread of economic innovation around the world and the political and cultural adjustments that accompanies this diffusion (Hitt, Ireland & Hoskisson, 2001). Tendon (1998) viewed globalization as the interconnectedness of contemporary civilization, which includes political, social and cultural systems. According to Sonia and Rajeev (2009) globalization is the

process of integrating various economies of the world without creating any hindrances in the free flow of goods and services, technology, capital and even labor or human capital.

Globalization could be seen as the process of increasing interconnectedness between societies so that event in one part of the world has an effect on people and societies far away. With the concept of globalization, individual firms and corporate organizations has been able to transact businesses worldwide without restrictions which have helped to enhance cross border business relationship.

2.2 Concept of Small and Medium Scale Business

History has shown that the concept of small and medium enterprises (SME) was introduced into the development landscape as early as the late 1940s and the main objective was to improve trade and industrialization in the present developed nations (OECD, 2004). The definitions of SME are usually derived in each country, based on the role of SME in the economy, policies and programs designed by particular agencies or institutions empowered to develop SME. In addition, the classification of SME also varies overtime from agencies or developing institutions to another, depending on their policy focus. SMEs can be defined based on certain criteria including, turnover, number of employees, profit, capital employed, available finance, market share and relative size within the industry.

The Central Bank of Nigeria, in its 2005 guideline on Small and Medium Enterprise Investment Scheme (SMEIS), described SME as any enterprise with a maximum asset base of 200million naira (excluding land and working capital) with no lower or upper limit of staff. Using quantitative indices alone to define SMEs have proven unsatisfactory in many respects. This is because such indices are characterized by periodic alterations due to inflation and thus can sometimes be misleading.

2.2.1 Role of the SME Sub Sector in Economic Development.

In developing countries, the role of SMEs is more important since SMEs often offer the only realistic prospects for creating additional employment and thus reducing poverty and enhancing the quality of lives (Agbu, 2006). A healthy SME sub-sector is a sine qua non for inclusive and socially sustainable development even though institutions that provide support services where available are often limited in capacity and coverage in developing economies. Exports by SMEs usually range between 30 and 50 percent of total industrial exports in developed and developing countries. In tune with the latest developments in the world economy and the attendant globalization effects, the role of SMEs going forward is bound to be even greater and more pervasive, with a demonstrable impact on the emerging world trading order (Aluko, 2004).

2.2.3 Challenges of SMES in Nigeria

The fact that SMEs have not made the desired impact on the Nigerian economy in spite of all the efforts and support of succeeding administrations and governments gives a cause for concern. It underscores the belief that there exists fundamental issues or problems, which confront SMEs but which hitherto have either not been addressed at all or have not been wholesomely tackled. A review of literature reveals indeed the following plethora of problems, which are enormous, fundamental and far-reaching, first of which is the inadequate, inefficient, and at times, non-functional infrastructural facilities, which tend to escalate costs of operation as SMEs are forced to resort to private provisioning of utilities such as road, water, electricity, transportation and communication (Olayode, 2004).

More so, SMEs lack easy access to funding/credits, which can be traceable to the reluctance of banks to extend credit to them owing, among others, to poor and inadequate documentation of business proposals, lack of appropriate and adequate collateral, high cost of administration and management of small loans as well as high interest rates. Furthermore, weakness in organization,

marketing, information-usage, processing and retrieval, personnel management, accounting records and processing, etc. arising from the dearth of such skills in most SMEs due to inadequate educational and technical background on the part of the SME promoters and their staff (Orunmoluyi, 2000).

2.2.4 Financing of Small and Medium Scale Enterprises in Nigeria.

In recent years banks in developed countries have launched a number of initiatives that both improve the profitability of lending SMEs and also provide SMEs with better access to finance and to financial products than that are better failure to their needs. Furthermore, the financing of small scale enterprises goes a long way in determining the strength and success of the business enterprises (Usman, 2009). Adewuyi (2004) said that small scale enterprises are not to remain forever, but the expansion of any business unwisely may be total. The researcher further noted that business expansion should be financial sound, ordinary from earnings or capital contribution of owner's expansion in any case calls for careful advance planning.

Aluko (2001) declared that in order to reduce the high risk cost associated with the financing of small scale enterprises, it is necessary for the institutions to be equipped with staffs that are capable of evaluating pre-investment feasibility studies and surprise projects execution. Adeleke (2002) states that the major problem of many small scale founders is immediate capital problems to start the proposed business; the researcher further explained the source of capital, which are personal savings of the resources in cash original, family, member and friends, financial institutions and the recent innovations in the financing of small business all these depends on the size and large or age of the business determining the strength and success of the business enterprise.

2.3 Theoretical Framework

2.3.1 Theory of Dependency

Dependency Theory developed in the late 1950s under the guidance of the Director of the United Nations Economic Commission for Latin America, Raul Persist. Prebisch and his colleagues were troubled by the fact that economic growth in the advanced industrialized countries did not necessarily lead to growth in the poorer countries (Agbu, 2006). Indeed, their studies suggested that economic activity in the richer countries often led to serious economic problems in the poorer countries. Such a possibility was not predicted by neoclassical theory, which had assumed that economic growth was beneficial to all (Pareto optimal) even if the benefits were not always equally shared.

Prebisch's initial explanation for the phenomenon was very straightforward; poor countries exported primary commodities to the rich countries that then manufactured products out of those commodities and sold them back to the poorer countries. The "Value Added" by manufacturing a usable product always cost more than the primary products used to create those products. Therefore, poorer countries would never be earning enough from their export earnings to pay for their imports (Yusuf, 1994).

2.4 Empirical Review

Scholars have conducted researches in the areas of globalization and performance of SMEs in academic world. Elizabeth and James (2006) in the United States of America led to conclusion that all else equal, globalization does not have a significant effect on the profits of white-owned firms but in contrast, the estimated coefficient of all three globalization measures is significant at the 5 percent levels for minority-owned small scale businesses, suggesting that on the average, minority-owned firms that operate in more globalized region earn lower profit.

Onyeaghala and Anele (2014) examined the relationship between globalization and small scale businesses performance and suggested that globalization is strongly and positively related to performance of small scale

businesses. They found that each dimension (jobs, income or social system) of the small scale businesses performance was positively correlated to globalization. Their finding conform with that of Hitt, *et al.*, (2001) which state that globalization is the spread of economic innovation around the world and the political and cultural adjustments that accompany this diffusion.

Most of the scholars whose works have been reviewed highlighted the challenges of the small and medium scale businesses as high cost of administration of small loans, high interest rate, and discrimination from banks averse to risk of lending to small borrowers. This study seeks to empirically review the effect of globalization on small and medium scale enterprises in Nigeria. The study will centre on the trade openness as it played an important role in improving service delivery standards in the small and medium scale industry. In pursuance of the objective of the study; attention shall be focused trade openness, bank credit to SMEs and interest rate in business. It is on this basis that the following null hypotheses are formulated:

H₀₁: Globalization has no overall significant effect on SMEs performance in Nigeria.

H₀₂: Trade openness does not have significant influence on the performance of SMEs in Nigeria.

H₀₃: Bank credit has no significant effect on SMEs operations.

H₀₄: Interest rate has no significant effect on SMEs performance.

3 METHODOLOGY

This study adopts an ex post-facto type of descriptive research design. In carrying out this study, the secondary statistics data was used. Data was extracted from CBN bulletin on relevant information which depicts globalization and its effect on SMEs performance in Nigeria. Data collected were analysed through regression analysis on the current state of the SMEs sector in this era of global advancement and quality of services provided by SMEs.

The main source of data for this research was from CBN Statistical Bulletin 2014 edition to collect SMEs output, import, export, interest rate. This study adopts co-integration test technique. However, before the application of the technique, the time series characteristics of the variables was examined from 1992 – 2014. In order to capture the full effects of globalization on the performance of small and medium scale enterprises in Nigeria the following specified regression equation model was established and tested:

The econometric specification for model is:

$$MCAP/GDP_t = \beta_1 + \beta_2 BA/GDP_t + \beta_3 M2/GDP_t + \beta_4 TS/GDP_t + \beta_5 CPS/GDP_t + \beta_6 INTS_t + U_t \dots (2)$$

$$SME = f(BC/GDP, OPEN + INTR) \dots (1)$$

The econometric specification for the model is:

$$SME/GDP_t = \gamma_0 + \gamma_1 BC/GDP_t + \gamma_2 OPEN_t + \gamma_3 INTR_t + \varepsilon_t \dots (2)$$

Where:

SME/GDP_t = Output of Small and Medium Scale Enterprises to GDP at time t.

BC/GDP = Bank Credit to SMEs to GDP at time t.

OPEN = trade openness = Import+Export/GDP.

INTR = Interest rate

$\gamma_1 - \gamma_3$ = Estimated Parameters

ε = Stochastic error terms

The variables and their relationships are defined thus:

(a) *Openness of the economy (OPN)*: This is the ratio of trade (imports and exports) to GDP. This is one of the pull factors that influence FDI flows to host countries.

(b) *Bank credit to SMEs (BCSME)*: This measures the extent of credit creation among the commercial banks to Small and Medium Scale Enterprises in Nigeria within the study period

(c) *Interest Rate (INT)*: This the prime lending rate of the commercial banks to SMEs in Nigeria. It measures the volatility of the loan interest among the small scale business in Nigeria

(d) *SME Performance*: Output of small and medium scale enterprises: the data used is the contribution of wholesale and retail trade in Nigeria to Gross Domestic Product.

The economic apriori test enables us examine the magnitude and size of the parameters estimate. This evaluation is guided by economic theory to ascertain if the parameter estimate conforms to expectation. Hence it is expected that; $r_1 > 0$; $r_2 > 0$ $r_3 > 0$

Under the statistical test, we will test for the goodness of fit of the individual significance of each regressor using the t-test and finally the significance of the regression models using the f-test.

(i) *Goodness of fit test*: We shall make use of the coefficient of multiple determinations R^2 to find how the variations in the explanatory variable affect the dependent variable.

(ii) *Student's t-test*: It is used for testing the significance of each variable. We shall make use of 5% level of significance to determine whether there is significant effect or not.

(iii) *The F-test*: It will be used for testing the overall significance of the regression models. In order words, it will be used to test the joint impact of the independent variables on the dependent variable.

Econometric test will be used for empirical verification of the model. This will range from testing for serial correlation, normality and heteroscedasticity.

4. RESULTS

This section presents the properties of the data used for this study in order to understand the variables as well as the suitability for this study. It will assist in drawing inference under the test of hypothesis.

Table 4.1: The Descriptive Statistics of Variables

	BC/GDP	INT	OPEN	SME/GDP
Mean	6.173913	18.83261	20.11520	86.69565
Median	6.000000	18.29000	16.29836	98.00000
Maximum	23.00000	29.80000	45.61303	147.0000
Minimum	0.000000	13.54000	1.777572	12.00000
Std. Dev.	6.176585	3.351027	13.94636	46.56514
Skewness	0.816156	1.614823	0.315874	-0.561106
Kurtosis	3.294855	6.397570	1.743448	1.997692
Obs	23	23	23	23

Source: Authors' Computation (2017)

The above table revealed that all the variables have a positive mean value with SME/GDP having the highest value. A further investigation on the table shows that the median of the variables are not too different from the mean value which implies that the variables are symmetry. The maximum and minimum value for the variables ranges from positive to positive for all cases. It was also discovered that SME/GDP also has the highest standard deviation among the variable while the volatility of other are relatively low. It can also be inferred from the table above that the variables are positively skewed, and finally, the table revealed that BC/GDP, OPEN and SME/GDP are platykurtic, while INT is leptokurtic.

Before testing for causality, it is essential to determine the order of integration for each of the variables series. This study conducts the unit root test to determine the order of integration of the series. The Augmented Dickey-Fuller (ADF) tests are reported in Table 3, using Schwarz Info Criterion.

Table 4.2: Unit root Test

Variable	T-Stat	Prob.	Order
SME/GDP	-0.97035	0.7451	I(1)
SME/GDP(-1)	-4.07786	0.0053*	
BC/GDP	-1.9801	0.2937	I(1)
BC/GDP(-1)	-3.4056	0.0232**	
INT	-1.8996	0.3285	I(1)
INT(-1)	-5.4096	0.0003*	
OPEN	-0.9268	0.7599	I(1)
OPEN(-1)	-4.9411	0.0008*	

Source: Authors' Computation (**Note:** significant level: * 1%. ** 5% ***10%)

Table 4.2 above shows that SME/GDP, BC/GDP, INT and OPEN were not stationary at level given their probability value which is not significant. However at first difference SME/GDP, BC/GDP, INT and OPEN became stationary at first difference at 1% and 5% significant level. It therefore means that the variables considered in this study are multileveled integrated and integrated of order one, thus a long-run linear combination is suspected amongst them. Therefore a co-integration test is conducted to ascertain if there exist long-run relationships.

Co-integration Test

This is carried out to determine the existence of long run relationship (co-integration) among the variables and conducted as a pre-test to avoid 'spurious regression' situations. The results are presented in table below.

Table 4.3: Co-integration Test

The result of the Johansen co-integration test between globalization proxies and SMEs performance in Nigeria from 1992-2014 are given in Table 4.3.

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.769192	70.33069	47.85613	0.0001	29.32340	27.58434	0.0296
At most 1*	0.696757	41.00728	29.79707	0.0017	23.86445	21.13162	0.0201
At most 2	0.471905	17.14284	15.49471	0.0280	12.76959	14.26460	0.0850
At most 3*	0.196407	4.373254	3.841466	0.0365	4.373254	3.841466	0.0365

Source: Authors Compilation, (2017)

Trace test indicates 4 cointegratingeqn(s) at the 0.05 level and Max-eigenvalue test indicates 2 cointegratingeqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The Trace statistics indicated the existence of 4 co-integrating equations, while the Max-Eigen Value statistics indicated the existence of two co-integrating equation, implying that there exists a long run relationship among the variables. Since the result of the Johansen co-integration test indicated that the variables are co-integrated, the Vector Autoregression model is then employed.

Vector Error Correction (VER)

The vector error correction model is contained in table 4.4. The coefficient of the ECM is negatively signed but statistically insignificant at probability value at 29.4%. The value shows that the speed of adjustment of long run equilibrium is approximately 43.9%. It therefore suggests that no long run causality exist between globalization and SMEs performance in Nigeria.

Table 4.4: VER

	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-0.439621	0.391104	-1.124053	0.2936
SME_GDP(-1)	-0.049155	0.556205	-0.088376	0.9318
SME_GDP(-2)	0.322465	0.476706	0.676445	0.5178
INT(-1)	-15.96111	11.59480	-1.376575	0.2059
INT(-2)	-5.415181	7.525385	-0.719589	0.4923
BC_GDP(-1)	16.87692	11.82142	1.427657	0.1912
BC_GDP(-2)	4.746290	8.171879	0.580808	0.5774
OPEN(-1)	-3.367788	3.286187	-1.024831	0.3354
OPEN(-2)	-3.264104	3.127450	-1.043695	0.3271
C	-0.845513	9.812357	-0.086168	0.9335
R-squared	0.510558			
Adjusted R-squared	-0.101245			
F-statistic	0.834513			
Prob(F-statistic)	0.613390			
Durbin-Watson stat	1.880289			

Source: Authors Compilation, (2017)

Note: Significant level: * 1%. ** 5%, ***10%

The table above shows the short run equilibrium coefficient of the variables considered in this study. It was revealed that a period lag of interest rate (INT) and openness (OPEN) will bring about a negative effect on SMEs performance while bank credit (BC/GDP) will bring about a positive effect on SMEs performance, however all the variables do not significantly affect SMEs performance. Hence, interest rate, openness, bank credit at this level does not support the performance of SMEs in Nigeria. Conversely, a period lag of interest rate (INT), and bank credit (BC/GDP), have a positive effect on SMEs performance (SME/GDP) while openness (OPEN) have a negative effect on SMEs performance though not statistically significant at acceptable significance level. This suggests that the interest rate and loans from banks will not bring about an increased performance in the SMEs output.

From the above, the R-squared revealed that the explanatory variables explain 51% of changes in the dependent variable. This implies that about 49% variation in the independent variable is caused by other factors not considered in this study while The F-statistics shows that the result is not statistically significant as the probability value of F-Statistics is higher than 5%. Thus, this study fails to reject the null hypothesis which states that globalization as no overall significant effect on SMEs performance in Nigeria.

Table 4.5: Post Diagnostic Test

	F-statistic	Prob
Normality Test: Jarque-Bera	1.559885	0.4584
Breusch-Godfrey Serial Correlation LM Test:	0.356876	0.7138
Heteroskedasticity Test: Breusch-Pagan-Godfrey	1.889856	0.4009

Source: Authors Compilation, (2017)

The Breusch-Godfrey Serial Correlation Test was conducted to examine whether the variables are serially correlated, the result in table 4.5 shows that the probability value of F-statistic is not significant at 5% (0.71) as such we reject the null hypothesis that there is presence of serial correlation among the variables. Also, the normality test was carried out to check if the residuals are normally distributed. The result of the Jarque-Bera Statistics suggests that the residuals are averagely distributed given the probability value of 46%. Thus, the diagnostics indicate that the residuals are normally distributed, homoskedastic and serially uncorrelated which implies that the result of this study is not spurious and can be relied on for policy making.

5. SUMMARY AND CONCLUSION

This empirical work employed cointegration model to investigate the effect of globalization on SMEs performance in Nigeria. To capture the activities of globalization, three proxies were used to capture the activities of globalization; they include interest rate, bank credit and trade openness while on the other hand, output of SMEs to GDP was used to capture SMEs performance covering the period of 1992 to 2014. It is observed that interest rate, bank credit and trade openness do not improve the performance of SMEs output. The overall effect as shown by the F-statistics reveals that the variables considered in this study are not significant in explaining the level of improvement in SMEs output and performance in Nigeria. Hence, the four null hypotheses identified in the study which specified that globalization has no significant effect on SMEs performance, trade openness do not significantly influence SME performance, bank credit has no significant effect on SMEs operation, and interest rate has no significant effect on SMEs performance are all accepted.

The table above shows the short run equilibrium coefficient of the variables considered in this study. It was revealed that a period lag of interest rate (INT) and openness (OPEN) will bring about a negative effect on SMEs performance while bank credit (BC/GDP) will bring about a positive effect on SMEs performance, however all the variables do not significantly affect SMEs performance. Hence, interest rate, openness, bank credit at this level does not support the performance of SMEs in Nigeria. Conversely, a period lag of interest rate (INT), and bank credit (BC/GDP), have a positive effect on SMEs performance (SME/GDP) while openness (OPEN) have a negative effect on SMEs performance though not statistically significant at acceptable significance level. This suggests that the interest rate and loans from banks will not bring about an increased performance in the SMEs output.

As observed from the result, interest rate and trade openness leads to a negative effect on SMEs performance, hence the higher the interest rate, the lower the performance of small scale enterprises within the country, and vice versa. This is also evident in the rate of import and export within the country, as well as its gross domestic product (GDP). Thus in order to enhance SMEs performance within the country, interest rate should be reduced in order to encourage more business to access loans. Furthermore, the finding revealed a positive effect of bank credit on SMEs performance indicating that the higher the bank credits to SMEs, the greater their level of performance. Hence, it is necessary to increase credits and loans to SMEs at a low interest rate in order to enhance their performance, although their level of significance remains insignificant from the above analysis.

Based on the above statement, it is recommended that there is need to restructure as well as strengthen policy to ensure the rapid growth and development of the SMEs sector, more so an active operation of the SMEs Credit Guarantee Scheme should be created to improve credit providers' exposure to longer term debt issued by small firm managers, in such areas as business plan development, feasibility studies, project monitoring and analysis, book keeping and accounting, performance evaluation.

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SUPPLY CHAIN MANAGEMENT AND OPERATIONAL PERFORMANCE IN NIGERIA: A PANEL REGRESSION MODEL APPROACH

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ABSTRACT

The research examined the effect of supply chain management on firm's operational performance in Nigeria manufacturing companies with specific interest on supply chain strategy and supply chain flexibility. A random effect model was developed to examine whether there is a significant effect on the variables identified, and the level of significance that exist in the variables. This study adopts an ex post-facto type of descriptive research design using Secondary sources to generate the data. The data were gathered from the annual report of manufacturing companies between 2011 and 2016. Findings revealed that supply chain management does not have a significant overall effect on operational performance at Prob value =0.343 which is above the sig. level of <.005, and the magnitude of variation which supply chain management cause on operational performance is 7.6% for all the companies samples which is significantly low. Hence, it is recommended that the management of a company's supply chain do not necessarily affect their operations; thus organizations can adopt a combination of strategies and flexibilities in their level of operation.

KEYWORDS

Supply chain, Strategy, Flexibility, Performance.

1 INTRODUCTION

The dynamics of business atmosphere has placed important challenges on business organizations. As compared to the traditional business environment, firms nowadays have entered a new edge of business environment that is more competitive and complicated (Chen & Lin, 2009). As a result, the success of a firm does not only depend on its individual performance, rather on a complex chain of firms engaging in various roles.

Increasing competition has made supply chain flexibility and strategy an important emerging issue for businesses (Kumar, Fantazy, Kumar & Boyle, 2006). Flexibility could be the capacity to adjust to changes in product mix, production volume, or design as well as reaction to environmental uncertainty. In general, flexibility is defined as the ability of an organization to efficiently and effectively adapt to foreseen and unforeseen changes (Tummala, Philips & Johnson, 2006). The definitions of manufacturing flexibility play an important role in defining supply chain flexibility

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(Kumar et al., 2006). But as the supply chain extends beyond the enterprise, supply chain flexibility must also extend beyond one firm's internal flexibility (Clos, Vokurka & Lummus, 2003).

Operational performance can be defined as the level up to which products and services supplied by an organization meet the customer expectation. It provides an indication of the potentiality of the supply chain in providing products and services to the customer. This metric is most important in supply chain management as it integrates (involves) the measurement of performance right from supplier end to the customer end.

Recent studies have considered the effect of supply chain management on the financial performance of the organization using different dimensions and measurements of supply chain management such as supply integration, customer integration, internal integration, lean production, postponement concept, production performance, product quality, and delivery performance. However, there have been few researches on the effect of SCM on operational performance in the context of supply chain strategy and supply chain flexibility as far as the knowledge of the researcher is concerned (Arawati, 2011; Mohamed, Abdellatif & Fakher, 2012; Hamid & Hamid, 2014). This research intends to address the research gap by studying the effect of supply chain management in the context of supply chain strategy and supply chain flexibility on the operational performance of the organization. This is necessary as there have been past researches which have tested SCM against other organizational outcomes like profitability, productivity, and customer satisfaction; yet, few studies have studied the effect on the operational performance of the organization.

In addressing the research gap, the study provides answers to certain questions such as: what overall effect does supply chain management have on the operational performance of the organization? To what extent does supply chain strategy significantly affect operational performance? And how does supply chain flexibility affect operational performance? In line with these questions, the study will aim at examining the effect of supply chain management on operational performance of the organization in the context of supply chain strategy and supply chain flexibility.

2. LITERATURE REVIEW

Supply Chain Management

Supply chain management (SCM) is a set of managerial practices which includes sourcing raw materials, manufacturing and assembling products, managing warehousing and inventory, monitoring supply and demand, distributing and delivering finished products to the customer (Windischer & Grote, 2003; Agus, 2010). Various definitions have been used to explain the term SCM. Schonsleben (2004) defines SCM as coordination of strategic and long-term cooperation in logistics networks (Windischer & Grote, 2003).

According to Quinn (1997), the supply chain management includes all of those activities associated with moving goods from the raw-materials stage through to the end user. This includes sourcing and procurement, production scheduling, order processing, inventory management, transportation, warehousing and customer service. SCM also embodies the information systems which are necessary to monitor all of those activities.

Ganeshan & Harrison (1999) define supply chain as a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers. Supply chain management is integrated philosophy in the management of the distribution progress from supplier to final user. Supply chain management is a guiding concept of functional integration beyond individual firms onto networks of organizations (Gilaninia, Chirani, Ramzani & Mousavian, 2011).

Supply Chain Flexibility

The concept of flexibility in supply chain management is the ability of a business process to effectively manage or react to changes with little penalty in time, cost, quality or performance (Viswanadham & Raghavan 1997). On the other hand, Lee (2004) explains the flexibility of supply chains as the ability of a company in terms of three distinctive components. These components are: One, adaptable: Adjust the supply chain's design to meet structural shifts in markets, modify supply network strategies, products and technologies. Two, alignment: Create incentives along the partners within the supply chain for better overall performance. Three, agility: The ability of a supply chain to respond to short-term changes in demand or supply quickly and handle external disruptions smoothly.

According to Vickery, Calantone & Droge (1999), a manufacturing system is said to have flexibility, when it achieves the ability of reacting to changes faster and in a less costly manner in a way that system effectiveness will be less influenced. Given that flexibility is important but pursuing high flexibility is costly, there should be an assessment on how much flexible a supply chain should be.

Nemeth (2008) defined flexibility as consisting of two dimensions, temporal and intentional. In expanding the framework he identified four dominant dimensions of flexibility in his literature. The first is temporal; how long it takes an organization to adapt. The second is range; the number of options that an organization has open to it for change that was foreseen and the number of options it has available to react to unforeseen change. The third is intention; whether the organization is being proactive or reactive. The final dimension of flexibility is focus; specifically whether the flexibility is gained internally to the organization or by managing external relationships with trading partners.

Supply chain strategy

As global sourcing and offshore manufacturing dramatically alter the landscape of business activity, there needs to be a similar change in the way in which supply chain strategies are determined (Christopher, Peck & Towill, 2006). Whilst downward pressure on price will continue to be a real issue in deflationary market conditions, it has also to be recognized that agility and responsiveness are increasingly fundamental to competitive success (Christopher et al., 2006). The typical supply chain strategy is likely to be aimed at achieving a smooth flow at minimum cost (Harrington, 1991; Scott & Westbrook, 1991). But how are the right supply chain decisions to be made which will enable the defined business and marketing strategy to be enacted, literature shows a number of articles on supply chain strategy.

Katz, Bloodgood & Pagell (2003) presented three active supply chain community strategies and one passive strategy. The active strategies are modularizing, appending and innovating. The passive strategy is following. Modularizing occurs when the community switches from selling individual inputs to selling complete sub-assemblies, or bundles of services (Katz et al., 2003). Appending means that the supply community bundles goods or services that are presently available elsewhere, with the existing goods or services in the hope of gaining additional profit from end consumers. Innovating adds one significant potential benefit to the supply community: a good or service not previously offered, following simply means to mimic the behavior of other suppliers (Katz et al., 2003).

Performance

The most effective relationships exist where supply chain partners have been made aware of what performance standards they are being held accountable for (Stuart & McCutcheon, 2000). Selecting performance measures is intended to make sure companies accomplish the specific (collaborative) goals that they set. The supply chain performance measures that an organization sets for itself and

others should be specific, measurable and evaluated at regular intervals, and whatever measures are selected should be enforced (Tummala, Philips & Johnson, 2006).

Supply chain companies have realized the importance of financial and non-financial performance measures (Fantazy, Kumar & Kumar, 2010). An effective performance measurement system ought to cover all aspects of performance that are relevant for the existence of an organization and the means by which it achieves success and growth (Kaplan & Norton, 1996; Hillman & Keim, 2001). This means that any performance measurement system ought to include more than just financial measures. This point is well established as many authors contend that any credible model of performance measurement must have more than one criterion (O'Regan & Ghobadian, 2004).

Ali & Güven (2009) carried out a study on Supply Chain Management as a Sustainable Performance Booster for the Accommodation Enterprises. Their objective was to access the supply chain practices of the hotels and to reveal effects of such practices on the hotels' performance. The survey instrument was adopted from previously used and tested measures of past researchers. The result showed that there is positive relationship between the supply chain practices of the hotels and their performance.

Sachin & Vincent (2010) carried out a research on exploring the relationship between efficient supply chain management and firm innovation: An archival search and analysis. The data was generated from an archival financial statement information and patent citation data for firms in the manufacturing sector, over a 10-year period from 1987 to 1996. Longitudinal analysis, focusing on the influence of efficient supply chain management on a firm's innovation over time, was conducted. The results of the research indicate that over time a firm's supply chain performance and supply chain stability positively influence the volume of its innovations.

Furthermore, Arawati (2011), studied Supply chain management, supply chain flexibility and business performance. The researcher's objective was to examine the importance of incorporating supply chain management in Malaysian manufacturing companies. The study was a quantitative, cross-sectional research utilizing primary data. The overall result suggests that supply chain management has significant correlations with supply chain flexibility and business performance. Specifically, supply chain flexibility and business performance have high correlations with SCM comprising programs such as 'strategic supplier partnership', 'lean production', 'postponement concept' and 'technology and innovation'.

Adebayo (2012) conducted a study on the impact of SCM practices on SCM Performance. The SCM practices considered in this paper were namely strategic supplier partnership, customer relations practices, information sharing, information quality and postponement. The research provides empirical justification for five key dimensions of SCM practices identified and describes the relationship among SCM practices and SCM performance as well as the impact of these practices on SCM performance. The study thus showed that SCM practices definitely impacts SCM performance.

Somuyiwa, Mcilt, & Adebayo, (2012) carried out a research on firm's competitiveness through supply chain responsiveness and supply chain management practices in Nigeria. They focused on 115 manufacturing companies as their sample size and adopted multiple regression analysis for the analysis. Results indicated a positive association between supply chain responsiveness, supply chain management practices and competitive advantage.

Arawati (2015) carried out a study on the influence of supply chain management on production performance and product quality. The researcher's objective was to examine the importance of incorporating supply chain management (SCM) in the Malaysian manufacturing industry and investigate its impact on production performance and product quality. A measurement Smart PLS model was developed and refined with reliability and validity tests more; Pearson's correlation

analysis was conducted to establish associations between SCM practices, production performance and product quality. The findings revealed that SCM has a positive and significant effect on production performance. In addition, SCM also has a positive and significant effect on product quality.

Njoku & Kalu (2015) carried out a research on the effective supply chain management as a strategic tool for profitability enhancement in the competitive marketing environment (Empirical evidence in the Nigerian food and beverage industry 2005-2014). Data was collected from annual reports of various issues and analyzed using inferential statistics such as Pearson correlation model and simple regression analysis. Findings revealed that after investing heavily, their supply chain components do not significantly reflect in their profitability.

In line with the reviewed literature, the following hypotheses were postulated:

- H₀₁. Supply chain management has no overall significant effect on organizational operational performance.
- H₀₂. Supply chain strategy has no significant effect on the operational performance of an organization.
- H₀₃. Supply chain flexibility has no significant effect on operational performance of an organization.

3. METHODOLOGY

This study adopts an ex post-facto type of descriptive research design. This is because the design creates a causal relationship between the variables identified after the event. The target population for this study consists of twelve manufacturing companies in Nigeria which engages in consumer goods between 2011 and 2016. Consumer manufacturing companies are selected because of their engagement in supply chain with the final consumers of their products; hence, the companies are vital to this research work. The sample size for this study consists of top six manufacturing companies which produces consumer products, which were selected purposively on the basis of highest market capitalization, and whose financial data were available online annually between 2011 and 2016.

This research makes use of a secondary data, with the researcher having no control over the variables under study. The data were generated from the annual reports of the selected companies from 2011 to 2016. The variables in this study are divided into two which include the independent variable and the dependent variable. The independent variable identified is supply chain management which is measured by supply chain strategy and supply chain flexibility which are proxies on inventories and distribution cost respectively while the dependent variable is operational performance which is proxy on net cash generated from operating activities. Thus, it is specified that operational performance is dependent on supply chain management.

A mathematical model whose variable is adapted from the research of Arawati (2011) is used to explain the relationship between the dependent variable (operational performance) and the independent variable (supply chain management). The mathematical equation below therefore shows the effect of the independent variable on the dependent variable in a linear form as thus:

$$OP = f(SCSTRA, SCFLEX) \quad (1)$$

Where: OP =Operational performance

SCSTRA = Supply chain strategy

SCFLEX = Supply chain flexibility

This can be specifically expressed in explicit form as:

$$OP_{it} = \alpha_0 + \alpha_1 SCSTRA_{it} + \alpha_2 SCFLEX_{it} + U_t \quad (2)$$

Where U = stochastic or random error term (with usual properties of zero mean and non-serial correlation).

$\alpha_1 - \alpha_2$ = Co-efficient of associated variables

α_0 = Constant Intercept.

Due to the large figures involved in the data, a log- linear form is more likely to find evidence of a deterrent effect than a linear form; the equation is therefore log-linearized as follows:

$$\text{LOGOP}_{it} = \alpha_0 + \alpha_1 \text{LOGSCSTRA}_{it} + \alpha_2 \text{LOGSCFLEX}_{it} + U_t$$

Measurement of Variables

Operational Performance

The operational performance of the organization is the cash flow from the operating activities of the companies. The net cash generated by operating activities of each company is used as proxy to measure the operational performance in the study and this is derived from the annual reports of the companies by adding the values of the cash receipts from customers and the cash generated from operations while deducting from the cash payments to suppliers and employees, value added tax received, and the income tax paid.

Supply chain Strategy

Supply chain strategy is a strategy which can either set up universality and integration in trade activities (purchasing, producing, selling and logistics) which is carried out in the length of chain, or set up maximum value for end users, and for setting up this strategy, the activities should be applied that improve cooperation and confidence relation between chain participants (Wisner, 2003; Cohen & Roussel, 2005). The supply chain strategy deals with the measures taken by the companies in distributing their products to the consumers. Inventories are used as proxy for supply chain strategy of an organization. Inventories are used as they show to an extent the type of strategy and the chain of network the organization adopts in making their goods available to the consumers. A lower inventory implies that the firm adopts the just in time or zero stock style, and transfers directly to the consumers without necessarily having distribution centers to store their goods, while a high inventory cost implies that the organization makes high usage of distribution centres and rely more on the middle men in the chain of distribution to transfer their goods to the consumer.

Supply chain Flexibility

The supply chain flexibility focuses on how flexible the companies are in distributing their products. The study used distribution cost as proxy for supply chain flexibility. These distribution costs determine to some extent how an organization is flexible in its supply chain. The higher the distribution cost, the more flexible the organization is in its supply chain.

The study utilizes a descriptive and inferential statistics to establish the effect of supply chain management on operational performance. The descriptive statistics help to describe and understand the characteristics of the variables under study and it includes the mean, median, variance and standard deviation. The inferential statistics meanwhile assists in drawing inferences from the panel data which was analyzed based on the pooled OLS, fixed effect model and random effect model. The data gathered are analyzed using E-views (v7).

4. RESULTS

Table 4.1: *Descriptive Statistics*

	Flexibility	Strategy	Operational Performance
Mean	22.39005	23.11069	23.34875
Median	22.19584	23.11063	23.60026

Maximum	24.53157	24.59283	25.39433
Minimum	19.89058	21.31702	20.08312
Std. Dev.	1.398261	0.968950	1.359151
Skewness	0.085042	-0.489236	-0.701078
Kurtosis	1.943289	2.480740	2.851847
Jarque-Bera	1.431947	1.533798	2.484985
Probability	0.488714	0.464451	0.288664
Sum	671.7016	693.3208	700.4626
Sum Sq. Dev.	56.69890	26.66795	53.57146
Observations	36	36	36

Source: E-views output (2017)

Table 4.1 shows the generated data and the descriptive statistics descriptive statistics on supply chain flexibility, supply chain strategy and operational performance respectively. The Table reveals that the mean values for the variables are positive: 22.39, 23.11 and 23.34 respectively, and that supply chain flexibility have the largest average change value. The Table further revealed that the minimum change and the maximum change are positive in each case. This implies that each of the variables have positive changes throughout the sampling period. It is more so revealed in the Table that supply chain flexibility has the highest standard deviation which implies that it is the most volatile factor among the variables. The Table also shows that supply chain flexibility have a positive skewness, while supply chain strategy and operational performance have a negative skewness indicating that the right tail is particularly extreme for supply chain flexibility. Subsequently, the Table revealed that all the variables are platikurtic which implies that they are thinly tailed. Similarly, the Jarque-Bera (JB) statistic indicated that there is evidence of normality for all the variables.

Table 4.2: Pooled Regression Model

Dependent Variable: Operational Performance

Method: Panel Least Squares (pooled OLS)

Samples: 2011-2016

Periods included: 6

Cross sections included: 6

Total panel (balanced) observations: 36

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	7.275962	6.307572	1.153528	0.2588
FLEXIBILITY	0.430305	0.162639	2.645768	0.0134
STRATEGY	0.278582	0.237147	1.174724	0.2504
R-squared	0.250135	Mean dependent var		23.34875
Adjusted R-squared	0.194590	S.D. dependent var		1.359151
S.E. of regression	1.219765	Akaike info criterion		3.329834
Sum squared resid	40.17134	Schwarz criterion		3.469953
Log likelihood	-46.94750	Hannan-Quinn criter.		3.374659
F-statistic	4.503248	Durbin-Watson stat		0.798934
Prob(F-statistic)	0.020524			

Source: E-views output (2017)

Table 4.3: Fixed Effect Model

Dependent Variable: Operational Performance

Method: Panel Least Squares (fixed effect)

Samples: 2011-2016

Periods included: 6

Cross sections included: 6

Total panel (balanced) observations: 36

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	30.97070	23.31765	1.328208	0.1977

FLEXIBILITY	0.584252	0.497626	1.174077	0.2529
STRATEGY	-0.895835	1.291662	-0.693552	0.4952
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.761084	Mean dependent var		23.34875
Adjusted R-squared	0.685065	S.D. dependent var		1.359151
S.E. of regression	0.762743	Akaike info criterion		2.519388
Sum squared resid	12.79910	Schwarz criterion		2.893040
Log likelihood	-29.79081	Hannan-Quinn criter.		2.638922
F-statistic	10.01178	Durbin-Watson stat		2.132457
Prob(F-statistic)	0.000014			

Source: E-views output (2017)

The fixed effect model indicated that probability value of supply chain flexibility and supply chain strategy are at 25.2% and 49.5% respectively which is above the 5% significant level. It can hence be said that supply chain flexibility and supply chain strategy do not have a significant effect on operational performance.

Table 4.4: *Random Effect Model*

Dependent Variable: Operational Performance

Method: Panel EGLS (cross-section random effects)

Samples: 2011-2016

Periods included: 6

Cross sections included: 6

Total panel (balanced) observations: 36

Swamy and Arora estimator of component variances

Variable	Coefficient t	Std. Error	t-Statistic	Prob.
C	13.36481	11.65644	1.146561	0.2616
FLEXIBILITY	0.376958	0.283085	1.331608	0.1941
STRATEGY	0.066801	0.520979	0.128223	0.8989
Effects Specification				
			S.D.	Rho
Cross-section random			1.290714	0.7412
Idiosyncratic random			0.762743	0.2588
Weighted Statistics				
R-squared	0.076149	Mean dependent var		5.965776
Adjusted R-squared	0.007716	S.D. dependent var		0.748136
S.E. of regression	0.745244	Sum squared resid		14.99549
F-statistic	1.112754	Durbin-Watson stat		2.064346
Prob(F-statistic)	0.343260			
Unweighted Statistics				
R-squared	0.223333	Mean dependent var		23.34875
Sum squared resid	41.60720	Durbin-Watson stat		0.744003

Source: E-views output (2017)

The random effect model also indicated that the two values of the two variables do significantly not affect operational performance at 5% significance level. The probability values of supply chain flexibility and supply chain strategy are at 19% and 89% respectively hence, making it insignificant on operational performance. In order to select the appropriate model for the hypothesis. The Hausman test is carried out. The Hausman test specifies that the fixed effect model is appropriate where the Probability value is <5% and statistically significant, while the random effect model is appropriate where the P value >5% and is not statistically significant. Thus random effect is appropriate for the null hypothesis while the random effect model is appropriate for the alternate hypothesis.

Table 4.5: Hausman Test				
Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random	0.775318	2	0.6786	
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
FLEXIBILITY	0.584252	0.376958	0.167495	0.6125
STRATEGY	-0.895835	0.066801	1.396971	0.4154

Source: E-views output (2017)

The result of the Hausman test in table 4.5 showed that the P value is 65.9% indicating that the probability value is greater than 5%, thus it is not statistically significant. Thus, the pooled regression model in table 4.2, and the fixed effect regression model in table 4.3 are not relied upon as they do not indicate the appropriate model for discussion based on the Hausman test. This implies that the random effect model in table 4.4 is the appropriate model to analyze the effect of supply chain management on operational performance in the manufacturing sector. The random effect model indicates that the companies have a common mean value for the intercept.

From the analysis result of the random effect model in Table 4.4, it is discovered that the probability value of supply chain flexibility and supply chain strategy respectively are not statistically significant at 5% sig. level. The probability values of the two independent variables are 19% and 89% respectively. This implies supply chain strategy and supply chain flexibility have no statistical significant effect on operational performance.

The random effect model in Table four is thus used to test the hypotheses. As revealed by the model, the overall effect of supply chain management on operational performance in the manufacturing sector is not significant at 5% because it show a probability statistic of 34%, and an R squared value of 7.6%. This indicates that the magnitude of variation caused on operational performance is 7.6% for all the companies sampled. The model further revealed that there is no significant individual effect of supply chain flexibility and supply chain strategy on operational performance. This is as seen in Table 4 that the probability value for supply chain flexibility is 19%, while the probability value of supply chain strategy is 89%. Hence the two variables do not have a statistical effect on operational performance. Thus the study fails to reject the three null hypotheses in this study which states that supply chain management has no overall significant effect on organizational operational performance, supply chain strategy has no significant effect on the operational performance of an organization, and supply chain flexibility has no significant effect on operational performance of the organization.

5. CONCLUSION

This study examines the effect of supply chain management on operational performance of an organization, with specific interest on supply chain strategy and supply chain flexibility of the organization. A random effect model was developed to examine whether there is a significant effect on the variables identified, and the level of significance that exist in the variables. Having developed the model, the study proceeds to test the underlying hypotheses towards achieving the research objectives.

The first objective is to evaluate the overall effect of supply chain management on organizational operational performance. The result revealed that supply chain management does not have a

significant overall effect on operational performance, and the magnitude of variation which supply chain management cause on operational performance is 7.6% for all the companies' samples which is significantly low.

The second objective examines the effect of supply chain strategy on operational performance of an organization, and it was discovered from the result of the appropriate random effect model that supply chain strategy does not have a statistical significant effect on operational performance at 89% probability level which is above the 5% significant level.

The final objective determines the effect of supply chain flexibility on operational performance of an organization, and it was also discovered by the model that supply chain flexibility do have a statistical significant effect on operational performance at a probability level of 19% which is above the accepted significant level of 5%.

The discussion in the previous section indicates that the study has been able to provide meaningful insight into the effect of supply chain management on the operational performance of manufacturing companies in Nigeria. The study has shown that supply chain management indices do not affect the operational performance of companies operating in the Nigerian manufacturing sector. Consequently the major conclusion drawn from this study are discussed in line with the objectives identified in chapter one and it discovered by the researcher that supply chain management do not have a significant overall effect on operation performance of organizations, More so, the study concluded that the supply chain strategies which are adopted by companies do not have an effect on their operational performance, and the study finally concludes that the different types of flexibility being utilized by companies do not affect their operational performance.

From the preceding discussions and conclusion, it is recommended that the management of a company's supply chain do not necessarily affect their operations; hence organizations can adopt a combination of strategies and flexibilities in their level of operation. Organizations however, should give more concern to their financial and overall performance. In doing this, organizations should seek to adopt the most effective and efficient method of managing their supply chain so that they can fully optimize their overall financial performance.

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PERSONAL BANKRUPTCIES FROM MACROECONOMIC PERSPECTIVE

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ABSTRACT

Personal bankruptcies are traditionally discussed from legal, microeconomic or social point of view. This paper focuses on the development of personal bankruptcies in the Czech Republic during the time period 2008-2016 and aims to connect performance of economy and the development of personal bankruptcies. As statistical tools there are used descriptive statistics and regression and correlation analysis. For the economy performance are used the measures of GDP, unemployment rate, household indebtedness and share of debts in default. Based on the results of the analysis there shall be said that lower economic performance influences increasing number of personal bankruptcies. This conclusion has significant consequences for the government and its politics, banks and other financial institutions.

KEY WORDS

debt relief; Czech Republic; macroeconomic development; over indebtedness

JEL CLASSIFICATION

G33, K35

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INTRODUCTION

The term personal bankruptcy is not defined in current legal framework of the Czech Republic although it is highly used by general public as well as professionals. Personal bankruptcy is used as an alternative term for individuals' insolvency. Insolvency is a legal process under Act No. 182/2006 Coll. on Insolvency and its Resolution (generally called Insolvency Act) in the Czech Republic. The Insolvency Act, effective since January 2008, has offered in the Czech Republic for the first time the possibility of resolving the bankruptcy following not only liquidation as well as reorganization principle. Especially in the case of natural persons (non-entrepreneurs) it is a great revolution. Legal norms sometimes require revisions. The revisions should generally increase efficiency, shorten waiting time periods or strengthen the rights of one or other interested parties. This act has been already effective for more than nine years. It means some data are available for further decision making. On the other hand, many pieces of information are missing. The aim of this paper is to analyse the concept of personal bankruptcies from the macroeconomic point of view. The unfavourable macroeconomic conditions could be an impulse for the increasing number of personal bankruptcies. The reminder of this paper is as follows. Firstly, there would be provided a brief literature review on approached area, followed by the designing the model for the practical analysis. Conclusive remarks would be provided based on the results of the analysis.

1 LITERATURE REVIEW

Personal bankruptcy provides individuals a possibility to solve their complicated financial situation when they are not able to repay their debts anymore. Personal bankruptcy is mostly a question of legal framework (Draghici, 2015). Since 2008 the Insolvency Act has implemented debt relief as a manner of solving bankruptcy. The Czech legal norms were inspired by foreign legal frameworks, especially from Germany or USA (Frelichová, 2008). Clearing a non-entrepreneurial subject's debt is possible into two ways – monetization of debtor's assets and completing a payment plan. It is completed within five years and the debtors have to repay at least 30% of their unsecured debts. Experiences show that the repayment schedule dominates the monetization (Kislingerová et al., 2013).

The issue of personal bankruptcy is usually discussed from the microeconomic (Fišerová and Paseková, 2016, Ključnikov and Junger, 2013, Paulík et al., 2015 or Randáková and Bokšová, 2015), individual (Hospodka, et al., 2017 or Paseková, et al., 2015) or social perspectives (Paseková, 2013). Contrary, the macroeconomic situation is more connected with corporate insolvencies than debt reliefs. This statement can be proved by contributions by Kislingerová and Arltová (2013), Svobodová (2013), Kislingerová and Schönfeld (2014) or Louda (2016). Carter and Van Auken (2006) proved that the main reasons for insolvency of small enterprises are lack of knowledge, the impossibility of debt financing and the economic climate. On the other hand, personal bankruptcies are usually not connected with the general economic conditions. It must be emphasized that unexpected changes in personal life are supposed to be the primary trigger of non-entrepreneurs' insolvency (Kislingerová et al., 2013). Among these changes it may be mentioned illness, divorce, partner's death, loss of employment or only insufficient financial literacy whose connection with social standing was proved by Jappelli (2010). It can be added an approach of Smrčka and Arltová (2014) who studied the relation between debt and living standard.

Increasing household indebtedness (Hospodka et al., 2017, Ključnikov, and Majková, 2016, or Smrčka, 2011) could lead to serious consequences and therefore the macroeconomic perspective of personal bankruptcies should not be overlooked. Especially current situation of loans and other credit products which are available as never before may be helpful for a worsening personal

situation. These efforts are very rare in the literature. A small step can be visible in Fišerová and Paseková (2014) whose problem is an insufficiently long time series followed by the slow introduction of debt relief in the Czech Republic in the early stage and the macroeconomic situation affected by the consequences of the recent global crisis.

2 METHODS

Methods are related to the analysis of time series. The studied time series show the development of the number of personal bankruptcies and macroeconomic situation (GDP and unemployment) completed with the amount of bad debts in the economy. The data are described in the following part. The basic tools of descriptive statistics will be followed by regression and correlation analysis. The following paragraphs specify used time series and some necessary data transformation.

The analysis of this paper is based on the publicly available data although insolvency process is often criticised because of the lack of related information (Kislingerová, 2012). The individual insolvency cases are available in the insolvency register but it must be emphasized that it is not possible to aggregate these individual cases using information technologies (Smrčka, 2013). Therefore, the primary data source is total number of individuals' insolvency proposals published by Creditreform (2015, 2017). It is a time series from 2008 till 2016. It cannot be longer because of the enforcement of the Insolvency Act since 2008. The development of the number of the insolvency proposals will be compared with the macroeconomic conditions measured by gross domestic product (GDP) and unemployment. These indicators are regularly published by statistical offices as Czech Statistical Office or Eurostat. For both indicators annual data are used.

Aforementioned increasing household indebtedness can also have its impact. Therefore, the basic comparison between indebtedness and personal bankruptcies would be processed. Furthermore, total indebtedness cannot be used as an explanatory indicator because households draw loans more and more nowadays. Czech National Bank publishes also a value of bad household debts. The worsening macroeconomic conditions have consequences on the ability to repay debts. These data have to be transformed for our purposes due to absolute view. The increasing amount of loans has the consequence of the increasing amount of bad debts in the absolute values. However, the macroeconomic situation is stable and the general ability to repay debts does not change. Conversion of absolute indicators to relative one would solve this obstacle. Therefore, the share of bad debts is computed (bad debts/total household debts). Afterwards, the annual changes between the number of personal bankruptcies and the share of bad debts will be compared. The annual changes are expressed as chain indices (see equation 1).

$$\text{Annual change } X = \frac{X_n}{X_{n-1}} - 1 \quad (1)$$

where X – means analysed variable,
n – means period (year).

3 RESULTS

The amount of personal bankruptcies steadily grew in the Czech Republic at the beginning of the analysed period. Concerned debtors could not solve their loans and other payables in a different way. As it can be seen from table 1 growth dynamics had been gradually slowing down and since 2014 there has been a year-on-year decline in the number of these insolvency proposals. Foreign experience shows that steady increases occurred in most countries since the introduction of the debt relief (Kislingerová et al., 2013, p. 43). The question remains whether, despite the steep growth of

seven of the 9 monitored years, the unfavourable macroeconomic situation associated with the global crisis did not influence the results. The loss of employment was marked in the previous text as one of the changes in personal life causing personal bankruptcy. Poor economic performance and rising unemployment may result in more personal bankruptcies as compared to periods of low unemployment and high economic performance.

Table 1 Development of debt relief proposals in the Czech Republic

YEAR	pROPOSALS	aNNUAL cHANGE	MAIN DESCRIPTIVE STATISTICS		
2008	1 936		Mean		19 671
2009	4 237	118.85%	Median		23 830
2010	10 559	149.21%	Variation		10 920
2011	17 600	66.68%	Minimum		1 936
2012	23 830	35.40%	Maximum		31 577
2013	30 888	29.62%	Percentiles	25	7 398
2014	31 577	2.23%		50	23 830
2015	29 349	-7.06%		75	30 118
2016	27 067	-7.78%			

(Source: authors based on Creditreform data, 2015, 2017)

Table 1 shows not only the development of debt relief proposals but also some basic descriptive statistics of this variable. It is visible that there are significant differences among analyzed years. The potential reasons for the high number of insolvency proposals could be global economic crisis leading to lower national output and related higher unemployment rate. There can be also other reasons connected more with social environment as lower personal literacy whose threat is connected with a large offer of loans and other credit products in the current market. It seems that credit products are available as never before. We will focus on the first mentioned reason further. The development of debt relief proposals and its time differences will be analyzed in relation to the macroeconomic situation expressed by annual GDP measured in mil. CZK and annual unemployment rate. Values of these two variables and their basic descriptive statistics are displayed by table 2.

Table 2 Development of main macroeconomic indicators in the Czech Republic

YEAR	REAL GDP (mil. CZK)	uNEMPLOYMENT U	main DESCRIPTIVE STATISTICS			
				GDP	U	
2008	3 935 698	4.40%	Mean	4 136 344	6.03%	
2009	3 820 932	6.70%	Median	4 032 910	6.70%	
2010	4 011 836	7.30%	Variation	261 936	1.16%	
2011	4 032 910	6.70%	Minimum	3 820 932	4.00%	
2012	4 001 491	7.00%	Maximum	4 665 111	7.30%	
2013	4 040 276	7.00%	Percentiles	25	4 001 491	5.10%
2014	4 209 397	6.10%		50	4 032 910	6.70%
2015	4 509 446	5.10%		75	4 209 397	7.00%
2016	4 665 111	4.00%				

(Source: authors based on CZSO data, 2017 and Eurostat data, 2017)

Real gross domestic product has had the most stable development from the observed variables. There was significant decrease in 2009 and slight one in 2012 but all the other years were connected with steady increases. On one hand, unemployment rate followed the shifts of gross domestic product in 2009 and 2012 on the other hand unfavorable values remained also in 2010 and 2013. It means that decreases of the unemployment rate came later although there was already the increase of GDP.

The next step is conducting of regression analysis. Regression analysis is performed for the number of insolvency proposals as the dependent variable. As explanatory variables real GDP and unemployment rate are used. Results of the analysis are provided by table 3 and 4. The result of regression whose explanatory variable is the unemployment rate is unconvincing (R-squared 0.000547). Without any doubts it is statistically insignificant at a 95 percent level because p-value is equal 0.95. Contrary, the regression with real GDP as explanatory variable provides more convincing results. It is displayed in table 3. The model itself shows moderate dependence between real GDP and the number of debt relief proposals. The value of R-squared is equal to 0.4121. It means that 41% of variability of dependent variable are explained by the proposed model. If we choose the significant level at a 95 percent both coefficients would be unfortunately insignificant. As a consequence, we decrease the significant level to a 90 percent level and this model can be used. Statistically it is moderate dependence according the value of R-squared. Unfortunately the model expresses that increasing real GDP leads to the higher amount of debt relief proposals how it is visible from the positive value of coefficient GDP.

Table 3 **Regression analysis (GDP explanatory variable)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.026767	0.012081	2.215552	0.0623
C	-91044.23	50072.15	-1.818261	0.1119
R-squared	0.412193	Mean dependent var		19671.44
Adjusted R-squared	0.328221	S.D. dependent var		11582.81
S.E. of regression	9493.520	Akaike info criterion		21.34774
Sum squared resid	6.31E+08	Schwarz criterion		21.39156
Log likelihood	-94.06481	Hannan-Quinn criter.		21.25316
F-statistic	4.908671	Durbin-Watson stat		0.507366
Prob(F-statistic)	0.062285			

(Source: authors based on Creditreform data, 2015, 2017 and CZSO data, 2017)

Table 4 **Regression analysis (Unemployment explanatory variable)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Unemployment	-220.8333	3567.614	-0.061899	0.9524
C	21003.81	21916.56	0.958353	0.3698
R-squared	0.000547	Mean dependent var		19671.44
Adjusted R-squared	-0.142232	S.D. dependent var		11582.81
S.E. of regression	12379.16	Akaike info criterion		21.87855
Sum squared resid	1.07E+09	Schwarz criterion		21.92237
Log likelihood	-96.45346	Hannan-Quinn criter.		21.78397
F-statistic	0.003832	Durbin-Watson stat		0.185837
Prob(F-statistic)	0.952373			

(Source: authors based on Creditreform data, 2015, 2017 and Eurostat data, 2017)

Economically this dependence does not prove the basic idea that worsening economic performance leads to higher amount of debt relief proposals. The data have proved opposite relationship that the improving economic performance (growing GDP) leads to higher amount of debt relief proposals. This problematic conclusion is caused by the short time series and dynamic development of using debt relief in the case of individuals in the early phase. The development of the last two years shows that the number of the insolvency proposals has been decreasing when the country economic performance has improved.

As a consequence, another explanatory variable has to be searched which would connect general economic situation and personal bankruptcies. From the economic point of view there should exist a connection. Therefore, this analysis should go on searching a variable which would support statistically the economic point of view.

The increasing indebtedness has been already emphasized. The personal bankruptcy occurs only in the case if individuals are not able to repay their debts anymore. It means that there would be no institute of debt relief if there were no debts. Table 5 proves that households draw more and more credit. The total household indebtedness increased by 40% in the analysed time period. The absolute value of bad debts also increased from 2008 till 2013/4. Although the absolute value of bad debts has decreased since 2013 it still exceeds the values in first years. It must be emphasized that the first analysed years are the period of the recent global economic crisis.

First the economic sense of bad debts related to the debt relief proposals is discussed. The low performance of the economy has generally a negative impact on employment and wage policy of employers which is reflected in the more problematic ability of households to repay their credits. It is best visible in table 5, specifically indicator share of bad debts. Till 2010 there was a significant increase of bad debts share. In the time period 2010-2014 this share was above 4%. Finally the proportion of debts in default significantly decreases in 2015 when it fell below 4%. Such an observation is fully consistent with the findings about the amount of individuals' insolvency proposals. This research idea will be further statistically verified.

Table 5 **Indebtedness of households in the Czech Republic in mil CZK**

YEAR	Total debts	Default		
		Bad debts	Share of bad debts	Annual change
2008	1 155 154	25 592	2.22%	
2009	1 210 271	38 702	3.20%	44.34%
2010	1 267 869	53 379	4.21%	31.66%
2011	1 330 195	54 368	4.09%	-2.92%
2012	1 372 891	58 750	4.28%	4.70%
2013	1 418 876	59 234	4.17%	-2.44%
2014	1 432 104	58 121	4.06%	-2.79%
2015	1 518 693	53 884	3.55%	-12.58%
2016	1 630 017	45 448	2.79%	-21.42%

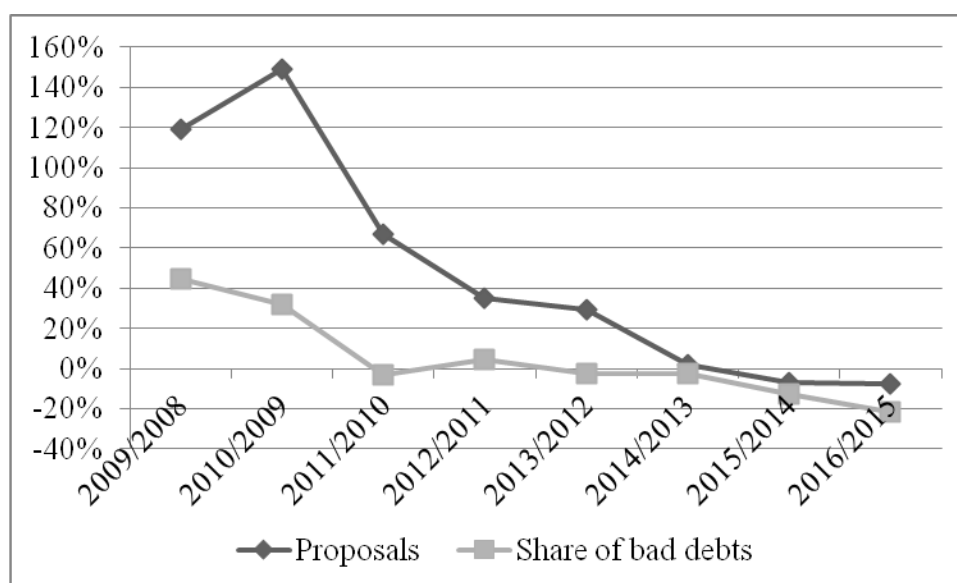
(Source: authors based on Czech National Bank data, 2017a, 2017b)

In the part dedicated to methods and data it has been already discussed that it has no sense to work with absolute data in this case. It is worthy to deal with relative values. Therefore, it will be compared the relative development of the number of debt relief proposals (table 1, third column)

and the share of debts in default (table 5, last column). The development of both variables is displayed in figure 1.

It seems the direction of development and the dynamics of both variables are consistent over the analysed time period. From the statistical tools the correlation analysis will be used. The regression itself is not wanted because it is difficult to define which variable is dependent and which is explanatory. The correlation coefficient is equal to 0.9. First it proves strong dependence between these two variables. Second the value is positive which means that increasing value of share of debts in default causes increasing number of the insolvency proposals of the individuals. It can be also postulated in the positive way. Decreasing value of share of bad debts in economy influences the number of debt reliefs whose amount is also decreasing. These two variables are significantly connected but it is impossible to determine dependency among each other. It can be postulated that they are the result of the same phenomenon.

Figure 1 Annual change of debt relief proposals and share of bad debts



(Source: authors based on Creditreform data, 2015, 2017 and Czech National Bank data, 2017a, 2017b)

DISCUSSION

Implications of these research finding could be especially in the practice. It can be discussed the role of banks and other financial institutions. They have to deal with higher amount and proportion of debts in default during the phases of lower economic performance. It is not a new idea. However, personal bankruptcy solved as the debt relief is a new way. The creditors offer a possibility to start a new life after the 5 years' fulfilling recovery plan. The debtor is motivated to pay installments of the recovery plan. The probability for creditors to get at least some money back is higher than in the case of an individual enforcement. The individual enforcement is a never ending process therefore the debtors' motivation is lower and they often give it up. They escape in the net of social benefits or grey economy where their earnings are not taxed and confiscated by the enforcement administrator.

Other related parties are governmental institutions and insolvency administrators. Insolvency courts have to deal with higher amount of proposals during and after crisis periods. Therefore, they need

more personal and material capacities during the specific time periods. It could seem that also the insolvency administrators have business very cyclical. It can be even postulated that their business is an example of anticyclical industry branch. Contrary, their work is not one-off. Peaks are observable during the time of the insolvency proposals. They have to find and monetize debtors' property and establish the recovery plan. Although it is not fully evident their work do not finish. They have to administrate recovery plan, transfer money to the creditors monthly and monitor debtors' activities and effort. The recovery plan will be fulfilled after five years. The economic cycle has 4-6 years on average and therefore the new peak of insolvency proposals will be coming.

CONCLUSION

This paper untraditionally focuses on the concept of personal bankruptcy in the direct link with the macroeconomic situation. Debt relief as a way to solve personal bankruptcy is usually dealt in the legal dimension of the insolvency law. Economic findings tend to be microeconomic, as debtors entering personal bankruptcy are individual economic players. Contrary, it can be found statements that social dimension prevails because personal bankruptcy enables individuals to start again without the debt burden. However, it is possible to aggregate the findings at the level of the whole economy and the microeconomic conception moves to macroeconomic one.

The paper's analysis dealt with the impact of the macroeconomic situation on the development and its dynamics of personal bankruptcies in the Czech Republic which occurred in the time period 2008-2016. The macroeconomic situation was described by gross domestic product and annual unemployment rate. The choice of these indicators is based on the economic connection between lower performance of the economy and worsening individual household situation which finishes in personal bankruptcy. Although economic justification seems reasonable it was not confirmed statistically. The unemployment rate was not a powerful explanatory variable at all. The relationship with gross domestic product showed a moderate dependence. Contrary, this dependence had been expected in opposite direction because of the economic sense. These obstacles are caused by the short time series and by dynamic early stages of debt relief in the Czech Republic. As a last step the level of household indebtedness and the number of individual insolvency proposals were examined. The direction of development and the dynamics of proposals and share of bad debts were consistent over the analysed time period.

The paper has not proved statistically the connection of personal bankruptcies with overall economic situation. This connection should be verified further when more data are available describing the length of at least three economic cycles (12-15 years). On the other hand, strong dependence between bad debts and personal bankruptcies was proved. It has serious implications, especially for government and financial institutions. They should reflect that increasing household indebtedness and worsening performance of economy lead to the increasing number of personal bankruptcies.

Some limitations of this research have been already mentioned. First the time series is not long enough because it does not contain enough economic cycles. Second the enforcement of the new insolvency law came in 2008 when the economic crisis was spreading through the world. As a consequence, it was observed radical upward trend of the personal insolvency proposals. This increase was probably more significant than in the time of economic expansion. On the other hand, personal bankruptcies are very specific and these cases are individual. There are not only macroeconomic factors, as well as microeconomic and non-economic. It is difficult to generalize them because there can be several reasons and consequences depend also on the related factors of personal situation and environment.

Future research can be conducted in several directions. The research will be able to continue later when longer time series is available. It would be possible to omit the exceptional prior years when the insolvency law came into force. Another possibility is international comparison which can show that similar development can be observed in more countries as a consequence of the crisis period. There are two basic limitations. First is data availability and second is different national insolvency law. Econometric approach to modelling the amount personal bankruptcies should not be based only on the macroeconomic factors but also microeconomic and social variables could be added. Last but not least there is an issue of seasonality. A question may be asked if the personal insolvency proposals do not occur in some months more than in others. Further it can be searched reasons for this state of the world and consequences for the related parties as insolvency courts, insolvency administrators or specialized lawyers and consultants dealing with these cases.

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THE QUALITY OF MACRO-ENVIRONMENT AND BUSINESS ENVIRONMENT AND UNIVERSITY STUDENT ENTREPRENEURSHIP - COMPARISON OF THE CZECH AND THE SLOVAK REPUBLIC

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ABSTRACT

The aim of this paper was to examine university students' propensity for entrepreneurship in the context of the evaluation of the quality of macro-environment and business environment. A part of this aim was a comparison of defined factors in the Czech and the Slovak Republic. In relation with the research aim, a survey-based research was conducted with university students in the Czech Republic and Slovakia. 409 students in the Czech Republic and 568 students in Slovakia were approached during this research. To verify the defined scientific hypotheses, the regression analysis was used. The research results brought interesting findings, namely that the present macroeconomic environment does not prevent students from starting their own business, and that the present level of basic macroeconomic factors (GDP, employment, inflation) determine the students' propensity for entrepreneurship in both countries. In Slovak Republic, the administrative workload is seen by the students as a factor discouraging them from entrepreneurship after graduating from college. The students feel that the conditions for doing business have improved in the last five years. Students in the Czech Republic think that the conditions for doing business have improved over the past five years, and consider the business environment to be reasonably risky and of good quality.

KEY WORDS

university students, propensity for entrepreneurship

INTRODUCTION

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Entrepreneurship is a significant part of the economic system, having important effects on the growth of the entire society. It is therefore important that the young generation develops an interest in entrepreneurship and starts building actual businesses. Obviously, this is the group of people who should be the most active part of the country's population. It is the very university graduates who should utilize their acquired knowledge and their innate intelligence to form the country's economic power.

Business environment in its broadest sense reflects the quality of the economic environment and the presumption of entrepreneurial subjects' economic activities. A high quality business environment creating conditions for a long-term, sustainable economic growth is the basic precondition for business development and the increase of the country's economic competitiveness on the international scale (Belanová, K., 2014, Ključnikov and Junger, 2013).

This paper examines how the quality of the macroeconomic environment and the business environment determine university students' propensity for entrepreneurship. The originality of this research lies in the quantification of the correlation between university students' propensity for entrepreneurship and the perceived quality of the macroeconomic environment and the business environment.

The structure of the paper is the following: The theoretical part presents the research results of the quality evaluation of the business environment. The second part defines the aim of the research, the methodology, and the description of the data used. The third part presents the results of the research and the discussion about the issue. The conclusion offers a final summary of the research.

1. THEORETICAL PART

On the theoretical level, Conorto et al. (2014) define three significant quality areas of the business environment: *a broader business environment*, *a competitive environment*, and *a narrower business environment*. *A broader business environment* comprises factors on the macroeconomic level that exist regardless of the existence or the rank of individual entrepreneurial subjects. *Economic factors* are the result of the character and the orientation of the country's economy, while the economic environment influences the changes of the material, energy, financial, investment and information conditions. The economic factors include areas such as inflation tendencies, changes in income and the structure of the consumer spending, the savings and debt rate, evolution of the interest rate, pricing policy, general availability of loans and other means of financing an enterprise, population's money saving and money spending tendency, direct interest rates, etc. *The political stability and the political orientation of the country* in which the enterprise operates are of a great importance for entrepreneurial subjects. The political factors define the legal conditions and regulate the business environment. The political-legal environment creates a legislative and support frame for entrepreneurial activities, regulates international business relations, the tax and levy politics, the anti-monopoly politics, the stability of the legal environment, the effectivity of the judicial system, the enforceability of the law, the administrative burden on enterprises, etc. *Technological factors* can, in a narrower sense, be viewed as an industry issue, however, for the business environment in a broader sense, the following factors play an important role: the availability of human capital and the infrastructure in the field of research and development, support of research and development, the state's cooperation with the private sector in this field, etc. The *social factors* can be considered quite marginal, they only affect the business environment indirectly - values, opinions, and lifestyles of the people in the environment and the evolution of population, cultural, ecological, demographic, religious, and ethnic conditions. The broader economic environment and individual factors are characteristic for their nearly identical evolution and influence on all entrepreneurial subjects on the given market, and their improvement or deterioration has a direct impact on the

quality of the business environment. *The competitive environment* comprises barriers to entry, buyer power, supplier power, threat of substitution, and competitive rivalry (the concept of Porter's five forces). The *narrower business environment* includes direct competitors, customers, suppliers, and employees.

In reality, the following elements may be viewed as the basis of the country's business environment: the legal frame for business and the enforceability of the law; the burden on enterprises (administrative, financial: taxes, levies, and fees); interference with the freedom to do business, and the infrastructure for entrepreneurship (conditions for entrepreneurship, the quality and availability of key production factors and services for entrepreneurs) (Conorto et al., 2014).

Detailed information on the quality of the business environment as a whole and its individual attributes are offered by a number of indexes, such as: the Global Competitiveness Index, the Index of Economic Freedom, the Corruption Perception Index and others that constitute the method of multicriterial evaluation of the country's competitiveness (Belanová, 2014).

It is apparent that the higher the quality of the business environment, the higher the propensity for entrepreneurship, and vice versa. Palalić et al. (2017) state that the higher the dissatisfaction with the current business environment, the higher the demotivation, which negatively affects the students' business intentions.

Many studies confirmed that entrepreneurs with university degrees have significantly better predispositions for doing business. E.g. Lafuente and Vaillant (2013) and Velez (2009) claim that entrepreneurs with university degrees are more interested in the possibility of starting their own business compared to those having a lower level of education. According to Naude et al. (2008), university education is a significant positive factor in entrepreneurship, as educated people are able to see more opportunities on the market that have a positive effect on the company's economic growth (Rauch and Rijdsdijk, 2013). This type of education is closely linked to a higher volume of sales, higher profitability, and business sustainability (Van der Sluis and Van Praag, 2008). Millian et al. (2014) state that educated entrepreneurs are able to acquire educated employees on the job market, which has a positive effect on the company's productivity.

Studies conducted within the business environment in the Czech and the Slovak Republic confirmed that entrepreneurs with a university education perceive the intensity of factors that form the business environment differently (Ključnikov et al., 2016; Ključnikov and Sobekova Majková, 2016), and have better predispositions for managing business and financial risks in an enterprise (Belás et al., 2016; Ključnikov and Belás, 2016, Paulik et al., 2015).

The standard and the quality of the macroeconomic environment and the business environment present two important areas that can determine the decision making process regarding entrepreneurship. To understand university students' attitude towards entrepreneurship, it is necessary to know their views and notions, and use this knowledge to create complex conditions that would enable starting and maintaining a business.

2. RESEARCH AIM, METHODOLOGY AND DATA

The aim of this paper is to study the university students' propensity for entrepreneurship in the context of the evaluation of the quality of business environment. A part of this aim was a comparison of defined factors in the Czech and the Slovak Republic.

The research was conducted in September 2016 – January of 2017. 409 students from 14 universities in the Czech Republic and 568 students from 8 universities in Slovakia were surveyed.

The Czech students were from the following universities: Technical University of Liberec, Newton College in Brno – University of Applied Business, University of Economics Prague, Masaryk University in Brno, Sting Academy in Brno, College of Entrepreneurship and Law in Prague, Palacký University Olomouc, and the Mendel University Brno. Students from Slovakia were studying at the following universities: University of Economics in Bratislava, Alexander Dubček University in Trenčín, University of Žilina, University of Prešov, Matej Bel University in Banská Bystrica, Technical University of Zvolen, Technical University of Košice, and Pan-European University in Bratislava. Universities were approached on the basis of willingness to participate in the research. The research focused on students of the 3rd year of Bachelor study and higher grades (Master's degree, engineering studies) who are supposed to be thinking about their future. A total of 409 college students (156 men (38.2 %) and 253 women (61.8 %) participated in the survey. There were 568 students from the Slovak universities (216 men (38.0 %) and 352 women (62.0 %)). The data were collected by means of a questionnaire. The questionnaire contained a total of 40 business queries that students had to rate by agreeing to the classical five-level Likert scale: 1 - I strongly disagree, 2 - I do not agree, 3 - I do not agree or disagree; 4 - I agree, 5 - I definitely agree.

In developing this paper, two scientific hypotheses were established:

H1: The macroeconomic environment significantly determines the Czech and Slovak university students' propensity for entrepreneurship.

H2: The quality of business environment significantly determines the Czech and Slovak university students' propensity for entrepreneurship.

In this research, the Macroeconomic environment construct was defined, using the following statements:

K31: I consider the macroeconomic environment of my country to be positive for doing business.

K32: The state of macroeconomic environment of my country supports starting a business.

K33: Present macroeconomic environment does not prevent me from starting a business.

K34: Present level of basic macroeconomic factors (GDP, employment, inflation) supports business and creates interesting business opportunities.

In this research, the Quality of the business environment construct was defined, using the following statements:

K41: The business environment of my country is of good quality and convenient for starting a business.

K42: The business environment of my country is relatively risk-resistant and enables me to start a business.

K43: Conditions for doing business have improved in my country in the last five years.

K44: The amount of administrative work of businesspeople in my country has decreased in the last five years.

The dependent variable was defined using the following statement:

KY: I am very interested in doing business.

To evaluate the established scientific hypotheses, the method of mathematical statistics called regression analysis will be used. A graphical analysis of variables was used to confirm the assumption of linearity. The presence of non-linear patterns between the dependent variable (KY) and independent variables (K31, K32, ..., K43, and K44) was verified using the Scatter plot. Verification of the assumption of normal independent variables distribution was performed using: 1. Graphical presentation comparing the probability model of the normal distribution and obtained data for each independent variable; 2. Testing of the descriptive characteristics (skewness, kurtosis) of independent variables, using the z – test. The assumption of normal distribution of an independent variable is not confirmed if the value of z – test is larger than 2 (Hair et al., 2010; Luskova et al., 2015). The assumption of homoscedasticity of independent variables was tested using the Bartlett's test (Martínez-López et al., 2013). If p – value of the Bartlett's test is higher than 0.05, the assumption is confirmed. The intensity of correlation between the dependent variable

and independent variable was tested using the correlation coefficient. The correlation results between variables are compiled into a correlation matrix. The critical acceptance value for independent variables into the linear regression model in Slovakia is established at $|t| \geq 1.952$ (564 degrees of freedom, significance level at 0.05) and for regression models in the Czech Republic at $|t| \geq 1.941$ (405 degrees of freedom, significance level at 0.05). The general multiple regression models for individual countries (Czech Republic, Slovak Republic) were based on the relationship between the dependent variable (KY) and independent variables, as per the scientific hypotheses, as follows:

$$KY = \beta_0 + \beta_{K31} x K31 + \beta_{K32} x K32 + \beta_{K33} x K33 + \beta_{34} x K34, \quad (1)$$

where: KY – dependent variable; β_0 – constant; β_{K31} ; β_{K32} ; β_{K33} ; β_{K34} – coefficients of independent variables (K31, K32, K33, and K34); K31, K32, K33, and K34 – independent variables.

$$KY = \beta_0 + \beta_{K41} x K41 + \beta_{K42} x K42 + \beta_{K43} x K43 + \beta_{44} x K44, \quad (2)$$

where: KY – dependent variable; β_0 – constant, β_{K41} ; β_{K42} ; β_{K43} ; β_{K44} – coefficients of independent variables (K41, K42, K43, and K44); K41, K42, K43, and K44 – independent variables.

Multicollinearity can have a negative impact on the calculated coefficients of independent variables in the regression models. The presence of multicollinearity in the regression model is confirmed if the value of the Variance Inflation Factor (VIF) is greater than 5 (Wit et al., 2012; Betakova et al., 2014). The statistical reliability of the proposed regression model is verified using the parametric F-test of Analysis of variance. If the p – value is lower than the significance level, then the regression model is considered statistically significant. The multiple correlation coefficient characterizes the correlation between variables in the regression model. Size explanation of the variability of the dependent variable using selected independent variables is characterized by the coefficient of determination (R^2) and adjusted coefficient of determination (Adjusted R^2). The positive coefficients of independent variables in the regression model indicate a positive impact on the dependent variable. The regression analysis, as well as testing was performed using the IBM SPSS Statistika software for statistical data analysis.

3. RESULTS AND SHORT DISCUSSION

The basic structure of students' responses to the question whether they have a strong interest in entrepreneurship (KY) after graduating from college (by country): Czech Republic: I definitely agree – 64 (15.6 %), I agree – 138 (33.7 %), I do not agree or disagree – 82 (20.1 %), I do not agree – 104 (25.5 %), and I strongly disagree – 21 (5.2 %) of university students in the Czech Republic. Slovak Republic: I definitely agree – 89 (15.6 %), I agree – 245 (43.1 %), I do not agree or disagree – 119 (21.0 %), I do not agree – 93 (16.4 %), I strongly disagree – 22 (3.9 %) of university students in the Slovak Republic.

A graphical data analysis performed using the SPSS program between the dependent variable KY and independent variables (K31, K32, K33, and K34) demonstrated linear correlations in both the Czech and the Slovak Republic. The comparison of the normal distribution curve with the independent variable data points at deviations in independent variables K31 and K32 in the Czech Republic and the independent variable K32 in Slovakia. The above mentioned doubts about the verification of normal data distribution assumption, as well as the results of the homoscedasticity assumption testing are shown in Table 1.

Table 1 Skewness, kurtosis, z- value and Bartlett's test of independent variables

Independent Variable	CZECH REPUBLIC				SLOVAK REPUBLIC			
	Skewness	Kurtosis	Z-	Bartlett's	Skewness	Kurtosis	Z-	Bartlett's

	(S)	(K)	value (S) (K)	test	(S)	(K)	value (S) (K)	test
K31	-0.347	-0.122	2.026 1.845	0.015	0.629	-0.502	1.508 0.741	0.354
K32	-0.294	-1.123	2.478 3.366	0.032	0.463	-0.825	2.026 3.477	0.019
K33	-0.780	-0.146	1.742 1.684	0.184	-0.164	-1.127	2.005 1.179	0.806
K34	-0.529	-0.281	1.054 0.422	0.215	0.141	-0.951	2.001 1.442	0.231

(Source: Author)

The test results of the normal distribution assumption in the Czech Republic were not confirmed in K31 and K32. However, the independent variable K31 and the results of z – value of skewness only slightly exceed the value of 2. Given the large student research sample (more than 100), the assumption can be considered confirmed, according to Hair et al. (2010). The assumption of normal data distribution in the Slovak Republic is not verified in the independent variable K32. The Bartlett’s test results deny the assumption of homoscedasticity in independent variables K31 and K32 in the Czech Republic and K32 in Slovakia.

Table 2 Correlation matrix of dependent variable and independent variables

V*	CZECH REPUBLIC					V*	SLOVAK REPUBLIC				
	KY	K31	K32	K33	K34		KY	K31	K32	K33	K34
KY	1					KY	1				
K31	0.255	1				K31	0.428	1			
K32	0.125	0.633	1			K32	0.181	0.613	1		
K33	0.958	0.323	0.403	1		K33	0.831	0.338	0.371	1	
K34	0.619	0.393	0.466	0.774	1	K34	0.598	0.365	0.457	0.761	1

Note: *V – dependent variable KY and independent variables (K31, K32, K33, and K34). (Source: Author)

The correlation matrix results indicate that there are weak correlations between the dependent variable KY and independent variables K31 and K32 in both countries. On the contrary, the strong correlation (independent variable K33) and very strong correlation (independent variable K34) with the dependent variable KY in both countries indicate that these factors will be a part of the regression models.

A partial conclusion is that independent variables K31 and K32 are not statistically significant variables in the regression models (Czech Republic and Slovak Republic), as the assumption of a normal data distribution, homoscedasticity, low correlation of KY and t - test results (Czech Republic: p – value of t – test for K31 = 0.354; p – value of t – test for K32 = 1.007; Slovak Republic: p – value of t – test for K31 = 0.688; p – value of t – test for K32 = 0.899) was not confirmed.

The results of the regression equation, the significance of the regression model and the regression model characteristics with statistically significant factors are shown in Table 3.

Table 3 Characteristics of regression models

CZECH REPUBLIC	SLOVAK REPUBLIC
Least squares multiple regression	

R ²	0.469				0.357				
Adjusted R ²	0.461				0.348				
Multiple correlation coefficient	0.685				0.598				
Residual standard deviation	0.108				0.094				
Regression equation									
Independent variables	Coefficient	Std. Error	t-Test	p-value	Independent variables	Coefficient	Std. Error	t-Test	p-value
Constant					Constant				
K33	0.214	0.087	2.459	0.014	K33	0.385	0.091	4.231	0.003
K34	0.428	0.177	2.418	0.015	K34	0.279	0.125	2.232	0.021
Analysis of variance									
F-test				13.058				9.288	
P- value				0.024				0.044	

(Source: Author)

The t – test results confirmed the statistical significance of independent variables K33 and K34 in both countries. The created regression models are statistically significant (Czech Republic: p- value of F- test = 0.024; Slovak Republic: p- value of F- test = 0.044). Multicollinearity is not present in the regression models. Up to 46.9 % of the variability of students' significant interest in entrepreneurship after college graduation in the Czech Republic can be explained by the fact that the country's macroeconomic environment does not prevent students from starting a business and that the present values of macroeconomic factors support business by creating interesting business opportunities. In the Slovak Republic, 35.7 % of the variability of students' significant interest in entrepreneurship after college graduation can be explained by the above mentioned factors. The regression models with a linear function for respective countries are formed as follows:

$$\text{Czech Republic: } KY = 0.214 \times K33 + 0.428 \times K34 \quad (3)$$

$$\text{Slovak Republic: } KY = 0.384 \times K33 + 0.279 \times K34 \quad (4)$$

Students in the Slovak Republic state that the macroeconomic environment does not prevent them from starting a business, which is a more positive view than that of the Czech students. On the contrary, students in the Czech Republic rate the present level of business support and the creation of interesting business opportunities more positively than students in Slovakia. The above mentioned results indicate that the macroeconomic environment determines the students' propensity for entrepreneurship in both countries.

Hypothesis H1 is confirmed.

The graphical analysis of data performed in the SPSS program between the dependent variable KY and independent variables (K41, K42, K43, and K44) demonstrates linear correlations in both the Czech and the Slovak Republic. The comparison of the normal distribution curve with the independent variable data does not point at deviations in independent variables in the Czech Republic, but points at deviations in the independent variable K43 in Slovakia. The results of assumption verification of normal data distribution, as well as the results of the homoscedasticity assumption testing are shown in Table 4.

Table 4 Skewness, kurtosis, z- value and Bartlett's test of independent variables

Independent Variable	CZECH REPUBLIC				SLOVAK REPUBLIC			
	Skewness (S)	Kurtosis (K)	Z-value (S), (K)	Bartlett's test	Skewness (S)	Kurtosis (K)	Z-value (S), (K)	Bartlett's test
K41	-0.152	-1.157	0.851	0.285	0.813	-0.290	2.584	0.041

			0.656				0.245	
K42	-1.066	0.036	1.783	0.885	-0.335	-1.207	1.164	0.431
			1.654				1.312	
K43	-0.242	-0.466	1.934	0.339	-0.024	-0.024	2.011	0.109
			0.847				2.057	
K44	0.360	-0.433	0.355	0.088	0.207	0.207	1.558	0.115
			1.522				1.363	

(Source: Author)

The test results of the normal distribution assumption and homoscedasticity in the Czech Republic were confirmed in all independent variables. In the Slovak Republic, the z – value of skewness and kurtosis of independent variable K43 is above 2. Given the large student research sample (568 students), the assumption can be considered confirmed. However, the assumption of normal distribution in the independent variable K41 is rejected. The results of the Bartlett's test confirm the assumption of homoscedasticity in all independent variables except K41 (Bartlett's test = 0.041) in the Slovak Republic.

Table 5 Correlation matrix of dependent variable and independent variables

V*	CZECH REPUBLIC					V*	SLOVAK REPUBLIC				
	KY	K41	K42	K43	K44		KY	K41	K42	K43	K44
KY	1					KY	1				
K41	0.781	1				K41	0.270	1			
K42	0.585	0.563	1			K42	0.821	0.399	1		
K43	0.611	0.674	0.809	1		K43	0.573	0.396	0.652	1	
K44	0.707	0.755	0.722	0.629	1	K44	0.875	0.260	0.684	0.844	1

Notes: *V – dependent variable KY and independent variables (K41, K42, K43, and K44).

(Source: Author)

The results of the correlation matrix indicate that in the Czech Republic, there are strong correlations between the dependent variable KY and independent variables (K41, K42, K43, and K44). In the Slovak Republic, there is a very low correlation between the dependent variable KY and the independent variable K41, and a partial correlation between KY and K43. There is a very strong correlation between KY and independent variables K42 and K44 ($R > 0.800$).

A partial conclusion is that the independent variable K41 is not a statistically significant variable in the regression model in the Slovak Republic, as the assumption of a normal data distribution, homoscedasticity, low correlation with KY and t-test results (Slovak Republic: p – value of t – test for K41 = 0.354) was not confirmed.

The results of statistically significant independent variables, statistical significance of proposed regression models, and regression model characteristics are shown in Table 6.

Table 6 Characteristics of regression model in Czech Republic and Slovak Republic

CZECH REPUBLIC					SLOVAK REPUBLIC									
Least squares multiple regression														
R ²					0.451					0.673				
Adjusted R ²					0.449					0.671				
Multiple correlation coefficient					0.672					0.821				
Residual standard deviation					0.115					0.144				
Regression equation														
Independe	Coefficie	Std.	t-	*p-	Independe	Coefficie	Std.	t-	*p-					

nt variables	nt	Error	Test	value **VIF	nt variables	nt	Error	Test	value **VIF
Constant					Constant				
K41	0.193	0.064	3.016	0.011* 2.156**	K42	0.155	0.067	2.313	0.016* 1.574**
K42	0.201	0.110	1.827	0.047* 1.835**	K43	0.309	0.132	2.341	0.015* 1.644**
K43	0.645	0.227	2.841	0.019* 3.148**	K44	-0.376	0.206	- 1.825	0.048* 2.199**
K44	0.358	0.138	2.594	0.024* 2.833**					
Analysis of variance									
F-test				12.351					10.222
P- value				0.031					0.038

Note: * p – value of t – test; ** VIF – Variance inflation factor (Source: Author)

Results of t – tests confirmed the statistical significance of independent variables K41, K42, K43 in the Czech Republic, as well as K42, K43, K44 in the Slovak Republic (p – value of t- test < 0.05). The created regression models are statistically significant (Czech Republic: p – value of F- test = 0.031; Slovak Republic: p – value F- test = 0.038). Multicollinearity is not present in the regression models, as the results of VIF > 5. Regression models with a linear function for respective countries are as follows:

$$\text{Czech Republic: } KY = 0.193 x K41 + 0.201 x K42 + 0.645 x K43 + 0.358 x K44 \quad (5)$$

$$\text{Slovak Republic: } KY = 0.155 x K42 + 0.309 x K43 - 0.376 K44 \quad (6)$$

Up to 45.1 % of the variability of students' significant interest in entrepreneurship after college graduation in the Czech Republic can be explained by the quality of the business environment, reasonable risk rate in the business environment, improvement of conditions for doing business in the past 5 years, as well as reduction of administrative burden on enterprises in the past 5 years. In Slovakia, approximately 67 % of the variability of students' significant interest in entrepreneurship after college graduation can be explained by the reasonability of the business environment's risk rate and the improvement of conditions for doing business in the past 5 years. However, the administrative burden on enterprises has a negative effect on entrepreneurship and lowers students' propensity for entrepreneurship. The Quality of business environment construct defined in this paper determines the propensity for entrepreneurship of those students who have a strong interest in starting a business after graduating from college, regardless of their country of origin.

Hypothesis H2 is confirmed.

Among the main features of the Czech business environment are primarily economic and financial factors such as macroeconomic indicators, but also legislative and political factors or the social climate. Business environment is where the interests of more than one group meet, be it the interest of individual entrepreneurs, cities, townships, counties, or the state. It is a society-wide interest of every country to put emphasis on increasing the quality of the business environment.

Results obtained in this research detailing students' evaluation of the business environment and the macroeconomic environment in the Czech Republic correspond with the results of statistical findings of the Czech National Bank which claims that in the Czech Republic, there has been a long-term improvement of the quality of the business environment primarily due to the improvement of seven out of ten indicators compared within the time period of 5 years. The biggest improvement can be seen in the area of corruption and the bureaucracy of administrative burden on enterprises (Kyněra, 2016).

The results of the research among the V4 countries' students conducted by Okreglicka et al. (2017) on a sample of 300 students in 2016 indicate that even though Polish students have a higher propensity for entrepreneurship, the university's role in creating entrepreneurial intentions or reviewing them is smaller than in the Czech or the Slovak Republic. These results offer an interesting finding: universities specializing in economics in both the Slovak and the Czech Republic put a great emphasis on university graduates' employability.

It is interesting to see that in the time period between 2015 and 2016, there has been an increase in the average number of viewings of resumes posted by students from University of Economics in Bratislava and Slovak Technical University in Bratislava, according to the largest online job portal in Slovakia (www.profesia.sk). These students' resumes are on the top two ranks of the scale. Students' employability, along with improved macroeconomic indicators in the form of the lowest unemployment rate in the Slovak Republic increases their attractiveness on the job market.

CONCLUSION

The aim of this paper is to study the university students' propensity for entrepreneurship in the context of the evaluation of the quality of business environment. A part of this aim was a comparison of defined factors in the Czech and the Slovak Republic.

The results of this research have brought interesting findings, namely that the present macroeconomic environment does not prevent students from starting their own business, and that the present level of basic macroeconomic factors such as the GDP, employment, and inflation determine the students' propensity for entrepreneurship in both countries. In Slovak Republic, the administrative workload is seen by the students as a factor discouraging them from entrepreneurship after graduating from college. The students feel that the conditions for doing business have improved in the last five years. Students in the Czech Republic think that the conditions for doing business have improved over the past five years, and consider the business environment to be reasonably risky and of good quality.

The results of university graduates' propensity for entrepreneurship achieved using the regression analysis are limited by the size of the student sample. A verification of the achieved results is definitely needed with a larger sample of students in both countries. Despite this limitation, the diversity of the approached students from 14 universities in the Czech Republic and 8 universities in the Slovak Republic makes the results interesting not only for the academic society, but mainly for the supporting subjects dealing with the business environment of both countries.

The next research will focus on students' social environment and the state's support of entrepreneurship. It is assumed that social environment factors such as family status, society, politicians, and media have an influence on the university graduates' propensity for entrepreneurship. However, the state's support of entrepreneurship and the forms of support of the business environment in the country can significantly influence a young person contemplating starting a business, and determine his or her propensity for entrepreneurship.

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INFORMATION ON THE LAUNCH OF THE PROJECT „PROTECTING INFORMATION IN SPECIAL PUBLIC LAW REGIMES AND POSSIBILITIES OF ITS EFFECTIVENESS"

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Based on the decision of the Research and Development Promotion Agency (APVV) and subsequently, after signing the contract no. 16-0521 project team led by doc. PhDr. JUDr. Peter Potásch, PhD. began on 1 July 2017 with the solution of the project „Protection of information in special regimes of public law and possibilities of its effectiveness".

ANNOTATION

The issue of legal protection of information is extensive, varied and up to date. It is a subject of constant evolution. Today, all social processes dependent on information. Information are very often of a sensitive nature that law gives a certain quality of protection. A special place in the legal protection of information plays a protection of information by means of public law, namely administrative law, constitutional law and criminal law. The real situation in the legal regulations of legal protection of information in these areas of law is not from the point of efficiency, validity, application problems, as well as in terms of the balance between the right to information and the protection requirements in a coherent form known. There is also an issue of consistency of national enactment of legal protection of information in these areas of law with the relevant international enactments, mainly the requirements of EU legislation. Answers to these questions can be found primarily on the basis of applied scientific research.

KEY WORDS

Legal protection of information, the protection of information by means of constitutional law, protection of information by means of administrative law, protection of information by means of criminal law, the protection of clandestine information, protection of personal data, protection of transferred information

PROJECT OBJECTIVES

- 1.) Defining the main terms, especially the term "information" and the term "legal protection of information"

- 2.) Identification and summary of national and international legal regulations governing the legal protection of information in selected areas
- 3.) Performing the jural analysis of the legal protection of individual forms and areas of information, focusing on efficiency, legitimacy and balance of requirements for access to information and requirements for their protection
- 4.) Finding out the theoretical and practical problems associated with the legal regulations of information protection
- 5.) Provide for empirical knowledge about the problem of legal regulations of legal information protection
- 6.) Formulating proposals for legal regulations of legal protection of information de lege ferenda

RESEARCH TEAM

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Doc. JUDr. Peter Polák, PhD. (docent, Vedúci Ústavu verejného práva) - investigator

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JUDr. Jozef Milučký (sudca Najvyššieho súdu SR) - investigator

Doc. JUDr. Jana Vallová PhD. (Riaditeľka Odboru všeobecnej vnútornej správy) – investigator

PROJECT SCHEDULE

01.07.2017 - 31.12.2017 Planning, the research and bibliographical stage.

01.01.2018 - 31.12.2018 Synthetic phase (analytical work)

01.01.2019 - 30.06.2020 The evaluation and the verification phase

01.07.2020 - 30.06.2021 aktualisation and popularization phase

INFORMATION ON THE STATUS OF THE PROJECT SOLUTION „CRIMINOLOGICAL AND CRIMINAL LAW OPTIONS TO RESOLVE DOMESTIC VIOLENCE“

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Based on the decision of the Agency for the Support of Research and Development (APVV) and on the basis of Contract no. 15-0644 continues the team under the leadership of doc. Mgr. Petra Polák, PhD. in the solution of the project "Criminological and Criminal Law Possibilities for Resolving Domestic Violence" in the second year.

ANNOTATION

Annotation Domestic violence is one of the recent and severe social problems. His legal solution consistently fails to absence of relevant legislation which would clearly and precisely the what it is „ domestic violence ", what forms of action can be subsumed under the term and what not, which shows signs of domestic violence and how it can be addressed resp. sanction. In doing so, in cases where there is serious offenses against life, health or human dignity that are at the same time nature of domestic violence steadily increasing. With this in mind, it is a strong taboo issue, the actual rate of incidence of domestic violence in a society is only possible to argue. Clearly, though, we can say that this is a problem that occurs frequently, although not relevant underpinned by having the right solutions. Appropriate legislation which would provide the necessary protection to victims of domestic violence guarantee their rights in criminal or civil proceedings and ultimately changed the very.

KEY WORDS

Domestic violence, victims of domestic violence, control domestic violence, legislation does affect domestic violence.

PROJECT OBJECTIVES

The main objective of research output is to devise comprehensive solutions to the problems of domestic violence and that of his basic (framework) and content definition through optimal form of punishment of this phenomenon to model legislation (civilnoprávnej, an administrative remedy and criminal) that it will be responsible. In order to achieve this goal will be used several milestones. For these purposes, ie sub-objective of the research will be:

- a.) by analyzing various theoretical perspectives to determine the current definition and the definition of the concept of domestic violence (in terms of the range of forms of behavior, in terms of subjects covered, in terms of typical characters)
- b.) forming a channel for the expression of the relevant entities that participate in solving the problems of domestic violence (in order to identify the most frequently occurring forms of action that is in the nature of domestic violence in order to identify the most common victims of domestic violence)
- c.) through the analysis identify the most common problems associated with the current possibilities to address domestic violence (identified cases such as domestic violence, choice of instruments to address them)
- d.) the critical evaluation of the current options to address domestic violence,
- e.) the proposed systematic solutions to underlying problems - definition and the definition of domestic violence,
- f.) model design civilnoprávneho, an administrative remedy and criminal justice model for tackling domestic.

After the basic systematic (analytical, planning and rešeršových work) will create a Web site on which will be regularly published interim solutions outputs of scientific research projects. After the initial preparatory work for the solution of basic scientific problem will be gradually published partial outputs in the form of scientific articles, conference papers, organized conferences, seminars, expert forums in order to create space for the expression of the actors involved and the purpose of presentation of the results of scientific research projects . Partial and final results will be presented in the form of print and electronic media. The results of scientific research projects will be formulated in monographs non-commercial nature and addressed in the final form of the output messages are also relevant authority (Ministry) for the purpose of incorporating these outputs into the relevant legislation.

RESEARCH TEAM

Doc. JUDr. Peter Polák, PhD. (docent, Vedúci Ústavu verejného práva) - responsible investigator
Prof. PhDr. Květoň Holc, DrSc. (profesor, Kriminologické centrum) - investigator
JUDr. Marcela Tittlová, PhD. (odborná asistentka, poverená tajomníčka Ústavu verejného práva) – investigator
PhDr. Et PhDr. mult. JUDr. Libor Klimek (výskumný pracovník, Kriminologické centrum) – investigator
JUDr. Mgr. Zuzana Medelská Tkáčová, PhD. (odborná asistentka, Katedra občianskeho práva, Akadémia Policajného zboru SR)
JUDr. Marek Talapka (interný doktorand) - investigator
JUDr. Peter Papáček (interný doktorand) - investigator

PROJECT SCHEDULE

01.07.2016 - 31.12.2016 Planning, the research and bibliographical stage
01.01.2017 - 31.12.2017 Synthetic phase (analytical work)
01.01.2018 - 30.06.2020 The evaluation and the verification phase
01.01.2019 - 30.06.2020 Popularization phase.

