

**DOCTORAL (Ph.D) THESIS**

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**RELATIONSHIPS ON LABOUR MARKET OF RECENT**  
**AGRICULTURAL GRADUATES**

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## **1. Preliminaries and objectives of the research**

The thesis focuses on the labour market position of higher education output.

The **primary objective of the dissertation** was to analyse the position of recent agricultural graduates in the years between 2006 and 2008.

**The following tasks were needed to be fulfilled in order to achieve the above objective:**

- Analysis of the reasons and consequences the expansion of higher education.
- Analysis of organisational characteristics of employers of recent agricultural graduates.
- Analysis of economic activity of recent agricultural graduates.
- Analysis of the parameters of filling a position and its fitting to the labour market.
- Analysis of job alternatives.
- Analysis of working time and income situation of recent agricultural graduates.
- Analysis of drivers of career-change of recent agricultural graduates.
- Recommendations for a potential implication for institutional career follow-up model.

## 2. Materials and methods

The tasks of the dissertation were conducted on the basis of primary and secondary researches. The secondary data and information were collected by reviewing the relating professional literature. The secondary survey focused on the tendency observed on the labour market and the reasons and impacts of the expansion on employment, which went through in higher education.

In order to achieve the set **objective a new database** was necessary to build, which provided the basis for understanding the labour market position of agricultural graduated. The database was built on the data recorded in the course of primary research.

Both quantitative and qualitative methods were used in the primary survey. *The target group* of the research was the full-time graduates of study programmes on agriculture. Considering the literature recommendations, the survey on labour market position was done in the period of 12-15 months following the graduation exam of students of years 2005 to 2007. In the involved period, altogether 355 students graduated from Kaposvár University. The number of received and assessable questionnaires was 216. The sample was representative concerning the program, gender and year of graduation. Among the qualitative methods, structured deep-interview was selected for the questionnaire-based survey. The data were processed with MS Excel and SPSS 13.0; the used mathematical-statistical methods are described in the dissertation.

### **3. Results**

#### **Labour market position of recent agricultural graduates**

According to the analysis, high economic activity and low inactivity were found in case of the recent agricultural graduates. The grade of their diploma has influence on the success on labour market. Those without language exam or with only basic level language exam were found unemployed more frequently. Employers expect 'hard-covered' diploma from entrants; they do not content themselves with a certificate proving the termination of studies only. Re-evaluation of jobs is experienced, which is shown by the changes in employer expectations. Among job requirements and besides sector-specific knowledge competencies on management and economics came into front.

#### **Method of job-seeking**

Relational capital has determinant role in occupation of graduates. The research revealed changes in the value order of graduates of higher education; the role of other job-seeking channels grew besides personal relations. In parallel, the share of those who found their jobs via their contacts within the university decreased, which probably was due to an increased number of students as well as to higher demand laid on the academic staff. According to the result obtained it was found that those who started to look for job during their studies found jobs earlier than others.

#### **Analysis of mobility**

In the course of the analysis of mobility of agricultural graduates it was found that entrants of labour market are willing for daily commuting and

changing their living place in hope of receiving a potential job. The income situation of those who chose moving to another living place is better than of those got employed at their living place. Among the three programs analysed the animal breeding engineers have the highest mobility and the economic agricultural engineers have the lowest willingness. Willingness for mobility was found in relation with the education background and job-related specifications of given professional qualification. The premises of service sector are basically concentrated in cities or places with better infrastructure; this is why economic agricultural engineers tend to choose their jobs in their living place. Contrary, animal-breeding engineers who are characterised with higher mobility mainly find their jobs in agricultural production. Agricultural production and relating premises are linked to rural areas, therefore, this group of labour market is partly driven by necessity, and thus constraint also has a role in their willingness for mobility.

### **Features of jobs taken and fitting to qualification**

#### *Demand for higher education graduates of jobs taken*

Recent agricultural graduates were employed in jobs requiring higher level education in majority (72.8%). Those graduates that also obtained language exam (according to the qualification requirements) have better opportunities to fill a vacancy. The graduates are typically employed in administration and production. The relationship between the type of study program and the type of filled vacancy was statistically proven.

#### *Higher level qualification and type of job*

In the course of the analysis of fitting of qualification to a position, a moderate fitting level was found. Best fitting was found in case of animal-breeding engineers. By bearing the required language exam, the candidate

filled a vacancy more or entirely fitting to his or her diploma in a higher share than those without language exam.

### **Analysis of working time and income of recent agricultural graduates**

#### *Average working time and income*

Men and women perceive their income situations differently. Men are paid usually higher and women lower incomes than the average.

The average monthly salary of agricultural graduates was found 121 938 Ft and their average working time were 8.8 hours. Positive correlation was found between working time and income, which let to conclude that increase in daily used work hours influences the receivable income. Women earn 16.7% less than men. Significant difference was shown by the one-way analysis of variance of salaries of women and men.

Regional patterns were also found in the differences of salaries. One-way analysis of variances of different regions showed regional significant difference of income. The available income for recent agricultural graduates correlates with the economic development of the region. In more developed regions the income will be higher.

#### *Analysis of income claims in different living categories*

The analysis of income claim showed that the income situation of the graduates is located between the living levels “average” and “narrow”. The income differences observed in labour market appears in case of the income claims as well; because the income claim of women is lower than that of men.

Regional patterns were found in case of income claims as well; two different groups of statistical regions were defined. The role of regionalism appears in the thinking of people, too; they priced their own work accordingly.

In living categories “good” and “very good” it was found that income claim of industrial employees is the highest and it is the lowest in the public sphere.

### **Features of career change**

In the course of the analysis of career change it was found that 60.5% of the graduates do not want to change their current job. On the basis of income categories, for those in the average and somewhat below the intention for career change is more frequent than in categories earning above the average.

Almost 50% of agricultural graduates want to change for economic-type education, but also IT (16.9%) and technical jobs (9%) are considered.

Men are rather interested in IT, technical and military areas; while women are interested in economic science, pedagogy, jurisprudence, nature science and medical orientation. According to their opinion, a new qualification can be obtained by attending a new study program resulting in the targeted diploma.

### **Importance of life long learning**

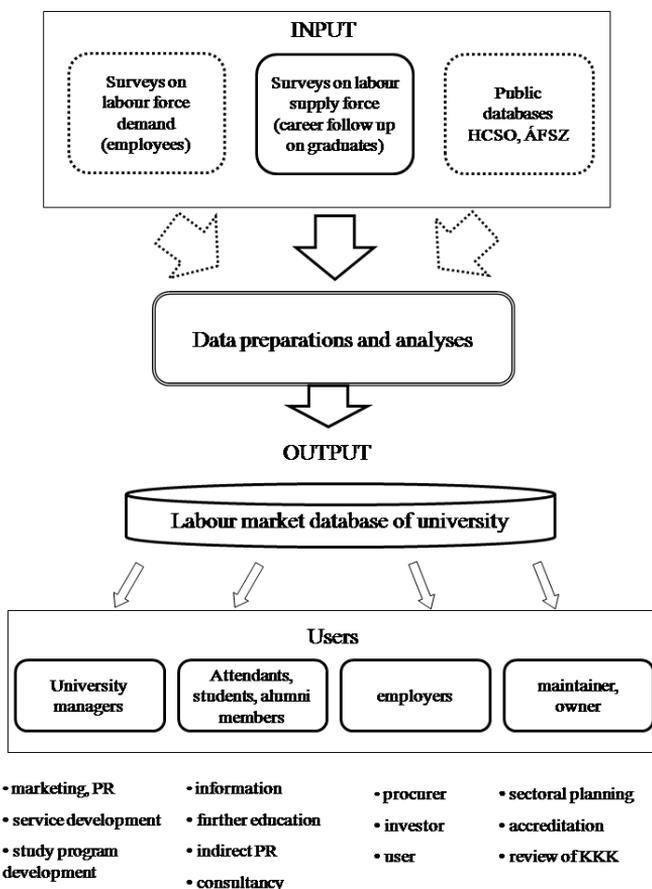
After having obtained their diploma, almost 50% of the graduates attended any training. Those with lower income took part in trainings with lower frequency than those with higher income. Among various forms of education the role of shorter term trainings can be emphasised. Concerning the professional field of these programs, 48.6% of those attending further programs did economic, 14.7% agricultural programs and 13.8% foreign language courses. In this phase of their life cycle the motivation factor changes from parent to work requirements, necessity for additional knowledge and evaluation of personal interest; as many of those taking part in further education mentioned these motivating factors.

## **Potential practical implications of results**

In market competition those organisations will succeed that are able to answer the challenges of the market. One of the major indicators of education can be the labour market data of graduates.

At the moment, the higher education institutions do not have such database which would be able to measure the labour market success of the provided diploma. Figure 1 summarises a potential practical implication of the use of such database. The model examines the input and output sides of the use of data. In order to define the labour market value of the study programs of the higher education institution, regular data collection is necessary on both the demand and the supply sides. The regular data collection can be complemented with information provided by HCSO and Hungarian State employment Service. The data collected by these two institutions are not suitable for the evaluation of the efficiency of given institution.

Surveys on labour supply cover the information collected with the career-path surveys of graduates. Supply data support the targeted labour demand surveys. The database contains the time series of data collected according to pre-defined methodology, which can be used for information supply on user groups.



**Figure 1: Potential model of labour market forecast**

**Four main user groups** can be defined for the “Labour market Database of University”:

**Managers of the institution:**

Managers of the university can be grouped according to the management hierarchy of the institution, considering the professional field represented by the managers. These are: the senate, the rector and deputies, deans and deputies, who play strategic role in the evaluation of the process. The next level is the heads of departments, who with an active participation of academic staff could be the operative implementers of necessary measures; because this is the group which has the most direct contact and influence on

students. The data can be used for various purposes depending on their content. If the data have positive content, it is reasonable to handle them as part of the marketing communication strategy of the institution and to indicate them in the **marketing and PR** activities. Labour market data may point out the potential fields of development of study programs and services (e.g. further trainings during the running of programs).

### **Students:**

The student self-governments are determinant elements of the group of students, who are active players of the process and keep communication between strategic managers and students.

Objective **information** is given to the person applying to the institution on the preferred study program and labour market opportunities. Bearing the suitable information the person is able to decide on further studying in the given education institution. Satisfaction of students and graduates induce **indirect PR**, which can provide competitive advantage for the education institution. It can build its **career consultancy** on the basis of the feed-backs in order to enhance the entering to labour market.

### **Employers:**

Employers play role as **procurers**. If the information system works, employers can place an order for training of persons with varying skills. On the other hand, the employers can act as **investors** in the region in order to improve the education structure. Thirdly, employers can be **users**, thus they have resort to other trainings and programs of the institution.

### **Maintainer:**

In case of higher education institutions the maintainer is the Ministry of National Resources, the maintainer can use the labour market data in the course of macro-level **planning**. Even a quality system can be built, with a potential indicator set of the labour market data. Further on, the database

support modifications in the education and output requirements if the earlier defined education targets and results do not comply with the real labour market facts.

## 4. Consequences

Paradigm was changes on the demand market for agricultural graduates. While earlier such professionals were sought for who had specialised knowledge; in these days a “marketable” agricultural expert needs to have skills and knowledge on task-execution and high level economic knowledge in order to reach success on the labour market.

A peculiarity of agricultural education appears in the labour market emergence as well. Jobs that can be filled with agricultural qualification are typically low income and relatively high number of working hours accompany.

Based on the findings of the research it can be stated that recent agricultural graduates can be described with high ratio of economic activity and low inactivity at the initial phase of their employment. As opposed to the labour market data of the country, entrant women have higher while men have lower economic activity figures.

According to the research, the time-frame of employment contract of graduates is opponent to the FIDÉV study concerning the South Transdanubian region in case of agricultural graduates.

The role of relational capital may result in several advantages. According to the survey, the relationships (friends, family) are visible factor as ways of job-finding for recent agricultural graduates. The share of those finding job through their contacts in the university is decreasing, while it is increasing in case of those finding job on the internet.

The surveys undoubtedly prove that those who started to look for job during their studies found jobs earlier than those starting job-seeking after receiving their diploma.

In these days mobility and flexibility of human resource have evaluated. In case of agricultural graduates more than 60% of entrants of labour market are willing for daily commuting and changing their living place in hope of receiving a potential job. The analysed group of labour market is partly driven by necessity, and thus constraint also has a role in their willingness for mobility.

On the basis of the findings of the primary research, a conclusion can be drawn that depreciation of the agricultural diploma is not typical. The majority of recent agricultural graduates fill jobs requiring higher level qualification.

In case of jobs requiring higher level qualification, mainly budgetary institutions, companies with legal entity and large companies can be identified as employees. Employers reckon less with higher level qualification in case of service sector, companies without legal entities, micro-enterprises and foreign countries.

The analysis of qualification and the filled job revealed the best fitting in case of employees in public administration and food economy.

People applying to higher education do not know the labour market value of their chosen study program, because databases do not exist, yet. At the same time further education can be considered as an investment for the person and his or her family, thus they rightly expect returns on their investments or any advantages. The income available with a given qualification is thus one potential indicator in the evaluation of the labour market value of given study program. On the basis of the findings the available income can be identified for given time and study program.

According to the results obtained the available income for agricultural graduates is different between regions. The income available for recent agricultural graduates correlates with the development of the region.

Answers revealed that for people with different labour market positions are motivated by different drivers to change their career. Entrant unemployed changed their career in order to obtain a different qualification, which may lead to a better labour market position. In case of employees, the motivation for change is likely due to their underemployment, because those who fill a vacancy not requiring higher qualification tends to change their career more frequently than those employed for job requiring diploma.

The relationship of language exam and success on labour market was analysed from various aspects. Those who do not have language exams demanded by the education requirements were more frequently unemployed than entrants with language exam. Those entrants who have the language exam were more frequently employed in a job requiring higher qualification and fitting better or entirely to their study programs.

A better grade diploma has positive impact in the labour market emergence. While 16.3% of those with a diploma of only satisfactory grade are unemployed, this figure is decreasing in case of “good” and “excellent” diplomas (13.4% and 4.2%, respectively). Those with better grade diploma are more frequently employed in jobs fitting to their qualification level. The relationship between the grade of diploma and the number of applications for job and interviews was also analysed, and it was found that along with improving grade of diploma the number of applications and interviews decrease.

## **5. New scientific results**

1. I have built a career follow-up model in higher education. This career follow up model may support the follow-up system of given higher education institution. On the basis of the model labour market information system can be formed, which helps strategic planning in given institution.
2. I have created a new database on agricultural career-path. The database is suitable to find relationship between the work time and income of agricultural graduates. It makes possible that the actors of labour market make funded decisions.
3. In such context I have examined first the relationship between labour market success and grade of diploma and the language exam required by education requirements. I have proven that if a graduate has better grade diploma and fulfilled the language exam requirements he or she will get employed with higher chance, faster, will fill a vacancy requiring diploma and fitting better to the acquired profession.
4. According to the surveys, I have proven that students need to build labour-market experiences during their studies in order to improve their chance for getting job.
5. On the basis of the results obtained I have concluded that early career change can be avoided if study fields as economics, farm economics, accounting and management methodology are given higher importance in the study program.

## **6. Recommendations**

In order to improve the labour market position, modules targeting the development of knowledge and skills on entrepreneurship is recommended, which may help to build entrepreneur approach and willingness of graduates.

On the basis of the research it is recommended to improve the relationship between university and graduates, such as via institutional alumni organisations and relating services; which system provides mutual benefit for both the institution and the alumni members.

According to the results, it is recommended to build career management information system in the study program and transfer these skills besides high quality professional knowledge. In the future it is important that trainings encouraging employment appear in the education system with higher emphasis, in order that students start to prepare themselves on their life stage of employment as early as within their study period.

In more developed regions the receivable income is also higher. It is necessary to keep this fact in mind later on, in the interest of re-integration of agricultural higher education institutions and of the occurrent restructuring of education system.

On the basis of results obtained regarding questions on career change it is recommendable to make the economic orientation more emphasised as early as during the bachelor programs.

Due to the outstanding number of those attending further education programs it is recommended to map up the service opportunities of higher education institutions, which may compensate the shortening state-provided budget.

Knowledge of foreign language was benefit, for today it has become basic requirement in labour market. It is recommendable to lay greater emphasis on the language teaching in higher education, and to make the students more conscious about foreign language use.

On the basis of the set model it is recommended to build the information system of the institution on labour market and to use the results in the course of strategic planning.

## **7. List of publications related to the Phd research**

### **Scientific publications in hungarian language**

**Szabó G.** – Piros M. (2007): A felsőoktatás és a munkaerő-piac kapcsolódási pontjai. Acta Scientiarum Socialum. 2007. XXV. sz. 247-248.p.

### **Scientific publications in foreign language**

**G. Szabó,** S. Kalmár (2009): How are graduate career starters seeking a job? Regional and Business Studies (2009) Vol 1 No 2, 31-38. p.

### **Full articles in proceedings in hungarian**

**Szabó G.** – Piros M. (2007): A munkaerő-piac által igényelt készségek, kompetenciák a Dél-dunántúli Régióban. Erdei Ferenc Tudományos Konferencia. Kecskemét, 2007. augusztus 27-28.

**Szabó G.** – Piros M. (2007): Az agrár felsőfokú végzettségekkel szemben kialakult munkáltatói preferenciák a Dél-dunántúli Régióban. Erdei Ferenc Tudományos Konferencia. Kecskemét, 2007. augusztus 27-28.

**Szabó G.** – Piros M.: A pályakezdő agrárdiplomások kereseti viszonyai. Pannon Gazdaságtudományi Konferencia. Veszprém, 2007. június 7.

**Szabó G.** – Piros M. – Walter V. (2008): Új követelmények a pályakezdő agrárdiplomásokkal szemben. *In:* Dienesné Kovács E. – Pakurár M. (szerk.) „Hagyományok és új kihívások a menedzsmentben; 140 éves a vezetés és szervezés oktatása a debreceni gazdasági felsőoktatásban” Nemzetközi Konferencia. Debrecen, 2008. október 2-3. 491-498. p.

### **Full articles in proceedings in foreign language**

Cs. Borbély, **G. Szabó,** K, Szabó: Landwirtschaftliche Ausbildung in Ungarn. 15. Arbeitswissenschaftliches Seminar. Internationale Tagung. 5. – 6. März 2007

**G. Szabó** - E., Szentgróti – V., Walter (2009): Job search behaviour of graduated career starters. II. Nemzetközi Gazdaságtudományi Konferencia. Gazdasági versenyképesség- életminőség- fenntarthatóság. Kaposvár, 2009. április 2-3. 873 – 879. p.