

Is it worth for bachelor graduates to diversify study programme for master level?

To diversify
study
programme for
master level

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Abstract

Purpose – The purpose of this paper is to add supplement to the theory of human capital with a less researched aspect: diversification possibilities of the professional profile. Our empirical analysis tested the research question, whether there is a significant difference between diversificational and specialist career strategies in the BA-MA transition based on labour market data on salaries and time of getting employment.

Design/methodology/approach – Present study analyses data from the Graduate Career Tracking System from 2011 to 2015 and the Integrated Administrative Databases from 2017. Graduates of master's courses were divided and compared in three groups: generalists, specialists and field changers. To evaluate career strategies the measurement of success was based on salaries and the time taken to get jobs.

Findings – The analysis showed that there are visible differences between the results of the three groups regarding factors of employment, so at the time of reaching the absolutorium a lower rate of major subject changers are employed, while field changers get jobs significantly faster. Based on net salaries we could not reveal a difference between major subject retainers and changers, while field changers earn significantly more.

Practical implications – Specialists (major subject retainers) have jobs that match with their degree and specialty outstandingly, field changers have notably weaker matches, while major subject changers differ only minimally. Considering this it may be due to distorted perception that specialists think the least that their master's studies are essential for the proper execution of their jobs.

Originality/value – In the literature review we found a research gap: Although there is a large number of excellent works analysing the effects of education on wages (salary curve) and career, but only a few of them investigate the impact of the professional portfolio (diversification or specialisation). The novelty of our research is that we developed a new methodology to test this question on example of the Hungarian students of business and economics focused.

Keywords Higher education, Graduate salaries, Career opportunities, BA-MA transition, Specialisation, Diversification of study field

Paper type Research paper

1. Introduction

Present study tests career strategies among Hungarian students of business and economics based on labour market data and facts. Our initial qualitative research with focus groups made it clear that there is a popular assumption among students regarding the further study of BA graduates in a master's programme. Although many take employment after completing their bachelor's studies and do not return for a master's, those who go on studying are mainly guided by two beliefs: either they deepen the knowledge they acquired during

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their undergraduate studies or they choose to widen their portfolios and will have the potential to get jobs in two fields on the labour market. Our focus group questionnaire supported the latter hypothesis. Since there is an increasing significance of big data academic and leaning analytics in higher education (Chaurasia *et al.*, 2018), we decided to test the hypothesis on a large number national database in Hungary with quantitative methods.

Obviously, other aspects can lead to diversification as well, in addition to the narrowly defined labour market-related effects. These push-and-pull (compelling and incentive) factors influence people on individual and social levels, too. For instance, the following non-labour-market-related reasons can be considered.

- (1) Career-related individual factors: openness to novelty, need for retraining due to individual or social crisis situations, expectations from family, creating a conscious career portfolio due to security aspirations, redesign of individual career, redefining the direction of a wrong choice (e.g. interests or strengths do not match the BA education), career change caused by a mid-life crisis, personal values (diverse knowledge is a value), the need to broaden attitude (observe topics from alternate perspectives), the individual ambitions, the need for self-improvement, the hobbies.
- (2) Social factors: social status, achieving higher prestige in the intellectual social stratum, enhancing social utility and responsibility, legislative and technological changes, developing collaborative and transversal competencies (to understand other mind-sets), joining specific groups and networks, national cultural values (whether a multidisciplinary degree is natural in the given society or not).
- (3) Educational management factors: life-long-learning, international opportunities (Bologna process), diversity of education abroad, increasing interdisciplinarity and flexible shifting between fields, improving creativity, increasing uniqueness and irreplaceability.

To establish the research we introduce relevant domestic and international theories (the approach of education – economics and labour market to wage curves, career strategies), most recent related surveys, and then we define our hypotheses during the discussion of methodology and finally we draw our conclusion based on the results.

2. The conceptional foundation of major subject diversification strategy – literature review

The topic outlined in the introduction regarding degree levels was often in the centre of labour market (wage related) examination, however, the field specific analysis of the transition from bachelor's to master's level gives an opportunity to learn about rarely researched occurrences. This is also supported by Veroszta (2014, p. 113):

detailed analysis of field-related characteristics linked to labour market aspect is valid by all means. The explanatory models clearly showed that the study field, used as a control variable, had a significant role in the development of income motivations and expectations. The exploration of study field characteristics and relationship to income deserves a separate analysis.

The goal of our study is to contribute to Hungarian and international empirical results by analysing career strategies related to the field of study.

2.1 Salary curves in relation to the completion of bachelor's and master's degree

Further on we discuss the differences and transition between bachelor's and master's courses. There is an increasing attention on the students' subjective expectations of labour market,

consequently not only the salary appears as an influencing factor in research models but also the content of work, the prestige, the conditions and environment of the job and other non-material incentives. (Schomburg and Teichler, 2006; Mora *et al.*, 2005; Teichler, 1999; Fiorito and Dauffenbach, 1982; Montmarquette *et al.*, 2002; Zafar, 2009)

In the transition from BA to MA the students' major subject diversification career strategies represent a case of investment theory. A group of master's students believe that in the future they will be more successful in the labour market than specialists, if in their MA course they gain insight into other field(s) (*diversification*) instead of deepening their knowledge in their previous field (*specialisation*).

The theory of human capital showed that people may invest in developing their productivity, thus the market value of their labour, by training and education (Becker, 1975; Schultz, 1971). Based on the theory of investment those enrolled in master's courses can expect to be hired faster and to gain higher income, providing the return on the investment into their education. Regarding the present study we can assume that students aim to secure the return on their time, effort and money invested in their master's degree by the diversification of study field.

Major subject diversification strategy of students can be interpreted as an inverse (voluntary) selection theory method, a deliberate self-selection: the advantage of different degree subjects is that if they cannot get a job with one they will succeed with the other, thus major subject diversification can act as a protective net, "they have better chances of staying in the net", or that is their expectation. Besides with the combination of the two degree major subjects makes them unique, thus increases their rarity and makes them harder to substitute, so they will be able to get jobs with special requirements.

Based on Chevalier's (2011) model examining the relationship between salary differences and labour market adaptations, major subject diversification on the one hand increases the chance of students getting employment that is the closest to their field of interest, aspirations and career goals. On the other hand it also increases the probability of them not utilising a part of their diversified portfolio in their job, thus one of their degrees (BA or MA if they are in different major subjects) will be more dominant, if the combination of their degrees is not especially required by the employers.

2.2 Motivations behind career strategies, decision mechanisms and career tracking

When comparing different study fields, the research on study paths in business and economics revealed that students in these fields tend to have a managerial attitude. It is evident that student of business and economics are primarily guided by income return in their career decisions. It can also be concluded that those thinking on a longer term see greater chances for a later promotion through diversified master's studies.

Career choices and orientation of individuals are not determinative in modern society, in other words it does not necessarily follow a direction marked by the family and it cannot be regarded as definitive. Gachino and Worku (2019, p. 1746.) state:

students (...) are automatically assumed to learn and accumulate pertinent capacity, which would then enable them to compete in the business world or pursue further studies in future. (...) The empirical results generated indicate that demographic characteristics such as age, nationality and gender had a positive effect on learning.

Further empirical research has shown that the choice of a university depends on the advices from family, friends, teachers, reputation and job prospects (Kusumawati *et al.*, 2019). According to the theoretical model of Othman *et al.* (2019) five important main aspects can be identified as an influencing factor for the students' decision about the selection and enrolment; these are the class and lecturer factor, the time-space factor, the ease and comfort factor, the course mate factor and the commitment factor. This "selection is very critical

decision for students as it would reflect students expected outcome for their future career directions” (Othman *et al.*, 2019, p. 587).

In a theoretical framework the aforementioned underpins the Ajzen model, according to which the strategies of recent graduates in business and economics are simultaneously guided by expectations regarding the probable output of their behaviour (*behavioural beliefs*), the consideration of the expectation of others (*normative beliefs*), and expectations regarding the supporting and inhibiting factors of their behaviour (*control beliefs*) (Ajzen, 2006). Decision-making mechanisms in the change of study field and/or specialty can be explained by the maximisation of expected utility of their behaviour (Friedman and Savage, 1952). For the students who are less conscious the *reference point* is the example of other students and they follow their peers. Explanation to this is also provided by sociocognitive theories, as Bandura’s (1999) *observational social learning theory*: not only internal motivational forces and external rewards and punishments influence decisions, but also the observation of other people’s experiences and expectations based on them. The career strategies of peers as references serve as primary role models to them, often showing unreal expectations, because these expectations are not underpinned by empirical data. The constant interaction between the cognition and behaviour of an individual and his environment is called *reciprocal determinism* by Bandura. Changing study fields when starting a master’s course can, however, reduce labour market uncertainty, which adds further motivation to a diversified career strategy.

To improve their labour market success students create their career portfolio, which puts them into a multidimensional complex decision-making situation, this way characteristic solution patterns are observed among master’s students in business and economics. The most important factors of major subject decision are expected salary, prestige, the institution offering the course and difficulty of passing. This ranking is also valid for those planning a career in business and economics. Conscious students gather relevant information and make a decision based on this. Figure 1 shows the process leading to the decision about major subject diversification.

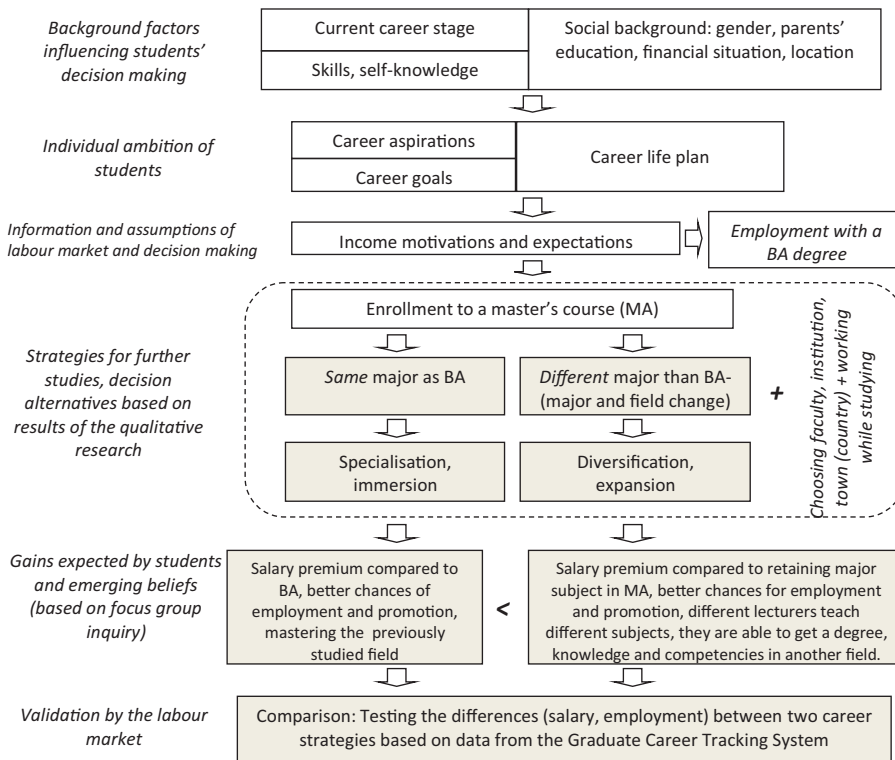
There are some special cases, when the preferences can be influenced by other additional factors, e. g. under crisis six different motives could be found in enrolling master study, and these are self-motives, professional motives, social motives, academics motives, lack of vision and delaying military service (Khalifa *et al.*, 2018).

Besides monetary and career-related incentives the area of interest itself can also serve as a motivation to change: one is interested in a different field, so changes major subject. Another case is when someone does not pursue his master’s studies directly after completing his undergraduate degree but starts working first at an organisation and problems arise.

2.3 Present reputation of master’s courses and related international research

Mass higher education can adapt to the expectations of the labour market if the BA level becomes general education (“pre-training”), and it is not a problem if the time or invested energy is not utilized. When the employee would like to find a matching profession, a second education cycle must be performed on the master level (Kozma and Polónyi, 2018).

The European Higher Education Area is a step-by-step, interdependent system, i.e. there is an assumption of the descriptors (knowledge, skills, competence) being stronger at the vertically higher educational levels. In all countries, but especially in Eastern Europe, it can be seen that managing the paradigm shift caused challenges for professors, and they were unprepared. With tight deadlines, the training systems and curricula of BA courses had to be designed without knowing anything about MA level continuation, and if so, how large extent and what it would be like. The BA level curriculum was not developed in a way that it was possible to think through what should be included and what should appear only on the next level. “Educating managers in higher education has the challenge of combining academic



Key: Grey boxes represent the subject of our empirical research, while white ones stand for the secondary research of literature. BA = bachelor's course; MA = master's course. Dotted line signifies the set of decision alternatives

Source(s): Authors' own construction

Figure 1. Conceptual foundation of the empirical testing of major subject diversification strategies – Decision processes of students

requirements with the practical competence development needs of the business world” (Jakubik, 2019, 434). The professors tried to squeeze as much as possible into the BA to keep their classes. Because of these factors, the education policy and higher education institutions have not given a sound solution to the separation of the educational levels, which also plays a significant role in BA-MA transitions.

In the 3 + 2 years BA-MA system generated by the Bologna process the main aims of undergraduate courses are to teach lifelong learning, to prepare students for postgraduate studies, to help entry into the labour market, and to train students for European citizenship (international mobility). Adaptation to the labour market and the content of courses are important regarding the BA-MA transition. Besides study field selection according to individual interests is also decisive.

It can be stated that from an international viewpoint examining the labour market aspects of master's courses is relevant in many countries (Table 1). The individual returns of master's education (from students' perspective) have been studied from various angles, and also their effect on income curve for example in the USA (Engbom and Moser, 2017; Hamlen and Hamlen, 2016; Lindsey and Machin, 2016; Bardhan et al., 2013; Stevenson, 2016; Zhao et al., 2006), in Germany (Silvester et al., 2014; Mertens and Rübken, 2013), in Canada (Ferrer and

Source	Main result, conclusion of research, scope of analysis	Country
Engbom and Moser (2017), Hamlen and Hamlen (2016)	A degree in higher education means a high salary premium already at the start in the U.S. labour market, but it is not clear whether it is due to the development of human capital or to selection theory. Both undergraduate and graduate degrees have positive returns in the labour market, doctorates only to a smaller extent. The value of the degree comes from "opening the doors" of high salary jobs	USA
Lindey and Machin (2016)	Although the rate of employees with a master's degree has risen (close to 15% in the USA), they are still the ones with the highest salary premium, that has further increased due to high requirements (both skills and education) in companies	USA
Bardhan <i>et al.</i> (2013)	There is significant lagging regarding jobs and degrees. Higher education reacts inflexibly to changes in work force demand in the short term and adapts to requirements only moderately in the long term. It would be important to improve the adaptability of universities through developing unique training programs and generating the optimal mix of degrees	USA
Stevenson (2016)	The most lucrative fields of higher education in the USA are business, medical and legal education. The higher return of higher level degree originates from higher responsibility and decision autonomy. Tuition fees of courses have higher returns in case of institutions with higher ranking. A master's degree can serve as a tool for career change if one regrets the decision on his undergraduate degree	USA
Zhao <i>et al.</i> (2006)	Dubious opinions regarding the reputation of master's courses were tested through empirical research, but it was established that graduates, who performed better in problem solving, leadership, group working and cooperation, had higher annual income and better promotion options in both short and long term	USA
Silvester <i>et al.</i> (2014)	Master's students in Germany expect significant advantage as a result of their degree: higher social status, finding employment easier, broader network and higher income	Germany
Mertens and Röbbken (2013)	The return on education will be at least 8% depending on country and institution, but it can be as high as 22.6%. Income is not solely dependent on vertical levels of education, but on a horizontal specialty field differentiation as well, since graduates will be adapt to different employer requirements this way, which improves their productivity. This is particularly true for careers in business, economics and law, doctoral degrees can further increase income	Germany
Ferrer and Menendez (2014)	Canadian master's graduates have an income advantage, it is especially true for those finding employment after their undergraduate studies and returned to study for their master's degree later with work experience	Canada
Hartog <i>et al.</i> (2014)	In the decision of Chinese students, whether to study further or find employment, income risk does not play a role	China
Gray (2008)	The whole concept of master's education should be reconsidered taking the wide variety of students' careers and age groups into account. Experienced professionals need more specialised master's courses. The career prospects of younger students should be more focused on	UK

Table 1.
International research
on labour market
aspects of master's
education

(continued)

Source	Main result, conclusion of research, scope of analysis	Country
Maršíková (2015)	The income return of higher education graduates is positive, however the increase in the number of degree holders can create problems: the difference between skills, education required by employers and the actual supply of workforce, overqualification, underqualification. These imbalances in the labour market decrease income advantage thus the return on investment in education	Czech Republic
Cismas <i>et al.</i> (2016)	Training for lifelong learning that includes master's education also means to mentor and develop students' flexibility that broadens future career opportunities and the openness to mobility	Romania
Poladashvili (2018)	Holders of a master's degree have better problem solving skills and innovativity in a new and complex work environment related to their studies, where they can apply their skills in practice. The focus group survey revealed that students mainly started a master's course because of special employment and career opportunities (adaptation)	Bulgaria
Kume and Dhamo (2013)	Albanian employers doubt that the master's courses in the Bologna system would train higher quality employees than those before the reform. According to 53% of employers positive effect can be perceived in the long term, and 20% of them would not pay more for an MA graduate (compared to the old system of undivided undergraduate and graduate courses), 20% believe that the Bologna process worsened the quality of Albanian higher education	Albania

Source: Authors' own construction

Table 1.

Menendez, 2014); in China (Hartog *et al.*, 2014), in the UK (Gray, 2008); and in Central-Eastern Europe (Maršíková, 2015 Cismas *et al.*, 2016; Poladashvili, 2018; Kume & Dhamo, 2013); however, only a few investigate the aspects of the major subject. Overall it can be established that it is worth earning a master's degree in most countries, because it results in higher salary premium and better chances in finding employment.

3. Introduction to methodology, hypotheses and sample

The idea to our hypothesis came from a qualitative survey where the goal was to find out what decision making mechanisms final year undergraduate students go through to enrol to master's education. The survey, on which the research was based, was a focus group survey that we organised following the information event on master's courses in the Faculty of Business and Economics, University of Pécs (Hungary) in the spring semester of the academic year 2017/2018: With the participation of eight students we conducted a one and a half hour directed talk. Later the survey was repeated with master's students and the results were very similar.

The qualitative survey revealed that *a part of the students assumed that the change of major subject in master's course, in other words master major diversification would distinguish them in the labour market; therefore it would be a competitive advantage.* For example one would get hired faster, would be able to apply more knowledge and competency and have higher income than those who continue their studies in the field of their undergraduate studies. This assumption generates three groups of students:

- (1) Major subject retainers (specialists), who choose to deepen their knowledge in one major subject.

Table 2.
Gross salaries of
graduates of 2012/13
and 2014/15 based on
major subject change
(IAD data)

Major subject change/ Gross salary (HUF)	2012/13		2014/15		2014/15	
	May 2013 n	May 2014 Average	May 2015 n	May 2015 Average	May 2016 n	May 2016 Average
Major subject retainer	566	225,317	894	276,825	884	365,893
Major subject changer	422	236,684	643	286,118	638	394,797
Field changer	113	214,214	225	252,660	217	320,448
Total	1,101	228,534	1,762	277,131	1,719	372,824
Levene p	0.712	0.830	0.242	0.761	0.009	0.360
Anova p	0.182	0.011	0.005	0.002	0.781	0.492
Welch p	0.176	0.007	0.006	0.002	0.659	0.476

Note(s): Significant differences at a level of 95% are italicized in the table

Source(s): Authors' own construction based on Integrated Administrative Databases (IAD) 2017

-
- (2) Major subject changers (generalists), who believe in the diversification, by combining two different major subjects in their degrees.
 - (3) Field changers, who represent a special case of diversification, because they have similar motivations for choosing to study business for master's degree, but they obtained an undergraduate degree in a different field of study.

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The aim of the present study is to identify the three, previously defined, student groups and to test our hypotheses below:

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- H1.* Students who change major subjects (or fields) when starting a master's degree, gain a traceable competitive advantage in the labour market
- H1a.* Students who change major subjects (or fields) when starting a master's degree have significantly higher salaries within five years after graduation than those choosing the same subject for their master's studies.
- H1b.* Students who change major subjects (or fields) when starting a master's degree course gain employment significantly faster after graduation than those choosing the same major subject for their master's studies.

The data collection from the Integrated Administrative Databases (IAD) only contains students reaching absolutorium in the academic years of 2012/2013 and 2014/2015. In contrast to the data from the Graduate Career Tracking System (GCTS), it covers all graduates from all course types and levels. In connection with the IAD data we used the FIR data from the Office of Education and data tables from National Tax and Customs Administration of Hungary (NTCA). In the latter case only gross salaries could be assigned to graduates who were examined in every half year between May 2012 and May 2016. The base population was 57,727 people in the academic year of 2012/13 and 51,423 people in 2014/15. To provide a unified frame of comprehension we only considered data collected in May so further on we do not review data from November.

We applied the same logic to narrow down the data as with the Graduate Career Tracking System (GCTS) data, the only differences were that we did not have to clean data based on the data source previous education did not have to be cleaned and we based the age limit on the last year of NTCA data. After all we analysed the data of 1 806 (2012/13) and 703 (2014/15) graduates from master's courses in business and economics.

4. Results

Using the data of the GCTS we examined the differences between the three predefined groups. Finally we examined the differences in net salary of main job and work appreciation. Based on the results (Table 3) field changers earn significantly more (Anova p: 0.024 Levene p: 0.011 Welch p: 0.046), net 218,000 HUF, while there was not a big difference between study subject retainers and changers. Considering the appreciation of work only prestige of profession shows differences between groups, study subject changers value the social status of their profession 1.5 more than major subject retainers and 0.2 more than field changers.

We executed various analyses based on categories generated with the help of IAD. On the one hand we examined gross salaries based on major subject change regarding both grades at various points in time. It can be said that there is no difference in the initial time period between those who graduated in 2012/13. However, even in the following period (May 2014) a significant difference can be detected. Field changers earn significantly less than both specialists and major subject changers in business and economics. In this period there is no difference between major subject retainers (specialists) and changers. Two years after graduation (May 2015) major subject changers earned significantly more than specialists or field changers, however, there is no significant difference between specialists and field

Table 3.
Gross salaries of graduates in of 2012/13 and 2014/15 in business and economics based on major subject according to major subject change (IAD data)

Major subject change according to subjects/ Gross salary (HUF)	2012/13		2014/15		2014/15		2014/15		2014/15				
	May	Average	May	Average	May	Average	May	Average	May	Average			
Business nmmt.	Subject retainer	185	222,372	316	271,886	318	315,490	316	350,130	70	257,670	89	301,211
	Subject changer	137	219,681	223	271,051	232	349,013	221	408,686	53	260,001	64	328,875
	Total	322	221,227	539	271,541	550	329,630	537	374,228	123	258,674	153	312,783
Comm. Marketing	Subject retainer	84	196,892	136	265,020	133	290,608	124	341,752	23	304,054	34	322,900
	Subject changer	59	261,133	80	309,657	80	341,760	78	363,909	18	265,170	31	302,459
	Total	143	223,397	216	281,552	213	309,820	202	350,308	41	286,983	65	313,151
Intl. business	Subject retainer	39	252,002	58	310,244	62	386,858	62	392,298	19	329,029	24	344,161
	Subject changer	36	260,421	61	335,100	64	396,007	60	521,222	23	332,225	28	361,507
	Total	75	256,043	119	322,986	126	391,505	122	455,703	42	330,779	52	353,501
Finance account	Subject retainer	160	239,728	223	280,999	221	334,327	211	377,192	44	237,904	44	304,494
	Subject changer	17	204,423	37	209,921	40	266,343	41	292,587	46	249,978	64	311,318
	Total	177	236,337	260	270,884	261	323,908	252	363,427	90	244,075	108	308,538
Tourism hosp	Subject retainer	33	187,580	52	231,671	48	245,342	45	286,916	9	222,328	17	293,070
	Subject changer	54	229,852	79	286,149	84	365,816	82	376,545	9	204,405	10	222,851
	Total	87	213,818	131	264,524	132	322,007	127	344,787	18	213,367	27	267,063

Note(s): differences at a level of 95% are italicized in the table

Source(s): Authors' own construction based on the Integrated Administrative Databases 2017 (IAD)

changers. This means that studying in a business and economics master's course after an undergraduate degree in a different field levels off the advantages of specialisation, but cannot catch up with the synergies of having studied more aspects of business and economics. The same is valid for the last examined period (May 2016), so major subject changers earn significantly more, while there is no notable difference between field changers and major subject retainers.

Regarding those students who graduated in the academic year of 2014/15 we could only analyse two time periods due to the data collection. The analysis could not reveal any differences either in the starting period or one year later. Regarding graduates of 2012/13 the first year also reveals minimal differences. So it is probable that what the analysis showed in their case would be valid for the following time periods (two and three years later) regarding graduates of 2014/15 (Table 2).

Besides the general inquiry we examined different level groupings. Within this we assumed that for different undergraduate major subjects in business and economics careers with different income level can be identified. Due to the base population of the survey we can check this in the same structure as in the main inquiry for the following undergraduate major subjects: business and management, commerce and marketing, international business, finance and accounting, tourism and hospitality. The above undergraduate major subjects can be only taken by students of business and economics so only major subject retainers and changers can be examined. Our assumptions were validated: results are significantly different.

For graduates of 2014/15 there is no difference between the major subjects. However, the case of master's graduates of 2012/13 is a different one. For business and management graduates there are no differences in the initial period and one year later, it only develops two years later (May 2015) and grows dynamically in the third year.

Commerce and marketing studies show a different picture: there is already a difference in favour of major subject changers in the first year; however, it is not true for May 2014 and 2016. The only other significant difference can be seen two years later (May 2015). Therefore it can be assumed that the initial difference persisted (because the tendencies remain the same even in the statistically irrelevant years), major subject change or specialisation did not bring a substantial shift.

International business has different characteristics. There is only one period when gross salaries differed significantly (May 2016), but then graduates with a major subject changing strategy earned almost 130,000 HUF more in average.

The procession is just the opposite in case of finance and accounting students. It is true only in case of this major subject that specialisation, retaining the major subject is advantageous, as there is a significant and steady difference already in the first year after graduation for those who decided to specialise in this subject, even so that the difference was statistically not significant in May 2013. Regarding trends in this case it is also true that major subject retainers earn more.

Tourism and hospitality studies show the tendencies that we identified across all major subjects with the exception of finance and accounting. In May 2013 the difference was not yet manifested, but after that it was stabilized and major subject changing strategy became advantageous (Table 3).

5. Findings and conclusions

The main goal of our research was to add supplement to the theory of human capital with a less researched aspect: diversification possibilities of the professional profile. Our empirical analysis tested the research question, whether there is a significant difference between diversification and specialist career strategies in the BA-MA transition based on labour market data on salaries and time of getting employment.

The analysis of the GCTS databases showed that there are visible differences between the results of the three groups regarding factors of employment, so at the time of reaching the absolutorium a lower rate of major subject changers are employed, while field changers get jobs significantly faster. As to positions, there is a higher ratio of managers among field changers, but also non-professional employment is outstanding compared to the other two groups. These characteristics can be traced back to the fact that significantly more field changers work in the public sector.

Specialists (major subject retainers) have jobs that match with their degree and specialty outstandingly, field changers have notably weaker matches, while major subject changers differ only minimally. Considering this it may be due to distorted perception that specialists think the least that their master's studies are essential for the proper execution of their jobs.

Based on net salaries we could not reveal a difference between major subject retainers and changers, while field changers earn significantly more. Our analysis on the Integrated Administrative Databases showed that a master's degree in business and economics after an undergraduate degree in a different field provide the same advantage that major subject retainers achieve. Generally it can be stated that *in every period when there was a statistically significant difference, major subject changing career strategy came out most effective regarding gross salaries*. In major subject level examinations the same turned out to be true with the exception of two subjects. There was a visible difference regarding students with an undergraduate degree in commerce and marketing even in the first analysed period. The other exception was the case of finance and accounting undergraduate degree holders. For them the right strategy proved to be not the change but the retention of major subject, because they earned significantly more than major subject changers.

Based on the above we consider the statement to be true that in the transition between undergraduate and master's courses in regard to business and economics major subjects, the change of major subjects is the logical and rational choice of students in most cases, so we regard hypothesis H1a valid. As to H1b we could not reveal such difference based on data of the Graduate Career Tracking System, but in the future it is worth examining on the Integrated Administrative Databases as well.

6. Limitations and further directions of the research

In the research the following limitations have to be considered: detectable salary differences could have other reasons and major subject change cannot be traced back only to the above. It might be that a student changed major subjects without an aim of diversification but because he did not like the original major subject, lecturers, teaching methods or the student's skills and field of interest did not match, so modified his original plans. A further limitation is the distortions due to the characteristics of the two sets of data, as the subjective information of the GCTS and the limits of obtainable information elements in the objective state databases, that is the Integrated Administrative Databases. We could not filter those from the database who changed major subjects during their master's studies (from one major to another).

Our research was based on business and economics graduates (BA or MA), in the future it would be worth extending the analysis to other study fields and degrees. Our original goal was to compare the time periods before and after 2011, however, it can only be done with further research. Examining the institutional aspect is also important: in case of either specialists or generalists it is worth analysing whether those are more successful who gained their BA and MA degrees at the same university compared to those who changed institutions. Besides institution change study type (part time and full time) is also an important factor to be analysed, because in many cases following an undergraduate degree students decide to work (for example staying in the place of internship) and study on a master's course part time (Chavan and Carter, 2018), this way the start of their employment is not postponed, they gain professional experience while earning money and are able to connect their studies with their work.

In addition to the labour market factors, a series of other BA-MA transition-related decision-making influencing factors were listed in the introduction. From the perspective of fundamental social values, it is essential to mention the database of European Values Studies (EVS, 2019), which showed that for the Hungarian employees the most important work-related values are the good pay (income), the job security, and the interesting job (Borgulya and Hahn, 2013). The socio-demographic (and non-labour-market) impact of the diversification is that it pushes people towards big (university) cities instead of small population settlements. Consequently, it is worth informing potential higher education applicants about all these effects and factors influencing their choice about MA degree at university open days as well as in the last year of the high schools (orientation days).

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