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MOTIVATING EXPERTS TO STAY

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Abstract

Keeping an expert satisfied is becoming a primary managerial task since more and more people decide to become independent employees or freelancers. Therefore, the question arises: What are organizations ready to do in order to keep them? The purpose of this paper is to explore what employers are willing to do in order to keep an employee who has been working in a key position in the company and has decided to quit and start working as a freelancer. The aim is to investigate whether the company's attitude depends on the size of the company, the area in which it operates, the county where its headquarters are, or their previous experience in hiring a freelancer. The research was conducted in Croatia in June 2018. The results show that employers are aware of the problem. They are to some extent ready to motivate experts with various motivation factors.

Key Words

HRM; managing experts; motivating experts; motivating talents.

INTRODUCTION AND THEORY

Human resource market has changed in the past decades by increasing externalization of employment staff for various jobs. More and more employees decide to design their own work environment and conditions and thus choose to be independent employees, freelancers, or employees of their own small business as a one-man band. A new problem emerges for organizations: experts, as people with very specific knowledge of core business of the organization, tend to leave. Globalization, due to its global competitive possibilities, is only one of the causes that enable experts to move across the large HR market. Competitive advantage of an organization rests on knowledge and, according to Teece (2015), on the ability to motivate experts to create knowledge, help build organizational capabilities and shape strategies. Teece, therefore, emphasizes the importance of intellectual property and of controlling specialized assets. Intellectual property as an aspect of property highlights the importance of knowledge. According to Davenport and Prusak (1997, p. 5) knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provide a framework for evaluation and incorporation of new experiences and information. Knowledge is not shared around, nor it is free of charge. Teece (1998) talks of knowledge as of intangible assets and says that productive knowledge is typically embodied and thus not possible to be accomplished only by transmitting information, i.e. it is difficult to replicate it. According to him, imitation is nothing else than replication performed by a competitor. From this standpoint, it is not possible to imitate the productive knowledge of an expert. This emphasizes the value of an employee with a specific know-how of a core business activity of an organization.

Teece (2015) talks about three important categories of an expert with regard to knowledge creation: the first two are *literati* and *numerati*, both marked by high levels of education and experience, and the third very important category is the category of *integrators*, who synthesize the work of the others. Once an organization recruits an expert with specific knowledge, it is expected to manage their knowledge in a special manner since productive knowledge needs further deployment and use of it. Fleming and Marx (2006), when rethinking the status of technical professionals who span organizational boundaries and, as they say, accelerate the process of invention by contributing to and capitalizing on interfirm 'spillovers' of technical knowledge, claim that managerial attention should focus on identifying, retaining, and enabling *gatekeepers*, as they named technical experts. Special focus in managing experts should be given to developing creativity. By discussing the impact on creativity of an expert within the organization (Fleming and Marx, 2006), it could be concluded that clustering inventors as experts, for example, will less likely result in new ideas. Though, if a new idea arises, it will be more likely adopted by other inventors. Therefore, they find that cohesion of employees has a negative impact on generating creative ideas, but a positive one when it comes to their development and diffusion.

According to the study of 301 geniuses that had been conducted almost a hundred years ago, Cox (1926) discovered that intelligence alone did not make distinction and it had to be accompanied by tenacity of purpose. Creative thinking has its purpose and is highly asked for in contemporary human resource management since it is the foundation needed for creative problem solving. This requires persistence and intensity connected with strong motivation. Motivation is not a stable dimension of an employee. Therefore, permanent monitoring of managerial motivating processes within HRM is even more prominent.

Competitiveness leads to the departure of key experts and benefits for competitors, which Teece (2003) sees as the start of negative processes in which reputation and quality decline. In case experts are unsatisfied, according to Sturman and Trevor (2001), first to quit are those with most education, training and abilities. Motivation of the highest quality experts could be both tangible (financial) and intangible. Teece (2015) says that higher financial motivation will not make up for an unsatisfactory work environment. According to him, dimensions of job environment that matter, or 'quality of work life', include: organization culture, quality of management, challenge of work, and autonomy-afforded employees.

METHODS

Given that the main purpose of this research is to explore what the employers are willing to do in order to keep the employee who has been working in a key position in the company and has decided to quit and work as a freelancer, the main hypothesis is the following: "In order to retain the employee who has been working in a key position, employers are willing to make concessions regarding the independence of the employee in deciding about the time and place of work." It is followed by an additional hypothesis: "In order to retain the employee who has been working in a key position in the company, employers are willing to give them share in the company." In order to examine which independent variable the attitude of the employer depends on, several additional hypotheses were set:

- Employer's attitudes about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on whether they have already hired a freelancer for a job or not.
- Employer's attitudes about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on the area in which the company operates.
- Employer's attitudes about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on the size of the company.
- Employer's attitudes about the concessions which they are willing to make, in order to retain the employee who has been working in a key

position, depend on the county where the headquarters of the company are.

Primary data were collected using a questionnaire. The survey was conducted online through the survey tool [esurveycrator.com](https://www.esurveycrator.com). The target population were small, medium and large companies based in Croatia. An e-mail with the link to the web-based questionnaire was sent to the companies in Croatia by the Croatian Chamber of Commerce. From the 4th to the 25th of June 2018, the survey was completed by 158 respondents.

The 70 of the participants were male, 77 females, 9 participants did not want to state their gender, and two of them did not answer the question. One of them was between 18 and 25 years old, 32 of them between 26 and 35 years old, 46 between 36 and 45 years old, 46 between 46 and 55 years old, and 33 of them were older than 55.

Respondents were generally familiar with all organizational processes in their company. 99 of them were directors of the company, 12 were members of the board of directors, 18 managers of the company, 12 employees in human resources, and 17 of others.

Regarding their educational level, two participants completed their elementary education, 38 participants completed their secondary education, 18 of them completed undergraduate studies, 73 graduate studies, 17 had master's degrees, 7 were university specialists, and 3 of them had doctorates.

As it regards the headquarters of the company, only the capital city of the country stands out with 51 (32.3%) head offices of the companies. The seats of other companies are located in other counties, with each county having at least one company having a head office, and none of the counties has more than 10% of the total headquarters of the company.

Regarding the size of the company (division according to the Accounting Act (NN 78/15, 134/15)), 111 (70.7%) of the companies were micro (assets up to HRK 2.6 m, revenues up to HRK 5.2 m, average number of employees during the year is 10); 24 (15.3%) small (assets amount up to HRK 30 m, revenues up to HRK 60 m, average number of employees during the business year is 50); 11 (7.0%) medium (assets up to HRK 150 m, income up to HRK 300 m, average number of employees during the year is 250); and 11 (7.0%) were large (crossing the indicators for medium entrepreneurs in two of the three criteria, and regardless of these criteria large entrepreneurs are also banks, savings banks, housing savings banks, electronic money institutions, insurance and reinsurance companies, UCITS management companies, alternative investment fund management companies, factoring companies, investment firms, stock exchanges and even smaller number of other entrepreneurs). The data was analyzed using the SPSS version 22.

FINDINGS AND DISCUSSION

In order to examine what concessions the employers are willing to make to keep the employee working in a key position who has decided to quit and

work as a freelancer, the 5-point Likert scale was used. The question was: “If a key position employee decides to quit and work as a freelancer, what concessions are you willing to make to keep the employee and to what extent?”. Eight statements were offered to respondents: “I would not offer anything”; “I would allow the employee to decide independently of their working hours”; “I would allow the employee to decide independently of their place of work”; “I would allow the employee additional education”; “I would allow the employee additional days off”; “I would allow the employee share in the company”; “I would allow the employee to participate in the company’s management”; “I would provide the employee with additional financial bonuses”. Each of the respondents had to indicate the extent to which they agreed with the statement. The offered answers were as follows: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

Table 1. Descriptive statistics for the Likert scale of the employers’ attitudes about the concessions they are willing to make in order to keep the employee

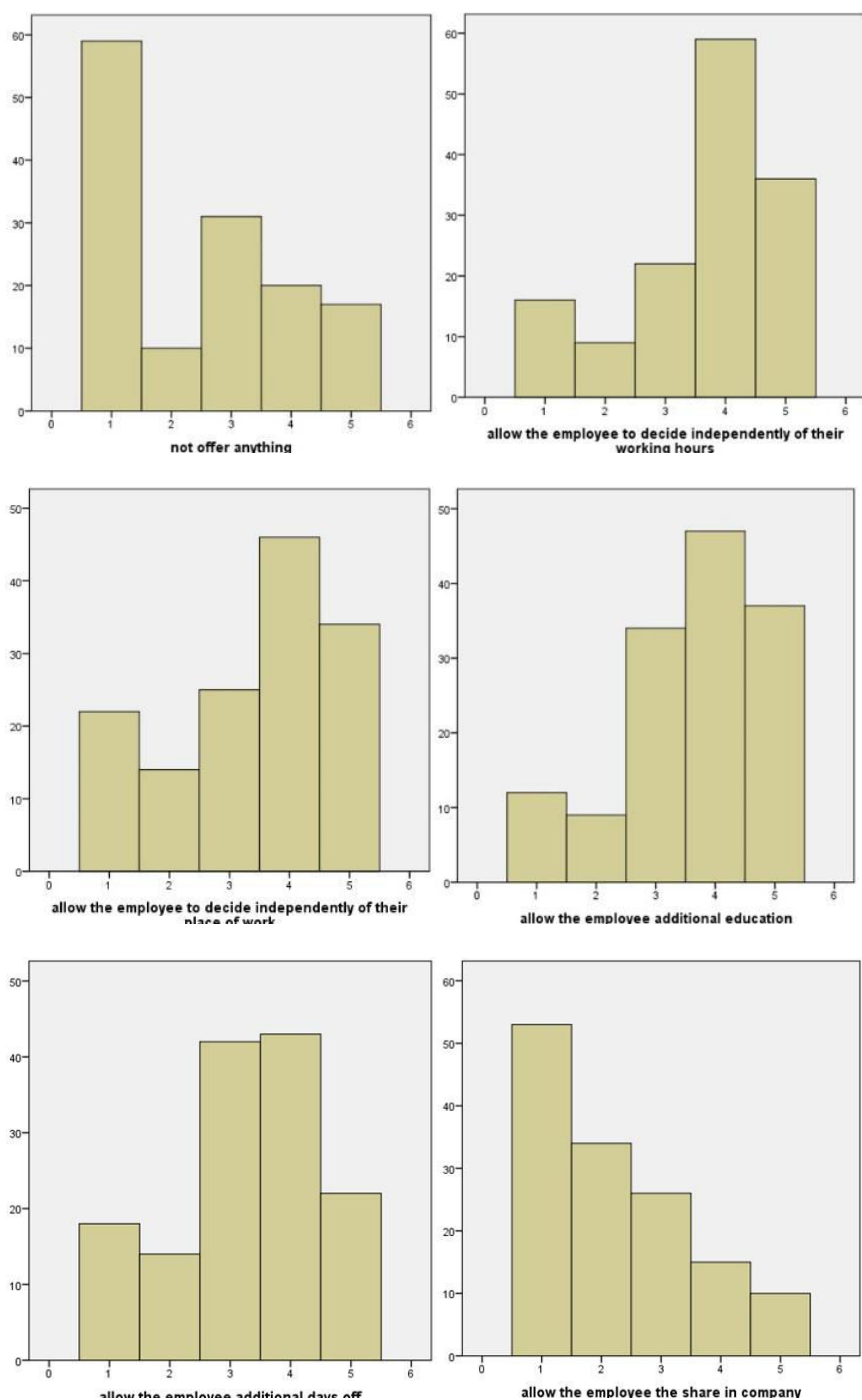
		not offer anything	allow employee to decide independently of their working hours	allow employee to decide independently of their place of work	allow employee additional education	allow employee additional days off	allow employee the share in company	allow employee the participation in the company's management	provide the employee with additional financial bonuses
N	Valid	137	142	141	139	139	138	135	140
	Missing	21	16	17	19	19	20	23	18
Mean		2,46	3,63	3,40	3,63	3,27	2,24	2,38	3,56
Median		2,00	4,00	4,00	4,00	3,00	2,00	2,00	4,00
Mode		1	4	4	4	4	1	1	4
Std. Deviation		1,470	1,246	1,367	1,193	1,225	1,270	1,257	1,248

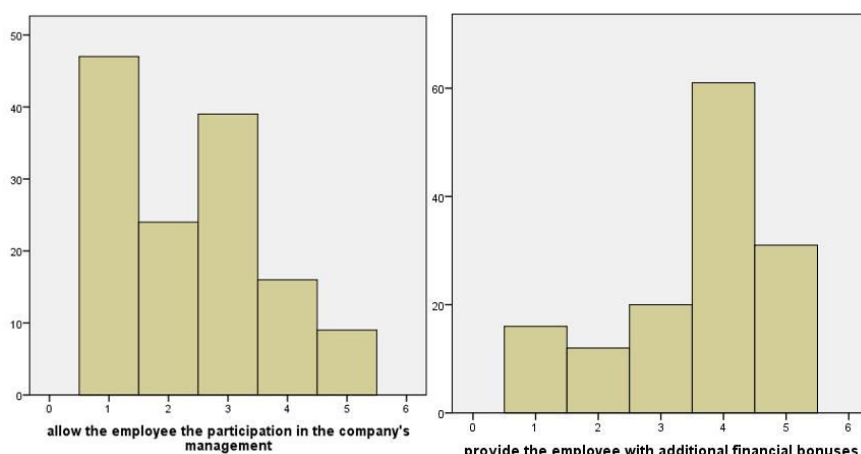
Source: Own survey.

Descriptive statistics shown in Table 1 confirms that employer would definitely try to do something in order to keep the employee who has been working in a key job position, but they are not willing to give share in the company or to let them participate in the company’s management. First of all, employers are willing to allow the employee additional education and allow them to decide independently on their working hours. They are willing to provide the employee with additional financial bonuses, to allow them to decide independently of their place of work, and allow them additional days off.

Histograms in Figure 1 show to which extent the respondents agree with each of the statements. Histograms show that respondents are the surest in the first statement declaring that they will certainly do something to keep the employee. Hence, the main hypothesis “In order to retain the employee who has been working in a key position, employers are willing to make concessions regarding the independence of the employee in deciding about the time and place of work” is accepted.

Figure 1. Histograms of the employers’ attitudes regarding the concessions they are willing to make in order to keep the employee





Source: Own survey.

Regarding the additional hypothesis “employers are willing to give them share in the company”, there is not enough evidence to keep the null hypothesis after this analysis. Therefore, null hypothesis is rejected, meaning that employers are not willing to give share in the company, not even at a price of the employee working in a key position leaving.

Table 2. Test statistics for the Likert scale of the employers’ attitudes about the concessions they are willing to make in order to keep the employee depending on whether they already hired a freelancer or not

	not offer anything	allow the employee to decide independently of their working hours	allow the employee to decide independently of their place of work	allow the employee additional education	allow the employee additional days off	allow the employee the share in company	allow the employee the participation in the company's management	provide the employee with additional financial bonuses
Mann-Whitney U	1796,500	2061,500	1789,000	2141,500	1944,500	2135,000	1955,000	2132,500
Wilcoxon W	5282,500	3601,500	3274,000	3626,500	3375,500	3566,000	3281,000	3617,500
Z	-1,894	-1,346	-2,354	-,573	-1,393	-,420	-,770	-,739
Asymp. Sig. (2-tailed)	,058	,178	,019	,566	,164	,675	,442	,460

a. Grouping Variable: have they ever hired a freelancer

Source: Own survey.

Test statistics for the Likert scale of the employers’ attitudes about the concessions they are willing to make in order to keep the employee depending on whether they already hired a freelancer or not provided in Table 2 shows that there is no statistically significant difference in the attitudes of the employer in any of the claims, except for the statement “allow the employee to decide independently of their place of work”.

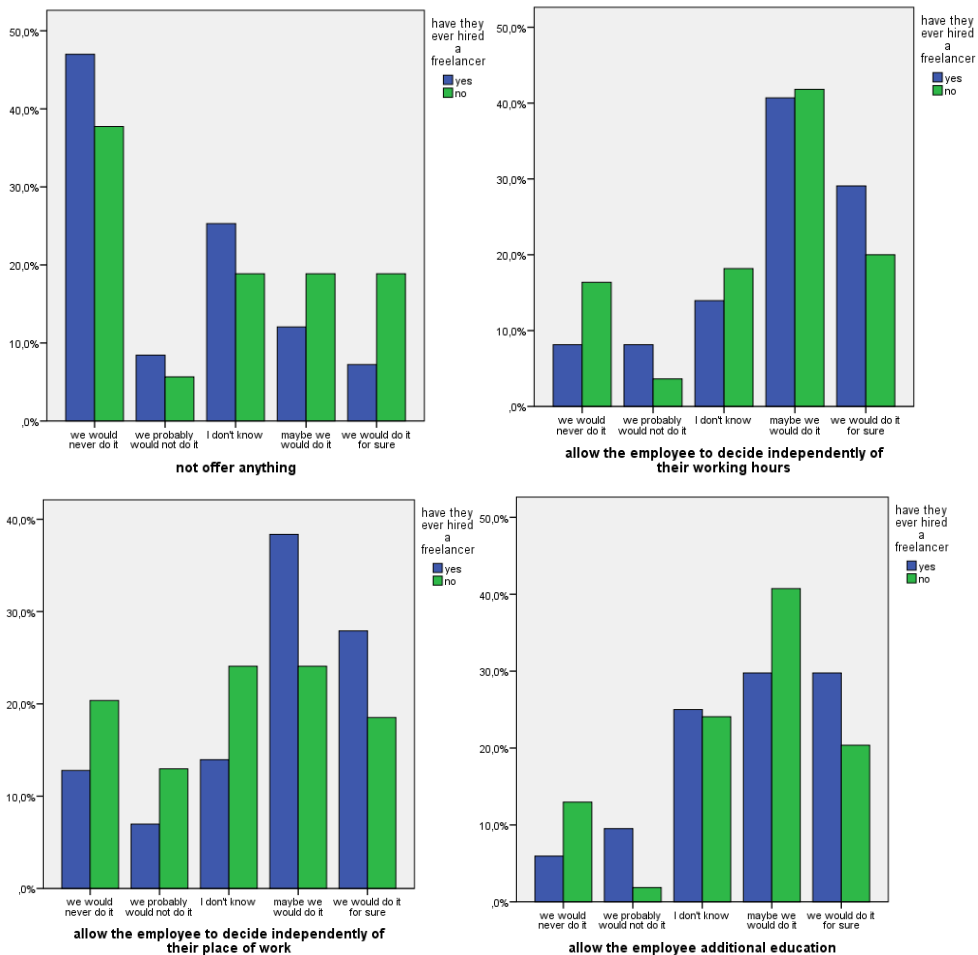
According to the bar charts provided in Figure 2, employers who have hired freelancers (blue, on the left) are more willing to allow the employee to choose their workplaces than those employers who have never hired freelancers before (green, on the right).

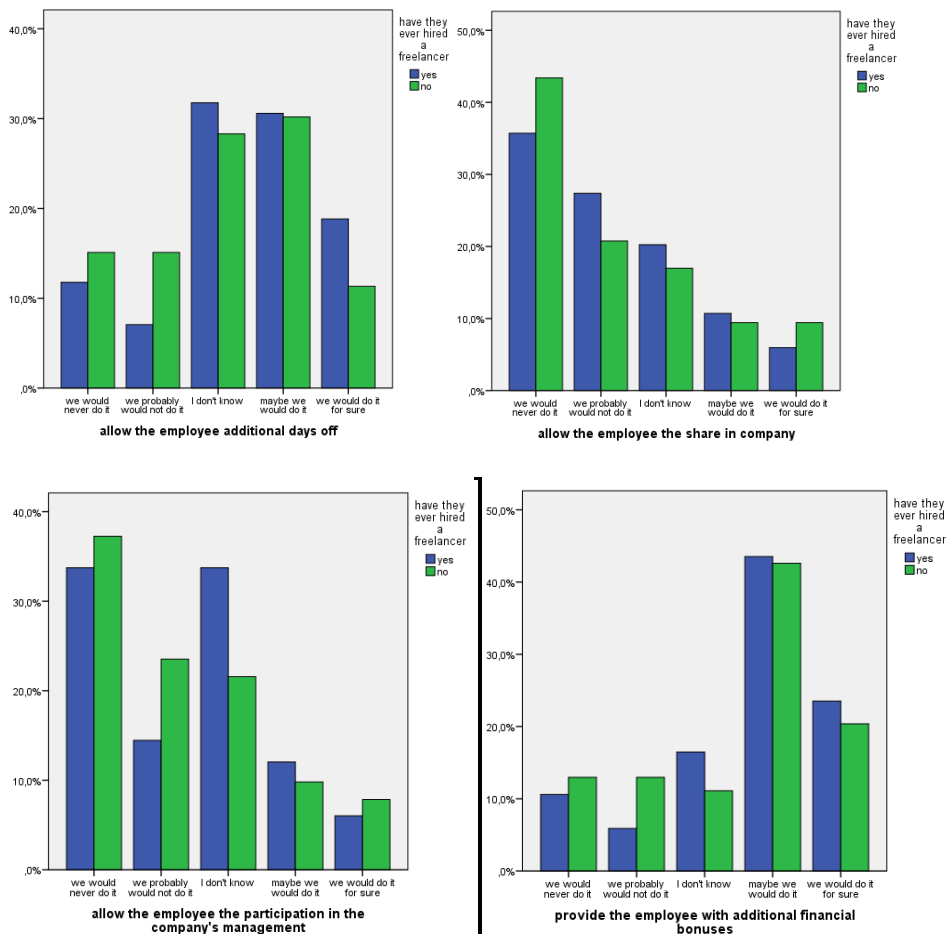
Test statistics for the Likert scale of the employers’ attitudes about the concessions they are willing to make in order to keep the employee

depending on whether they already hired a freelancer or not provided in Table 2 shows that there is no statistically significant difference in the attitudes of the employer in any of the claims, except for the statement “allow the employee to decide independently of their place of work”.

According to the bar charts provided in Figure 2, employers who have hired freelancers (blue, on the left) are more willing to allow the employee to choose their workplaces than those employers who have never hired freelancers before (green, on the right).

Figure 2. Bar charts of the employers’ attitudes depending on whether they have already hired a freelancer or not





Source: Own survey.

However, since this is the only significant difference between employers who have and have not hired freelancers, there is not enough evidence to keep the null hypothesis “Attitudes of the employer about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on whether they have already hired a freelancer for a job or not”. Accordingly, null hypothesis is rejected, meaning that there is no statistically significant difference in the attitudes of the employer depending on previous experience in hiring freelancers.

Table 3. Test statistics for the Likert scale of the employers’ attitudes about the concessions they are willing to make in order to keep the employee depending on the area in which the company operates

Test Statistics^{a,b}

	not offer anything	allow the employee to decide independently of their working hours	allow the employee to decide independently of their place of work	allow the employee additional education	allow the employee additional days off	allow the employee the share in company	allow the employee the participation in the company's management	provide the employee with additional financial bonuses
Chi-Square	10,264	2,258	3,507	1,580	4,744	5,475	4,747	2,136
df	5	5	5	5	5	5	5	5
Asymp. Sig.	,068	,812	,622	,904	,448	,361	,447	,830

a. Kruskal Wallis Test

b. Grouping Variable: In which area does the company operate?

Source: Own survey.

Test statistics for the Likert scale of the employers' attitudes about the concessions they are willing to make in order to keep the employee depending on the area in which the company operates shows that there is no statistically significant difference in the attitudes of the employer in any of the claims. Therefore, hypothesis "Attitudes of the employer about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on the area in which the company operates" is rejected.

Table 4. Test statistics for the Likert scale of the employers' attitudes about the concessions they are willing to make in order to keep the employee depending on the size of the company

Test Statistics^{a,b}

	not offer anything	allow the employee to decide independently of their working hours	allow the employee to decide independently of their place of work	allow the employee additional education	allow the employee additional days off	allow the employee the share in company	allow the employee the participation in the company's management	provide the employee with additional financial bonuses
Chi-Square	10,950	5,505	6,108	,810	4,036	6,733	4,243	2,309
df	3	3	3	3	3	3	3	3
Asymp. Sig.	,012	,138	,106	,847	,258	,081	,236	,511

a. Kruskal Wallis Test

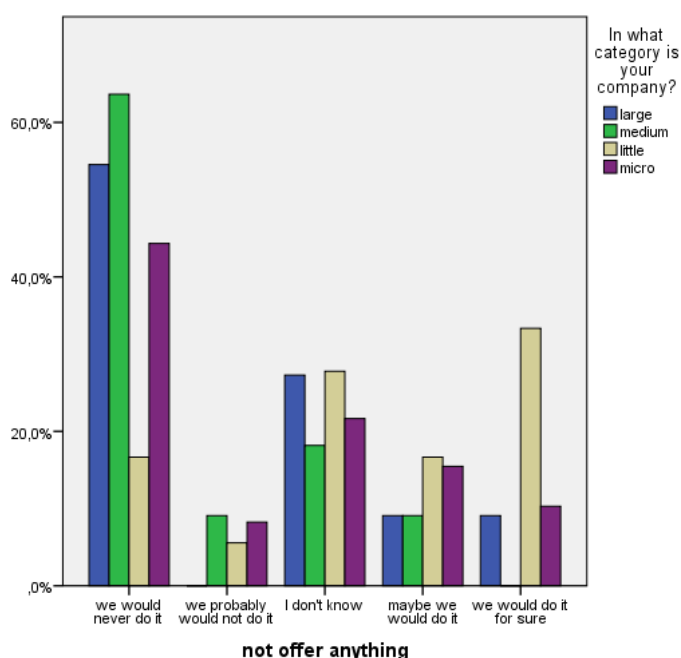
b. Grouping Variable: In what category is your company?

Source: Own survey.

Test statistics for the Likert scale of the employers' attitudes about the concessions they are willing to make in order to keep the employee depending on the size of the company, shows that there is no statistically significant difference in the attitudes of the employer in any claim except for the statement "I would not offer anything".

Bar chart in Figure 3 shows that little companies have different opinion regarding the employee who has decided to quit and work as a freelancer. They are not willing to offer them concessions and try to keep them to such extent as the other companies. Most little companies are certain that they would not offer anything to their employees without the intention to keep them.

Figure 3. Bar chart of the employers' attitudes about not offering anything to the employee who has decided to quit and work as a freelancer depending on the size of the company



Source: Own survey.

However, considering that in this sample the share of little companies was 7%, we do not have enough evidence to keep the null hypothesis "Attitudes of the employer about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on the size of the company". Accordingly, null hypothesis is rejected, meaning that there is no statistically significant difference in the attitudes of the employer depending on the size of the company.

Table 5. Test statistics for the Likert scale of the employers' attitudes about the concessions they are willing to make in order to keep the employee depending on the county where the headquarters of the company are

Test Statistics ^{a,b}								
	not offer anything	allow the employee to decide independently of their working hours	allow the employee to decide independently of their place of work	allow the employee additional education	allow the employee additional days off	allow the employee the share in company	allow the employee the participation in the company's management	provide the employee with additional financial bonuses
Chi-Square	27,934	19,133	20,199	19,191	11,371	19,855	24,894	13,500
df	19	20	20	19	19	20	19	19
Asymp. Sig.	,085	,513	,446	,445	,911	,467	,164	,812

a. Kruskal Wallis Test

b. Grouping Variable: In which county are the headquarters of the company?

Source: Own survey.

Test statistics for the Likert scale of the employers' attitudes about the concessions they are willing to make in order to keep the employee depending on the county where the headquarters of the company are, shows that there is no statistically significant difference in the attitudes of the employers in any of the claims. Hence, hypothesis "Attitudes of the employer about the concessions which they are willing to make, in order to retain the employee who has been working in a key position, depend on the county where the headquarters of the company are", is rejected.

CONCLUSIONS AND IMPLICATIONS

The results of this research show that employers are struggling with the problem of retaining experts and keeping them satisfied and motivated. They are ready to provide independency to the expert employees as to give them possibility to make decisions regarding the working environment. However, when it comes to share organizational shares, the bottom line is they are not ready to do it – employers do not find this acceptable. In Croatia, with developing independent employment as a form of employment, management will need to think more about that issue and to find out other additional motivation factors, but first of all to rethink rigid habits from the times when an employee was expected to obey the strict rules of working hours and places. Contemporary human resource management should put into the focus the specific needs of employers that will result in the achievement of strategic goals with the highest level of satisfaction.

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THE EFFECT OF FOREIGN DIRECT INVESTMENT IN TRANSITION COUNTRIES – CASE OF KOSOVO

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Abstract

The purpose of this paper is to establish that FDI has impact on improving some of the macroeconomic indicators influencing the economic development of transition countries, as well as Kosovo. In this paper, will be evaluated the impact of FDI on economic growth, income, labor and exports. The econometric model is based on linear regression (OLS), where each of the mentioned factors were tested with the same model, separately. The data were received by the Kosovo Agency of Statistics for the period 2004-2017. The results show that FDI has a positive impact on the economic growth of the current year with a 1% significance level ($p = 0.0023$), a positive impact on GDP growth per capita, lagged one year at a significant 10% ($p = 0.0729$); a positive impact on the export growth of the actual year with a significance level of 5% ($p = 0.0105$). As far as the impact of FDI in employment, the results are non-significant.

Key Words

Foreign direct investment economic growth; OLS models; transition countries; Kosovo.

INTRODUCTION

Foreign Direct Investment (FDI) is considered as a significant form of growth and economic development of host countries. This in turn refers to international economic integration, transformation of modern technologies, growth of management and organizational skills, and more modern marketing techniques (Moosa, 2002). A large number of studies consider that foreign direct investment generates economic growth in the host country (OECD, 2002) This effect and other spillovers are evidenced in many studies (Blomstrom & Kokko, 1998; Frindlay, 1978; Berthélemy & Démurger, 2002; Varamin & Vu, 2007).

According to Varamin & Vu (2007), technology transformation, apart influencing the performance of firms in host countries, also contributes to GDP growth, increased capital accumulation and trade growth. Whereas Wang (2009) determines foreign direct investment as an investment involving the transfer of a large pool of assets, including advanced technology and know-how, financial capital and best practices in managerial and administrative experiences in host countries etc. De Mello (1999) emphasizes that the spillover effect of technology and know-how of foreign firms are determining the long-term growth of the economy in host countries. On the other side, Lipsey (2002) highlight the effect that FDI has on employment and the overall increase in employee salaries, which is otherwise called the wage spillover effect (Lipsey 2002). In earlier FDI stages, (Helliner 1973, Cohen 1975, Nayyar 1978) emphasized the important role of FDI in trade exchanges, and in particular on expanding the exports of manufactured products of the host countries. While the WTO (1996) considers that FDI can often be used as a measure of country's integration into the world economy.

For other FDI effects in the host countries, such as: enhancing the use of resources and increasing the competitiveness of local firms, there are considerable numbers of studies (Blomström & Kokko, 1988; Lee & vTche, 2004; Pessoa, 2007). Local firms are forced to improve technology and find the best techniques and methods to deal with foreign firms competition (Driffield, 2000, Varamini and Vu, 2007).

According to the IMF (2007), FDI brings restructuring and modernization of private enterprises by increasing production capacity in host countries. Meanwhile, Demekas, Horváth, Ribakova and Yi Wu (2005) emphasize that the inflows of foreign direct investment has effects to finance the foreign trade deficit of the host country and has no effect on debt creation in an economy. Zhang , (2001), has an optimistic point of view on the prospect of foreign direct investment for a large number of reasons. Therefore, the policies of the most governments of the host countries are oriented towards the creation of conditions for attracting FDIs.

Meanwhile, other researchers also mention negative effects on the host country. Roolaht (2005) warns that technological transformation can also have negative effects, making the hosting countries dependent on the technology of developed countries. FDI-s can negatively affect host countries when these foreign investments create monopoly powers over the

gained market in the host countries. Very often, foreign affiliates result in increased competition with domestic firms (Bhalla & Ramu, 2005).

PROBLEM STATEMENT, OBJECTIVE AND HYPOTHESES

For a transition economy, such as Kosovo¹, FDI is considered as a key element that will contribute to the country's economic growth and development by assisting in the necessary structural changes. Many researches (Estrin & Uvalic, 2003, Christie, 2003; Brada, Kutan & Yigit; Demekas & al. 2005) show that FDI flow are not quite satisfactory in countries like Kosovo and in the Balkan countries due to the "Balkan" effect. Despite the lower inflow of FDI flows to transition countries compared to developing and developed countries, according to the World Investment Report (2018), projections show that there is an upward trend of FDI inflows, especially in transition countries.

In this context, the research problem of this paper is that FDIs have had positive effects on Kosovo's economic growth, as described in the above-mentioned studies.

As stated above, the objective of this paper is to measure the impact of FDI on the economic indicators of the economic development of the country, such as: economic growth, GDP per capita, labor and export. Consequently, we will test the cause-effect hypothesis that can be explained as follows:

- H1: FDI has positive effects on economic growth in Kosovo
- H2: FDI have positive effects on revenue growth
- H3: FDI have positive effects on employment
- H4: FDI have positive effects on export growth.

PROCEDURES AND METHODS

The Models

Testing the hypothesis will be based on the econometric models which apply to time series data. The theoretical basis of the methodological approach to the development of study and selection of econometric models, consists of the Solow model (1957). This model makes a transformation of the production function Cobb Douglas:

$$Y = AL^{\beta}K^{\alpha} \quad (1)$$

which transformers through logarithm by turning it into this functional form:

¹From a centralized economy in the former socialist system, Kosovo experienced an uppermost occupation during the 1990s, which ended with a devastating war of genocidal proportions also dwindled the whole economy

$$\ln GDP = \beta_0 + \beta_L \ln L + \beta_{IHD} \ln FDI + \beta_K \ln K + u_t \quad (2)$$

GDP - Gross Domestic Product; L - working age population; K - domestic capital; FDI - Foreign Direct Investments.

Based on the theory that the effect of FDI can not be noticed in the investment year, then the effect is tested using the lag (Studenmund 2017; Gujarati 2004; Osmani 2013). Adapted to the specifics of the case and based on the small number of observations, in our case we will test the impact of FDI with and without a one-year lag and including a small number of independent variables. A linear regression model will be used, which would have this form:

$$Y_t = \beta_0 + \beta_1 FDI + \beta_2 FDI_{t-1} + \beta_3 X_t + u_t \quad (3)$$

Y_t - dependent variables depending on the hypothesis that will be tested:

- rate of economic growth denoted as "*GDPgr*";
- GDP per capita denoted as "*GDPcap*";
- Employment rate denoted as "*EmpR*";
- Export denoted as "*Ex*".
- X_t - Gross capital formation denoted as "*Cap*"

Estimation and functional form

Model estimation will be made using the Ordinary Least Square method. Because to time series we often have problems of lack of stationarity (nonstationarity), which can cause spurious correlation (Studenmund 2017), to ensure that the series is stationary, we will evaluate the ADF-Augmented Dickey-Fuller test on the presence of unit root based on the Akaike Information Criterion (AIC). In the cases of existence of nonstationarity then the first difference will be applied (Osmani 2013).

To do the econometric analysis, the statistical package for econometric analysis-Gretl will be used, which also offers the possibility of applying the Heteroskedasticity-Corrected model. Also, through this software package, multicollinearity tests will be performed, including VIF - Variance Inflation Factor as well as Jarque Bera normality test. Hypotheses and test values are as follows:

- ADF test - Null hypothesis: the series has a unit root (significance level 5% AIC)
- Jarque Bera (JB) - Null hypothesis: error is normally distributed
- Multicollinearity test:
VIF minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem
- The heteroskedasticity test does not apply because is used the Heteroskedasticity-corrected model (part of Gretl package).

As far as functional forms are concerned, a form that will give better results will be used. We will consider the following functional forms: lin-lin; lin-log; log-lin and log-log.

The Data

Since the economic development and the effect of FDI is dynamic, for this type of research, it is mainly based on time series data. The study uses secondary data provided by the Kosovo Agency of Statistics and the World Bank database.

Because the reasons we mentioned above regarding the specifics of Kosovo, there is a lack of sufficient data to build series for a long period of time. This will make it impossible for us to develop models that could include many independent variables. Official FDI recording in Kosovo starts in 2004 (ASK 2018), so it limits the number of time periods that can be taken into consideration. Under these constraints, we take a 14-year period, thus 2004-2017.

RESULTS AND DISCUSSIONS

Descriptive statistics

From the statistical analysis of the description presented in Table 1 we see that Kosovo over the period observed has had a solid economic growth of 3.85% on average, with the largest growth being 7.29% in 2007 and smaller by 1.2% in the year 2014. The second below shows also the inflow of FDI averages 267 million euros annually, with a figure of 440 million in 2007 and 43 million in 2004. It is characteristic that both Kosovo's economic growth and the inflow of FDI and other macroeconomic indicators were not affected by the global financial crisis 2009. Table 1 presented the description of all variables used in econometric models for hypothesis testing. It can be seen that all variables have normal distribution where value of the p-value for the Jarque-Bera pointer is $p > 0.05$.

Table 1. Descriptive statistics of variables

	GDPGR	GDPCAP	FDI	CAP	EMPR	EX
Mean	3.854443	3249.340	267.2548	1293.950	27.09171	232.4349
Median	3.565615	3428.693	283.8172	1442.750	27.09200	284.9710
Maximum	7.286083	4054.721	440.7381	1819.700	29.80000	378.0000
Minimum	1.198071	2135.333	43.00000	701.2000	24.10000	35.60000
Std. Dev.	1.512139	637.4643	111.1592	373.1706	1.561304	109.6336
Skewness	0.652120	-0.671321	-0.464580	-0.471239	-0.193787	-0.556674
Kurtosis	3.447574	2.102640	2.536418	1.854238	2.357484	1.976375
Jarque-Bera	1.109129	1.521299	0.628977	1.283937	0.328441	1.334289
Probability	0.574322	0.467363	0.730162	0.526255	0.848555	0.513172
Sum	53.96220	45490.75	3741.568	18115.30	379.2840	3254.088
Sum Sq. Dev.	29.72533	5282689.	160632.7	1810332.	31.68970	156253.8
Observations	14	14	14	14	14	14

Source: ASK (2018) - Eviews processing.

Results of econometric models

Initially, the variables test showed that there was nonstationarity (the presence of unit root), and it was found that only the GDP growth (GDPgr) was a stationary variable (there was no unit root), so to the other variables used the first difference.

Further, the model estimation that tests the impact of FDI on Kosovo's economic growth was further explored. After applying some tests using or removing the lag, the model estimated that had the best results is presented in Table 2. Its functional form is linear – linear (lin-lin). Here we see that FDI has a positive impact on economic growth in the current year for 99% confidence level. Gross capital formation (cap) is statistically significant at confidence level of 95% of one lag.

Table 2. FDI impact assessment model in the economic growth of Kosovo

Model 1: Heteroskedasticity-corrected, using observations 2006-2017 (T = 12) Dependent variable: GDPgr					
	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	3.11057	0.298344	10.43	<0.0001	***
d_FDI	0.0116151	0.00276957	4.194	0.0023	***
d_Cap_1	0.00664895	0.00242955	2.737	0.0230	**
d_ - first difference; _1 lag; R-squared: 0.68; Adjusted R-squared : 0.61; P-value(F) = 0.005754 Test for normality of residual: $p=0.416818>0.05$; Variance Inflation Factors (VIF): $1.313<10.0$					
Source: ASK (2018) – Gretl processing.					

This implies that Gross capital formation has a positive impact on economic growth in the next year whereas FDI has a positive impact in the current year.

As shown in Table 2, the econometric model has a satisfactory coefficient of determination, where variations in GDPgr are explained by variations in independent variables of 68% (R-squared) or 61% by adjusted-R-squared. Based on the F-test, the estimated model is statistically significant for the 1% significance level (P-value (F) = 0.005754).

Also, the model meets the condition about residuals distribution where H_0 cannot be rejected, which means that residuals have normal distribution. The risk of multicollinearity is irrelevant because the value of VIF for the two independent variables is much smaller than 10.

The second estimated model tests the impact of FDI on revenue growth where as a dependent variables is used GDP per capita. As shown in Table 3, the best model for testing the link has log-log functional form. There is a poor influence of FDI in GDP per capita, which is statistically significant at the 90% confidence level of one lag. On the other side, the impact of Gross capital formation is statistically significant (99% confidence level).

Table 3. FDI impact assessment model in GDP per capita

Model 2: Heteroskedasticity-corrected, using observations 2006-2017 (T = 12)					
Dependent variable: d_I_GDPcap					
	Coefficient	Std. Error	t-ratio	p-value	
const	0.0147870	0.0168993	0.8750	0.4043	
d_I_FDI_1	0.0751089	0.0369936	2.030	0.0729	*
d_I_Cap	0.373289	0.0972645	3.838	0.0040	***
d_ - first difference; _1 lag; I_ -log;					
R-squared: 0.74; Adjusted R-squared : 0.68; P-value(F) = 0.002248					
Test for normality of residual: p=0.147137>0.05; Variance Inflation Factors (VIF): 1.026< 10.0					
Source: ASK (2018) – Gretl processing.					

Unlike the first model, the second model has a positive impact on GDP growth per capita in next year, while Gross capital formation has a positive impact in the current year.

Even in this model, the conditions of the econometric test of the model are met with a determination level of 74% or 68% by Adjusted R-squared.

As far as the impact of FDI on employment growth is concerned, after testing some models and using different functional forms, in either case does not result in any statistically significant model at least for the 90% confidence level. Consequently it is concluded that FDI does not have any positive impact on the increase of the rate of employment.

The last model is the one that tests the impact of FDI on export growth. In this case, the dependent variable is used the total export value in euro, according to the years investigated. The best rated model is the one with the log-log functional form. As shown in Table 4, the model shows that FDI has a positive impact on export growth, which is statistically significant for the 95% confidence level. With the same level of confidence, statistically significant is also the impact of Gross capital formation.

Table 4. FDI impact assessment model in export

Model 135: Heteroskedasticity-corrected, using observations 2005-2017 (T = 13)					
Dependent variable: d_I_Ex					
	Coefficient	Std. Error	t-ratio	p-value	
const	0.0647592	0.0365043	1.774	0.1065	
d_I_FDI	0.293053	0.0932764	3.142	0.0105	**
d_I_Cap	0.614616	0.206040	2.983	0.0137	**
d_ -first difference; _1 lag; I_ -log;					
R-squared: 0.77; Adjusted R-squared : 0.72; P-value(F) = 0.000645					
Test for normality of residual: p=0.677228>0.05; Variance Inflation Factors (VIF): 1.084< 10.0					
Source: ASK (2018) – Gretl processing.					

The impact of both variables is evidenced by statistical significance in the current year. The model (Table 4) fulfills the conditions of econometric tests of normality and multicollinearity and has a solid ability to explain variations dependent on independent variables to 77% according to R-squared or 72% by Adjusted R-squared.

CONCLUSIONS

The results of this research suggest that FDI has a major impact on Kosovo's macroeconomic indicators. The results are in line with the OECD (2002) ascertainment finding that the mayor studies consider that foreign direct investment generates economic growth in the host country. In particular, the impact is evidenced by economic growth and exports, while the share of GDP per capita is lower. Economic growth and exports are evidenced in the actual year, which shows that FDI has not yet reached a long-term impact that will be attributed to the effects that are highlighted from many authors. Also, the results do not support hypothesis that FDI has an impact on the growth of employment.

These results have significant implications for further research, which is focused on the impact of FDI spillover across Kosovo, in the sector or in different economic areas. It is important to have focused research related to the impact of FDI on employment. This will enable us to understand that the failure to accept the alternative hypothesis has to do with another alternative hypothesis that would be technological improvement, either this is due to the fact that in Kosovo still it is expressed the fiscal evasion which may be related to undeclared work in the responsible institutions.

The paper also has its own limitations, especially for the fact that we have a short period of time (14 years) which for the econometric models, does not allow the inclusion of many factors in the model.

However, since Kosovo is a small country and with a long period of transition due to the specifics of its past, the results lead us towards favorable policies for attracting FDI.

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MEASURING THE LEVEL OF QUALITY MATURITY IN ORGANIZATIONS

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Abstract

Due to the growing importance for achieving better quality in products and services, many organisations have adopted quality Standards into their everyday practice. Some authors stated decades ago that quality is free, and today many organizations are trying to sustain competitiveness by raising quality in every aspect of their organizations. The paper presents a literature review on quality maturity and how it can be measured.

Key Words

Quality maturity; total quality management.

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INTRODUCTION

The first results of the introduction of the quality system in Japan are beginning to appear in the 1950s and the next twenty years the Japanese economy is experiencing flourishing, while the American economy, which was "the leading" in quality, increasingly understands that it loses a large market share because of its low quality of products and then Deming at the beginning of the 80s introduced quality to American organizations by educating management. Many US organizations introduced quality management in 1985, and in 1987 the US Senate introduced the Malcolm Baldrige national quality award. All these steps have led to today's degree of quality development that can and must be measured in companies through specific indicators if organizations want to be efficient and effective and thus achieve sustainable success.

ABOUT THE QUALITY AND MANAGING IT

Vallin Feingebaum is the key person in quality development because he has created a concept of total quality control (TQC) and contributed to the development of production processes. His contribution is that a low level of quality should be prevented and observed in time before the production itself. The goal is to avoid the preventive. He defines full quality control as an efficient system for integrating various groups within organizations, responsible for developing, maintaining and improving quality. To effectively manage quality, it is necessary to: set quality standards, assess compliance with these standards, act when standards are not met, and plan improvements to these standards (Feigenbaum 1960). According to Goetsch and Davis (2010), the underlying philosophy of total quality is to continually improve processes, people and products. For this it may also be necessary to mention the concept of continuous improvement. Continuous improvement (CI) or kaizen for decades has its beginnings in quality and lean management. Study from Alič (2014) shows that over a certain time this concept stagnates or disappears in organizations due to numerous reasons. However, a harsh market rivalry and economic crisis where cycles of crisis periods are shorter than in the past have led to a growing interest in the field of CI (Singh and Singh, 2015).

Quality management is defined as "an integrated approach to achieving and maintaining high-quality results aimed at maintaining and continually improving the process and preventing disadvantages at all levels and in all functions of the organization in order to meet or exceed customer expectations (Flynn et al 1994: 342)." According to Iso Norm 9001: 2008, the quality management of a company is defined as a "management system that a company establishes, documents, implements and maintains in order to continuously improve the company's efficiency in accordance with the requirements of the prescribed standard (ISO 9001: 2008, p.10)". The best can be described through the ten principles of Armand Feigenbaum, which he set out in his 1990 book "Full Quality Control". Feigenbaum, already in

the first principle, "Quality is a Comprehensive Process in the Company" emphasizes that achieving quality is not the responsibility of a single function, department or project, but it is "a way of thinking and practice implemented in all the pores and processes of company's life that require constant support, analysis and improvement" (Injac, 2001, p. 102).

In 1979, Philip Crosby defined a framework for measuring the success of company's quality management in his book, "Quality is Free," using the framework called "maturity grid". The idea of a network or frame for measuring maturity consisted of the specific behavior of a company that it shows at different levels of so- called "maturity" levels that are analyzed or measured for one or more areas in the company (Fraser et al., 2002). Crosby's maturity network consists of six key areas that were scaled and evaluated according to Likert's scale. Each area was benchmarked through five levels, each level representing the specific behavior of the company and how many company employees successfully adopted these specific behaviors and their application. The areas included: understanding and attitude of management, quality position in the company, problem solving, cost of quality as a percentage of sales, quality improvement procedures, the general attitude of the company on quality (Crosby, 1979, p. 23). The company managed the mentioned categories to achieve different degree of development of individual categories by measuring them from 1 to 5, with category one being insecurity in knowing, for example, how manager's attitude about quality is unknown or it is unknown what is the cost of quality measured in percentages of sales. While on the other hand, level 5 is a complete knowledge of information about the cost of quality in total sales or the attitude of quality management.

According to Injac (2001, p.169), Crosby, unlike his predecessors, differed by "dropping the entire issue from the general level of philosophy and certain activities into a rounded recipe". That is why Crosby contributed to quality management from the aspect of the whole organization and the need to involve all levels of a company in improving overall quality. In addition, Injac argues that this approach has "indicated the need for an unification and standardization that will emerge eight years later in 1987 in the form of the ISO 9000ff Series" (Injac, 2001, p. 169). The ISO 9000ff standard series emphasized the importance of quality management at all levels of the company, not just the quality upgrading of production processes that were an imperative in the companies by that point. The fact is that maturity models are now widespread and applied in quality management, software development, supplier relationships, product development, innovation, product design, collaboration, product reliability and knowledge management (Fraser et al., 2002). The success of quality management should certainly be explored from the aspect of implementation and sustainability of the continuous improvement system as a quality management success generator.

MEASURING QUALITY MATURITY IN ORGANIZATIONS

At the end of the 80's of the last century, in practice, the quality management of the company, according to Saraph et al. (1989) was not possible due to the lack of measures to determine the success of the company's quality management. Therefore, the authors have defined eight areas of importance in terms of quality of management and the operational measures that managers can use to "evaluate quality management status and to manage improvements in all areas of quality" (Saraph et al., 1989, p. 810).

Hammer (2007) in his article published at the Harvard Business Review describes two models of maturity, on the one hand, the process of maturity and on the other hand, the maturity model of companies that are key to achieving business excellence. He further argues that the company must be mature enough for processes to increase efficiency over time. Hammer defines the maturity of the process as the ability of a process to ensure greater efficiency through time (Hammer 2007: 3). For processes to generate success and maturity through time, the company needs to provide leadership, culture, expertise and good management (Hammer 2007). Ravichandran and Rai (2000) proposed a model for measuring quality improvements in system development. This model consists of five theoretical constructs that can be seen in Table 1 with its literature background.

Table 1. Literature background

Theoretical Constructs	Saraph et al. (1989)	Flynn et al. (1994)	Ahire et al. (1996)	Authors Study	
Top Management Leadership	Top management leadership and quality policy	Top management support	Top management commitment	IS management support for quality	
Management Infrastructure Sophistication		Quality policy not explicitly considered	Not considered	Quality policy and goals	
		Training	Included under work force management	Employee training	Commitment to skill development
		Nature of reward schemes included under employee relations	Considered under top management support	Considered under employee involvement but dropped from the validated scale	Quality orientation of reward schemes
Process Management Efficacy	Product/service design	Product design	SPC usage	Formalization of reusability in systems development	
	Process management	Process management	Internal quality information usage	Process control	

	Quality data and reporting	Quality information	Benchmarking	Fact based management
Stakeholder Participation	Employee relations	Work force management	Employee empowerment and involvement	Empowerment of programmer/analyst
	Supplier quality management	Supplier involvement	Supplier performance	Vendor/consultant participation
	Customer involvement not explicitly considered	Customer involvement	Customer focus	User participation
Quality Performance	Not explicitly considered	Product quality in terms of scrap rate	Product quality	Product quality
	Process quality not explicitly considered as a performance measure	Process quality not explicitly considered as a performance measure	Process quality not explicitly considered as a performance measure	Process efficiency

Source: Ravichandran and Rai, 2000, p. 389.

Laosirihongthong et al. (2013) investigated the relationship between companies quality management and the impact on the performance of 149 companies in the car industry. Research findings show that top management is not sufficiently committed to managing people in the company, which is evident through inadequate employee involvement in enterprise management processes. They further argue that these "soft" factors of quality management are key to the application of best quality practices and the achievement of a developed company quality system.

Tang (2013) published an extensive research on the performance of companies quality management on a sample of 1490 companies in Shanghai. The results of the research showed that the overall maturity index of the quality management of the Shanghai companies at the level of development was 3.30 out of the possible 5 degrees. The author emphasizes the importance of top management responsibility through the "leadership through quality" strategy in promoting accountability and quality assurance, socially responsible business, increasing service quality, and further investment in the development of "soft" skills. According to Tang (2013) five constructs need to be investigated to determine the state of quality management in companies (Table 2). In the latest construct called quality performance, and it consists of variables: physical quality, market success and financial performance, another variable is added: "Innovation and Learning". Innovation and learning today are key to achieving business

differentiation in a competitive market. In the quality management of a company variables of "innovation and learning" is important for achieving business excellence. Kuratko et al. (2014) in their research claim that successful implementation of the innovation strategy in many companies is unattainable, although everyone is aware of how it represents a competitive advantage. Without innovation and learning, there is no added value to a company, and if the company does not apply its business policy to continuous improvement, which is crucial in collecting new knowledge, then there is no innovation.

Authors Santos-Vijande and A'varvar-Gonza'lez (2007) point out that innovation has the role of mediator between quality management and achievement of technical innovation. Lee et al. (2015) explore the mediating role of organizational learning between quality management and innovation. The task of management is to recognize the need for innovation, to provide the necessary resources, and to establish and maintain the effectiveness and efficiency of the innovation process (ISO 9001: 2009, point 9). Therefore, as a result of good quality management of enterprises, the aspect of innovation and learning has to be analyzed, and it can be examined through the number of new or improved products in relation to the average activity of the company (Soto-Acosta et al., 2016).

Table 2. Constructs for measuring organization quality

	Construct	Variables
1	leadership	leadership role and quality culture
2	design, process development and supplier management	design, process development, supplier management
3	production process and marketing process control, system	process control, management system, standardization, product testing, sales and services
4	Knowledge management	measurement, analysis and improvement, tools and methods of quality
5	quality performance	physical quality, market success, innovation and learning, financial success

Source: Authors according to Tang (2013).

CONCLUSION

Today, compared to 20 years ago, literature on quality provides many measures that are validated in practice and can be used to measure quality in organization. Every organization has to determine which set of measures fits their strategies. Once the measures are set managers can use the model to evaluate quality maturity and have a "feeling" about where they stand in the market from the aspect of 5 defined constructs. Introducing quality

principles and quality Standards just to have certificate in today's business environment is not the way to remain competitive advantage. Organizations have to evolve as market, people and needs evolve. In this context organization has to be dynamic and be aware where they stand on quality maturity from the aspect of every mentioned variable to be able to evolve, to grow and constantly improve. For future research it would be interesting to investigate what level of quality maturity organizations in Croatia have.

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FINANCIAL STRUCTURE AND PROFITABILITY OF INNOVATIVE SMES IN ITALY

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Abstract

The size and degree of innovation of a company strongly affect its profitability and financial structure: literature has extensively investigated the causal links between innovation and profitability of firms; moreover, many authors have studied the peculiarities of the financial structure of innovative companies. In both topics, however, the conclusions are not unambiguous. The paper aims to make a contribution to reducing the literature gap providing further evidence on these issues by evaluating Italian small and medium-sized innovative enterprises. The case of Italy was considered as an example of the introduction into the legal system of a country of a specific entity for innovative companies. The study presents the main structural data referring to these firms, based on last updated statistics by the Italian Innovative Business Register. This verification was furthermore deepened using the tools of balance sheet and profit and loss account analysis of innovative SMEs, with available data for the period 2010-2017 on Orbis database by Bureau Van Dijk. The results confirm the reversal of the traditional hierarchy of funding sources for innovative firms, as firstly theorized by Berger and Udell; profitability is negative, according to literature underlining that innovation is positively associated with turnover and employment growth, but not necessarily with higher profitability. This also confirms that the benefits of innovation can be appreciated in a medium-long term period.

Key Words

Innovative firms; capital structure; firm performance.

INTRODUCTION

The first results of the introduction of the quality system in Japan are beginning to appear in the 1950s and the next twenty years the Japanese economy is experiencing flourishing, while the American economy, which was "the leading" in quality, increasingly understands that it loses a large market share because of its low quality of products and then Deming at the beginning of the 80s introduced quality to American organizations by educating management. Many US organizations introduced quality management in 1985, and in 1987 the US Senate introduced the Malcolm Baldrige national quality award. All these steps have led to today's degree of quality development that can and must be measured in companies through specific indicators if organizations want to be efficient and effective and thus achieve sustainable success. Innovative companies represent a crucial resource for the development of modern industrial economies: the liveliness and performance of these companies strongly affect the innovative capacity and competitiveness of the economic system (Nadotti, 2014). The birth and survival of these companies is influenced by many factors that can be summarized in the two main themes of the knowledge gap and the funding gap. In particular, some characteristics of innovative companies, such as information asymmetries, the absence of guarantees and the high costs related to the estimate of creditworthiness, can become strong impediments to the provision of capital in the form of debt, with impacts on the financial structure and profitability of these companies. These aspects are particularly stressed in countries whose economy is typically characterized by small and medium-sized enterprises: among these, for example, there is Italy, where SMEs represent about 99% of total enterprises (ISTAT, 2018).

The ability of companies to innovate can become a critical factor for success, able to facilitate the development of the business; however, difficulties for potential financiers in attributing a representative and reliable value to innovations represents an important brake on the possibility for firms of finding the financial resources to support investments in innovation. Even if it is possible to obtain financing, the cost could still be too burdensome compared to the profitability of the company. Aware of the contribution that small and medium-sized enterprises offer to the economy of the country, the Italian Government has therefore decided to introduce in its legal system a specific entity, that is the Innovative SME, to which recognize particular advantages to overcome the main difficulties just reported. This legislative intervention recognizes the peculiarities of innovative small and medium-sized enterprises and represents a virtuous example of measures that encourage innovation as a driver of economic growth. Among the facilitation for Innovative SMEs, particular attention must be paid to the available solutions for the collection of capital: as an exception to the ordinary corporate regulations, limited liabilities companies can create categories of shares with specific rights (for example, shares that do not attribute rights to vote or that attribute such rights in non-proportional terms to the participation); carry out operations on one's shares; issue participative financial instruments; offer capital shares to the public. These measures

involve a radical change in the financial structure of limited liabilities companies, bringing it closer to that one of a joint stock company. Innovative SMEs can also use equity crowdfunding and, therefore, raise capital with special campaigns on authorized online portals. For the same companies, there is also a simplified, free and direct access to the Guarantee Fund for Small and Medium-Sized Enterprises, a public fund that facilitates bank financing by granting a guarantee on bank loans. This guarantee can cover up to 80% of the credit granted by the bank to innovative SMEs, within a maximum limit of 2.5 million euros, and can be granted through a simplified procedure. Innovative SMEs also benefit from some important facilitations and exemptions on terms for covering losses and on computation of a minimum income and taxable base for corporate taxation. Finally, to promote the investments in the equity of these companies, special tax incentives have been introduced, both for individuals and legal entities investors. These measures therefore contribute to creating a favorable scenario for the development of innovative companies in Italy. In the following paragraphs, an analysis of the main updated structural and accounting data of these companies will be proposed. Furthermore, the analysis of the main financial ratios of a sample of firms will be presented.

LITERATURE REVIEW

Literature on the subject is robust; for the purposes of this study, it is possible to distinguish two main strands: the first one focuses on issues relating to the financing of innovative firms; the second one deepens the relationship between the degree of innovation of the company and its profitability.

About the first topic, it can be addressed into the most relevant theoretical frameworks that explain the financial structure of SMEs: the pecking order theory (Myers and Majluf, 1984); the trade-off theory (Jensen and Meckling, 1976; Myers, 1977; Jensen, 1986); the market timing theory (Baker and Wurgler, 2002). Even with their own specific hypotheses, all these main theories on the financial structure of companies are formulated on large companies, not enough deepening for small firms. Besides, for innovative companies the results of these main theories are compromised by some substantial elements (Berger and Udell, 1998): innovative companies have a financial need and a level of risk that depends on the degree of development of the project; the screening and monitoring activities are difficult, due to the high level of agency costs and the degree of information opacity of these companies (Huyghebaert and Van de Gucht, 2007; Hall and Lerner, 2010); innovative firms are often not able to provide adequate guarantees to the loan, because they are mostly made up of intangible and/or highly firm-specific assets. These constraints mean that access to traditional sources of financing is difficult for innovative companies and therefore the financing of innovation could represent a serious and real obstacle for them. Berger and Udell (1998) re-proposed the pecking order theory for this type of company, referring to their financial growth cycle: the traditional hierarchy of funding

sources is modified not only according to the company size, but also for the degree of development of the project, to which different levels of information opacity and financial requirements correspond. For these companies, therefore, the traditional hierarchy is reversed. Following the financial growth cycle theory, a more recent literature on innovative SMEs' financing has been developed (Zoppa and McMahon, 2001; Sogorb-Mira and Lopez-Gracia, 2003; Hogan and Hutson, 2005; Hall and Lerner, 2009; Kuniy *et al.*, 2010; Abraham and Schmukler, 2018). The results they achieve are not unequivocal: differences are mainly attributable to the type of innovation (product, process; incremental, disruptive; Cainelli *et al.*, 2004; Koellinger, 2008; Czarnitzki and Hottenrott, 2010); to the business sector and firm market share (Schock, 2013; Mac an Bhaird and Lynn, 2015); to the attitude for innovation of the macroeconomic context (Arnone *et al.* 2015; Wilson 2015).

Besides, the specific competitive and business strategy of firms should also affects these results (Miles and Snow, 1978). The second strand of literature refers to the relationship between the degree of innovation of the company and its profitability. As a proxy for the degree of innovation of the companies, the empirical literature largely refers to investments in research and development by firms (R&D). Main results, even in this case not unambiguous, confirm the relevance of some structural factors (inclination of the management to innovation and the macroeconomic context; type of innovation; dominant or marginal position of the company in its reference market; specific source of financing; R&D location) in determining the contribution of innovation to the profits of the firm. Koellinger (2008) found that innovation is positively associated with turnover and employment growth, even if innovative activity is not necessarily associated with higher profitability. Dibrell *et al.* (2008) investigate the mediating effects of information technology on the relationships among product and process innovations and firm performance, measured in multiple profitability and growth rate metrics, on a sample of 397 small and medium-sized enterprises (SMEs). They find, among others, that the impact of innovation (both product and process) on performance (both profitability and growth) is primarily indirect, felt via the mechanism of the importance managers place on IT and an increased emphasis on IT abets managers' perception of their firms' performance, as compared with that observed among other peer firms. Peters and Schmiele (2011) address the question whether international R&D activities boost profitability, using a large data set of about 1,300 firms from the German Community Innovation Survey (CIS). The empirical results demonstrate that R&D location matters for profitability. Firms with both domestic and foreign R&D activities make significantly higher profits than all other firms, including those that carry out solely domestic R&D. Tran and Santarelli (2013) investigate the determinants of innovative activities and the innovation-performance relationship for the firm population in Vietnam. Private innovative firms significantly outperform their peers whereas the combination of young, small, and innovative characteristics in young innovative companies does not bring the expected higher

entrepreneurial performance as how it works in advanced countries; highly-leveraged firms, exporting firms, and diversified firms are more likely to be innovative than their counterparts, but the ability to transform innovative efforts into higher profitability and growth can only be witnessed among diversified firms; companies being endowed with larger asset pool have more favorable conditions to engage in innovation activities, but do not necessarily produce better performance relatively to their smaller counterparts. Adewale *et al.* (2015) consider the relationship between competitive advantage, innovation strategy and profitability level of firms in Nigeria. The authors deduce that competitive advantage and innovation strategy are both statistically significant to achieving high and persistent profitability level. Baussola and Bartoloni (2016) deepen complementarities between technological and non-technological innovation as crucial determinants of firm performance. This topic was not stressed by previous studies, as the focus has been primarily placed on technological innovation alone or on innovation efforts as measured by R&D or patent activities. They underline that capacities to develop market-oriented behaviour and introduce new organisational innovations are the drivers - together with technological innovation - of a firm's productivity and profitability. The authors also observe how the impact of such activities is larger when they persist over time, thus introducing a more general concept of innovation persistence. They present an empirical model based on a large panel of Italian manufacturing firms covering the period 2000-2012. About the relevance of persistence, also Othman and Ameer (2009). Hombert and Matray (2017) study whether R&D-intensive firms are more resilient to trade shocks. They provide evidence that R&D-intensive firms downsize considerably less. Curtis *et al.* (2018) provide evidence of an economically and statistically significant decline in the profitability associated with R&D expenditures. This result is consistent with diminishing marginal returns to R&D expenditures over time, in which spending has outpaced investment opportunities. However, despite the economic significance of the decline, analysts' long-term earnings growth forecast errors are systematically optimistic for firms with high R&D intensity. This evidence highlights the complexities associated with forecasting long-term earnings growth from innovation. Loukopoulos *et al.* (2017) examine whether a firm's business strategy is an underlying determinant of downside risk in accounting earnings and its components. Based on organizational theory, they predict that firms following an innovative "prospector" strategy exhibit lower profitability tendencies than firms following a cost-oriented "defender" strategy. Further, they anticipate that these strategies are asymmetrically positioned towards environmental uncertainty, with defenders focusing their efforts to efficiency, cost control, and minimizing exposure to downside risk, whereas prospectors direct their resources to flexibility, innovation, and maximizing the growth potential through aggressive expansion to new product markets.

Successful innovative activity is a major contribution to the intangible capital of firms; although its importance is generally acknowledged, the

contribution to companies' profits is a priori unclear. The literature review shortly summarized let us to underline how it is still difficult to affirm an absolute and direct relationship between innovation, financial structure and profitability for SMEs, as there are many other variables that strongly influence these links.

EMPIRICAL ANALYSIS

Methodology

The empirical verification is on two levels: the first one, with the objective to delineate the demographics of Italian innovative SMEs; the second one, with the aim of deepening the previous analysis, on a significant sample of such firms. For the first verification, we use the data publicly available on the Italian Business Register, updated at March, 2019, referring to the entire population of registered innovative SMEs (1,024); for the second one, we consider firms with available financial data for the 2010-2017 period in Orbis database by Bureau Van Dijk (433). The coverage of the sample is 42.3%.

The first analysis uses, substantially, a case study methodology, as an intensive analysis of an individual unit stressing developmental factors in relation to a broad definition of environment (Flyvbjerg, 2011). The unit is the whole innovative Italian SMEs. The methodology used for the second level of investigation is the financial ratio analysis, that is broadly recognized as a vital tool in identifying the financial soundness and cost effectiveness of firms, by establishing relationship between the items of balance sheet and profit and loss account (Shivam and Probhakar, 2013; Khairi *et al.* 2014). The combination of qualitative and quantitative methodologies allows us a more adequate answer to the following research questions: *a.* does the hierarchy of firms' funding capital structure follow the trends firstly outlined by Berger and Udell?; *b.* does innovation improve firms' profitability?

Results

The Italian Innovative SMEs

In this section, it is proposed the demographics Italian innovative SMEs. The definition of innovative SME was introduced in Italy in 2015, with the Decree-Law 3/2015 (known as "Investment Compact"), converted into Law 33/2015, which has extended most of the benefits envisaged for innovative startups to a broader range of companies, Innovative SMEs. This regulatory intervention acknowledges established principles of the contemporary economic doctrine, which unanimously ascribes to technological innovation a decisive impact on the levels of competitiveness and growth and on the processes of job creation. The aim of the legislator was thus to foster with greater effort and reach the propagation of technological innovation within the domestic entrepreneurial system. According to this legislation, this type of enterprise enjoys a vast and diversified package of measures that touch every aspect

of a company's lifecycle, including the introduction of more flexible corporate management tools, the liberalisation of remuneration schemes, the facilitation of the access to credit – for example by facilitating the investment in equity, and the support in the process of internalisation of innovative enterprises.

Innovative SMEs are companies that comply with the definition of the European Commission Recommendation 361/2003 about small and medium enterprises and meet the following requirements: be incorporated as companies with shared capital (i.e. limited companies), including cooperatives; have their headquarter in Italy or in another EU country, but with at least one production site or branch in Italy; have the last balance sheet certified by an auditor or by a company of auditors registered in the auditors' register; have the shares of the company not listed in a regulated market; be not registered as innovative startup or certified incubator in the special section of the Business Register; do not distribute profits; be of innovative character, as identified by at least two of the following criteria: at least 3% of either the company's expenses or its turnover (the largest value is considered) can be attributed to R&D activities; at least 1/5 of the total workforce are PhD students, PhD holders or researchers; alternatively, 1/3 of the total workforce must hold a Master's degree; the enterprise is the holder, depositary or licensee of a registered patent (industrial property) or the owner of a program for original registered computers.

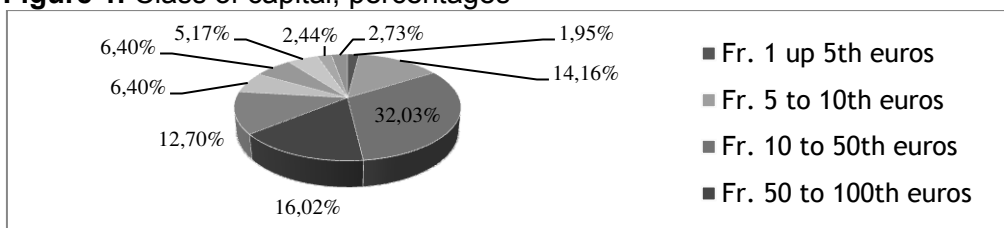
According to last available data¹, the innovative SMEs enrolled in the Italian Business Register are 1,024 (whole population). To deepen the demography of the sample, we have considered the following specifications: sectoral distribution; territorial reference area; legal form; female, foreign and youth prevalence in the corporate structure.

By the sectoral distribution, 66.02% of these ones is in the service sector, 26.37% in industry and 6.54% in trade. From a geographical point of view, 61.62% is in the North area, with the Lombardy region which, alone, accounts for 28.03% of the total; among the regions of central Italy (20.11% as a whole), Lazio is the one with the largest number of innovative SMEs (9.28%), while in the South (18.27%) the most relevant one is Campania, with 6.25% of the total. By juridical nature, the most widespread type is the limited liability company (77.83%), followed by the joint-stock company (19.63%). Simplified limited liability company counts for 1.17%; only 1.16% of the total is represented by cooperative companies. Looking at the composition of corporate groups, the innovative SMEs with a female prevalence are just 7.91% of the total, those with a youth prevalence 8.50% and those with a foreign prevalence 0.98%. The analysis can be deepened on the basis of the intensity of the three phenomena (exclusive, strong or majority presence, respecting the qualifications of the Italian Business Register about female, youth and foreign presence), as defined by the Italian Business Register. Overall, the three phenomena are therefore not significant for the innovative SMEs in Italy.

¹ Last available data is March 25, 2019.

From the list of innovative SMEs available on the website of Italian Business Register, it is also possible to have three main values that define the size and the economic and financial capacity of innovative SMEs: these ones are class of capital, class of production value and class of employee, last year. Referring to the class of capital (Figure 1), approximately 77% of the companies have a capital between 1 and 250 th. Euros.

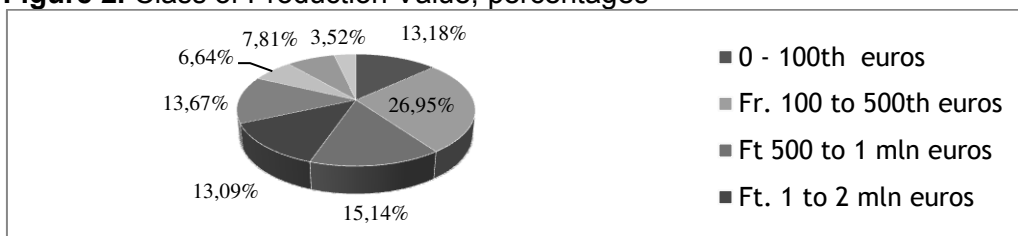
Figure 1. Class of capital, percentages



Source: Author's elaboration on Italian Business Register, March 25, 2019.

According to the class of Value of Production (Figure 2), approximately 82% of the companies have a value between 0 and 5 million euros, with a fairly uniform distribution among the classes, except for the "100 to 500 thousand euro" class, which has the greatest weight (about 27% of the total).

Figure 2. Class of Production Value, percentages



Source: Author's elaboration on Italian Business Register, March 25, 2019.

Finally, about the class of employees², 82% of companies has up to 49 employees, with about half of the companies having a maximum of 9 employees (49.18%) and just 9.48% of firms employing over 50 human resources. Overall, these analyzes underline a low capitalization of firms, which also corresponds in the value of production.

Financial analysis of Innovative SMEs in Italy

The analysis focus on firms in the special section of the Italian Innovative SMEs Register, with financial available data for the period 2010-2017. Data are from Orbis database by Bureau van Dijk, that offers comprehensive and detailed business data and financials across countries.

² Firms are categorized into the following six classes according the number of employees: from 0 to 4; from 5 to 9; from 10 to 19; from 20 to 49; from 50 to 249; over 250.

The number of Innovative SMEs companies with available unconsolidated data is 433 in 2017, last available year. Financial data are organised in main indicators of performance with the aim to analyse firms' profitability and financial structure, on their average values, in the period 2010-2017. The average Operating revenue (turnover) in 2017 is equal to 5'947 th euros; the average number of employees is 30. These values substantially follow the trend outlined with the analysis on the population as a whole. There is no high heterogeneity among firms in the sample.

To analyze the financial dynamics of the firms, we use the following ratios: current ratio; liquidity ratio, gearing; interest cover. Current and liquidity ratios are calculated on the values of the short-term assets and liabilities, respectively including and excluding the value of inventories; gearing is obtained as the ratio between the sum of non-current liabilities and loans and shareholder funds. Interest cover is calculated as the ratio between EBIT (Earnings Before Interest and Tax) and interest paid.

For the profitability analysis, we use the following two ratios: ROA using Net Income; ROE using Net Income. The value of ROA (Return On Assets) is calculated as the ratio between the firm's Net Income and its Total Asset; ROE is equal to the ratio of Net Income and Equity. For the same purpose, we also consider the following two margins: EBITDA Margin; EBIT Margin. EBITDA Margin is the ratio between EBIT plus Depreciation and Operating revenue (turnover); EBIT Margin is the ratio between Operating P/L (that is EBIT) and Operating revenue. Finally, we include also the ratio Cash flow/Operating revenue to focus on the financial relevance of economic values. Cash flow is calculated as the sum of Net Income and Depreciation. The table in Figure 3 presents the main results of our analysis.

Figure 3. Ratios, percentages

<i>Ratio, Percentages, average/year</i>	2017	2016	2015	2014	2013	2012	2011	2010
Current ratio	2,01	1,97	1,81	1,98	1,93	1,91	2,11	2,26
Liquidity ratio	1,81	1,75	1,64	1,80	1,74	1,69	1,94	2,01
Gearing	142,63	136,99	144,13	153,37	142,18	140,62	153,08	157,14
ROE using Net Income	(7,46)	(11,13)	(18,44)	(13,97)	(20,93)	(8,38)	(3,73)	0,16
ROA using Net Income	0,41	(1,95)	(1,30)	(2,41)	(2,68)	(1,88)	0,10	(0,31)
EBITDA Margin	8,13	6,50	6,62	5,80	7,66	8,18	11,50	10,11
EBIT Margin	1,61	0,62	1,21	0,24	2,43	2,94	6,14	2,92
Cash flow/Operating Revenue	6,40	4,34	4,85	2,54	4,79	5,90	7,51	7,05
Interest cover	37,01	24,68	29,32	20,07	24,14	35,35	40,51	34,37

Source: Author's elaboration on Orbis by Bureau van Dijk data.

Companies present a satisfactory profile in terms of liquidity: the value of current and liquidity ratios are positive in all of the period 2010-2017, demonstrating the ability of firms to efficiently manage their short-term financials, as to be able to face their short-term commitments. The

analysis of liquidity can be appreciated also considering the average credit and collection period of firms: Credit period is the ratio between Creditors and Operating revenue; Collection period is the ratio between Debtors and Turnover. The first one is equal to 72 days on average in 2017, considerably reduced compared to the average value at the beginning of the period (102 days); the second one is equal to 103 days on average in 2017, even falling down by the initial value (122 days). These results could be interpreted in an ambivalent and contrasting way, respectively as a sign of the growing contractual strength of firms or as tensions in the management of payments. Considering the values of liquidity ratios, the first interpretation is suitable for the case. Gearing ratio is high in all the years, highlighting an unbalanced financial structure of firms' debt. This result is consistent with the empirical evidence relating to the financial structure of Italian companies, typically undercapitalized and strongly dependent on bank loans. However, the ratio has quite mixed values: it goes from the maximum value of 157.14 at the beginning of the period to the average value of 142.63 in 2017, rising compared to 2016. This dynamic can also be explained by considering exogenous factors, in particular referring to the willingness of banks to grant credit, influenced by supervisory regulations, central bank's monetary policy and interbank market. Despite the weight of bank loans on the financial structure of firms, the level of financial charges is sustainable, as represented by the Interest cover values in the period. This result is also attributable to the favorable dynamic of market interest rates.

About profitability, ROA has negative values in six of the eight years analyzed; in the last year, the value is positive. These results can be interpreted taking into account the difficulties of small and medium-sized enterprises in closing their balance sheets with a net profit, due to the economic relevance of the financial and extraordinary costs. Such values also highlight an important issue related to an ineffective use of assets by firms. Even the value of ROE is negative; the values confirm the critical aspects already represented in the ROA results, mainly due to the dynamics of net income of companies.

This result has very significant strategic implications, since it indicates a negative return on equity; values are primarily influenced by the net income dynamics of firms: 30.25% of the sample has a negative net income, with a negative average of 55,594 th. Euros. Instead, net income calculated only for firms with positive values is equal to 2,854 th Euros. Furthermore, the high values of negative ROE are due to the low level of firms' capitalization. Discrepancies in the signs of ROA and ROE in three of the years (2010, 2011 e 2017) can be attributed to the fact that the ROE is calculated just for companies with a positive shareholder value, reducing the number of firms for which the average value of ROE is finally calculated. EBITDA and EBIT margin are rising, after the fall in the previous years.

CONCLUSIONS

Issues related to innovation financing, including the difficulty of attributing a reliable value to innovation itself, can be amplified by the size of the company: small and medium-sized innovative companies can heavily suffer from raising capital, and this is a brake on the development of the company. Problems related to the financing of innovative companies should be mitigated by specific regulatory measures aimed at favouring investments in these companies: in Italy, in 2015, it was introduced a specific entity that is the innovative SME, which benefit from particular facilitations, also about their access to financing and credit market.

The paper intended to study the Italian innovative SMEs, starting from main available statistics by the Italian Innovative Business Register. Data show that these companies are mainly limited liability companies, active in the service sector, based in Northern Italy. Firms are characterized by a low level of capitalization and value of production.

This evidence have been deepened through the financial ratio analysis of firms with available data in Orbis database by Bureau van Dijk for the period 2010-2017. The focus was on the financial structure and profitability of these companies. The results show a high level of indebtedness, confirming the literature that has long highlighted the strong dependence on credit from small and medium sized enterprises. This result is therefore explained by the dimensional factor not by the innovativeness of the company. Liquidity ratios are satisfactory, while profitability is not good. This last aspect can be explained by the macroeconomic context and also by the fact that innovation represents a medium-long term investment, which requires time to translate itself into profitable results for the firm. This paper contributes to the advancement of business and business-related science because it deepens the analysis on the effectiveness of specific measures for companies with a strong orientation towards innovation: both profitability and financial ratios are improving in the years following the introduction of incentives dedicated to innovative SMEs in Italy.

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