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PATTERNS OF STUDENTS' EARNING ORIENTATIONS AND EXPECTATIONS

Abstract:

The paper investigates students' earning expectations in the context of different motivations towards graduation. Although income benefits of attaining a degree is a thoroughly investigated topic as well as the realization of student wage expectations (see for example, Dominitz and Manski (1996); Betts (1996); (Brunello et al. (2004); Wolter (2001) etc.) there is less emphasis on the earning expectations as a component of learning motivations. Therefore, the main purpose of the study is to define the role of income benefit between the different student expectations.
The paper applies explanatory models in order to respond three research questions. Firstly, we examine the position of students' wage orientation among other degree-related values (ie. income-oriented/not income oriented students) and explore its determinants. Secondly, the study analyze the background effects of students' earning expectations. However, unlike the approach of previous research the purpose of this analysis is not to explain the amount of expected income, but also to reveal the causes of differences between the evaluation of individual and average expected earnings (ie. subjective over-/underestimation). Thirdly, by creating a typology on the basis of wage orientations and subjective income-estimations the purpose of the paper is to explore the role of income presumption in students expectations.
The research is based on data from the Hungarian Student Survey, fielded in 2012. The institution based online student survey, carried out within the framework of Hungarian Career Tracking System, covers the full range of Hungarian students and contains the data of up to 40,000 person.

Keywords:

Students, earning expectation, motivation, higher education, degree

JEL Classification: I23, I24, I29

Major international and Hungarian research has dealt in detail with the relation between the acquisition of a degree and the individual's future income, with students' expectations of their prospective income and whether these expectations are justified. Of these factors, the income advantage of degree holders and the way students perceive this fact are easy to observe. This study intends to deal with the attitude of higher education students to their future income from a perspective other than the economic interpretation (the interpretation based on investments and return on investments). To this end, while dealing with students' attitude to their prospective income we extend the object of our examination to include – besides expectations, return on investments and the individual – motivations, values and the higher education system as well. For this purpose, we present various ways of interpretation and various aspects of examination in terms of motivations and expectations alike. We do not regard the theories involved in our research as competing ways of interpretation but as reference points that give information on certain dimensions of students' attitude to their future income.

We begin our analysis with the discussion of the theoretical differentiation of and research approaches to income-related motivations and expectations. Next, we review the possible interpretations of students' attitude to their future income; in the course of the creation of explanatory models, we adjust the operationalization of background variables to these interpretations. After the presentation of the research data, in the analytical phase we examine the effects of the factors that influence income-related motivations and expectations in the interpretation framework specified above, with binary logistic regression models. In the next step, we discuss the characteristics of students' categories created on the basis of a combination of income-related motivations and expectations, while identifying the relevant background factors with a multinomial logistic regression model. To close our analysis, we sum up the information we acquired about the multi-factor environment that determines students' attitude to their future income.

Income-related motivations

Our research focuses on individuals' expectations related to their prospective income after their entry to the labour market and on whether these expectations prove to be justified or not. Albeit the next section of our study discusses this aspect in great detail, first let us put the issue in a wider perspective and examine income-related motivations: in other words, the importance students attach to their future income as graduates. The introduction of income-related motivations into our analysis is expected to offer a wider perspective on the approach focused on the relationship between a degree and its future return on investments on the labor market. As a result of the massification of higher education, the relationship between the higher education and the labor market – and, along with it, the objective indicators that describe it – has become more significant (Bálint et al. 2006). The definition of the success of output on the basis of these objective factors (primarily the income, and the time required for finding employment) basically relies on the human capital theory (Becker 1975) and forms the basis of important research results in Hungary and in other countries alike (Galasi–Varga 2005). At the same time, greater attention is

being paid to the subjective components of the recent graduates' success on the labor market. It is assumed the graduates' expectations, their work orientation and their employment strategies are complex factors and, consequently, it is not only income that is subjected to analysis, but the content, social reputation and conditions of work as well (Schomburg–Teichler 2006; Mora & Vila–García–Aracil 2005). It is this complex relationship between higher education and work (Teichler 1999) that justifies our approach, which – in order to give an exact picture of students' attitude to their prospective income – includes the examination of not only expectations but motivations as well. In our research, we assume that some higher education students are inspired to acquire a degree by motivating factors other than their future income and that it contributes to our goal to categorize and examine students on the basis of this factor. Several researchers have dealt with these non-financial motivating factors affecting labor market expectations (see for example: Fiorito–Dauffenbach 1982; Montmarquette et al. 2006; Zafar 2009).

Our study seeks to shed light on the background factors that affect students' income-related motivations and to take into consideration possible frameworks of interpretation. To determine if students link the acquisition of a degree to the expectation of higher prospective incomes, our analysis offers two possible theoretical approach: (1) the theory of the conversion of capital and (2) the theory values attached to higher education (for details, see below).

The theory of *the conversion of capital* (Bourdieu 1999) is based on the transformability of the various forms of capital and differentiates between economic, cultural and social capital. Economic capital entails accessible financial assets and can be directly converted into money, while cultural capital is made up of incorporated, objectified or institutionalized knowledge that is normally measured in terms of formal categories (e.g. qualification, degrees, titles). The field of education is a case in point that albeit through investment economic capital can be converted into cultural capital (which then obviously creates economic profit), the strategies of the conversion and re-conversion of capital vary greatly with the individual's social background. When making decisions about their investments in studies, families which have access to less cultural capital are more likely to fall in line with the principle of immediate gratification and focus on the financial return on their investment in studies. On the contrary, in the case of families with more cultural capital the principle of delayed gratification or long-term return on investment operates, which shifts emphasis from financial returns towards the acquisition of cultural capital. On this basis, in terms of students' income-related orientation it is expected that students with a more preferable cultural background (with more cultural capital) are less motivated to acquire economic capital. Empirical research into the connection between the individual's family background and his or her income-related motivation corroborates this assumption. The results of Kelsall and colleagues (1972) establish the link between low-status family background and emphasis on return on investments on the labor market: they evidence that students in a less favorable status prefer fields of profession that offer better labor market perspectives. Van de Werfhorst and his colleagues (2001) also confirmed Bourdieu's theory when they

established that children coming from families of the cultural elite are more likely to opt for study fields that offer access to cultural capital.

The theories of *values attached to higher education* are relevant in terms of students' income-related motivation inasmuch as they are basically linked to motivations related to participation in study programmes. Within the framework of this approach, students at different levels and in different institutional types of higher education are characterized with different values and expectations related to higher education, which again can account for their attitude to their prospective income. As a rule, research on the values that students attach to higher education – aimed at, among other things, the description of the structure of higher education – focuses on cross-cultural differences (Schwartz 1992; Feather 1998) or on the exploration of differences in study fields (Verkasalo et al. 1994; Myyry 2003). Research in Hungary also established that the values students attach to higher education differ by types of institution and training programmes (Veroszta 2010). With regard to orientation towards labor market value, research found that although such "material" values are present in a massified higher education as a whole (Teichler 2009), students who enter different levels and institutions of the higher education attach different values to the financial results of their prospective degree. Scott's higher education theory (2004) states that emphasis on the labor market is more characteristic of students of practice-oriented, modern, massified universities than of students who study at traditional "elite universities". Moreover, in the interpretation of higher education offered by the Bologna process, the default is an institutional form that is based on students' massive demand, disseminates practical knowledge and offers a flexible system of education. If compared to private institutions, traditional universities of sciences and colleges (partly due to their traditional modes of operation) find it more difficult – and are less willing – to offer this type of training. On this basis, it can be presumed that it is worth analysing students' income-related motivations in terms of the institutional structure of higher education as well.

Income-related expectations

Besides income-related motivations, our analysis focuses on the factors that determine higher education students' expectations of their future income. With regard to income-related expectations, the factor under examination is not the individuals' attitude to income but the differences in the incomes they expect.

The results of research into students' expectations concerning the labor market invariably establish that such expectations are basically realistic, albeit, in certain cases, they are slightly over-optimistic. This is based on a comparison between the expected and actual (measured) incomes of recent graduates in the relevant labor market segment. In this regard, the results of research conducted in Hungary fall in line with those of international research. For our purposes, it is not the degree of the justification of expectations, but the explanation of the differences between expected incomes that is telling. On the basis of data collected from Hungarian secondary

school leavers, Varga (2001) – with the introduction of the time factor – establishes that students have an exact knowledge of the income differences (albeit this deteriorates with time). Betts (1996), when examining students' income estimations (which proved to be very precise), pointed out that decisive factors include the background variables of the length of studies and the family background (the income level of parents). Betts established that students who come from a family in less favorable financial conditions are more likely to expect lower income and that the length of studies has a positive effect on the estimated future income. Wolter and his colleagues (2008) introduced the factor of the different management of income risks in the research of students' estimations of their prospective incomes, and thus involved in the research process the role of profession categories and of related labor market compensation mechanisms. Carvajal and colleagues (2000), when exploring income expectations, established gender-based differences, which, in their approach, may also be regarded as a characteristic of the given study field. In their research into the income expectations in Europe, Brunello and colleagues (2001) took country-specific differences into consideration, and thus identified the effect of study fields, gender, age, family background and the length of studies on income expectations and on the accuracy of such expectations. Research results also highlight that students tend to expect higher individual incomes and than income in general (Varga 2001; Dominitz–Manski 1994; Webbink–Hartog 2004) and that differences by social background are relevant in this respect, too (Avery–Kane 2004).
While looking for an explanation of income-related expectations, we involved in our research the background variables referred to above. Undoubtedly, the interpretation framework used for the examination of the effect of these explanatory variables is dominated by the investment theory, yet signaling theory and the theory of selection effect are also included as possible explanatory theories.

For the purposes of explaining the changes in income-related expectations, we based the examination of *investment effect* on the theory of human capital. The theory of human capital is an economic approach which interprets decisions regarding education as an investment that – through the investment of money and time – increases the individual's human capital manifested in knowledge and skills (Becker 1975; Schultz 1983). The return of investments in education can be interpreted at the level of the individual (as higher lifetime earnings, higher salary) and at the level of the society (as the improvement of the productivity of the economy). With regard to income-related expectations, the theory of investment has been confirmed by several researchers (Varga 2004; Galasi–Varga 2005). Our research, which interprets decision on education at the individual level in the framework of investments and return on investments, links higher expected incomes to greater investment in education (longer study period, further studies, higher level of education).

When interpreting income-related expectations on the basis of the *signaling theory*, we also presume that the labor market reacts to training programmes of higher level or of better reputation with higher incomes; this reaction, however – in the absence appropriate information – is based on the way the given qualification signals productivity rather than on actual enhanced productivity. According to filter theory

(Arrow 1973), which connects to Spence's (1973) signaling theory as well, education does not improve productivity but does serve as an indicator or signal of it. This means that the basic difference between the theory of investment and filter theories is the different interpretation of the connection between income and productivity. Institutions of higher education operate as filters inasmuch as they select individuals of better abilities and thus offer information for employers at relatively low costs (Varga 1998). Besides formal institutional mechanisms such as admission requirements and graduation requirements, individuals' self-selection also contributes to filtering as future students decide to pursue studies in types of institutions, on study programmes and in forms of training which match their abilities the best. Our analysis links the interpretation of income-related expectations based on the signaling theory to various background variables of the training and the institution (the level and location of study programmes, institution type, the form of studies). It is assumed that if such parameters operate as signals which give the employers information on hierarchy, then students will incorporate these parameters in their income-related expectations. In Hungary, employers' research into the signaling function of higher education output, intended to explore the role of the institutions of graduation, established the existence of such a role empirically, with conjoint analysis. In our analysis, the indicators of the institution and the training which are related to the signaling theory do overlap with the indicators related to the theory of investment to a great degree. Our model is not suitable for the clear separation of these two effects, and we do not make efforts to arrive at such separation. Previous research on the links between the filter theory and the theory of human capital includes approaches that emphasize competition and parallelism (Kun 2009).

The third theoretical approach included in our analysis to explain income-related expectations is intended to identify the *selection effect* of education. Our premise is that social inequalities continue to exist after the expansion of higher education. The role of the educational system as a factor that reproduces social inequalities is explained by powerful theories (pl. Bourdieu–Passeron 1977; Coleman 1991; Boudon 1974) and confirmed by major Hungarian studies (among others, Ferge 1976; Gazsó 1971; Ladányi 1994). The expansion of higher education has brought the examination of the effect of social background into the fore. As evidenced by the results of international research, the expansion did result in a quantitative development of access opportunities yet the same inequality exists in opportunities (Shavit–Blossfeld 1993), or there is less inequality but it is still identifiable (Breen et al. 2009; Shavit et al. 2007). Accordingly, during the examination of the effect of social selection on income-related expectations we assume that students who come from a more favorable social and economic background will predict higher incomes.

Hypotheses

On the basis of the above theoretical considerations we intend to identify the following effects in relation to the factors that influence students' income-related motivations and expectations.

Conversion of capital effect (H1): For students who come from families with relatively big cultural capital are less motivated by the acquisition of higher income (economic capital).

Higher education value effect (H2): Students' income-related motivations differ by institution types. Students who pursue their studies at institutions associated with more practical values (such as colleges and private institutions) have stronger income-related orientation.

Investment effect (H3): Investment in studies has a positive effect on students' expectations of their future income.

Signaling effect (H4): Students' income-related expectations differ along the characteristics of the institution and the study programmes in terms of hierarchy

Selection effect (H5): Students with a more favorable social and economic background expect higher incomes.

Database and methodology

The data used for the purposes of our analysis are from the 2012 student survey of the Hungarian Graduate Career Tracking System. The data were collected via online questionnaires. The research involved the complete base population (student who were in active status in 2012), including students on traditional university programmes, college programmes, single-cycle programmes, Bachelor programmes and Master programmes. Data were collected by 32 institutions of higher education[1] participating in the national programme of the Graduate Career Tracking System, with uniform research questionnaires, on the basis of their internal lists of students' addresses. After the unification, cleaning and weighting, the number of the elements of the national database (comprised of the unified institutional databases) is 41,250 persons. The base population (students in Hungary who had active status in 2012) consists of 244,493 persons. The average response rate is 16.87 %. After the application of the weighting procedure, with regard to the base population, the database is representative in terms of study field[2], work schedule and the respondent's gender.

Dependent variables

Our analysis examines income-related motivations and expectations in a binary logistic regression model. For income-related motivation, the dependent variable of our explanatory model is the existence of income-related motivation, while for expectations it is the expectation of higher than the average incomes. The intensity, direction and significance of each background variable are detected on the basis of the changes of the values of these binary variables (in the form of odds ratios), along the above hypotheses.

[1] The base population consisting of the students of the participating institutions covers approximately 90% of higher education students in Hungary.

[2] Due to the low number of cases, we excluded four study fields where the number of students is very low (sports science, public administration, arts and art mediation), which reduced the database by 2,765 persons (6.5% of all respondents) yet contributed greatly to the consistency of our data.

To create the dependent variable of the income-related motivation, we categorized students in the 2012 database into two groups: those who stated that one of their motivations to acquire a degree was to have higher income in the future and those who did not. To identify degree-related motivating factors, the questionnaire enlisted six factors out of which [3] respondents were asked to select the two factors they found the most important. These factors entailed elements of the dimensions of livelihood, lifestyle and reputation. On this basis, we created the dependent variable that differentiates between students who are motivated by their prospective income and those who are not. 46.7% of the respondents reported that they have income-related motivation (that is, selected it out of the options in the questionnaire).

The two-value variable applied for income-related expectations indicated higher than the average predicted incomes. The database used for the purposes of our analysis contains information about income-related expectations in the form of answers given to open questions[4]. In the course of data management, with regard to income-related expectations (and motivations), we created two categories of students on the basis of whether they indicated that they expect to earn higher than the overall average income (an average net HUF 194,383 per month) after graduation. 45% of students reported that they expect higher than the average income.

In the third phase of our analysis, out of the combination of the two-value variables we created on the basis of income-related motivations and expectations we created four categories of students (defined on the basis of students' attitude to income), and described them with multinomial logistic regression. The four categories included as the dependent variables of the model are as follows:

Unmotivated individuals who undervalue their future income: students who do not have income-related motivation and do not expect higher than the average income (29.5%)

Unmotivated individuals who overvalue their future income: students who do not have income-related motivation yet expect higher than the average income (21.8%)

Motivated individuals who undervalue their future income: students who have income-related motivation yet do not expect higher than the average income (24.7%)

Motivated individuals who overvalue their future income: students who have income-related motivation and expect higher than the average income (24.1%)

Explanatory variables

In all of the three models, the background variables were applied in a uniform manner and during the interpretation they were associated with the examination of each

[3] Question in the questionnaire: Individuals want to acquire a degree for various reasons. Out of the following options, please mark the two reasons which are the most important for you. To avoid unemployment; High income; Social reputation; Management position, career; Relatively free lifestyle; Employment abroad; Professional and intellectual development

[4] Question in the questionnaire: Please specify the monthly net average salary you would be satisfied with as a recent graduate (1-3 years after graduation, employed in Hungary and on your professional field)

effect. The variables were operationalized on the basis of the following considerations:

Highest qualification of parents: the highest qualification acquired by the father and the mother (examined separately).

Links to the profession in the family: parents/grandparents who work in the professional field of the higher education studies (regardless of their qualification level).

The family's financial situation: the family's financial situation at the time when the respondent was 14 years old, as perceived by the respondent. The five-point scale was transformed into three categories: average, better than the average and worse than the average.

Secondary school background: the type of institution where the student acquired his or her secondary school leaving certificate (for secondary grammar schools, traditional 4-grade schools, 6- or 8-grade schools and bilingual schools were dealt with separately).

Place of residence: due the strong hierarchy of Hungary's regions, we decided to create separate categories for the places of residence the respondents had at the age of 14 (Eastern Hungary, Central Hungary, Western Hungary).

The work schedule of studies: regular (full-time) and other (the latter including evening, correspondence and distance programmes).

The form of funding: state-financed or fee-paying.

Study plans: the respondent plans to pursue (any form of) further studies in higher education 1-3 years after finishing his or her current studies.

Degrees: the student already has higher education qualification.

Study performance: the respondent's subjective evaluation of his or her study performance as compared to other students on the same programme. The five-point scale was transformed into three categories: average, better than the average and worse than the average.

Employment: the respondent works while pursuing studies in higher education (regardless of the intensity of the work and whether it falls in line with his or her prospective field of profession).

Form of training: due to the low number of elements, traditional college education and traditional university education were examined together with BA/BSc programmes and MA/MSc programmes, respectively. Single-cycle programmes (the majority of which are programmes of law and medicine) were dealt with in a separate category.

Type of higher education institution: to create our institutional typology, we used Hrubos's categorization (2012), a Hungarian adaptation of the empirical classification system of the international U-map project intended to categorize European higher education institutions on the basis of their mission and commitment (van Vught 2009).

Maintainer of higher education institution: the separation of institutions maintained by the state (or churches) and institutions maintained by private entities/foundations.

Region of higher education institution: the location of studies, broken down by faculties (Eastern Hungary, Central Hungary, Western Hungary).

Control variables: study field; the respondent's gender; the respondent's age (24 years or older).

The variables of gender, study field and age were introduced into each model as control variables. These three variables all represent factors that strongly influence income-related motivations and expectations; for this reason, their effect needs to be isolated from the effects of the explanatory variables under analysis. However, they are not closely linked to our hypotheses. There have been and there are major targeted research projects which intend to identify the effect of three control variables on the output of degree holders[5]; however, our analysis does not seek to achieve this goal. For each model, the scope of the control variables was extended, depending on which background variables we could interpret in the light of our hypotheses.

Results

Our first explanatory model, created along the theoretical considerations and methodological procedures specified above, examines the factors that affect students' *income-related motivations*. Out of the two effects we assumed to exist, we identified conversion of *capital* with the variables related to the individual's cultural background, while in terms of the higher education value effect we examined the role of the characteristics of the training programme and the institution. Our hypothesis on the capital conversion effect (H1) was confirmed by the results. Students whose parents do not gave higher education qualification are more likely to have income-related motivations (motivation to acquire economic capital). Students whose family members have links with the given professional fields (cultural capital) are less likely to have income-related motivations. The same holds true for students who acquired secondary school leaving certificates at 6- or 8-grade secondary grammar schools, if compared to students of vocational secondary schools. The effect of economic capital, however, shows some degree of parallelism: students in less favorable or average financial situation are less likely to have income-related motivations.

With regard to the *higher education value effect* , we assumed that students of colleges and private institutions have stronger income-related motivation (H2). Results show that young persons who study at colleges with a high number of students and a general training profile are more income-oriented than students of classical universities of sciences. Students of traditional single-cycle programmes (e.g. programmes of law and medicine) are less likely to have income-related motivations than the Bachelor students of the Bologna system are. However, students

[5] For gender differences in terms of income-related expectations, see for example: Carvajal et al. (2000), Chevalier (2006), Zafar (2009), Montmarquette et al (2002).
For research on the effect of the study field, see for example: Finnie–Frenette (2003), Gunderson–Krashinsky (2009), Tacsir (2010), van de Werfhorst et al. (2001).

on Master programmes are more likely to have income-related motivations. Contrary to our assumptions, the category of the students of private institutions and institutions maintained by foundations does not display major differences.

Table 1.

Factors that affect students' income-related motivations (odds ratios)

The results of binary logistic regression Exp(B)

Conversion of capital effect	Father's education: elementary	1.130*
	Father's education: vocational/grammar school	1.092+
	Father's education: college	1.021
	Mother's education: elementary	1.186**
	Mother's education: secondary school	1.200***
	Mother's education: college	1.127*
	Professional connection in the family (ref.: no connection)	0.893**
	Family's financial background: below average	0.951
	Family's financial background: average	0.915**
	Secondary school: grammar school	0.991
	Secondary school: grammar school 6-8 th grade	0.901*
Higher education value effect	Type of study: MA/MSc	1.133*
	Type of study: one-cycle	0.762**
	Institution: specialized college with narrow training profile	0.979
	Institution: college with broad training profile	2.314***
	Institution: non-traditional university with broad training profile	0.977
	Private funded institution (ref.: state funded)	0.909
Control variables	Region of institution: Western Hungary	0.510***
	Region of institution: Central Hungary	1.157**
	Region of origin: Western Hungary	0.849***
	Region of origin: Central Hungary	0.841***
	Full time studies (ref.: part time)	0.955
	State financed status (ref.: self financed)	0.929*
	Further study plans (ref.: no plans)	0.933*
	Second degree (ref.: no degree)	0.891**
	Academic performance: below average	1.008
	Academic performance: average	1.085**
	Employment (ref.: not employed)	1.100**
	Field of study: agriculture	1.059
	Field of study: humanities	0.618***
	Field of study: economics	1.597***
	Field of study: informatics	1.445***
	Field of study: law	1.434***
	Field of study: medical and health care	0.873
	Field of study: teacher's training	0.375***
	Field of study: social sciences	0.848**
	Field of study: natural sciences	0.784***
	Male (ref.: female)	0.989
	Older than 24 (ref.: max. 24 years old)	0.885**
Mo del sta	Constant	0.900
	Cox & Snell R Square (Pseudo-R^2)	0.082

	Nagelkerke R Square (Pseudo-R^2)	0.110
	N	24,636

Source: Students 2012 – Educatio Non-profit LLC

Notes: Reference for parental education: university; for family financial background: above average; for secondary school: vocational; for residence at age 14: Central Hungary; for subjective performance: above average; for institution type: traditional university for region of institution: Central Hungary; for field of study: engineering.

Significance: *** p<0.001; ** p<0.01; * p<0.05; + p<0.1

In the explanatory model of students' *income-related expectations*, we examined the factors that underlie expectations of higher than the average income. With regard to the *investment effect*, we assumed that the length of studies, the intensity of study and better performance have a positive effect on income-related expectations, that is, they result in the growth of the odds ratio which indicates expectation of higher than the average incomes (H3). The results partially confirms our assumption. Students who spend relatively longer time in the higher education (attend Master programmes or single-cycle programmes), plan to invest more in higher education studies and perform better are more likely to report stronger than the average income-related expectation. Still, data evidence that it is appropriate to complete the explanation of income-related expectations with a labor market background variable: students who study on part time programmes or perform work during their studies expect higher income.

With regard to the *signaling effect*, out of the above variables data on the qualification level must be regarded relevant again. This hypothesis (H4) states that students' income-related expectations change hierarchically along the characteristics of the institution and the training programme (signals). If the level of the training programme is interpreted as a signal, then the signaling theory can be linked to the fact that individuals who purse higher-level studies tend to expect higher incomes – however, this holds true for the theory of investment as well. Looking for the signaling role of the higher education institution, we find that – if compared to students of institutions in Eastern Hungary – students of institutions in Western and Central Hungary are more likely to expect higher than the average income. As far as the institutional type is concerned, students of private institutions, institutions maintained by foundations and non-classical universities of sciences are more likely to report expectations of higher than the average incomes. Therefore, in case we presume that institutions which are located in regions that are in a relatively favorable economic position, maintained by private entities or are universities yet do not operate as classical universities of sciences are more likely to be perceived by the labor market as better than the average signals, then students' expectations of higher than the average incomes can be attributed to the signaling effect.

Our hypothesis on the *selection effect* (H5) states that a preferable social and economic background results in higher expected incomes. The results partially confirm our hypothesis, especially with regard to the positive link between an individual's financial background and his or her income-related expectations. As for

the parents' qualification, it is the father's qualification that increases the probability of expectations of higher than the average income; however, this difference ceases to exist at the level of higher education qualification. The links family members have to the professional field where the respondent pursues his or her studies increases the probability of higher income expectations. Students who come from families whose situation is average or worse are less likely to report that they expect higher than the average income, which means that the effect of the financial background is consistent and parallel. Students who come from Western or Central Hungary (that is, the economically favorable regions of Hungary) require higher income that student who come from the less favorable region of Eastern Hungary. This means that family background exercises a positive effect on the expected income.

Table 2.

Factors that affect students' income-related expectations (odds ratios)

The results of binary logistic regression Exp(B)

Selection effect	Father's education: elementary	0.904+
	Father's education: vocational/grammar school	0.901*
	Father's education: college	0.950
	Mother's education: elementary	0.947
	Mother's education: secondary school	0.958
	Mother's education: college	0.930
	Professional connection in the family (ref.: no connection)	1.083*
	Family's financial background: below average	0.918*
	Family's financial background: average	0.847***
	Secondary school: grammar school	1.021
	Secondary school: grammar school 6-8 th grade	0.993
	Region of origin: Western Hungary	1.166**
	Region of origin: Central Hungary	1.185***
Investment effect	Full time studies (ref.: part time)	0.506***
	State financed status (ref.: self financed)	0.957
	Further study plans (ref.: no plans)	1.095**
	Second degree (ref.: no degree)	0.884**
	Academic performance: below average	0.862**
	Academic performance: average	0.932*
	Employment (ref.: not employed)	1.219***
	Type of study: MA/MSc	1.401***
	Type of study: one-cycle	2.157***
Signaling effect	Institution: specialized college with narrow training profile	0.861
	Institution: college with broad training profile	1.082
	Institution: non-traditional university with broad training profile	1.171***
	Private funded institution (ref.: state funded)	1.362**
	Region of institution: Western Hungary	1.147*
	Region of institution: Central Hungary	1.409***
Control varia	Field of study: agriculture	0.286***
	Field of study: humanities	0.297***
	Field of study: economics	0.514***

	Field of study: informatics	0.929
	Field of study: law	0.390***
	Field of study: medical and health care	0.849+
	Field of study: teacher's training	0.208***
	Field of study: social sciences	0.315***
	Field of study: natural sciences	0.502***
	Male (ref.: female)	1.949***
	Older than 24 (ref.: max. 24 years old)	0.852***
Model statistics	Constant	1.426***
	Cox & Snell R Square (Pseudo-R^2)	0.131
	Nagelkerke R Square (Pseudo-R^2)	0.174
	N	23,615

Source: Students 2012 – Educatio Non-profit LLC

Notes: Reference for parental education: university; for family financial background: above average; for secondary school: vocational; for residence at age 14: Central Hungary; for subjective performance: above average; for institution type: traditional university for region of institution: Central Hungary; for field of study: engineering.

Significance: *** p<0.001; ** p<0.01; * p<0.05; + p<0.1

After the isolated examination of the factors that affect income-related motivations and expectations, the next section discusses the complex nature of students' attitude to their future income, relying on the analysis of students' categories or types defined on the basis of the combinations of expectations and motivations. Regarding the category of unmotivated individuals who undervalue their future income (out of the four student types referred to above[6]) as the reference category, we use a multinomial logistic regression model to examine the odds ratios of students falling into the three other categories along the individual background variables. In the model, the differences between the odds ratios represent the effect explanatory variables have on students' attitude to their future income. The chances of falling into the student category of *unmotivated individuals who overvalue their future income* (that is, of those who do not regard income as an important factor yet expect higher than the average income) – if compared to the reference group of unmotivated individuals who undervalue their future income – are significantly lower among students who are in a less favorable financial situation and are higher among those who come from a more favorable region. Out of the background variables the training programme, higher-lever and longer study programmes and the full-time work schedule increase the chances of a student to fall into the category of individuals whose income-related motivations are weak yet expect higher than the average income in the future. The effect of institutions is weaker in the case of private institutions. In other words, for this group the basic factors are those of the financial background, the region and the characteristics of the training programme. If compared to the reference group, the group of *motivated individuals who undervalue their future income* (students for whom income is an important factor yet do not expect higher than the average income) are more likely to come from a less favorable

[6] For the description of the creation of the variable, see the section "Database and methodology".

cultural background (their parents do not have a university degree). In terms of the background variables of the training programme, this category is characterized by the lower ratio of single-cycle programmes and a stronger institutional effect: if compared to the background of classical universities of sciences, the ratio of the variables is higher in all other institutional clusters, in private institutions and in institutions located in regions other than Eastern Hungary. This indicates that in this group the factors of the family (cultural background) and of the institution are strong determinants. A student's chances to belong to the category of *motivated individuals who overvalue their future income* are influenced by the financial, educational and institutional background alike. A student who comes from a family in less favorable financial situation is less likely to fall into the category of individuals for whom income is an important factor and who expect higher than the average income. However, he or she is more likely to belong to this category if he or she already has a degree and studies on a full-time, state-subsidized programme. In terms of the institutional background, non-classical universities and private institutions have such positive effects.

Table 3.

Factors that determine students' attitude to their future income (odds ratios)

The results of multinomial logistic regression (Exp B)

Reference category: unmotivation+undervalue	**Unmotivation +overvalue**	**Motivation +undervalue**	**Motivation +overvalue**
Father's education: elementary	0.972	1.223**	1.002
Father's education: vocational/grammar school	1.010	1.214**	0.947
Father's education: college	0.932	1.041	0.977
Mother's education: elementary	1.044	1.438***	1.138
Mother's education: secondary school	1.007	1.392***	1.151+
Mother's education: college	0.941	1.229**	1.035
Professional connection in the family (ref.: no connection)	0.969	1.131*	1.036
Family's financial background: below average	0.864*	0.935	0.858*
Family's financial background: average	0.836***	0.969	0.819***
Secondary school: grammar school	1.060	1.033	0.999
Secondary school: grammar school 6-8 th grade	1.031	0.941	0.885+
Region of origin: Western Hungary	1.279***	0.981	1.039
Region of origin: Central Hungary	1.199**	0.845**	1.021
Type of study: MA/MSc	1.188*	1.022	1.682***
Type of study: one-cycle	2.109***	0.575***	1.671***
Full time studies (ref.: part time)	1.923***	0.925	1.822***
State financed status (ref.: self financed)	1.034	1.050	1.118*
Further study plans (ref.: no plans)	0.936	1.040	0.955
Second degree (ref.: no degree)	1.059	1.047	1.257***
Academic performance: below average	0.861*	1.080	0.863*
Academic performance: average	0.935	1.093*	0.985
Employment (ref.: not employed)	0.835***	0.974	0.786***

Institution: specialized college with narrow training profile	0.801	2.025***	1.782***
Institution: college with broad training profile	0.994	4.076***	4.3465***
Institution: non-traditional university with broad training profile	1.235**	1.191**	1.287***
Private funded institution (ref.: state funded)	0.560***	1.626***	1.439**
Region of institution: Western Hungary	1.220*	0.525***	0.601***
Region of institution: Central Hungary	1.268***	0.846**	1.292***
Field of study: agriculture	0.287***	1.099	0.297***
Field of study: humanities	0.290***	0.535***	0.173***
Field of study: economics	0.471***	1.338***	0.667***
Field of study: informatics	0.916	1.289**	1.160+
Field of study: law	0.420***	1.809***	0.508***
Field of study: medical and health care	0.733*	0.669**	0.659**
Field of study: teacher's training	0.214***	0.388***	0.086***
Field of study: social sciences	0.282***	0.719***	0.242***
Field of study: natural sciences	0.506***	0.701***	0.377***
Male (ref.: female)	0.536***	1.072	0.541***
Older than 24 (ref.: max. 24 years old)	1.125*	1.084	1.270***
Intercept	0.785***	-1.136***	-0.268
Nagelkerke R Square (Pseudo-R^2)	0.230		
N	20,628		

Source: Students 2012 – Educatio Non-profit LLC

Notes: Reference for parental education: university; for family financial background: above average; for secondary school: vocational; for residence at age 14: Central Hungary; for subjective performance: above average; for institution type: traditional university for region of institution: Central Hungary; for field of study: engineering.

Significance: *** p<0.001; ** p<0.01; * p<0.05; + p<0.1

Summary

The objective of this study was to explore students' attitude to their future income from various aspects. While analyzing this attitude, we made efforts to shed light on the diversity of possible viewpoints and explanatory theories, and did not intend to identify a single relevant framework of interpretation. To this end, we offered several possible interpretations besides the economy-oriented approach that dominates the research. In the first step of the expansion of our perspective on students' attitude to their future income, we applied content differentiation, and dealt with income-related motivations and expectations and their determining factors separately. For both questions (about motivations and expectations) we introduced several possible explanatory theories in our examination. We interpreted students' income-related motivations, on the one hand, along the theory of capital conversion and, on the other hand, along values attached to the higher education. Our model created for this purpose confirmed both explanatory powers. The connection between cultural capital and students' s income-related motivations was particularly clear. We examined students' expectations of higher than the average income from several theoretical approaches, too, where the relevance of the theory of investment is shown by the fact that longer study periods and greater investment in studies increase the expected

income. As for the signaling theory, differences in expectations by various institutional backgrounds seem to confirm the theory, but to establish the direction of the interconnection, a more hierarchical set of background variables is needed. Finally, in terms of the effects of an individual's family on his or her expected prospective income (selection theory) we identified the influence one's financial background has on the expected income.

With the regard to the student categories defined on the basis of students' attitude to their future income, it is to be highlighted that, if compared to unmotivated individuals who undervalue their future income, unmotivated individuals who expect higher than the average income are under the positive effect of favorable financial, educational and regional backgrounds. Students for whom income is important yet they expect lower than the average income are more likely to come from families with lower cultural capital and to pursue their studies at non-traditional universities. Individuals who come from families in a better financial situation, study at a higher educational level at private institutions or institutions maintained by foundations are more likely to fall into the category of students who are motivated by their prospective income and expect higher than the average income.

The key result of our research is not the exploration of the direction and the degree of the above-mentioned effects but the presentation of the opportunities offered by a multi-dimensional approach to the attitude of students to their future income. We are convinced that it is justified to extend this principle of analysis with several supplementary research approaches. Firstly, it seems that labor market aspects need to be included in the sets of explanatory variables. In this respect, students' labor market involvement and the indicators of the justification of their labor market expectations can be variables that carry important information. Secondly – and in close relation to the labor market aspect –, the characteristics of each professional field need to be analyzed in more detail. The explanatory models clearly indicate that the characteristics of study fields (applied as control variables) play a key role in determining income-related motivations and expectations. The exploration of the characteristics of study fields and the individuals' attitude to their future income call for a separate targeted analysis.

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