

FIS, University of Economics in Prague: Twenty Five

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Abstract

FIS (Faculty of Informatics and Statistics) of the University of Economics in Prague, was founded in 1991. Since 2001, so for 15 years, master's degree survey is performed at the graduation ceremonies of all the faculties of University of Economics in Prague. Its aim is to explore some of the circumstances of their studies, their jobs during the study, but especially their likely future labor involvement, their salary expectations and their satisfaction with studies at the university. Paper presents some data about students and graduates of the faculty from this survey, but also the information about the students and graduates from the project Reflex 2013. This survey was conducted in 2013 for the third time in a row by SVP PedF of Charles University in Prague with the aim to map out the exercise of university graduates in the labor market shortly after obtaining a diploma. Therein respondents rated their university studies, characterized his professional history, and expressed their professional competencies in relation to the requirements of their employment.

Keywords

Faculty of informatics and statistics, a survey of new graduates, Reflex 2013

JEL code

A23, Y1

INTRODUCTION

During the reorganization of the University of Economics in Prague in 1991 the Faculty of Informatics and Statistics was established. "It merges departments and fields of study dealing with information systems with the use of computers and statistical, econometric and other mathematical methods applied in all areas of the business life, as well as philosophy problematic" (<<http://fis.vse.cz/en/o-fakulte/profil-fakulty>>).

After its establishment, the faculty had about one thousand students in the bachelor's and master's degree (see Table 1). After ten years of the faculty existence, only the students of bachelor program exceeded such a number (1 086 in 2002). Number of master graduates of the faculty in the 90s was below one hundred, in 2008 reached over two hundred, in 2012–2013 have exceeded even 300. In recent years the master students are 900–1 000, the master graduates is roughly one third.

Since 2000, master's degree survey is performed at the graduation ceremonies of the university's faculties. Its aim is to explore some of the circumstances of their studies, their jobs during the study, but especially their likely future labor involvement. Initially, there were changes in the interviewing, but since 2004 questionnaire for ten years has stabilized. Additional updates of the questionnaire occurred in 2014, when the request for the inclusion of new questions, ascertaining the particular expectations of graduates of their future salary and satisfaction with studies at the chosen faculty, was accepted. Participation in the survey is high, around 90% of graduates.

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Table 1 FIS – the number of students and graduates of master’s program

Year	1992	1996	2001	2006	2011	2015
Total number of students	954	1 427	1 723	2 578	3 229	2 793
of which in bachelor’s program	590	1 053	625	1 708	2 118	1 707
in master’s follow-up pr.	273	332	467	398	953	988
in master’s program	-	-	541	355	25	-
in doctoral program	-	42	90	117	133	98
in distance study	91	-	-	-	-	-
Number of graduates masters	-	46	154	188	285	277

Source: Výroční zpráva o činnosti fakulty informatiky a statistiky za rok 2015 <http://fis.vse.cz/wp-content/uploads/2015/10/VZ_FIS_2015_final.pdf>

Some additional interesting information on the faculty graduates was obtained from the survey Reflex 2013. According to Koucký, Ryška and Zelenka (2014), the source file contains data about graduates of public and private universities in the Czech Republic including, of course, the University of Economics in Prague (1 531 respondents, of which 250 reported the study FIS). This survey builds on major international projects implemented in previous years; its principal investigator and coordinator of the SVP PedF UK in Prague. This survey provides further information on the faculty graduates, but of course also on the graduates from other universities. The survey was focused on graduates in 2008–2012; by year of birth is their age range of fifteen. It was conducted online, unfortunately, further details regarding the method of selecting respondents the source does not provide. However, we do not intend to strive any broader generalizations. It is also necessary to consider that both surveys included only successful graduates; their answers can be systematically different from the responses of unsuccessful students.

Graduates of the faculty either studied computer science fields, or quantitative methods in economics; their numbers are in a ratio of about three to one. The proportion of women among all college graduates in the Czech Republic is about 60% (Řezanka, 2016). However, the Faculty of informatics and statistics belong to the schools, which are lower interesting for women: their proportion is less than 30%. The composition of the respondents in the survey Reflex 2013 – graduates of FIS corresponds to these facts.

Data from the master’s degree survey are collected for 15 years, so they enable to analyze the changes occurring at that time. However, it is quite surprising, how the structural changes in data over time are small and uninteresting.

1 FIS AND ITS STUDY FROM A VIEW OF STUDENTS

The main motivation to study at the faculty according to the graduates: “the study helps me for good career prospects” (average rating of 1.65 on a five point scale; 1 = strongly agree, 5 = strongly disagree; variability, $\text{var}^2 = 32\%$) and “it was an interesting and attractive field of study” (average rating of 1.67; $\text{var} = 35\%$). It is obvious that students perceive the reality of the labor market. Sometimes the students are suspected to be coming to the faculty being attracted by relatively simple admission procedure and then moving to another, “easier” fields of study at the university. The responses of graduates showed this rather as a marginal motivation (average rating 3.68; $\text{var} = 65\%$). Less than 5% of respondents stated as the reason for studying at the faculty, that they have not been accepted to study elsewhere. However, it should be noted that the answers of unsuccessful students of faculty may differ.

Study of mathematical disciplines (statistics) being considered somewhat more challenging than studying computer science (3.7 vs 3.4; 1 = study was easy, 5 = study was not easy). As for the study itself,

² Variability (var) is expressed relative to the maximum achievable (on the used scale) standard deviation; it is 2 for the five point scale (namely, when are present only outer categories, each of the 50%).

most students appreciate its time flexibility (the availability of required courses; the time that they have to fulfill degree requirements; the possibility to combine study and a job; all about 1.8 with var = 40%; the five point scale, 1 = very good, 5 = very bad). Also the professional level of teaching, contacts with teachers and experience in oral presentation shows good rating (all about 2.0 with var from 45% to 55%). On the contrary, they would appreciate better higher standard of foreign language teaching; they are not satisfied with preparation to communicate in a foreign language in the studied field (3.6; 56%) and neither with the preparation for the use of literature in foreign languages (3.2; 55%).

However, the median proportion of the declared high quality teachers is 70% (its distribution is heavily skewed to the left) and among all universities in the Czech Republic, they evaluated their faculty as above-average = 3 to highly above-average = 2 (2.6; 45%). The seven point scale was used for this evaluation (1 = best, 7 = worst); besides two responses, the worst evaluation the faculty obtained was average (4). The study by rating of graduates is a good basis for “personal development” (2.1; 47%) and for “further learning within the employment” (2.2; 56%). On the contrary, often they consider this as not sufficient basis for the development of business skills (3.2; 61%). Asked whether sought in their study of the best marks, 42% of respondents answered “probably yes” or “definitely yes” (but also 38% “rather not” and “definitely not”).

2 EMPLOYMENT OF GRADUATES DURING THEIR STUDIES

Various evaluation of university study programs agree on the fact, that teaching is focused on the acquisition of theoretical knowledge and less on practical skills and experience. This may also be the reason for a rapidly growing share of employed students: at a later employer, the practice is a considerable advantage. The question on employment of students during their studies led in the past to the conclusion that the proportion of master students employed in the study is slightly more than half. After the question upgrade in 2014, however, it turned out that this percentage is much higher. Almost a quarter of the FIS graduates, who replied to the question, said full-time work while studying, 60% part-time work.

As expected employment during studies plays a role in finding job after graduation. Graduates who worked already during their studies full time, often get a job in the same company after graduation.

Table 2 Employment with the same company, like when studying

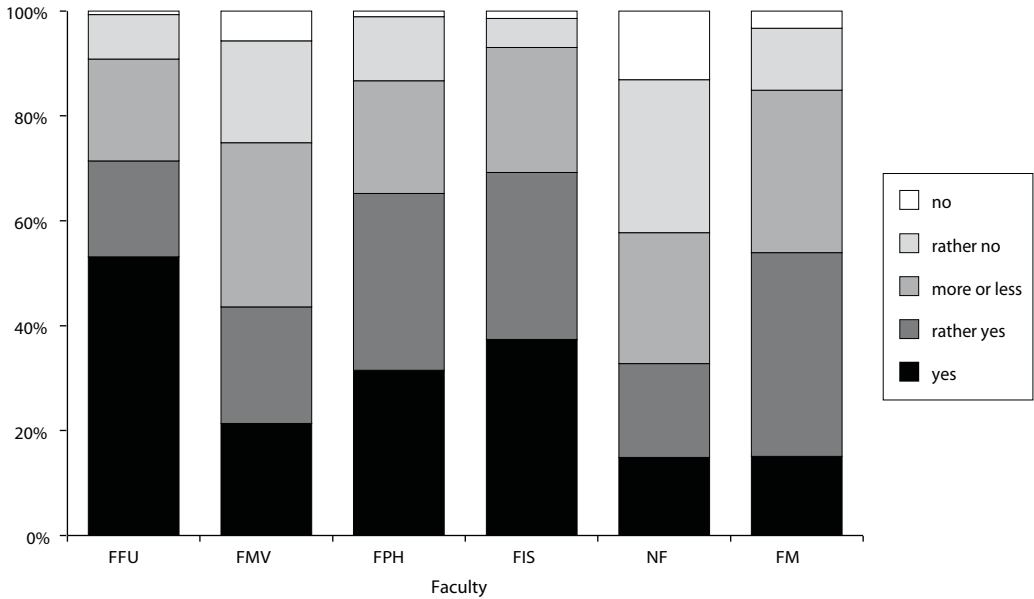
		Employment with the same company, like when studying	
		yes	no
Job while studying			
part time	%	50.5	49.5
full time	%	85.2	14.8

Source: Author, Master’s degree survey, FIS, 2015 (internal material of the faculty)

The employers have an interest in the graduates of the faculty. Over 80% of graduates know for a long time in advance, where they will work. Since 10% of graduates yet postpones their future employment for various reasons (holidays, motherhood, journey abroad, parallel or further study), the proportion of graduates so far (in the time of graduation) unsuccessful in finding a job is relatively low.

The most similar structure of responses to the question on knowledge of future employment is in the context of the university at the Faculty of Finance and Accounting (FFU). The graduates of these two faculties also have the most benefit from their major specialization (a five point scale; 1 = strongly agree, 5 = strongly disagree): 70% of responses are “yes” or “rather yes”. The other faculties of the university does not have the proportion of those responses so high.

Figure 1 The use of major specialization in 2015



Source: Author

In contrary, a specific feature of the faculty is the choice of minor specialization. University students usually choose the minor specialization at their own faculty. However, the FIS students usually choose the minor specialization at another faculty. It seems that if the faculty is characterized by lower utilization of main specialization, the minor specialization is understood as the continuing professional development. If the usage of the main specialization is high, the minor specialization is perceived as an alternative, as a „backup“ option. While exploring the usage of major and minor specialization, the lowest level of consensus (measured by Cohen kappa) was found just for the FIS and FFU.

3 EMPLOYMENT OF GRADUATES AFTER THEIR STUDIES

A large majority of graduates of the University of Economics (nearly 80%), and this also applies to FIS, remains to work in Prague and is aimed primarily to large private companies (over 50 employees). Doing so they often continue a job they performed while studying. Nearly 80% of the FIS graduates (who responded to this question) has a contract for an indefinite period. Graduates mostly work in the field of information technology and communications (over 50%); but also in trade, finance and insurance etc.

It has been found that about 10% of graduates in the long term is not concerned about future employment at the time of graduation due to various reasons – further studies, planned trip abroad, motherhood, or an extension of the holidays eventually. In the sample survey Reflex 2013, the proportion of unemployed graduates FIS is under 4%, moreover, mostly it comes only a few months. The most frequently cited reasons for non-acceptance by the employer in this case are insufficient practice.

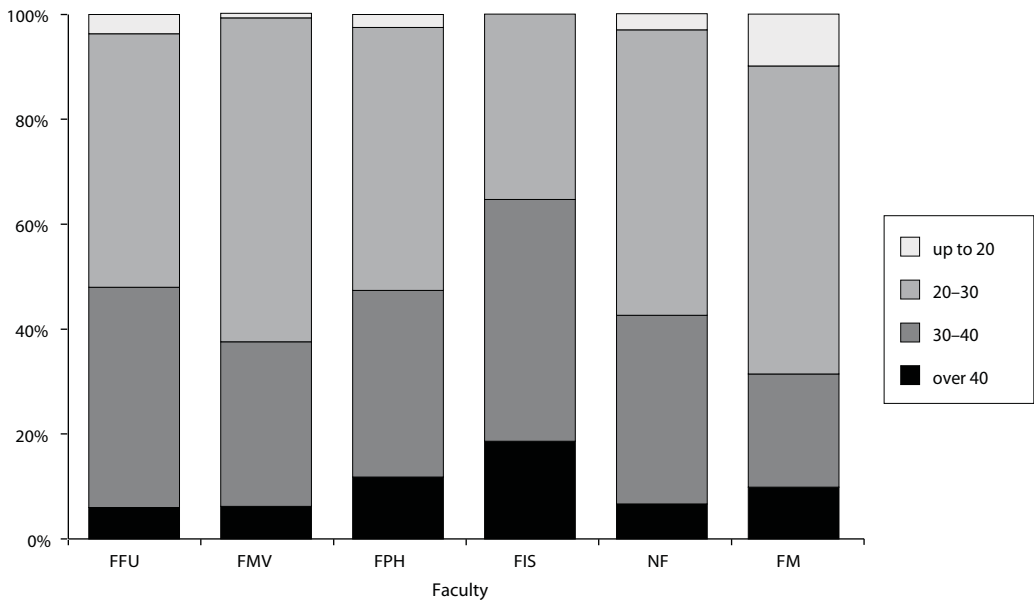
Since 2014 the questionnaire master’s degree survey contains several issues relating to the salaries of graduates. More than half of University graduates is expected starting salary at intervals around the average wage in the Czech Republic. However, the FIS graduates are somewhat more demanding. Table 3 contains a comparison of the structure of the responses of University graduates and FIS graduates.

Table 3 Expected starting salary (2015; in thousands of CZK)

	University	FIS
Up to 20	10.5%	6.8%
20–30	51.5%	36.8%
30–40	27.5%	36.1%
over 40	10.5%	20.3%

Source: Author, Master's degree survey, FIS, 2015 (internal material of the faculty)

Another question associated with the starting salary in master's graduates survey ascertains, what their satisfaction with the starting salary is, or, more precisely, what salary would be considered adequate. As Figure 2 shows, the FIS graduates attach best value to their qualification compared to other faculties.

Figure 2 Adequacy of starting salary (in thousands CZK)

Source: Author

Regarding expectations in the short term (three years), the graduates expecting the lower starting salary then often think that it will not change, or it will change only a little. On the contrary, graduates with high demands on the starting salary expected soon its more substantial increase.

What is the reality? What incomes of faculty graduates result from survey Reflex 2013? Nearly two hundred graduates responded to this question. However, although the year 2013 falls into a period of economic recession in the Czech Republic, respondents reported incomes even higher – see Table 4.

Table 4 Graduates: starting and actual salary (in thousands of CZK)

	Starting	Actual
Up to 20	25.1%	19.8%
20–30	31.5%	17.4%
30–40	27.1%	25.2%
over 40	16.3%	37.6%

Source: Author, Master's degree survey, FIS, 2015 (internal material of the faculty)

4 BENEFITS OF STUDY AT FIS FOR JOB PLACEMENT OF GRADUATES

The graduates from the faculty are employed in accordance with what they studied. Almost 80% of them do the work for which, in their opinion, their completed study field or possibly a related field fits best. Table 5 shows the extent to which they think they will be able to use their current knowledge and skills in their job.

Table 5 Utilization of expertise in the employment

	%
1 – in large extent	20.8
2	27.6
3	26.0
4	12.8
5 – not at all	2.0

Source: Author's calculations

During the project Reflex 2013, the graduates were also asked about their competencies. In the set of 26 items the students evaluated on the 10-point scale (1 = lowest level, 10 = highest level) their level of competencies acquired at school, their own current level and the level required by their employer. Researched competencies were divided into seven groups representing professional qualification, flexibility, innovation and knowledge management, mobilization of human resources, international orientation, drive, business presentations (Koucký, Ryška and Zelenka, 2014).

A comparison of the average level of competencies acquired at school and own current competencies implies an expected fact that in the latter case it is the same or higher. In some competencies plays a role, albeit short, work experience, not in others. Graduates of FIS evaluate competence levels acquired at school and own current competencies roughly equally for example in terms of professional theoretical and methodological knowledge, legal competence and presentation skills (in this respect the faculty has prepared them obviously good). Conversely, the biggest inherent contribution graduates indicate in the case of foreign language skills, but, somewhat surprisingly, also in the case of mother tongue, further in creative thinking, independent decision making, drive and the ability to bear responsibility, manage the team or work in an international environment (items with differences in level by more than one degree on the used scale; the maximum difference is about 1.5 degrees).

Like the graduates of other schools (Koucký, Ryška and Zelenka, 2014), also the FIS-graduates perceive their *current* competencies for employment as sufficient. The average level of achieved competencies in all seven categories is always higher than the average level of required competencies – see Table 6. This relationship is inverted in only a few of the 26 questioned items, such as ability to utilize expertise

in practice, knowledge of the conditions for the use of professional theories in practice, ability to identify and solve problems or the ability to communicate with people. Thus, the graduates perceive certain reserves in these competencies.

Table 6 Level of achieved and required competencies of FIS graduates

	Competencies	
	Achieved	Required
Professional qualification	7.06	6.87
Flexibility	7.29	7.00
Innovation and knowledge management	7.61	7.18
Mobilization of human resources	7.19	6.93
International orientation	6.81	6.31
Drive	6.89	6.33
Business presentations	7.36	6.59

Source: Author's calculations

5 FIS GRADUATES' SATISFACTION WITH THE STUDY, EMPLOYMENT AND LIFE

According to the master's degree survey, over 80% of graduates would choose the same field of study at the faculty again. It's more than the average for high schools in the country (about two-thirds of responses, Koucký, Ryška and Zelenka, 2014; it also applies to the rest of the University of Economics). In addition, about 10% of graduates would remain in University of Economics, but would have chosen another field.

In the Reflex survey there was also ascertained the satisfaction of graduates in various fields of life (five point scale, 1 = very satisfied, 5 = not satisfied at all). The average level of satisfaction with the employment of graduates is 1.95 (var = 46%). Only 5% of graduates state an experience with unemployment, almost always short-term. The satisfaction is significantly influenced by the feeling of a sufficient use of knowledge and skills and, of course, by the size of salary (significance level 0.05; the exact test, sparse contingency tables).

The average level of satisfaction with the economic situation of households is 2.00 (var = 44%), of satisfaction with family life is 2.18 (var = 55%). Unfortunately, further information about households in which respondents are living, has not been surveyed. In view of age of respondents, it can be assumed, that many still live in the household of their parents. It should be added to the last statement that only 6% of the corresponding graduates stated, they had children. However, due to shifting of reproductive age into the later years, it is also not surprising.

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