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# Managerial Education and Entrepreneurial Attitudes of Students: Is There a Link?

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## Managerial Education and Entrepreneurial Attitudes of Students: Is There a Link?

**Abstract:** The role of entrepreneurship over the last few decades has constantly been growing for a number of reasons. This is accompanied by a growing number of students choosing fields of study where entrepreneurship education is an indispensable part of the curriculum, such as business studies or management. Efficiency of entrepreneurship education, often measured by entrepreneurship intentions revealed by students, is examined in numerous papers. Only a handful of them, however, pay attention to differences between various fields of study. Those differences in entrepreneurial attitudes of students enrolled for different studies may possibly be a result of dissimilar impact of entrepreneurship education combined with their core education (science, art, business, etc.). It is also possible that those differences may come from the initial choice of the field of studies; supposedly students of management may be of a more entrepreneurial nature than their non-managerial counterparts and that is why they choose this field of studies. The authors of this article decided to fill in the existing gap by checking whether students-beginners enrolled for management studies are in fact more entrepreneurial than students who enrolled onto other – non-managerial – fields of study.

**Key words:** management education, entrepreneurship education, entrepreneurial intentions, student entrepreneurship



## Introduction

The role of entrepreneurship in contemporary economies has never been as appreciated as it is now. Countless policies are implemented to increase the level of entrepreneurship, foster its development, popularise it, make it equally prevalent among men and women, etc. The number of scientific papers, journals, conferences – all dedicated to various aspects of entrepreneurship is constantly growing. Recognised by many as an important factor fostering economic growth, it has come to attention of policy makers especially in countries of emerging economies. Considerable amount of research considering entrepreneurship declares its usefulness for the state and educational institutions like presented by Jayalakshimi and Saranya [2015], Suuitaris, Zerbinati and Al-Laham [2007] or Bae, Qian, Miao and Fiet [2014].

This high demand for entrepreneurship is also reflected by the changes in higher education: universities respond to it by increasing enrolment onto business and management programmes as well as by incorporating entrepreneurship modules in many other curricula. The example of the UK shows that between 1997 and 2001 the number of enrolments onto postgraduate business and management programmes increased by more than 25 per cent. The number of MBA students exceeded 30 000, with 12 000 new graduates each year. In relative numbers it means that nearly one out of five postgraduate students in the UK studied business and management [Adcroft, Willis, Dhaliwal 2004].

Taking the above-mentioned data into account, it seems that the question whether entrepreneurship can be taught is answered in a positive way. Although many scholars still argue about it, most agree that at least some aspects of entrepreneurship can be taught [Henry, Hill, Leitch 2005]. Furthermore, there are more and more empirical experiments regarding the subject and most of them tend to support the thesis [Kantor 2013].

Certainly, entrepreneurship can be taught, but in the more general view a far more profound question is actually whether it can be learnt. In this paper the authors investigate the question whether it is the matter of managerial education that makes students allegedly more likely to set up and run own business or perhaps those who are more likely to do it choose managerial education in order to help them to carry out their entrepreneurial plans. To answer this question, students-beginners enrolled for managerial and non-managerial undergraduate programmes at the Faculty of Economics and Management, Gdańsk University of Technology have been examined.



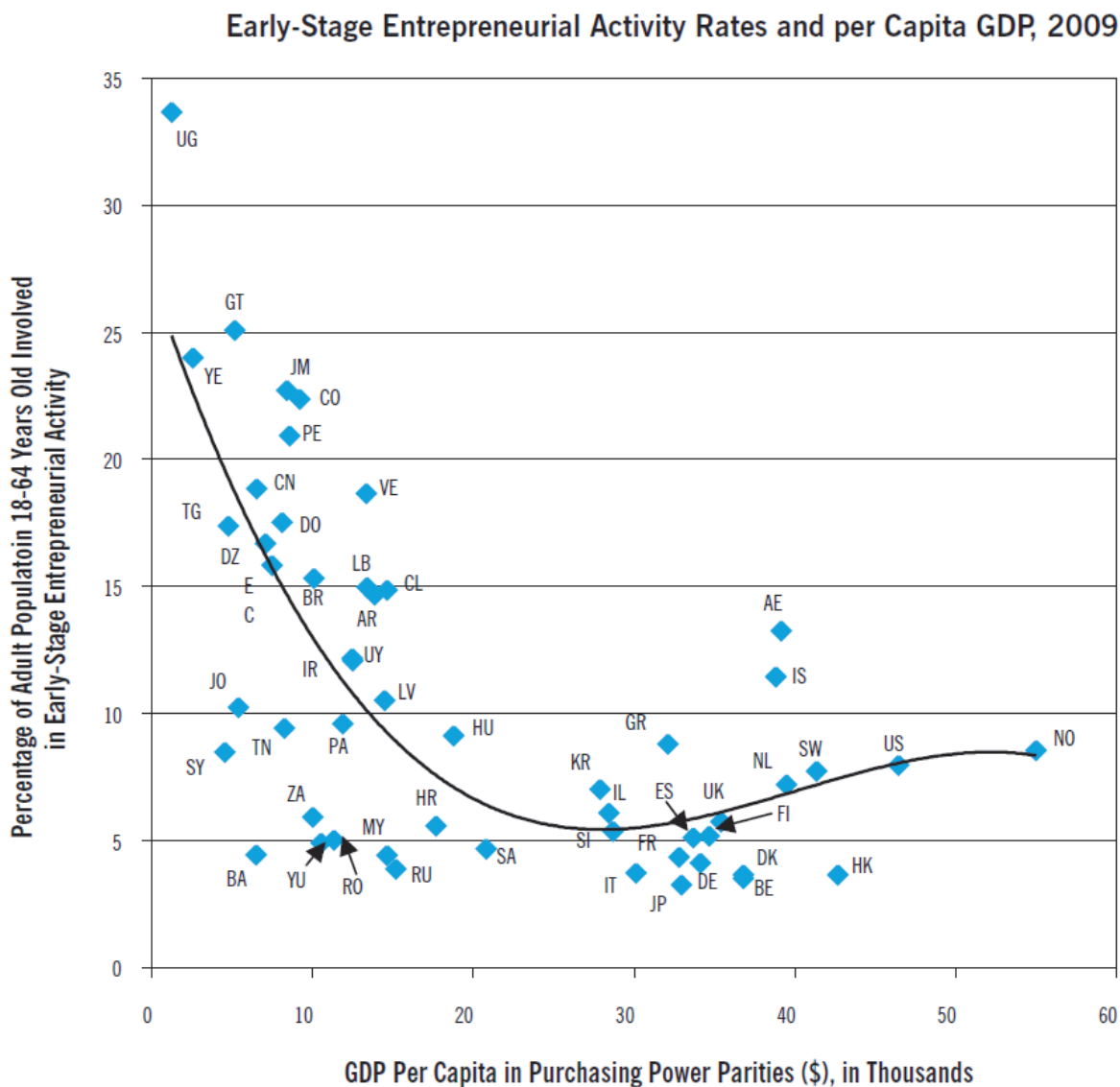
## **Managerial and entrepreneurial economy**

This ever-growing interest in managerial education and entrepreneurship can be explained in many ways. One of them is linked to the idea of a broad transformation from managerial economy to entrepreneurial economy, often perceived as a reorientation from managerial to entrepreneurial capitalism. This shift is characterised by three major changes [Acs, Szerb 2007, p. 110]:

- growing importance of new enterprises offering new products and services to the market, as well as increasing importance of foreign companies expanding into branches traditionally occupied by domestic businesses;
- pushing out bureaucratic structures by market and businesses, visible as flattening organisational structures in large enterprises to increase their elasticity and agility and also privatisation of some state-operated domains such as health care or education;
- changes in innovations: instead of typical for managerial capitalism incremental innovations and improvements, useful for developing lines of products, entrepreneurial capitalism is based on radical innovations, developed from breaking-through technologies that challenge traditional ways of thinking. Large enterprises, deeply rooted in managerial capitalism are still needed for mass production, but these are relatively small and very dynamic businesses led by visionary entrepreneurs that create new solutions and technologies, later adopted by their large counterparts.

The concept of such transformation was further developed by Audrestch and Thurik [2000, 2001] and described as a complex process conducted in fourteen dimensions in four major areas [Audrestch, Thurik 2004]. The growing role of entrepreneurship was also emphasised by GEM researchers, who tried to investigate the relation between entrepreneurship (measured with TEA – Total early-stage Entrepreneurial Activity Rate) and the level of economic development. The results showing a U-shaped relation between those variables suggested that economies based on innovations (the ones with the highest GDP per capita PPP) may require higher rate of entrepreneurship than economies based on efficiency. In this view, economic growth is even more dependent on entrepreneurship in countries that are already economically developed.

Graph 1. U-shaped relation between the level of economic growth and entrepreneurship



Source: Bosma, Jones, Autio, Levie 2008.

It should be stated here that there are still serious doubts with regard to the actual demand for entrepreneurship. Subsequent editions of GEM did not provide support for the U-shaped relation between economic development and entrepreneurship rate and the L-shaped relation is at least equally possible. Some researchers warn against too much emphasis put on entrepreneurship support. "This is bad public policy. Encouraging more and more people to start businesses won't enhance economic growth or create a lot of jobs because start-ups, in general, aren't the source of our economic vitality or job creation." [Shane 2009, p. 142]. But even if the need for entrepreneurship is overe-

stimated, managerial education remains an important field and entrepreneurship is an indispensable ingredient of it.

Even if managerial education is treated as inseparable with entrepreneurship in case of the majority of curricula, there are still doubts whether managerial education really develops entrepreneurial spirit of students. Dean A. Shepherd and Evan J. Douglas [1997] argue that most of universities which offer entrepreneurship courses fail to recognise the importance and peculiarity of such subjects. While the common approach is to treat entrepreneurship courses merely as a tool for merging functional parts taught at other courses, more attention should be put to “awakening and enhancing” the entrepreneurial spirit of students which is undoubtedly needed at the highest managerial level involved in making strategic decisions [Shepherd, Douglas 1997]. Such deliberations indicate the need to further investigate the connection between managerial education and entrepreneurship in order to answer the question whether the former really develops the latter.

## **Managerial education and entrepreneurship**

Although most of the studies on managerial education concern higher education students, it seems like only a handful of articles differentiate students' field of study. The majority of the cases are based solely on the students of either managerial, business or entrepreneurial studies like those by Nasr and Boujelbene [2014], Karlsson and Moberg [2013], Shinnar, Hsu, and Powell [2014]. Or on the contrary, the research is exclusively focused on technical and engineer studies, like by Souitaris, Zerbinati and Al-Laham [2007] or Mat, Maat and Mohd [2015]. The fact that only so few articles make discipline differentiation rises a question what might be the reason for such outcome.

One immediate explanation for that fact is that managerial education is usually associated with more intense and detailed entrepreneurial courses (e.g. management or business studies), while any non-managerial studies (e.g. technical, engineer, chemistry or even art studies) might but do not have to offer them. If they do, they are usually more basic or field-specific. As a natural implication, many scientists have focused on studying specifically entrepreneurship education. Hence, the focus on entrepreneurship courses rather than field of study seems logical. Numerous of publications concern relation of such education with entrepreneurial measures and their derivatives such as entrepreneurial intentions [Ibrahim et al. 2015], presence of a role model (or prior family exposure) [Karimi et al. 2013], entrepreneurial competencies [Ismail, Zain, Zuliha 2015], entrepreneurial self-efficacy (ESE) [Oyugi 2015] and others – for instance gender role [Karimi et al. 2013]. Most of them incorporate Theory of Planned Behaviour (TPB) as their theoretical research basis e.g. Carr, Sequeira [2007], Kuttim, Kallaste, Venesaar and Kiis [2014],



Zhang, Wang, Owen [2015]. However, in order to find out potential other reasons for the lack of discipline differentiation let us briefly analyse the articles which do make such distinction.

There exists a conventional wisdom that entrepreneurial education is positively correlated with entrepreneurial intentions. This is actually scientifically proven in many studies i.a. Nasr, Boujelbene [2014] or Kuttim, Kallaste, Venesaar, Kiis [2014]. All of the following works differentiate students by field of study.

The work by Murgesan and Jayavelu (2015) uses Theory of Planned Behaviour (TPB) as the theoretical basis for their research testing the impact of entrepreneurship education on students' entrepreneurial attitudes. The authors group 450 students into four categories: business (representing managerial education) and three others – engineering, arts and science students (representing non-managerial studies). The study include pre-post setting which is gaining popularity in research of entrepreneurship attitudes i.a. Karlsson, Moberg [2013], Shinnar, Hsu, Powell [2014], Ismail, Zain, Zulihar [2015]. The result of their study is that mean values for all measured variables increased due to the entrepreneurship education. However, what is worth noticing is the fact that the mean difference value in all variables is significantly higher among students of managerial studies (managerial education). It certainly suggests a difference in characteristics of these students.

Another work which also incorporates TPB is the research by Maresch, Harms, Kailer and Wimmer-Wurm [2016]. They point out that it has already been proven that entrepreneurial education influences entrepreneurial intentions, however, rarely the context is taken into account. Hence, they confront two groups of students: business studies students (managerial) versus science and engineering students (non-managerial). The main conclusion of their work is that even though entrepreneurial education is effective for both groups, entrepreneurial intentions seems to be negatively affected by subjective norms among non-managerial students which show another discrepancy between students with regard to entrepreneurship attitudes.

The research in similar environment to ours has been done by Yasin, Mahmood and Jaafar [2011] at Malaysian Polytechnic. They divided students into two groups, one of technical and the second of non-technical studies. One of the main conclusion of the paper is that non-technical students were characterised by higher entrepreneurial intention than their colleagues of non-technical studies. Furthermore, students form the technical group indicated that they are not willing to become entrepreneurs immediately after studies. Again, this time with another grouping, the differences between students can be observed.

The comparative analysis study from Ethiopia performed by Dugassa Tessema Gerba [2012] compares business management students (managerial) and engineering stu-



dents. The result of the research is not surprising and states that business management students (who undergone entrepreneurship education) tend to be characterised by higher entrepreneurial intention than engineering students (who did not undergo such education). However, what is worth noticing is that Ababa's study indicated that four of measured variables were significantly higher among male students than among female. Moreover, he concludes that according to his research prior family exposure had no significant impact on entrepreneurial intentions. This is contrary to some conclusions from the work by Karimi et al. [2013] who investigated role models and gender influences. Hence, the context and differentiation of the groups seem to play an important role in entrepreneurship attitudes.

Chukuakadibia, de Villiers and Pinto [2016] measured entrepreneurial intention of 238 students of business and non-business related studies. The significant difference is found between the groups and the suggestion to adapt entrepreneurial education to the characteristics of the group is made.

Once again on the basis of Theory of Planned Behaviour, the work by Zhang, Duysters and Cloudt [2014] shows correlation between entrepreneurship education and entrepreneurial intent by measuring several variables among 494 students from both technological and non-technological universities. The conclusion is made that males and students from technical universities are characterised by higher entrepreneurial intention than females and students from non-technical universities. The study also concerns role models and other important variables.

The last example is somewhat peculiar due to the fact that it tests special case of entrepreneurial intention namely cyber entrepreneurial intention. Regardless of the specific nature of this notion, the conclusion in the study is made that there exists a disciplinary difference between IT-related and non-IT related students when it comes to cyber entrepreneurial intention.

Having presented the examples of entrepreneurial intention studies which differentiate the fields of study and expertise of students, it is now clear that significant differences between students with regard to their discipline of studies might appear and this contextuality is worth investigating. The above analysis shows that there certainly exists a research gap concerning the impact of managerial education and students' entrepreneurial attitudes especially while taking into account the choice of studies. Hence, the question arises whether the choice made by young people either to choose managerial or non-managerial studies is anyhow related to their prior-to-studies entrepreneurial attitudes. Intuitively one might think that there must be. That is the reason why in our research students are differentiated by two types of studies – managerial and non-managerial.





## Methodology, research sample and results

The required data was collected with the use of a questionnaire which was administered to first year undergraduate students of the Faculty of Management and Economics, Gdańsk University of Technology. This research has been carried out within the framework of SEAS (Survey on Entrepreneurial Attitudes of Students) which is a longitudinal research programme, started in 2008.

Demographical data was limited to gender and origin (big urban agglomeration, small and medium-sized towns and villages). The questionnaire tested students for their self-efficacy (entrepreneurial self-efficacy and student-related self-efficacy), role model presence (prior family exposure), entrepreneurial self-perception, and entrepreneurial intention.

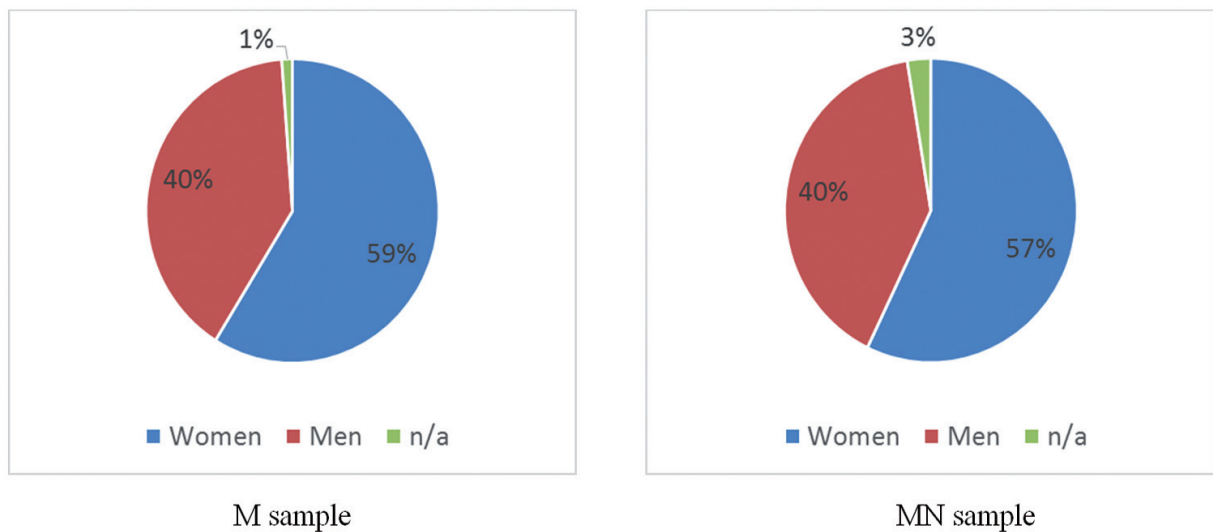
Entrepreneurial self-efficacy (ESE) was tested using one item and student self-efficacy (SSE) was examined with the use of four items. In both cases five point Likert scale was employed and this is the usual way of measuring both types of self-efficacy in the SEAS programme. The respondents were also asked about their prior exposure to entrepreneurial activities performed by members of their family (parents, grandparents, siblings, other relatives and friends), as they may pose a role model of an entrepreneur for the students. Additionally, the students who confirmed their exposure to entrepreneurial activities were asked whether they helped running this business. Five point Likert scale was also used for measuring entrepreneurial self-perception. Lastly, the students were asked about their entrepreneurial intentions in terms of their plans to set up own business.

In the research two samples were formed. The first one included those studying Engineering Management (managerial education – “M sample”). The other one was composed of students enrolled for two programmes: European Studies and Econometrics & IT (non-managerial education – “NM sample”). The total number of respondents was 247 with 170 belonging to the M sample and 77 to the NM sample.

Substantial differences between both samples in terms of their demographical features were not expected. Traditionally, the Faculty of Management and Economics is frequently attended by female students more than other faculties of Gdańsk University of Technology. And indeed, gender proportions remain similar in both sample with roughly 40% of men and 60% of women, as can be seen in graph 2.



**Graph 2. Gender composition of the examined samples ( $\chi^2$  p-value=0,7092)**



Source: own calculations based on research results.

Slight differences with regard to students' origin could be spotted, with more students in M sample coming from villages (28% vs. 20% in NM sample) and a greater share of 3-City residents in the NM sample (40% as contrasted with 28% in the M sample). Those differences, shown in table 1., are yet statistically insignificant.

**Table 1. Students' origin in the examined samples ( $\chi^2$  p-value=0,1538)**

Origin (place of living before starting studies)	M sample		NM sample		Total:
	Count	Percentage	Count	Percentage	
3-City agglomeration (Gdańsk, Sopot, Gdynia)	47	28%	31	40%	78
Small and medium-sized towns	73	43%	31	40%	104
Villages	48	28%	15	20%	63
No answer	2	1%	0	0%	2
<b>Total:</b>	<b>170</b>	<b>100%</b>	<b>77</b>	<b>100%</b>	<b>247</b>

Source: own calculations based on research results.

Unlike with demographical features, visible differences with regard to other variables examined in our research visible differences were expected, the first one being entrepreneurial self-efficacy (ESE). As one may have expected, ESE is more prevalent

among those enrolled for management studies (see Table 2.), but the difference is again statistically insignificant<sup>1</sup>.

**Table 2. Entrepreneurial self-efficacy in the examined samples ( $\chi^2$  p-value=0,2784)**

Entrepreneurial self-efficacy:	M sample		NM sample		Total:
No	67	39%	36	47%	103
Yes	103	61%	41	53%	144
Total:	170	100%	77	100%	247

Source: own calculations based on research results.

Prior exposure to entrepreneurial activities seems to be virtually the same in both samples. Approximately every fifth student knows no-one running own business. The major sources of exposure to entrepreneurial activities remain parents, relatives and friends to a similar extent in both groups<sup>2</sup>. This first source – parents – are probably the most valuable in terms of potential role model for the students<sup>3</sup>.

**Table 3. Prior exposure to entrepreneurial activities – knowledge of an entrepreneur**

Knowledge of someone running own business:	M sample		NM sample		Total:	
None	35	21%	13	17%	48	19%
Parents	56	33%	28	36%	84	34%
Siblings	10	6%	3	4%	13	5%
Grandparents	8	5%	1	1%	9	4%

<sup>1</sup> It should be noted here that with regard to SSE (student self-efficacy) there was absolutely no difference between both samples: 21% of students were not characterised by SSE.

<sup>2</sup> P-values were calculated separately for each category. In all cases the observed differences proved to be insignificant.

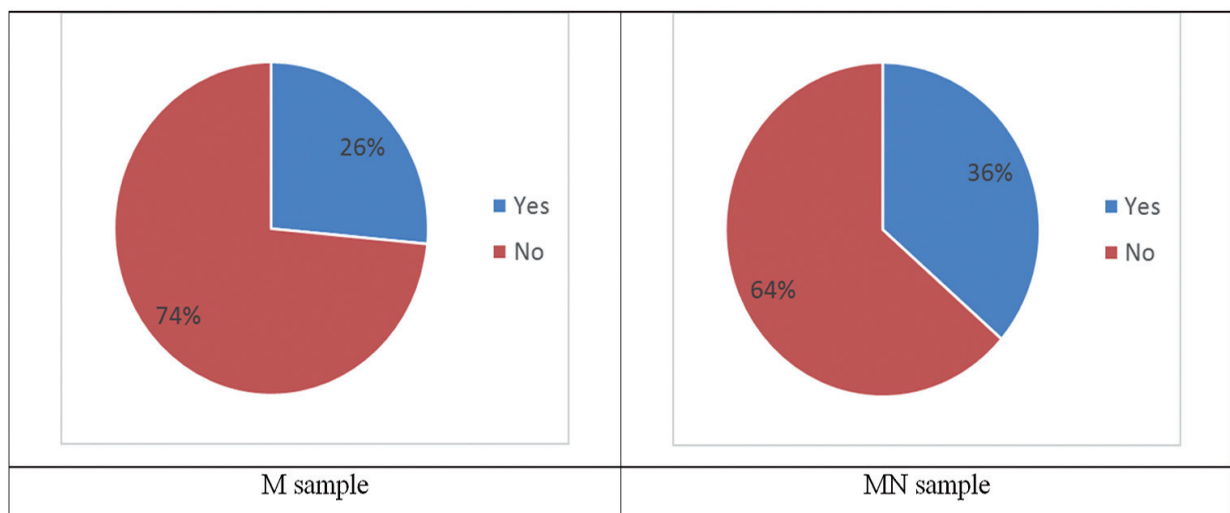
<sup>3</sup> This view can be possibly challenged, if parents are not particularly satisfied with being business owner. This may be the case if they belong to necessity-driven entrepreneurs. Unfortunately, it was impossible to verify this; it was not possible to collect reliable data on parents being necessity- or opportunity-driven entrepreneurs by asking this question to the students. Virtually all answers indicated that parents are opportunity-driven entrepreneurs, which seems unlikely.

Relatives	67	39%	29	38%	96	39%
Friends	62	36%	29	38%	91	37%

Source: own calculations based on research results.

Taking into account the fact that roughly 80% of respondents know someone running own business, the share of those who were involved in some kind of help in business operations seems to be relatively small in both samples – see Graph 3.

**Graph 3. Prior exposure to entrepreneurial activities – help in running a business ( $\chi^2$  p-value=0,1144)**



Source: own calculations based on research results.

What is surprising, this share is lower in the M sample (about a quarter). One may have expected that management students will be more interested in such participation in business activities. In the other sample more than one third had this kind of experience. Yet the difference remains statistically insignificant.

Insignificant difference was also noticed when it comes to entrepreneurial self-perception. The majority of students, when asked whether they feel entrepreneurial, tends to confirm that. The share of those with positive entrepreneurial self-perception is higher among management students (the M sample), but the difference in comparison with their non-management counterparts is too small to matter.

**Table 4. Entrepreneurial self-perception in the examined samples ( $\chi^2$  p-value=0,0925)**

Entrepreneurial self-perception:	M sample		NM sample		Total:
Negative	50	29%	31	40%	81
Positive	120	71%	46	60%	166
Total:	170	100%	77	100%	247

Source: own calculations based on research results.

There is a similar pattern when looking at entrepreneurial intentions. This is probably the most unexpected finding in our study. There is hardly any difference between management and non-management students as far as plans to set up own business are concerned. There were two students claiming they already had their businesses and both of them belonged to the M sample, but – again – it seems not to be enough to make a real difference.

**Table 5. Entrepreneurial intentions in the examined samples ( $\chi^2$  p-value=0,8192)**

Plans to set up own business:	M sample		NM sample		Total:
Already have	2	1%	0	0%	2
Yes	79	47%	35	45%	114
No	89	52%	42	55%	131

Source: own calculations based on research results.

## Conclusions

In the literature it is not very common to investigate entrepreneurial attitudes of students-beginners. Most of research try to look at efficiency of entrepreneurial education (or – more broadly management education) and hence they examine students either before graduation or after their entrepreneurship course or module to see and evaluate its impact.

It has been decided to take another perspective and look at students choosing different types of education within the same university faculty. It seemed obvious that different interests and inclinations, leading to different choices as far as the subject of studying is concerned, should be reflected by differences in attitudes, personal experiences regarding entrepreneurship, and last, but not least – entrepreneurial intentions. Following this reasoning, managerial students were expected to be significantly more enterprising in most (if not every) aspects examined. Surprisingly, they were not. Small dif-

ferences we found were sometimes of the expected nature, sometimes contrary to our expectations, but every time too small to matter. We are eager to continue our observations to see what differences in entrepreneurial attitudes between those two samples can be discovered upon their graduation. The choice of the field of study made by our students does not seem to be linked with their sense of entrepreneurship. If upon their graduation they would differ significantly with regard to their entrepreneurial attitudes, then – with a bit of an irony – we can say that university education makes a difference.

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