

# The Macedonian labour market and the role of university business incubators

Dimitar Nikoloski<sup>1</sup>

<sup>1</sup>Faculty of economics-Prilep, University "St. Kliment Ohridski", Bitola, Macedonia,  
dimitar.nikoloski@uklo.edu.mk

The aim of this paper is to assess the perspectives of the Macedonian labour market with respect to the dynamic changes in the higher education system and, particularly the role of the university business incubators. During the two decades long period of transition Macedonian labour market has been characterised with depressed conditions manifested by high and persistent unemployment rate, strong labour market segmentation and prevalence of long-term unemployment. In such circumstances, the higher education system in Macedonia has been challenged to change its role in the society. During the period of transition we have witnessed a dramatic evolution of the Macedonian higher education system that has been characterised with proliferation of university centres, growing number of study programmes and development of new concepts such as introduction of dispersed studies, clinical education, compulsory internship etc. In this context, the role of the universities as generators of knowledge and promoters of entrepreneurial spirit has been repeatedly emphasised by both academics and policy makers. Although the idea for university business incubators in developed western economies is not new one, Macedonian higher education system is lacking sufficient experience about their role and socio-economic implications. In order to fill this gap, the focus of the applicative part in this paper will be development of a model for appropriate university business incubator. Hence, we would like to explore the feasibility of this model for developing entrepreneurial skills among students and to evaluate its potential impact on the Macedonian labour market. As a consequence, we will formulate suitable policy recommendations as guiding principles for policy makers in designing more competitive higher education system that would respond to the needs of the Macedonian labour market.

## Keywords

Business incubator, Entrepreneurship, Higher education, Labour market

## 1. Introduction

One of the most important development goals of economic policy is the goal of full, productive and sustainable employment, *i.e.* employment for all those who are able to work, wish to be employed and actively looking for a job. This commitment becomes even more pronounced in the case of transition economies where economic shocks have contracted the level of employment and redistributed wealth. Having in mind the social implications of persistent open unemployment manifested in rising poverty and social exclusion, all transition countries have placed unemployment reduction among their most important macroeconomic goals. However, policy measures intended to reduce unemployment have to be based upon previous comprehensive analyses of the labour market characteristics and have to be implemented by credible governments.

In the circumstance when unemployment is high, the policy measures should simultaneously focus on both demand and supply side of the labour market [1]. This means that efforts for creation new jobs in the economy should be accompanied by accumulation of appropriate knowledge and skills of the workers and potential labour market entrants. In this context, almost all transition countries have paid

particular attention to reforms of their education systems in order to provide more competitive and marketable skill generation. Alongside the introduction of compulsory secondary education, we are witnessing dramatic changes in the higher education system in Macedonia that are still subject to criticism. One form of reconciliation of the demand and supply labour market policies is by creation of university business incubators as viable tools for development of entrepreneurial skills and creation high quality jobs.

Given the Macedonian labour market conditions and the on-going reforms of the higher education system, in this paper we aim to develop an appropriate model of university business incubator and to assess its potential impact on the labour market performance. Hence, with this research we intend to fill the gap in our literature about the implementation of university business incubators. For this purpose the paper is structured as follows. In the second section we will present the main features of the Macedonian labour market as a contextual framework of the research. A critical elaboration of the higher education reforms in Macedonia will be given in the third section. In the fourth section we develop an appropriate model of university business incubator for the case of Macedonia with giving emphasise to the potential stakeholders, supporting services and phases of incubation. Finally in the fifth section we conclude and formulate some policy recommendations.

## 2. Macedonian labour market performance

The main source of data for the Macedonian labour market is the Labour force survey. The first Labour Force Survey (LFS) in Macedonia was conducted in 1996, and since then we have detailed data concerning labour market trends [2]. The LFS is one of the most valuable sources of information regarding trends in the labour market. This survey is conducted according the methodology recommended by the International Labour Office (ILO) and the recommendations of the European Statistical Bureau (Eurostat). The goal of the LFS is to provide comparable data concerning the size and the structure of the active population with respect to international standards. According to the LFS the general trends in the Macedonian labour market are presented in Figure 1.

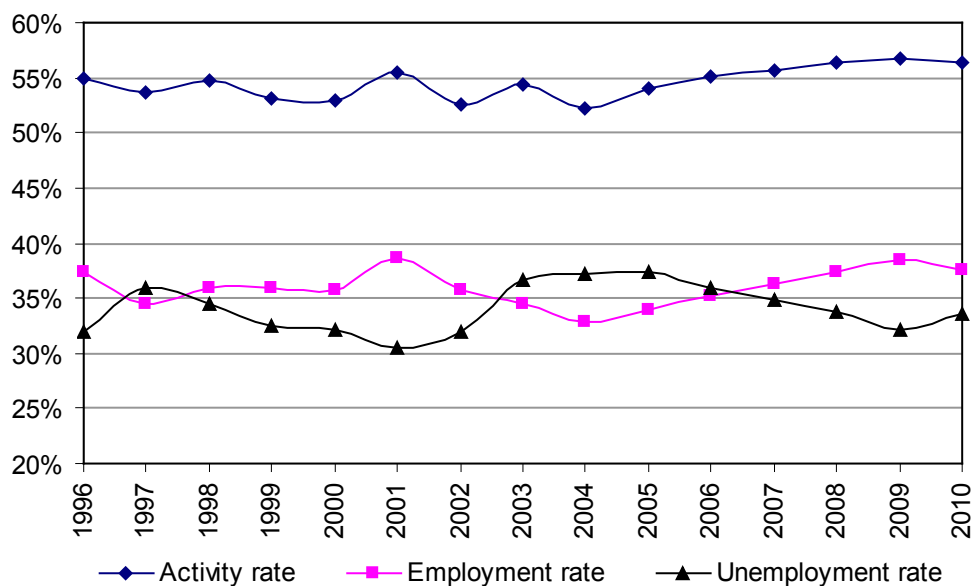


Figure 1 General trends in the Macedonian labour market

From Figure 1, we can notice that the unemployment rate in Macedonia during the period 1996-2010 is high and persistent. Moreover, the unemployment and employment rates manifest procyclical changes throughout the whole period of transition. Based on the LFS data, the unemployment rate in 1996 was estimated to be 31.9 percent, followed by period of steady decline until 2001 and a sharp increase thereafter. The unemployment rate steadily declined since 2006, but recent economic downturn has again reversed this trend. The unemployment measures based on the registered number of unemployed is even higher than the unemployment rate estimated from LFS. For instance, registered unemployment in 2000 peaked at 44.9 percent of the total labour force, which to our knowledge represents the highest registered unemployment rate among all transition countries.

The Macedonian labour market is characterised by a relatively stagnant unemployment pool that has been translated into increasing long-term unemployment [1]. For instance, long-term unemployment accounted for 80.7 percent of total unemployment in 1996 and it grew steadily until 2005 when it accounted for 86.7 percent of total unemployment. Moreover, the so-called very-long-term unemployment comprising the unemployed who look for jobs for more than four years is outstandingly high [3]. For instance, in 2005 the proportion of very-long-term unemployed accounted for 65.4 percent of total number of Macedonian unemployed population.

Long-term unemployment has significantly contributed to an erosion of skills and motivation of unemployed workers, making them less employable over time [4], [5]. The deterioration of skills further reduces the attractiveness of the labour force and contributes to a blurring of the difference between the states of unemployment and non-participation. After remaining unemployed for a long period of time, a considerable part of unemployed workers stops looking for jobs and quits the labour force. This is known as the phenomenon of 'discouraged workers,' a characteristic for depressed labour markets where labour demand is insufficient and unemployed workers face poor employment prospects. Discouraged workers do not fulfil the requirements of job search as a precondition to be counted as unemployed. On the other hand, they can easily re-enter the labour force if, conditions on the demand side of the labour market improve. The empirical literature has recently documented the problems that statistical offices in transition countries encounter in estimating the unemployment rates in the presence of large numbers of discouraged workers [3], [6]. How to categorise those that lie on the borderlines between unemployment on the one hand side, and employment or inactivity on the other side, may significantly influence the officially calculated unemployment rate.

Although we are unable to undertake a separate analysis, we also acknowledge the existence of underemployment. The term underemployment is used to designate the state of those workers who are able to find employment only for short periods of time, such as involuntary part-time workers, seasonal workers, day or casual workers, whose relative shares in the total workforce typically increased during transition [6]. In Macedonia this is the situation not only for many legally employed workers, but also for those who work in the informal sector. The category underemployed also includes workers whose level of education and professional skills make them overqualified for their jobs. This is the case of the workers with a strong educational background forced to perform various types of 'unfavourable' jobs in order to secure their basic existence [7]. Therefore, two basic forms of underemployment are persistent: visible underemployment, which is characterised by insufficient working hours and, invisible underemployment, associated with productivity losses due to insufficient use of human capital.

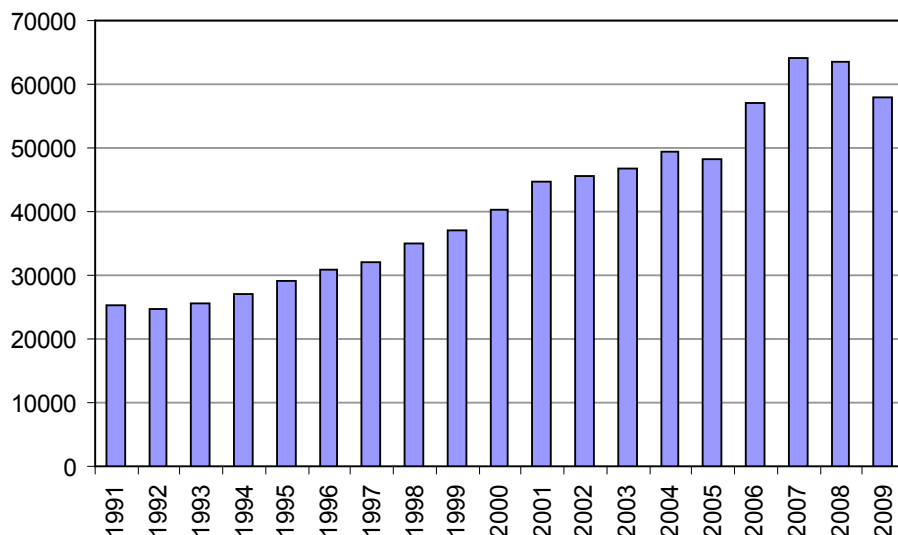
Having in mind the above-mentioned characteristics, we can argue that the labour market in Macedonia is affected by striking segmentation, meaning that certain social groups such as: youths, less educated workers, and women, face a much higher risk of unemployment and/or non-participation than the rest of the labour force [5]. This conclusion is in accord with the findings for some other transition countries [8], [9]. The high Macedonian unemployment rate has enormous social implications such as rising poverty and income inequality. For example, the estimated percentage of the population living below the poverty line in 2003 was 21.7, whereas the Gini coefficient in the same period stood at 0.373 [10]. Long spells of unemployment often leads to the degradation and dehumanisation of individuals in society, causing social exclusion and increasing the burden for the government of providing the necessary safety net. Consequently, the problem of unemployment is not only a personal problem for the people who experience it, but it has become a problem for the economy as a whole. Today, the Macedonian government bears a big part of the responsibility for the poor labour market performance that can be partly improved by undertaking appropriate policy measures. In this context, we next examine the reforms in the higher education system in Macedonia.

### **3. Challenges of the higher education system**

Having in mind the depressed characteristics of the Macedonian labour market, the higher education has faced a challenging task to become a generator of competitive and marketable skills for students in order to promote greater employability. On the other hand, the insufficient demand on the Macedonian labour market prevents the policy makers from getting relevant feedback of the reforms efficiency. During the two decades long period of transition in Macedonia we have witnessed a variety of changes in the sphere of the higher education. The main features of this transformation will be briefly explained as follows.

First, the most striking feature of the higher education in Macedonia has been a proliferation of a number of new institutions and study programmes. For instance, twenty years ago in Macedonia

existed only two state universities and total absence of private initiative, whereas today there are 5 state universities and about 18 private higher education institutions [11]. Alongside this process, the existing universities have permanently diversifying their curricula by offering new and more competitive study programmes. The rising number of higher educational institutions and study programmes has contributed to increase of competition and creation of critical academic climate. As a consequence, the number of enrolled students in higher education in Macedonia marks an increasing trend which can be noticed from Figure 2. Recently, the number of enrolled students in higher education exceeded 60000 students per year, opposed to only 25000 students enrolled each year at the beginning of the 90's.



**Figure 2** Number of students in Macedonian higher education

Second, all universities in Macedonia by 2010 have adopted the European credit transfer system and adhered to the Bologna process whose goal is 'to create a European space for higher education in order to enhance the employability and mobility of citizens and to increase the international competitiveness of European higher education'. This trend has been crucial for the process of harmonisation of the Macedonian higher education with the common European standards. However, the recent evaluation of this system shows a number of weaknesses that imply needs for further revisions and improvements.

Third, the adoption of the new 'Law for higher education' in March 2008 and the latest changes and additions in February 2011 have brought a number of novelties among which the most prominent are dispersed studies and compulsory study programmes in English [12]. Most of these reforms are dubious in their nature since they are not initially engendered from the academic milieu and are not widely supported by all members of the academic community. For example, the model of dispersed studies has been criticised because of its detachment from the concept of concentration of knowledge similar to that applied in university campuses. Taking into account that dispersed studies in Macedonia have been launched without providing the necessary technical and personal equipment, this model of studies is discriminatory in nature because it deprives the students in dispersed classes of their basic academic needs.

Finally, clinical education and compulsory internship have been promoted by the Ministry of education and science in Macedonia as most prominent ways for achieving a greater competitiveness of the higher education. However, these changes have not been accompanied by appropriate analysis of the capacity of Macedonian economy to serve/host all students for such forms of practical education. Having in mind that most of the Macedonian companies are small and medium in size and in the same time permanently face financial, technical and personal problems, it is clear that these intentions should be realised with more soundness for the current economic performance.

#### **4. A model of university business incubator**

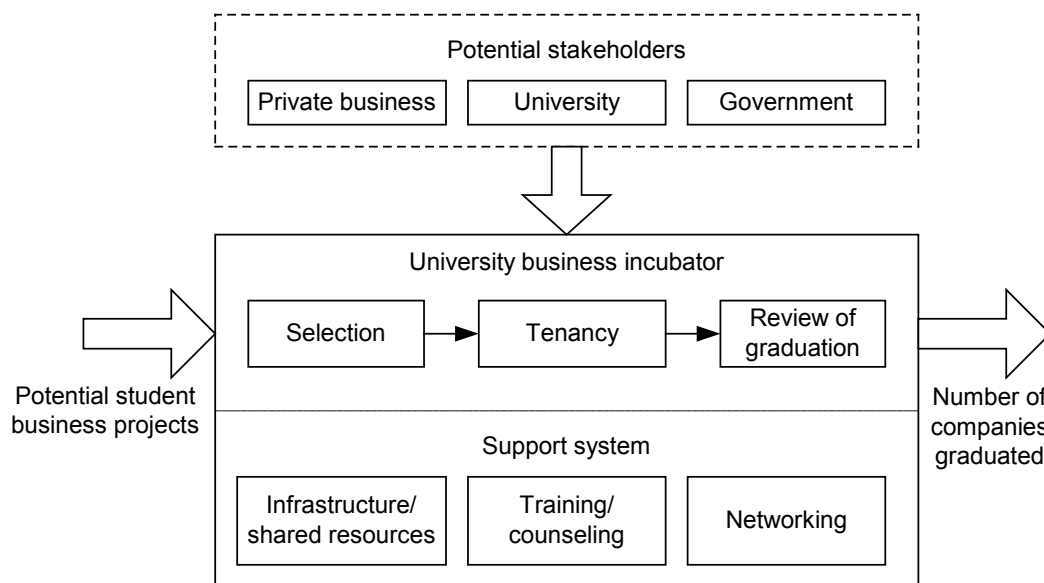
From the previous section it is evident that higher education system in Macedonia has been recognised as an important factor for generation of essential knowledge and skills that give students advantageous position in the labour market. However, as previously noticed, the higher education system in Macedonia is lacking an establishment of suitable relationship between the practical needs

of the students and capacities of the Macedonian economy real sector. Therefore, in this section we propose a particular strategy consisting of establishments of university business incubators (UBI) that would help enhancing the students' entrepreneurial skills and, in the same time, would corroborate with the functioning of Macedonian economy.

Historically, incubators appeared in developed countries in the early 1980s, whereas in developing countries they are a quite recent phenomenon [13], [14]. Incubators can be differentiated according to several criteria such as: their mandate (for profit or non for profit), the type of sponsorship (private, public or mixed), their focus (mixed use or niche), geographic area (rural, urban, suburban) etc. The goals of the incubators may also vary but, generally encompass economic development and generation of new jobs, property venture development, fostering entrepreneurship in transition countries, development of export production etc. [15], [16].

An university business incubator is a particular type of incubator because it has a purpose to bring together various stakeholders in order to offer a variety of services to the students who have potentially successful business ideas and help their start-ups to get established and evolve to the point where they can operate independently. To our knowledge, such type of business incubator in Macedonia has still not been established hence, in our effort to develop a suitable model of UBI we address the experiences from similar types of incubators in developed countries and use the best proven practices around the world.

The role played by universities consists of linking research, technology, capital and know-how to leverage entrepreneurial talent, accelerate development of new technology-based firms and speed up the commercialisation of technology [17]. The evidence from the developed countries shows that university link to the incubator reduces the probability of new venture failure [18]. In particular, the UBI should provide a number of support services for students business projects and assist them toward becoming sustainable business entities. The potentially successful business projects should pass through several phases starting with selection, tenancy, reviewing of graduation and eventually leaving the incubation process. The conceptual framework of the proposed model of UBI is presented in Figure 3.



**Figure 3** A model of University business incubator

From Figure 3 we can notice that our model of UBI generally consists of three building blocks namely, potential stakeholders, supporting services and phases of incubation. In what follows we separately analyse each of these elements.

#### **4.1 Potential stakeholders**

Alongside the universities as potential stakeholders in the university business incubator may appear the government authorities and private businesses. Therefore, in order to meet the interests of all potential stakeholders, we recommend that personnel should have mixed background ranging from academic, local government and business area. The management function should be delegated to a

director who is full time university professor and has considerable experience in the domain of business advising. In this context, UBI would help strengthen interactions between university and industry, promote research commercialisation, and give opportunities for university staff and students to better utilise their capabilities [19].

Particularly susceptible partner in this model of incubation are local government authorities that can contribute to the functioning of the UBI by providing a variety of services such as premises and other logistic support. In return, the benefits of a well-managed UBI for the government can be viewed in the fact that incubators help overcome market failures, promote regional development, generate jobs, incomes and taxes, and demonstrate political commitment to small businesses.

Private businesses may also cooperate with the business incubator in finding potential partners, engage in research-based technology, developing new products etc. In return, businesses can benefit from UBI by developing opportunities for acquiring innovations, supply chain management, and helping them meet their social responsibilities.

## **4.2 Supporting services**

According to experience from several successfully established UBI their main goals include providing variety of services such as office space, shared facilities, business consulting, access to capital, networking and, resources, so that the companies within the incubator learn how to develop and grow their business in order to be competitive in a market economy. Furthermore, the proposed model of UBI may allow two types of incubation i.e. physical and affiliate incubation. Students involved in full incubation would receive physical space, whereas affiliate businesses would receive all of the services except physical space. Students in the affiliate program may not be ready to occupy physical space in the incubator or the nature of the business may not warrant physical space.

Since, all beneficiaries of the UBI will be enrolled full time students, the university may gradually incorporate the UBI activities as an extracurricular programme. Once accepted into the UBI programme, students will be required to participate in variety of activities that we shortly describe. First, as part of the learning process, programme staff needs to be able to review the financials of the company with the student in order to assist in their growth and strategic planning. Second, students have to select and attend relevant seminars to his/her business offered by the university. If the student needs specific course which is not offered, it would be provided by outside consultants. Third, periodically all UBI tenants will meet to hear a guest speaker, network and discuss their ongoing business endeavours. Finally, each tenant will be required to meet with the UBI director individually according to a previously prepared schedule.

## **4.3 Phases of incubation**

Process of incubation consists of several phases starting from selection, tenancy, review of graduation and eventually exit from the incubation and starting post-incubation period. The phase of selection is one of the most sensible parts of the incubation process since it largely determines the outcomes of the incubation. In order to make correct selection decision, the process of selection should be done by a competent committee consisting of several experienced members. The applicants should have opportunity to apply on a regular basis once or twice a year, whereas the projects will be evaluated according to a number of indicators.

The period of incubation or tenancy should be limited to one year with or without possibility to be extended after the reviewing of graduation. As successful businesses will be classified those who demonstrate potential ability to operate in a market environment without supporting services from the UBI.

The assessment of the performance of business incubators has been stressed as a critical element to its success [20]. With an effective assessment the incubator may continually improve its functioning, attending and exceeding the expectancies of all the players involved in the process. For this purpose we propose a number of indicators for the assessment of UBI such as indicators of pre-incubation process, indicators of selection process, indicators of residence period, indicators of the graduate companies and indicators of the management of the incubator.

## 5. Conclusions and policy recommendations

From the previous analysis we can draw several concluding remarks that can be used as guiding principles for policy recommendations. First, the depressed characteristics of the Macedonian labour market impose needs for creation of global agenda for fighting high and persistent unemployment. Having in mind the pronounced labour market segmentation, the measures have to target mainly the disadvantaged labour market segments. Second, the reforms of the Macedonian higher education system have not been proven to have significant positive impact on the labour market performance. As a consequence, we stress the importance of undertaking a large scale empirical assessment of the reforms with purpose to identify the existing gaps. Third, the concept of university business incubator that so far has not been tackled in Macedonia may play crucial role in the reconciliation of the labour market policies that should be simultaneously undertaken on both demand and supply side. Having in mind that university business incubators as a target group have younger and educated population, they can be used as alternative strategy for creation new productive jobs and fighting youth unemployment.

As a suitable strategy we recommend launching a pilot project of university business incubator that can be utilised in assessment of strengths and weaknesses of the proposed model. In this context, the policy makers have to be aware of the modest entrepreneurial potential in post-transition countries and adequately to project the potential development scenarios. The potential effects from implementation of UBI can be divided into direct or short-term and indirect or long-term effects. Among the direct effects the most important are creation of new companies and jobs, increased generation of revenues from taxes, decrease of unemployment etc. On the other hand, the improvement of the business climate and creation of entrepreneurial spirit are most important spin-off effects that on the long run may exert positive influence on the Macedonian economy.

From this perspective, the adoption of the model of UBI as a standard in both state and private higher education institutions in Macedonia will have large positive impact on the Macedonian labour market performance in several manners. First, creation of new and sustainable businesses will absorb a part of the young and educated labour force that would otherwise remain unemployed. Since, the young and educated segment of the labour force marks a continuous growth, we hope in the near future to see at least substantial decrease of the unemployment rate for this segment of the labour market. Furthermore, increased budget revenues from taxes, if adequately utilised will improve the infrastructure and further exert positive impact on the investment climate. In this way, the economy would enter the so called 'virtuous circle' that reinforces itself through a feedback loop and has favourable results in terms of moving the Macedonian economy from the sub-optimal to an optimal equilibrium. Finally, increase in the awareness of self-employment opportunities will stimulate the entrepreneurial endeavours and induce creation of new jobs.

## References

- 1 Long-term unemployment includes all unemployed workers that look for work for more than one year
- 2 Nikoloski D. Some Aspects of the Problem of Unemployment in Macedonia, Economic Development, Vol.6, No.1-2-3, pp.241-260, 2004.
- 3 Macedonian Statistical Office <http://www.stat.gov.mk/>
- 4 OECD. OECD Employment Outlook. 2002.
- 5 Gregg P. and Manning A. Labour Market Regulation and Unemployment. Unemployment Policy, Government Options for the Labour Market, Centre for Economic Policy Research: 333-356. 1996.
- 6 Nikoloski D. The sustainable rate of unemployment in transition countries – A case study for Macedonia, VDM Verlag, May 2009.
- 7 Brown J. et al. Non-standard Forms and Measures of Employment and Unemployment in Transition: A Comparative Study of Estonia, Romania and Russia. IZA Discussion Paper, No.1961. 2006.
- 8 Svejnar J. Transition Economies: Performance and Challenges, Journal of Economic Perspectives, 16 (1): 3-28. 2002.
- 9 Blanchflower D. Unemployment, well-being, and wage curves in Eastern and Central Europe. Journal of the Japanese and International Economies, 15(4): 364-402. 2001.

- 10 Rutkowski J. Labour Market Developments During Economic Transition. The World Bank Policy Research Working Paper, No.3894. 2006.
- 11 World Bank, FYR of Macedonia Poverty Assessment for 2002-2003. Poverty Reduction and Economic Management Unit, Europe and Central Asia Region. 2005.
- 12 Ministry of education and science of the Republic of Macedonia <http://www.mon.gov.mk>
- 13 Law for higher education. Official register of the Republic of Macedonia No.35 published on 14.03.2008.
- 14 Scaramuzzi E. Incubators in Developing Countries: Status and Development Perspectives. The World Bank infoDev programme, 2002.
- 15 Kmetz J. Business Incubators for Central and Eastern Europe. University of Delaware. 2000.
- 16 Aranha J. Incubator Models. infoDev Incubator Support Center, 2003.
- 17 National Business Incubators Association <http://www.nbia.org>
- 18 Sarfraz M. The University Business Incubator: A Strategy for Developing New Research/ Technology-Based Firms. The Journal of High Technology Management Research Vol.7 No.2. 191-208. 1996.
- 19 Rothaermel F. Thursby M. Incubator Firms Failure or Graduation? The Role of University Linkages. Research Policy (34) 1076-1090. 2005.
- 20 Lalkaka R. 'Best Practices' in Business Incubation: Lessons (yet) to be Learned, International Conference on Business Centers: Actors for Economic and Social Development, 2001.
- 21 Bizzotto C. The Incubation Process. infoDev Incubator Support Center, 2003.