

# ECONOMIC GROWTH EFFECTS ON EDUCATION WITH THE EMPHASIS ON THE CAREER CENTER

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## Introduction

Today's period is predominately marked by change. Fast technological development, sharp competition, globalisation and similar trends are forcing companies to have dynamic developmental goals. It is therefore a priority task of them to secure a high-quality human resource structure, primarily focused on raising the levels of productivity, efficiency, creativeness and innovativeness. We may expect that those companies failing to keep up with global developments will lose their competitive advantage and start lagging behind in developmental terms.

A company always attempts to achieve the goals it has set through its employees, therefore many authors (Lipičnik, 2002; Porter, 1997; Baron and Kreps, 1999) assert that it is precisely human resources that represent a company's competitive advantage. Novak and Florjančič (2004) hold a similar view, stressing that management has to become people-focused, discovering in them unknown potential that will help the company to resist pressures of global competition. Webster and Jensen (2006) believe that the way to enhance competitive capacity is to enhance human capital, being the single inconstant capital, which can be continually increased, while natural resources are in fact constant. We may conclude that companies will only manage to operate successfully in global circumstances if they maintain a clear human resource development vision and provide the competences required for a global functioning of their staff, both those in service and those in the preparatory phase. The latter is the term used by Florjančič et al. (2004) for would-be staff in the process of education. Inasmuch as companies are regarded as places where science is practically applied and where education is best evaluated, the continuing cooperation between companies and educational institutions is so much the more important. This is the only way to manage to generate and apply development; in this process, a new, higher and

desired situation is attempted to be created out of the existent knowledge and skills of human resources, resulting in the recognition enjoyed by well-performing companies.

Education – the process of learning new skills, of finding out new information or of understanding various phenomena – can be analyzed by theories of cognition, theories of behaviour and through most Social Science disciplines (Belfield, 2000). Education may be regarded as a way of generating, accumulating and maintaining human capital (Becker, 1985). Human capital – an individual's embodied skills above their raw labour ability – can be obtained in many forms: schooling and training are the educational forms of interest here, but alternative forms may be experience or simply watching those who already have a larger stock of human capital. As a case of alternative form there the career center at the faculty may be mentioned. Typically, such accumulation takes a long time and it may be measured using educational credentials, such as certificates, years of schooling or examination grades. But although exams are sometimes an end in themselves, the deployment of human capital typically has external effects in the labour market, in the household or in a broader society. Educated people are typically more skilled, allowing them to earn more; but they may also be more health-conscious, allowing them to enjoy life more, or more civic-minded, contributing to society's goals. In choosing how to deploy their human capital to any of these ends, individuals are making decisions about resources, economic decisions (Belfield, 2000).

## 1. Economic Model of Education

A macro-economic approach to the generalised effects of education involves modeling economic growth. Aggregate production function and growth models may be used to capture some of the social benefits and productive spill-overs of education. In these models education may

affect economic growth in representing either an enhanced labour input or a separate factor of production (Blundell et al., 1999; Romer, 1994). Following Benhabib and Spiegel (1994), the production function for per capita income  $Y_t$  may be rendered in Cobb-Douglas form:

$$Y_t = \Lambda(t) \cdot K_t^\alpha \cdot H_t^\beta \cdot L_t^\gamma \cdot \varepsilon_t \quad (1)$$

Here  $Y_t$  depends on physical capital  $K$ , labour  $L$  and human capital  $H$ ;  $\Lambda(t)$  is a growth coefficient over time (with a residual error term  $\varepsilon$ ). Growth regressions can then be estimated using log differences across the base period  $X$  and current time period  $T$ :

$$(\log Y_T - \log Y_X) = (\log \Lambda_T - \log \Lambda_X) + \alpha(\log K_T - \log K_X) + \beta(\log H_T - \log H_X) + \gamma(\log L_T - \log L_X) + \varepsilon T_X \quad (2)$$

The coefficient of interest here is then  $\beta$ , the impact of the difference in human capital on per capita income growth. To extend the model, a law of motion or trajectory for human capital can be generated (as in De Gregorio, 1996; Glomm, 1997). These trajectories for human capital accumulation map the possible effects of education on economic growth as the two grow together. Benhabib and Spiegel (1994), for example, model the effect of human capital as a way either of raising productivity through innovation and endogenous growth or allowing nations to catch up with designated "world-leader" economies. Alternatively, these leading economies may experience positive feedback in investing further in education and so growth rates may diverge. Another chain of causation may occur where an educated workforce is a pre condition for foreign investment of physical capital; this may be either directly because of the educated workforce or indirectly because education is correlated with political stability. Instead of direct influence as a factor, though, education may be boost total factor productivity, through innovations and through, education may boost total factor productivity, through innovations and through the speed of adoption of technology from abroad. Also, human capital may be rivalrous in individual workers or non-rivalrous as a shared level of knowledge about new designs and methods (Belfield, 2000).

Unlike labour and capital, factors which may be inelastic in the short run, education may be a more immediate way to raise economic growth.

In Eeckhout's model (1999), where inputs are not readily substitutable and ability levels are heterogeneous, education serves as a way to move the economy on to a higher growth path. De Gregorio (1996) traces through the effects of borrowing constraints on human capital accumulation and so economic growth, finding the removal of such constraints may boost growth. If the stock of human capital produces growth, then innovative workers are in effect generating economic growth and may do so over long periods of time.

Thus the growth of output may be attributable either to the level of education or to its growth (or both), with flows of human capital raising technical progress. To test this, two measures of human capital are typically used. The stock of human capital may be proxied by years of education per worker or literacy rates. The flow of human capital may be rendered as enrolment rates in schooling, that is, the net proportion of the age group which is in schooling. An enrolled student cohort is therefore the flow which augments the existing stock of years of education. The difficulties with using such variables are that, typically, developed countries have literacy rates which are narrowly spread and very high, tending toward 100 %, and so leave little room for "growth" (Belfield, 2000). As an alternative, Pritchett (1996) uses the wage increment from years of education across the working population to represent the present value of a given stock of schooling.

Beyond looking at the evidence of the effects of education on national economic growth, such models may be applied to regional development. Economic growth effects may be estimated from looking at the multiplicative effects of education institutions, particularly universities. Such institutions are important loci of expenditure and economic activity and may have spill-over effects on the skills mix and industrial structure of a local economy. The effects of such institutions may be significant for regional growth and research effort (see Harris, 1997, CVCP, 1997; for a single university, see Battu et al., 1999). On the benefits side, a larger host community of education providers is likely to: attract and retain workers, provide low cost access to education cycles (although increase sensitivity to demographic cycles); and allow for economies of scale in labour markets. On the costs side, congestion and

higher tax burden may suggest against increased education provision in a region.

## 2. The Problem of Young People Penetrating the Labour Market

Graduates are one of the groups which have most difficulties finding employment. We believe that in the future, the economy will be unable to absorb the multitude of jobless graduates if they do not possess the needed skills, capabilities and qualities expected or required by employers. That is to say, a right person in a right place continues to be economically justified. Pavlin (2004) proved that in certain cases, the educational system has difficulties following changes in the labour market. According to him, educational institutions should attempt to properly develop their graduates' competences for the labour market. Ferjan and Jereb (2005) note that there is no part of the world where employers employing graduates coming from schools or faculties were, or are, entirely satisfied with the latter's skills and knowledge. According to Spitzer (2005), similarly, companies frequently are doubtful as regards the efficiency of education and training, since it commonly happens that the majority do not acquire the skills needed for effective work, or that skills and knowledge acquired are irrelevant. Further, Catelli (2006) found that the influence of education on an individual's level of performance only accounts for approximately 20 percent, while experience and on-the-job learning have a high influence on effective work.

We must be aware that one needs to continually adapt to changes and to be ready to change his or her occupation several times in the course of life in accordance with the changing job opportunities. It is important to develop both technical and social skills and, primarily, to understand when, how and why to use them. It is therefore so much the more vital that the occupation we desire to pursue is in harmony with our capabilities, personality and interests. Wenger et al. (2002) are aware that in the modern society, occupation is an increasingly flexible and heterogenous category, since occupations change, primarily as regards tasks and duties performed by an individual in a certain work process. Most secondary school graduates continue their studies at a university level, therefore it is in the secondary school when young people ought to already be acquainted

with the situation in the labour market, and with knowledge, skills and qualities required by employers for particular kinds of work.

Increasingly more problems are observed in Slovenia regarding employability of young people – including those with a completed higher education, whom this paper is concerned with. We believe that young people mostly begin to think of their career too late, which is one of the reasons why they have difficulties finding employment after completed schooling. If they fail to get employed shortly after finishing their studies, they may start feeling prospectless and useless, which in turn can leave an individual with permanent mental consequences. Although youth is being prolonged as a period and young people start to think of employment, having a family etc. relatively late, they ought to be aware that it is precisely by planning and steering their career that they can acquire more competence, knowledge and capability for work. In most cases, the reason why young people fail to get suitable employment after finishing their studies, thus being unable to pursue their planned career path, is the lack of work experience, which they do not acquire during their studies. Another thing that frequently happens is that young people's expectations regarding their career differ from what the situation turns out to be in reality when they actually become employees of a particular organization. Brennan (2005) describes that many employers cooperate with students by way of offering them financial support, rewards for the best of them, performance of mandatory pre-graduation practical work, and sponsorship in the final year of their studies. Employers thus get to know the students early enough and recognise more easily those who meet their company's needs. On the other hand, students get to know the work being done, collect experience, and find out if a particular job suits them and if they are ready to work for the company after completing their studies.

The issue described has prompted us to consider how the existent situation might be improved. One solution to coping with the high graduates unemployment rate is to enable students to already start having contacts with employers in the course of their studies, thus helping them to get connected to the labour market. It is already during their studies that students could make out a career plan, and develop skills and concepts and acquire extra knowledge that would help

them achieve the goals set within their selected path. We see opportunities primarily in the establishment of career centres at faculties as described by Novak (2009). We believe that faculties ought to adapt to new circumstances as well as make use of the opportunities that the changes have brought along, which has prompted us to investigate faculty students' readiness to participate in a career centre.

For individuals, the broad evidence points to education's importance. Even if causality has not been established, there is plenty of circumstantial evidence and the imperative for individuals investing in a substantial duration of education appears strong. Yet there appear to be several difficulties both in estimating the non-pecuniary social effects and in substantiating the macro-economic gains from education. Along with the equivocal macro-economic evidence, some more direct criticisms have been offered, however, and these merit serious consideration (Belfield, 2000).

Levin and Kelley (1994) offer a critical evaluation of the economic benefits of education on a number of fronts, arguing against the "educational optimists" who simply presume that more education will mean higher economic growth. First, they argue that neither the connection between test scores and earnings nor the connection between test scores and productivity measures is strong. Workers may need to satisfy a threshold level of skills, but beyond that the returns to education are small and education does not boost economic growth. Second, although education may have a positive effect, a number of other complementary inputs must be in place: these might include new investment in capital goods, better management processes, and better organisational ways of working. Third, the strongly persuasive cross-sectional evidence, which has been amassed above, needs to be contrasted with the less persuasive and more sparse longitudinal evidence.

Given the inconclusive aggregate evidence, there are plenty of explanations for why education does not raise economic growth. Pritchett (1996) suggests that screening and signalling effects simply serve as a way of re-distributing wealth; subsidies for education may lead to over-investments; and under-employment may be tolerated through under-written jobs in the public sector. Perhaps investment has been on the wrong

sort of education – either higher education, investments on the intensive margin or training programmes with high deadweight losses may be suspects here (Belfield, 2000).

Finally, Behrman (1987, 1996) contends that there is limited evidence on how durable education's influence is on behaviour. It is possible, but not well investigated, that a high school diploma or a degree enhances all life experiences, but it seems an optimistic proposition. Belfield et al. (1999) present evidence from 11,000 UK graduates on the contribution their degree made to their personal development; the evidence suggests that a degree is only a temporary boost, as other life events supersede.

### **3. Investigation of Students' Readiness to Become Active Members of a Career Centre at the Faculty of Organizational Sciences**

#### **3.1 Empirical Sample and Proposed Hypotheses**

The Faculty of Organizational Sciences has undertaken activities aimed at launching a career centre for students. Among other things, an extensive survey was performed for this purpose regarding the establishment and operation of a career centre within the Faculty, carried out among regular students of "Bologna" graduate study programmes at the Faculty in spring 2009. The aim of the entire survey was to establish whether it would be sensible to launch a career centre at the Faculty. The survey was performed via a questionnaire consisting of two parts, i.e. a general part covering information on students (gender, type of study, year of study, average exam grade), and the opinion part consisting of twenty-eight questions. A portion of this extensive survey relates to students' readiness to become active members of the Faculty's career centre, which is what this paper is concerned with.

The basic survey hypothesis was that students of the Faculty are mainly ready to participate in its planned career centre.

The questionnaire was distributed to full-time students of the Faculty in such a way that both genders, both types of Bologna graduate studies (i.e. higher professional and university program-

**Tab. 1: Structure of the sample by gender, type of study, year of study, and average exam grade**

		Frequency	Percentage
Gender	male	132	40.1 %
	female	197	59.9 %
	Total	329	100.0 %
Type of study	higher professional	175	53.2 %
	university	154	46.8 %
	Total	329	100.0 %
Year of study	1	133	40.5 %
	2	120	36.6 %
	3	75	22.9 %
	Total	328	100.0 %
Average exam grade	6–7	68	21.7 %
	7–8	176	56.1 %
	8–9	59	18.8 %
	9–10	11	3.5 %
	Total	314	100.0 %

Source: own

mes) and all years of study were represented. The questionnaire was completed by those students who attended lectures or practical classes on the day when the survey was carried out. It was completed by 329 students, of whom 40.1 % were male and 59.9 % were female, 53.2 % were students of higher professional studies and 46.8 % of university studies, and 40.5 % were students of year I, 36.6 % of year II, and 22.9 % of year III. As regards their academic achievement, 21.7 % of students having completed the questionnaire had an average exam grade of 6–7, 56.1 % had an average grade of 7–8, 18.8 % had grades averaging at between 8 and 9, and 3.5 % had grades averaging at above 9. The structure of the sample is presented in the table Tab. 1. By its structure, the sample differs only slightly from the entire student population, and it is definitely sufficiently large.

We have measured student opinions regarding the establishment of a career centre at the Faculty through presented statements, which the respondents rated on a scale from 1 to

5, with 1 representing the lowest value and 5 the highest value (depending on the particular question).

The hypotheses proposed were the following:

- *Hypothesis 1:* Students are largely ready to participate in the Faculty's career centre.
- *Hypothesis 2:* Predominately, students would participate in the career centre because they believe they would benefit from this in their employment.
- *Hypothesis 3:* Students are largely ready to voluntarily engage in the career centre as office assistants.
- *Hypothesis 4:* Students are largely ready to voluntarily cooperate with companies in different projects within the framework of the career centre.

In empirical data analysis, both one-dimensional and multidimensional statistical methods were employed, including descriptive statistics, test for equality of means, analysis of variance, discriminant analysis etc.

### 3.2 The Degree of Readiness to Participate in the Faculty's Career Centre

We first tested Hypothesis 1, reading that students are largely ready to participate in the Faculty's career centre. We proposed a null hypothesis and an alternative hypothesis:

$H_0$ : Students are ready to participate in the Faculty's career centre.

$H_1$ : Students are not ready to participate in the Faculty's career centre.

We based implementation of the test on the question: How would you rank the given statements regarding your readiness to participate in the Faculty's career centre? The opinions were measured on a scale from 1 to 5, with 1 denoting that they completely disagree with the statement, and 5 that they completely agree with it. The first statement to which the hypothesis relates reads: I am interested in participating. The null hypothesis is accepted if the average rating  $\mu$  of the entire student population that defined the sample frame is at least 3. We may thus use:

$$H_0: \mu \geq 3$$

$$H_1: \mu < 3$$

The level of significance of this test as well as of all further tests shall be  $\alpha = 0.05$ . Statistical implementation of this test is based on the statistic:

$$t = \frac{\bar{X} - 3}{s} \sqrt{n},$$

which, due to the large sample, is a standardised normal random variable. The  $\bar{X}$  in it is the arithmetic mean of the sample,  $s$  is the standard deviation, and  $n$  is the sample size.

The average rating of sample data was  $\bar{X} = 3,61$  with the standard deviation  $s = 0,988$  and the sample size  $n = 326$  (the number of answers to the statement concerned), while the 95% confidence interval for  $\bar{X}$  does not vary (3,50; 3,72). The null hypothesis will be rejected if the hypothesis-testing statistic's value falls below the critical value of the standardised normal random variable  $z_{0,05} = 1,64$ . The value calculated from the sample data is  $t = 11,15$ , which is far more than the critical value, and the null hypothesis is therefore not rejected. We may thus conclude that students are largely ready to participate in the Faculty's career centre.

Although particular ratings vary somewhat with gender, type of study, year of study and average exam grade, these differences are not statistically significant (except for those depending on the year of study), which has been confirmed by the implemented analysis of variance. We proposed a null hypotheses that average values do not vary with gender, type of study, year of study and average exam grade, and an alternative hypothesis that they do vary. In testing the hypothesis with regard to gender, the F-statistic value has been calculated at 2.204 and the associated p value at  $p = 0,139$ , which is more than the test significance level ( $\alpha = 0,05$ ), and confirms acceptance of the null hypothesis that average values do not vary with gender. In testing the hypothesis with regard to type of study, the F-statistic value has been calculated at 0.728 and the associated p value at  $p = 0,394$ , which is more than the test significance level ( $\alpha = 0,05$ ), and confirms acceptance of the null hypothesis that average values do not vary with type of study. In testing the hypothesis with regard to year of study, the F-statistic value has been calculated at 3.423 and the associated p value at  $p = 0,034$ , which is less than the test significance level ( $\alpha = 0,05$ ), and confirms acceptance of the alternative hypothesis that average values do vary with year of study. Students most interested in participating are those of years I (average value being 3.68) and II (average value being 3.69), while students of year III are somewhat less interested (average value being 3.35). In testing the hypothesis with regard to average exam grade, the F-statistic value has been calculated at 0.759 and the associated p value at  $p = 0,518$ , which is more than the test significance level ( $\alpha = 0,05$ ), and confirms acceptance of the null hypothesis that average values do not vary with average exam grade.

### 3.3 Reasons for Participation in the Career Centre

Further, we attempted to establish the major reasons why students would participate in the career centre. Within the above mentioned question (*How would you rank the following statements regarding your readiness to participate in the Faculty's career centre?*) we acquired answers to the remaining statements. The number of answers ( $n$ ), the average rating ( $m$ ) and the standard deviation ( $s$ ) are given in the table Tab. 2.

**Tab. 2: Reasons for participation in the career centre (own research)**

	n	m	s
I would participate if this resulted in direct benefits in my studies (higher exam grades).	326	3.34	1.124
I would participate if this resulted in direct benefits in my studies (exemption from attendance of practical classes/lectures).	326	3.20	1.137
I would participate because I believe I would benefit from this in my employment.	326	4.10	0.850
I would participate if I had no direct contact with teachers/teaching assistants in the career centre.	325	2.61	1.021
I would participate if I had a direct contact with teachers/teaching assistants in the career centre.	325	3.12	1.023

Source: own

Average ratings range from the lowest of 2.61 (*I would participate if I had no direct contact with teachers/teaching assistants in the career centre*) to the highest of 4.10 (*I would participate because I believe I would benefit from this in my employment*). It is not surprising that students are most ready to participate in the career centre because they believe they would benefit from this in their employment.

Hypothesis 2 read: Predominately, students would participate in the career centre because

they believe they would benefit from this in their employment.

The hypothesis was tested through discriminant analysis, with statements from Tab. 2 representing independent variables, and the statement *I am not interested in participating* representing the dependent variable. We have worked a new variable out of this one, with answers from 1 to 3 representing the group of students not interested in participating (41.7 %), and answers from 4 to 5 representing the group of students inte-

**Tab. 3: Average values and standard deviations of independent variables with regard to the dependent variable, and correlations between particular independent variables and the discriminant function**

	I am not interested in participating		I am interested in participating		Correlations
	m	s	m	s	
I would participate if this resulted in direct benefits in my studies (higher exam grades).	3.37	1.087	3.30	1.145	0.060
I would participate if this resulted in direct benefits in my studies (exemption from attendance of practical classes/lectures).	3.21	1.116	3.19	1.159	-0.018
I would participate because I believe I would benefit from this in my employment.*	3.64	0.924	4.42	0.611	0.923
I would participate if I had no direct contact with teachers/teaching assistants in the career centre.*	2.74	0.968	2.52	1.052	-0.193
I would participate if I had a direct contact with teachers/teaching assistants in the career centre.*	2.90	0.968	3.29	1.035	0.347

\* Statistically significant (the associated  $p$  value is  $p < 0.05$ )

Source: own

rested in participating (58.3 %). Table 3 presents the average values and standard deviations of observed independent variables with regard to interest in participating in the career centre, and the correlations between a particular variable and the discriminant function (so-called weights) revealing what influence a particular variable has in the formation of the discriminant function.

According to the results of discriminant analysis, there are three statistically significant variables in the distinction between the above mentioned groups of students, i.e. *I would participate because I believe I would benefit from this in my employment*, *I would participate if I had no direct contact with teachers/teaching assistants in the career centre and I would participate if I had a direct contact with teachers/teaching assistants in the career centre*. It is clear from Table 3 that it is the variable *I would participate because I believe I would benefit from this in my employment* that has the greatest weight, which confirms our hypothesis.

Further, we also employed discriminant analysis to explore whether there are statistically significant differences with regard to students' gender, type or year of study, or average exam grade. The results revealed that there are statistically significant differences with regard to gender (the associated p value being  $p = 0.000$ ), with female students (average value being 4.25) being more ready to participate in the career centre because they believe they would benefit from this in their employment than the male students (average value of answers being 3.85). With regard to the type of study, there are no statistically significant differences (the associated p value is  $p = 0.446$ ), nor are there with regard to the year of study (the associated p value is  $p = 0.544$ ). With regard to the average exam grade, however, results again reveal statistically significant differences (the associated p value is  $p = 0.025$ ), with students with an average exam grade of between 8 and 9 being most ready to participate in the career centre due to the benefit brought by this in their employment (average value being 4.28), followed by students with an average grade of between 7 and 8 (average value being 4.13), who, in turn, are followed by students with an average grade of between 6 and 7 (average ranking totalling 3.91) and, finally, those with an average exam grade of above 9 (average value being 3.64).

### 3.4 Students' Readiness to Voluntarily Engage in the Career Centre as Office Assistants

Hypothesis 3 reads: Students are largely ready to voluntarily engage in the Faculty's career centre as office assistants.

We proposed a null hypothesis and an alternative hypothesis:

$H_0$ : Students are ready to voluntarily engage in the Faculty's career centre as office assistants.

$H_1$ : Students are not ready to voluntarily engage in the Faculty's career centre as office assistants.

We based implementation of the test on the question: To what extent are you ready to voluntarily engage as an office assistant in support of the career centre. The opinions were measured on a scale from 1 to 5, with 1 denoting that they are not willing to engage at all, and 5 that they are completely willing to engage. The null hypothesis will be accepted if the average rating  $\mu$  of the entire student population that defined the sample frame is at least 3. We may thus use:

$$H_0: \mu \geq 3$$

$$H_1: \mu < 3$$

Statistical implementation of this test is based on the statistic:  $t = \frac{\bar{X} - 3}{s} \sqrt{n}$ , which, due to the large sample, is a standardised normal random variable. The  $\bar{X}$  in it is the arithmetic mean of the sample,  $s$  is the standard deviation, and  $n$  is the sample size.

The average rating of sample data was  $\bar{X} = 2.86$ , with the standard deviation  $s = 0.921$  and the sample size  $n = 328$  (the number of answers to the statement concerned), while the 95% confidence interval for  $\bar{X}$  does not vary (2.76; 2.96). The null hypothesis will be rejected if the hypothesis-testing statistic's value falls below the critical value of the standardised normal random variable  $z_{0.05} = 1.64$ . The value calculated from the sample data is  $t = -2.75$ , which is less than the critical value, and the null hypothesis, therefore, may not be accepted. We may thus conclude that students are largely not ready to engage as office assistants in support of the career centre.



### 3.5 Students' Readiness to Voluntarily Cooperate with Companies in Different Areas within the Framework of the Career Centre

Hypothesis 4 read: Students are largely ready to voluntarily cooperate with companies in different areas within the framework of the career centre.

We proposed a null hypothesis and an alternative hypothesis:

$H_0$ : Students are ready to voluntarily cooperate with companies in different projects within the framework of the career centre.

$H_1$ : Students are not ready to voluntarily cooperate with companies in different projects within the framework of the career centre.

We based implementation of the test on the question: *To what extent are you ready to voluntarily cooperate with companies in different projects within the framework of the career centre.* The opinions were measured on a scale from 1 to 5, with 1 denoting that they are not willing to engage at all, and 5 that they are completely willing to engage. The null hypothesis will be accepted if the average rating  $\mu$  of the entire student population that defined the sample frame is at least 3. We may thus use:

$$H_0: \mu \geq 3$$

$$H_1: \mu < 3$$

The statistical implementation of this test is based on the statistic:  $t = \frac{\bar{X} - 3}{s} \sqrt{n}$ , which, due to the large sample, is a standardised normal random variable. The  $\bar{X}$  in it is the arithmetic mean of the sample,  $s$  is the standard deviation, and  $n$  is the sample size.

The average rating of sample data was  $\bar{X} = 3.18$ , with the standard deviation  $s = 0.996$  and the sample size  $n = 328$  (the number of answers to the statement concerned), while the 95% confidence interval for  $\bar{X}$  does not vary (3.07; 3.29). The null hypothesis will be rejected if the hypothesis-testing statistic's value falls below the critical value of the standardised normal random variable  $z_{0.05} = 1.64$ . The value calculated from the sample data is  $t = 3.27$ , which is more

than the critical value, and the null hypothesis may therefore be accepted. We may thus conclude that students are largely ready to cooperate with companies in different projects within the framework of the career centre.

### 4. Findings

The considered issue, empirically supported by an analysis of survey questionnaires, provides a basis for being able to draw the following conclusions based on the findings:

Students largely find a career centre at the Faculty necessary. This suggests that they are aware of advantages that a career centre would bring to both the Faculty and themselves. The result that they are largely ready to engage in the career centre is therefore not surprising. A more detailed analysis reveals that differences with regard to gender, type of study and average exam grade are not statistically significant. The most important reason for participating in the career centre cited by the students is their opinion that this will be of benefit to them in their employment. Results indicate that there are statistically significant differences with regard to students' gender, with female students (average value being 4.25) being more ready to engage in the career centre because they believe they would benefit from this in their employment than male students (average value of answers being 3.85). In our opinion, this result may be explained by the fact that girls have more difficulties getting employment and are therefore more likely to believe that they might find an opportunity for employment through participating in the career centre.

As regards the statement *I would become a member of the career centre by paying a membership fee*, only 10.3% of the respondents indicated agreement. 33.4% of the students indicated a medium (non-)agreement with this statement, while no less than 56.2% disagreed with it. In our opinion, it would not be appropriate to impose a membership fee on students but we would rather actively involve them as assistants in different activities related with the centre's operation. As expected, students are largely ready to become members of the career centre without paying any membership fee. 81.2% of them agree with the statement *I would become member of the career centre without paying any membership fee*, 15.8% indicated a medium agreement, while 3%

disagreed with the statement. Provided that membership in the career centre was free of charge, students would be ready to pay different sums for their participation in workshops and for a session with a psychologist and testings. According to the results, most students are willing to pay approximately EUR 15 to participate in a one-day workshop. As regards testings and a session with a psychologist, 44.5 % are ready to pay up to EUR 15, 24.4 % would give EUR 15–25, and 8.5 % of the respondents are ready to pay more than EUR 25. 22.6 % are not willing to pay anything.

Based on survey results, we cannot conclude that students are largely ready to voluntarily engage in the career centre as office assistants. The results were below our expectations, primarily because of the fact that abroad, students eagerly respond to similar invitations. Given the fact that 21.9 % of students are ready to voluntarily engage as office assistants in support of the centre, it is those that it would be sensible to invite to participate. Unlike their (non-)readiness to engage as office assistants, students are largely ready to voluntarily cooperate with companies in different projects within the framework of the career centre. Given the fact that most students are aware of the opportunity for employment that many of them would already find during or at the end of their studies through direct cooperation, the results do not surprise us. Students are ready to cooperate with companies in different forms. According to the results, they can be ranked as follows: performance of mandatory pre-graduation professional practice, holiday work, preparation of a diploma work, involvement in projects, occasional student work and, in the last place, preparation of research papers.

## 5. Suggestions

The staff of Faculty of Organizational Sciences are aware that care for the development of students' careers, the deepening of their knowledge and qualifications, are ever more necessary, which is why it is indispensable to establish a career centre. Thereby, the level of students' knowledge and competences can be raised, and their personality developed.

Graduates from the Faculty having additionally been guided to possess the skills and managerial competences necessary for their selected career might be able to achieve better results on their

learning, living and working paths. By getting to know their own personal interests, ambitions, skills and personality traits, students become more self-confident and certain that the job they will do is suited to them. This can result in an advantageous position in the society and the labour market, primarily because of their personal motivation and a positive orientation toward the future. We believe that from the perspective of conceptual views, students need to be systematically prepared for the "world of work" throughout the period of their studies (from the first year on), using various methods provided by a career centre.

To acquire further information, we have employed a survey questionnaire to collect full-time students' opinions regarding the establishment and operation of a career centre within the framework of the Faculty. We hold that their opinions should be taken into account in particular implementation phases, therefore suggesting the following:

In our opinion, the government ought to be aware how important career guidance at faculties is, and should therefore co-fund establishment of career centres, the fact being that in the social perspective, only such system is economical and humane in that young people can thus maximally develop their own individual capabilities. This brings advantages to the individual, who raises his or her employability and competitive advantage, thus becoming more attractive for potential employers. Ultimately, the government would itself benefit from this, with young people thus being protected from failing to get employment due to a lack of demand for their qualifications as well as from getting an unsuitable job. We therefore deem it sensible to give all students a chance to become members of the career centre free of charge. What makes us believe so is the fact that no more than 10.3 % of students are willing to pay a membership fee while they are generally willing to pay a certain sum both to participate in different workshops or seminars and for testings or a session with a psychologist who, if an individual desired so, would "discover" his or her capabilities, interests and personality traits. If costs of implementing particular activities are too high and the Faculty is unable to cover them from its own sources, we suggest acquiring sponsors or donors for each activity being implemented.

We are currently in a time period when public funds are increasingly scarce, therefore it

would be so much the more important that students were ready to voluntarily engage as office assistants in the Faculty's career centre. One fifth of surveyed students are interested in such participation, being aware that this is a way to gather experience and demonstrating that their own development, acquisition of new knowledge and personal growth are important to them. We believe that students who actively participated and continually helped those working in the career centre ought to be compensated for this by being offered certain privileges in their studies.

Students are aware that they are themselves responsible for planning their own career. By actively participating in various activities within the career centre, they would better understand themselves and learn how to appreciate themselves, develop appropriate and efficient interpersonal relations, make out a career plan and find opportunities for achieving the set goals, and learn to manage the requirements of the society and the labour market to successfully participate in both. Given the fact that most students are ready to cooperate with companies, we suggest to establish a partnership between the Faculty and those companies that support the endeavours and goals of developing students' careers. For a number of years, the Faculty has regularly cooperated with different companies, therefore we find it important to keep maintaining this cooperation, and to draw new companies to participate. Companies would thus have an opportunity to present to students the real world of work by way of gathering experience by their involvement in projects or their working and getting to know the situation in the labour market. Through such cooperation, companies could encourage the students to invest their share of knowledge and capabilities in the development and growth of a particular company. The Faculty's career centre would establish a dialogue between companies and students and align their interests on a regular basis.

The survey has revealed that most students primarily have an interest in cooperating with companies in the Gorenjska and Osrednjeslovenska regions, therefore we suggest identifying those companies in those regions for which our students and graduates are potentially attractive and which are ready for different forms of cooperation. To the career centre, this would represent a basis for compiling a database

enabling students to perform mandatory pre-graduation professional practice, participate in different projects, prepare diploma and seminar works, increase possibilities for employment etc. Given the fact that, for most respondents, it is precisely the factor of increased employment opportunities that makes them ready to become members of the career centre and cooperate with companies, the advantage of such cooperation is two-way. It is a fact that there are aspects of an occupation that students can only get acquainted with in companies. They get to know the requirements and conditions they will be meeting in their work and responsibilities within a work team, while companies can thus promote themselves, make particular occupations more attractive, and get tried-out professional staff. They thus avoid cognitive dissonance in newly recruited employees, which is increasingly common among young people.

We believe that all activities related to the establishment and operation of the career centre need to be integrated into a consistent whole, taking into account change in the internal and external environments. This enables particular activities at the Faculty's career centre to be adapted to changes in the environment while interconnecting the goals of the Faculty, students and companies. With regard to this, it is important that external and internal players are connected to each other, as this is the only way to achieve the goals from viewpoints of the Faculty, students, companies and the entire society. We must bear in mind the significance of feedback, or monitoring and evaluating particular activities, which influences satisfaction of all directly or indirectly involved in this process.

All activities in the phases of the career centre's establishment and operation must be designed and implemented in such a way that they jointly produce synergic effects, which is what distinguishes well-performing faculties from others, enhancing their reputation. It is important that the Faculty's management present a vision of the centre and motivate all the staff and participants to try to realise it, thus ensuring that the operation of the centre is focused on the needs of both the environment and the individual. The establishment and operation of a career centre thus becomes a concern of all involved, who can contribute from different aspects to the implementation of the desired goals.

## Conclusion

Despite the fact that faculties are being faced with restrictions of funds, we need to recognise the importance of career for an individual and the necessity to establish a centre for developing students' careers such as are known in foreign faculties and in only a sample of faculties in Slovenia. We believe that an establishment of a career centre at the Faculty of Organizational Sciences can be a new challenge and a unique opportunity for the students to start being aware of their role and significance in the society. Today, it has become impossible to imagine social development if the majority of people did not do their work in accordance with their interests and capabilities, trying to do well in the selected profession. Within the career centre, students could acquire extra knowledge and develop their capabilities, which would enable them to successfully compete in the labour market. Finally, the Faculty could deepen trust placed in it by Slovenian companies and the economy. This, in turn, would also represent greater responsibility toward the students, as the career centre would provide new opportunities and challenges for all those who desired and were able to make use of them.

Set of effects on education are arguably the most important, particularly if the individualised effects of education – be they earnings or non-pecuniary – are zero-sum. The evidence here is not conclusive though: interpretation of these models is also difficult when few of these macro-economic effects have been expressed in rate of return metric or cost-benefit ratios. This comparability with individual effects of education identified above is important none the less: individualised data may not be sufficient to show education investments to be externally efficient, that is, for the private marginal product of education to be equal to the social marginal product. For this efficiency condition to be established, aggregate data must also be incorporated and interpreted so as to cohere with the most robust micro-economic evidence that education raises earning (Belfield, 2000).

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**ABSTRACT****ECONOMIC GROWTH EFFECTS ON EDUCATION WITH THE EMPHASIS ON THE CAREER CENTER**

**Polona Šprajc, Jerneja Šifrer, Vesna Novak**

*The contribution deals with the economics of education and with the approaches to its optimisation on the basis of the field research. From the view of the education we can say that the macro-economic approach involves a modeling of economic growth in an education. The objective is to contribute to a field of education with the economic principles and therewith to identify basic fields in an education. Based on the identification of an economic field in the education the research within the education sector was carried out. The Career Center is one of the area at the university that could make more integrative and operational environment for the students. We can define the Career Center as the challenge and the opportunity for universities all over the world. Also, the Career Center may result as the total care for the development of student's careers, the deepening their knowledge and qualifications. The level of student's knowledge and competences can be raised, and thier personality developed. However, the education sector should enhance a human capital also with the support of the new activities in the education. The fact that the human capital is not important only for the one human being and that relates to the whole society is the crucial point that we have to be concerned with while we analyze the meaning of the education. Advancing, creation and researching are the three vital points which generate the knowledge through the education institutions. Universities contribute to the social, economic, cultural and education development in the society.*

**Key Words:** *economic model, effects on education, career centre, employment, students, cooperation with companies.*

**JEL Classification:** *A23.*