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The Economic Rationale behind Investments in Education and Human Capital

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Abstract

This paper evaluates the efficiency of education and human capital investment practices in the Republic of Macedonia, as a key stimulant in providing the necessary equilibrium between the structures of the labor market, the quality of education and economic growth. The development of higher education is seen as a key stimulator of the vital policy-making strategies which aim to affect a growth in employment. Moreover from the perspective of knowledge accumulation, the internationalization of higher education is seen as both an educational and an economic tool which can be used for increasing the functionality of the Macedonian market economy. Comparisons with Croatia and Germany, aim to address the 'knowledge based' economic outcomes of the contemporary management approach towards investment in knowledge and education. In conclusion, bridging the gaps between the government, the universities and the business sector as well as the students is seen as a key stimulator of the rationale behind investments in education and human capital. Hence, the suggested shift in management practices focuses on the 'bottom-up' management approach, in interaction with 'top-down' management, as a recommended tool for reaching better 'knowledge economy' outcomes.

Keywords: human capital, investments, labor market, internationalization of higher education, management, economic growth, wage structure, management

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Introduction

The process of globalization and the increased demand of market forces, innovations, progress in technology and skilled human capacities, has shaped contemporary labor markets and stimulated the rise of competitiveness among national economies. The awareness of the need for a new, agile and innovative economy has arisen alongside the need for a pragmatic and economic rational environment, which stimulates investments in human capital, increases the quality of education and produces adjustable 'employability' skills and qualifications. The access to quality education and the rationale behind investments in human capital became vital elements of labor market policies, with a huge potential for alleviating the problems of unemployment, a reduction of poverty, and social exclusion. In such a global context, the post-transitional societies such as those of the former Yugoslav countries and their historical background of egalitarian wage structures and reduced wage premiums on education, faced with the challenges of transcendental political capacities which led to the stagnation of proper investments in education and human capital. In the post-Yugoslav period, the Republic of Macedonia, as a post-transitional society, also faced the need to find the most effective ingresses for bridging the gaps between the labor market structure and an adequate human capital. Bridging these gaps is still one of the biggest challenges of the Macedonian market economy and its relevant economic growth. Therefore, the comparative aspect with another post-Yugoslavia state and current EU member state, such as Croatia, sets out to detect the current and future challenges of the problem-solving approach.

Hence, the first part of this paper offers a theoretical background of the development of the education and human capital theory. It focuses on its direct tie in to the 'knowledge based' society and its impact on the reduction of long-term unemployment. Moreover it offers perspectives of the active role of higher education in strengthening the link between the human accumulated knowledge, skills and competences with the market-absorbing capacities aiming to stimulate long-term economic growth and a functional market economy. The proactive and innovative development of higher education practices provides the key potential to shape the vital national and policy-making strategies which aim to

address the problems of high unemployment, the reduction of poverty and to increase the competitive potential of human capital. However, in order to realize positive outcomes, transparent and effective dialogue should be reached between the three key influencers: the university, the state and the business sector, for an efficient approach to overcome all existing gaps. Moreover, with the inclusion of the fourth key influencer: the students, we expect to reach a raft of practical and applicable outcomes that can foster further higher (formal and informal) education development. In addition to this, we will consider the tangible connection between education and the impact of human capital investments in education, training and employment schemes on attracting quality human capital, which foster economic growth and sustainability.

Hence, the general hypothesis suggests that more effective and transparent dialogue between the state, the universities, the business community and students can impact on the quality of education and the application of knowledge which can foster an increase in the quality of human capital and its relevant implications on employment schemes. This can increase productivity, knowledge competiveness, business and entrepreneurial opportunities and in turn impact upon economic growth. Moreover, by choosing the most efficient management approach and strengthening the relevant management capacities, the efficiency behind the investments in (higher) education and human capital will increase, as well. In order to apply the best management approach which stimulates economically rational investments in education and human capital, sharing open collaboration and diverse knowledge input is highly recommended. The contemporary challenges of the national, EU and global labor market, the requests of educational background, skills and applicable qualifications and the impact of long-term unemployment should be a joint subject of interest to all relevant stakeholders. Hence, the question is which improvements might have an impact on the development of (higher) education and the production of human competences, and moreover, what is the role of the internationalization of higher education in addressing the challenges of rationalization towards the investments in education and human capital?

The second part of the paper offers a comparative, cross-country analysis of the key-indicators of 'knowledge economy' indexes such as

the (long-term) unemployment rankings in three selected case studies: Macedonia, Croatia and Germany. The comparative indicators aim to address the current and future challenges of the countries' economic developments, based on their rationalization of investments in education and human capital.

The final part of the paper focuses on the possible decision-making options for encouraging the processes of rationalization behind investments in education and human capital. The recommendation for improving the dynamics of economic growth and stability, emphasize the need for increasing the quality, attractiveness and compatibility of higher education, as a key stimulator of the return to human capital. The enforcement of 'bottom-up' management, alongside the 'top-down' management approach is considered as a highly pragmatic and effective approach to micro and macro-economic challenges.

Theoretical Background

The first conceptualization of education and human capital' potential was offered several centuries ago when Sir William Petty (1623-1687) and Adam Smith (1723-1790) cultivated the human capital theory (Kern, 2009). Although Sir William Petty was the one who "examined the role of the state in the economy and touched on the value of labor" (Ibid.) it was Adam Smith who first established the basis of the economics of human capital, "making the first connection between the skill of the worker and higher wage levels, as he conceptualized these arguments in his famous book *The Wealth of Nations* (Kern, 2009; Becker, 1992). Human capital theory came back into fashion in the early 1960s, when it became one of the most influential economic theories of Western education, setting the framework of government policies. (Fitzsimons, 1999; *Encyclopedia of Philosophy of Education*, 2009) Amanda Kern in her work on human capital development theory points out that during this period, "the American economists Theodore Schultz (1902-1998) and Gary Becker (1930-) began to make tangible connections between education and its impact on the ability of human beings to earn higher wages" (Kern, 2009). "Schultz identified people as a source of the economic growth when other economists were

attributing national growth to improvements in technology" (Kern, 2009; Fitzenz, 2000). However, the significant contributions to human capital theory during the last half of the twenty-first century, were made by the work of two contemporary economists Samuel Bowles and Gary Stanley Becker, due to their point that " human behavior is based on the economic self-interest of individuals operating within freely competitive markets and second, education increases worker productivity" (Ibid.) In her paper Angela Kern emphasises that "it was Bowles who first challenged the conventional economic assumptions that people are motivated entirely by self-interest. In Bowles' view, wage structure, the individual attributed value on the labor market, and the social relations of the educational process can only be explained through an analysis of class and class structure" (Kern, 2009; Bowles, 1975). In contrast, "Becker asserted that every worker is a capitalist, acting in their own best interest. Becker has expanded human capital theory with his research on the relationship between earnings and human capital and he is responsible for developing a systematic framework for studying the return on education and on-the-job training, in addition to wage differentials and wage profiles over time" (Ibid.).

Moreover, Patrick Fitzsimons defined the modern human capital theory as "the basis for nation state structural policy frameworks [based on] the enhancement of labor flexibility through regulatory reform in the labor market, as well as raising skill levels by additional investment in education, training and employment schemes, and immigration focused on attracting high quality human capital". (Fitzsimons, 1999)

Unquestionably, attracting high quality human capital has been and is one of the most demanding educational as well as economic tasks. Moreover, with the adoption of the Bologna reforms, the rise of mobility and competiveness, the interaction between human capital and the 'knowledge economy' has increased as well. As a result, investments in education have increased in correlation to the quality of human capital. Leroy Almendarez in his paper "Human Capital Theory: Implications for Educational Development" considers education both as a consumer and a capital good (Almendarez, 2001). According to the author, "education [offers] utility satisfaction to a consumer and it also serves as an input to develop the human resources which are necessary for economic and social transformation" (Ibid.) Therefore, the focus on

education as a capital good is related to the concept of human capital, emphasizing the fact that "the development of skills is an important factor in the production activities of people" (Ibid.). The human capital theory emphasized the tangible connection between the education, human capital investments and economic growth. Bridging these key aspects of the market economies, can impact further on the economic development of the countries.

Lessons to be Learned: Bridging the Gaps between Past and Present Experiences

The political and social context in the former Yugoslavia (1945-1991) fostered the adoption of egalitarian programs designed to promote general access to health care and education. However, Boris Vujčić and Vedran Šošić in their work on investing in education in Croatia point out that "The exceptionally egalitarian wage structure in the former Yugoslavia reduced the wage premiums of educated workers and resulted in insufficient investment in higher education, compared to the parallel excessive investment in secondary-level vocational training" (Vujčić & Šošić, 2007). In such a historical framework, planners in the former Yugoslav countries such as Macedonia and Croatia "preferred secondary schooling, especially vocational training, over higher education and as a consequence of vocational training the share of proletarians in the labor force increased, which was considered to be the stronghold of the communist party" (Ibid.) Hence, the reasons for promoting the secondary-level vocational training at the expense of investments in higher education were rather ideological and "skills acquired under communism were excessively specialized and non-transferable from specific, outdated technologies. This rendered much of the human capital obsolete with the advent of the transition" (Campos & Jolliffe, 2004; Vujčić & Šošić, 2007). Such a characteristic egalitarian wage structure affected productivity and created a gap of "insufficient higher education potential at the expense of secondary-level vocational training investments".(Ibid.) This gap has affected the following outcomes both in Macedonia and Croatia, and it created additional challenges and

regressions, once global circumstances and technology demands had emerged rapidly in the global multi-polar world.

Back in the 1990s, with the end of the Cold War and the fall of the Berlin wall, the German economic unification of West and East Germany emerged, so new lessons could be learned, as well. Before German unification, the West German structure and dynamics of wages and mobility for different kinds of jobs in plants under private ownership, during the 1990s were different from those in East Germany". (Holger, Lutz, & Gartner, 2005). One of the reasons for such an imbalance was the fact that "during the 1970s and 1980s,the unions were pursuing an excessively egalitarian wage policy in West Germany" (Fitzenberger et all, 2001). At the same time, East German markets created gaps of applicable skill qualifications. As a consequence, "the unification shock in 1991 has led to a massive depreciation of human capital and wage dispersion, suggesting convergence in the wage levels between East and West Germany" (Kohn, 2006).

Since then, many challenges have been overcome and new ones have arisen, however the lessons of these past experiences are worth acknowledging as they have bridged the gap between recent political and economic challenges. The effort of the German policy-makers to consolidate the two different systems, their markets and populations which had grown apart and were unequally based, can be seen as an indicator of the strength and potential of joint action and comprehensive decision-making. Moreover, this included the potential of citizens in key policy-making processes with respect towards their 'capital' as human beings. The effects of such synergized management can be highly applicable, and can influence the rise of a productive workforce and an increase in employment, as well.

The experiences of the recent past have demonstrated that at the end of 20th and beginning of 21st century, there was an imbalance between educational structure, knowledge competences, qualifications and labor market demands which created new gaps and economic difficulties. Although the convergence of egalitarian wage structures was fostered, new challenges were created concerning the return of investment in education. Within a previously created transitional environment, once the higher education Bologna reforms were adopted and started to be implemented, the gap between the 'old' and 'new'

educational systems, the compatibility of qualifications and the lack of relevant interpretation of the re-structuring processes, affected the Universities as well as the State capacities to cope with competitive pressure and market forces on the global market.

Within the new Bologna transformative concept, the role of the universities as the main transmitters of knowledge and human capital have increased and shifted their responsibilities and tasks towards wider national, labor and economic challenges. Furthermore, the position and the role of the universities and their cooperation with the state and the business community gained a new perspective once the definition of Burton Clark's triangle of the three coordinating forces of the university system: academic, state and the market (Clark, 1983), came into force. According to Clark's triangle, (Figure.1) the higher education systems resulted from a triangle of forces: professional-collegial; governmental-managerial and market (Kogan et al. 2006).

Burton Clark suggests that three kinds of stakeholders play important roles in the university system: one is the university itself (academia); the second is the market (society) or the general public and the third stakeholder is the government (state) (Yamamoto, 2004). As a result, Burton Clark's triangular model attempts to illustrate the relationship between the state, the market and the academy, estimating the influence of these three factors, according to their interests and pressures, whereby: "1) state priority reflects public needs and desires for higher education programs and services, often as expressed by state officials, but also by civic leaders outside government; 2) academic concerns involve the issues and interest of the academic community, particularly professors and administrators; 3) market forces, cover customer needs and the demands of students, parents and businesses, as well as other clients of colleges and universities" (Burke, 2004). State priorities represent political accountability; academic concerns reflect professional accountability and market forces push market accountability (Ibid.) In such a framework, "social change impacts on the university, and at the same time works through the national government, the market and science. Hence, in the face of such pressure and demands, the university is expected to use its expert knowledge to coordinate its various functions" (Kogan & Teichler, 2007).

Within this position, the role of the universities attached equal importance to the decision-making process concerning business and economic developments. Moreover, its importance has rapidly increased with new global economic shifts, market forces and knowledge accountability on the global market. In addition, the lack of a dialogue between the state, the universities and the market is demonstrated as being a key influence in higher educational systems, as well as models of salary structure which impact on economic growth in general. The lack of a dialogue and cooperation between the state and its citizens within the former Yugoslavia or the separation of East and West Germany had created imbalances which were difficult to overcome. However, once the importance of the dialogue was acknowledged, joint and comprehensive decision-making could be practiced in order to reach positive results concerning state priorities. This acknowledged the fact that an open and effective dialogue and cooperation between all relevant participants – the state, the universities, the market and business communities and moreover: the students are rather a necessity than just a concept. Without doubt, these practices can generate relevant analyses of contemporary outcomes, can offer different perspectives of 'dealing with the past' models and can deliver a variety of interpretations, ideas and solutions to contemporary challenges. Furthermore, putting the Burton Clark' triangle into practice can support the academic transmission of power from local to national or state levels, to enforce the research exchange and to design internationally attractive curriculums (Clark, 1983). In addition, acknowledging the role of student participation in decision-making processes concerning the design of attractive curriculums and further higher education' development, can be an addition to the "triangle" of cooperation. Putting these mechanisms into practice is a challenging and demanding responsibility and good management practices of key importance for delivering positive outcomes.

The Internationalization of Higher Education as a Rationale Investment in Human Capital

In order to understand the potential of human capital as a stimulant of economic development, it is important to understand

that each investment in individual human capital has the potential to facilitate positive outcomes. Ogunade Adeyemi has commented that human development in economic terms largely depends upon the physical and human capital stock. (Ogunade, 2011) Moreover, Ogunade suggests that "human capital represents the assets that each individual develops to enhance economic productivity. As such, human capital is concerned with the wholesome adoption of the policies of education and development. In such a framework, the provision of formal education is seen as a productive investment in human capital, which sometimes is considered as equally or even more equally worthwhile than that of physical capital" (Ibid.).

Furthermore, the Organization for Economic Co-operation and Development: OECD, defines human capital as: "the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (OECD, 2001). Hence, human capital is applied to gain an understanding of individual productivity and economic gain at a national, state, regional, community and company level. "In addition to knowledge investments, knowledge distribution through formal and informal networks is essential to economic performance. Also required is tacit knowledge, including the skills to use and adapt codified knowledge, which underlines the importance of continuous learning by individuals and firms" (Ibid.).

Due to the need for qualified, applicable and compatible human capital resources in the modern, innovative and 'knowledge-based' global environment, the universities, the state and the market need to place an equal amount of respect to previously accumulated knowledge as well as to the contemporary development of formal and informal education, skills and qualifications. The economic impulses of both the private and public sectors, which correspond with national decision-making processes implies the need for relevant and adjustable market qualifications and skills. In this regard, joint strategic actions can increase the population's productivity and accelerate the decline of the unemployment rate. One of the key facilitators of these challenges with a necessary potential to address a variety of challenges is the internationalization of higher education.

"Albach, Reisberg and Rumbley stated that Globalization, a key reality of the 21st century, has already profoundly influenced higher

education. We define globalization as the reality shaped by an increasingly integrated world economy, new information and communications technology, the emergence of an international knowledge network and the role of the English language, and other forces beyond the control of academic institutions. Internationalization is defined as the variety of policies and programs that universities and governments implement to respond to globalization" (De Wit, 2011).

The internationalization of higher education can be a valuable tool for bridging the gaps between the state, the universities and the market, due to its role as being considered as a joint academic and economic process. As an outcome of the process of the convergence of higher education systems across Europe, which was initiated both with the Bologna process reforms and the European market economies, the internationalization of higher education is seen as a "positive development: more explicit, coordinated, interactive and proactive; more strategically focused on multilateral partnerships; continuing professionalism; more focused on the world outside Europe; more attention given to internationalization of the curriculum; and more attention towards to the quality assurance of internationalization" (De Wit, 2011). Furthermore, Roger Dale and Steve Robertson pointed out that the internationalization of higher education should be transmitted through the national sector and institutional level as a process of the integrating international, intercultural or global dimension (Dale & Robertson, 2009).

The internationalization of higher education is even more relevant since it addresses the process of globalization and enables us to see higher education development above its national context. This can be an additional motivation for universities to shape the development of formal and informal education skills, knowledge and qualifications which increase the productivity and international competitiveness. "International mobility programs are increasingly used to boost the economy without losing sight of their traditional objectives. As a result, the European Higher Education Area targeted by the Bologna Process is more than just a regional variation of internationalization. It has increasingly becoming a response to the challenges of globalization" (Isserstedt & Schintzer, 2005).

Furthermore, the internationalization of higher education respects previously accumulated knowledge. However, this interaction and fusion between 'past' and 'currently' gained experience, knowledge qualifications and skills can be a big challenge. In this rapidly shifting and progressive political and economic world, the integration of the "old" positive aspects as well as previously accumulated qualifications and skills into the 'new' modern post capitalistic system, can be considered as an attempt to fill the gap between the generations, to assimilate the education of all citizens and to foster their inclusion in the employment market.

One of the key UN Millennium goals also addresses this challenge. The global focus to "achieve universal primary education" not only set the basis of further educational development from primary up to higher education, but also emphasized the role of all relevant key influences: the policy-makers, civil society, and private sector, thereby: "Removing barriers, outside and within education systems, so as to provide equitable educational and learning opportunities for all children, since knowledge and education are key factors for sustained, inclusive and equitable economic growth and for the achievement of all the Millennium Development Goals, through continued political emphasis on education and by promoting, with the support of the international community, civil society and the private sector..." (UN Resolution, 2010)

With this in mind, education from early childhood to the training of an ageing workforce and its labor market adaptability which stimulates investment in human capital is a challenging process for post-transitional or developing societies such as Macedonia and Croatia as well, (although, Croatia recently became the 28th EU member state). The rationalization behind investment in education and human capital is a challenge for a developed economy and an EU member state such as Germany, too. But since Germany marks progressive economic growth and manages to deliver a stable market economy, which impacts on the reduction of unemployment, a comparative approach towards these three countries aims to detect the key challenges and perspectives for reaching measurable and visible economic growth as well as a functional market economy. This comparative approach aims to emphasize the role of management in addressing the key national and international challenges, such as: the decline of the unemployment rate, the

modernization of higher education or the increase of competiveness in the global market. From this perspective, the modernization of educational systems, especially higher education systems is considered as key priority of the transformative processes of any market economy, which affects the EU accelerating processes as well.

Cross-Country Comparative Analyses: Macedonia, Croatia and Germany

In order to examine the results of the 'knowledge economy' of the three countries we have chosen as our case studies: Macedonia, Croatia and Germany. We will use two composite indicators: World Bank' rankings of the Knowledge Economy Index (KEI) and the Knowledge Index (KI). The indexes are based on the measurements of the four basic "pillars" of the knowledge economy: Economic Incentive and the Institutional Regime (EIR); Innovation and Technological Adoption; Education and Training; Information and Communications Technologies (ICT) Infrastructure; Economic Incentive Regime, Education, Innovation and ICT (The World Bank, KAM, 2012).

The data available in Table 1 shows that Croatia by 2012 had made little progress in the rankings of this 'knowledge based' economy, by climbing only one position higher to the 28th place. The Republic of Macedonia has progressed four places since 2000 and it is now placed 34th out of 46. Analogous to Macedonia and Croatia, Germany is ranked in 6th place in Europe, moving 5 places, due to the progress in the Innovation and ICT pillar. If we compare the latest available World Bank data for long-term unemployment (% of total unemployment, referring to the number of people with continuous periods of unemployment extending for a year or longer (World Development Indicators) available in Table 2, we will notice the different rates between Macedonia and both Croatia and Germany, with a higher percentage of long-term unemployment of 83.1 (in 2010), which was almost double the percentage of Croatia and Germany. These figures correlate with the total unemployment rate in these three countries (% of total labor force), which refers to the share of the labor force that is out of work

but available for and seeking employment (World Bank, Labor Market database). According to the figures in Table 3, Macedonia differs in its unemployment ranking, compared to Croatia and Germany. However, according to the latest available data, Macedonia registered a small decline in the unemployment rate from 32.0 to 29.90 (Table 3) In this regard, it is important to stay focused on those management practices which have been and can continue to be strengthened so that education and 'knowledge' based capacities can be improved. The quality of research and innovations activities can be stimulated, the rate of unemployment can fall, and accordingly, stable economic growth can be delivered. One of the key human capital management trends shows that "in order to meet business challenges, increase the growth of the organization, and keep customers happy, the right talent must be hired, retained, deployed, developed, and engaged" (Lombardi & Laurano, 2013). Additionally, any incompetent management of human capital can impact on the structural instability of the labor market. The lack of efficient management capacities weaken practical performance and affect the slow growth of human capital. Germany for example, faced "weak growth performance, caused by decreasing working hours and the slow growth of human capital". (Klös & Plünnecke, 2003) According to Klös & Plünnecke, two main factors for poor investment in human capital were: the low skills of German students, and low private rates of investment in education. Consequently, when market forces played a more dominant role, private rates of investment converged and consequently, international differences in skills played an important role and caused differences in investment in higher education (Ibid.) However, strengthening the management capacities towards the practical implementation of cooperation between the universities, state and the market (business community; the small and medium enterprises), encourages a diverse "triangle" of inputs concerning the design of attractive curriculums, research exchange activities, fostering mobility, endorsing practical learning, and accelerating the life-long learning agenda, which has not only affected the employment rate in Germany, but has also stimulated the country's economic growth, its global competitiveness and the functionality of its market economy.

The 'Top-Down' vis-à-vis the 'Bottom-Up' Management Approaches

In one paper Dimitar Eftimoski has noted that: "economic growth is successfully converted into quality of living if it generates a higher level of employment, provides greater security of the population, makes possible a more equal distribution of income, makes the development of democracy possible and enhances human rights and freedoms" (Eftimoski, 2006). Moreover, ''the access of individuals to the capital market and to information can also foster the state reallocation of funds anticipated for human development, to those activities where most individuals would benefit. In this manner, the state can create equal chances and possibilities for all individuals through an equal distribution of funds anticipated for human development'' (Ibid.)

The management of human capital, good governance practices, as well as economic policies significantly affects the rationalization behind education and human capital investments, as much as it affects the business impulses and implications. In order to cope with the challenges of rationalization towards investments in education and human capital, the 'bottom-up' management approach in interaction with 'top-down' management, can be considered as a valuable addition to practical performances. The interaction of 'top down' and 'bottom-up' management might be an effective and efficient approach since it fosters a dialogue and effective cooperation between the relevant actors and participants of the decision-making processes.

The Republic of Macedonia, as an aspiring EU member state, is facing an even more demanding responsibility to address the challenges of good cooperation policies, since it was obliged to fulfill the Copenhagen economic accession criteria approved by the European Council in 1993. Due to these criteria, acceding countries are required, among other things, to be: "(i) functioning market economies, and (ii) to have, by the date of accession, the capacity to cope with competition and market forces within the EU (European Council in Copenhagen, 1993).

Therefore, choosing the right management approach can significantly affect the scope of the existing challenges. A 'top-down' management approach is most common and this is still very applicable within organizations, institution, enterprises, and of course the state. It

generates guidelines, information, plans and objectives which are inserted by 'top management'. The flow of information, overall goals, ideas for general growth, and adopted strategies are implemented from the top of the structure to lower levels, referring to the participants (citizens, students). However, the 'top-down' management is only effective when collaboration between top management (the state, universities and the market) and lower level participants is effective as well. Therefore, reaching the necessary quality of collaboration and dialogue is the most challenging aspect of the top-down management approach, since the 'team members of the triangle: state, universities and market should be satisfied and motivated in a respectful manner as well as the students/ citizens. Hence, the work of the universities, business or policy-makers should be highly responsible, compound and dedicated to founding the best mechanisms to amortize the gaps of unemployment as well as to reduce it. In this regard, rational investments in education and human capital should be integrated through the "top-down" management approach when the aim is to adopt and implement broader plans and strategies for reaching more effective and sustainable results and to define the key contemporary deprivations.

However, due to the need of performing effective practices which can generate national and economic growth and can meet many "quality of life" challenges of citizens, the positive aspects of the 'bottom-up' management approach can also be considered as a helpful and effective tool. The bottom-up approach "implies proactive team input in the project executing process and team members are invited to participate in every step of the management process" (Filev, 2008). In this regard, the role of students can shift from passive to active influencers or contributors to the comprehensive 'triangle' cooperation among the universities, the state and the market. The bottom-up aspects of contemporary challenges and deprivations concerning the rational investments in education and human capital can be even crucial for transparent and productive decision making which can lead to joint adopted frameworks, guidance or strategies. Better and more proactive involvement of students in the governance of higher education is recommended by the European Student Union as well (Bartolo, 2009). Moreover, students must be considered as equal partners in governance involved at all levels of decision-making (Ibid.)

Therefore, the interactive approach of 'top-down' and 'bottom-up' management is considered as an effective and promising approach for bridging the interests between the active participants of the 'triangle'. In this regards, it is difficult to reach these challenges. This interactive approach requires great quality of communication, collaboration, transparent dialogue, an open-minded platform and 'knowledge based' experience. We encourage such a framework for its variety of aspects, interpretations, ideas and solutions and therefore the final joint outcome will be the most effective one. Different aspects are welcomed from the civil and non-governmental sector as well: such as think-tanks, NGOs, and media representatives. The benefits of this approach affect all the actors who are involved: citizens, institutions and the state. As a result, a jointly adopted framework or strategies can significantly influence the progress of 'knowledge' based societies.

Conclusion

The Republic of Macedonia as a post-transitional country needs to implement effective and comprehensive policies towards investments in education and human capital, in order to address the key challenge of unemployment, and foster economic growth. In this regard, all relevant actors - the State, universities, the business community as well as students have a joint responsibility to encourage the cooperative platform and to strengthen management capacities.

Croatia, although a new EU member state, faces similar challenges regarding the "lack of awareness of the effects of public policies which can influence innovation activity and the level of technological sophistication, alongside innovation, financing and scientific and technological collaboration, as links between the enterprises and the innovation infrastructure'' (Švaljek, 2012). According to Švaljek, "one of the targeting key drivers for increasing the competitiveness of the Croatian economy and its macroeconomic stability is the innovative activity of the enterprises as well as the improvement of the innovation infrastructure of Croatia, with a special focus on the importance of human capital in terms of education and skills" (Ibid.). As a result, both Croatia and Macedonia are confronted with crucial challenges in developing

links between the enterprises and 'knowledge' infrastructures and increasing investments in innovations, as key management practice towards the decline of the unemployment rate. However, in order for the states to cope with the EU or global market economy implications, it is necessary to deliver constructive dialogues and cooperation among all relevant key influencers on the functioning of the market economy.

Germany today has a leading role in the European economy, due to its major shift towards a collaborative and comprehensive management approach which has the potential to generate economic growth and encourage innovation and research practices. Furthermore, "this increased focus on achieving economic benefits has shaped higher education policies on internationalization in Germany as well as across Europe. Globalization has even altered the Europeanization of higher education. European mobility programs once stood for encounters and reciprocal exchanges aimed at enhancing the cohesion of peripheral member states". The key strategy of the EU is to make "the most competitive and dynamic knowledge based economic area in the world" and with regard to this priority, other aspiring or current EU member states should shape its 'knowledge-based economic policies.

The process of the internationalization of higher education can significantly contribute to the rise of quality investments in human capital as well. It can also affect the wage structure models and its effects on educational investments. The investments in technology, research and innovations in accordance with the proper inclusion of the small and medium enterprises and their implications, can provide sustainable background for more effective development of the micro and macroeconomic policies. In line with the triangle produced by Burton Clark (Figure 1, 1983), who outlined the three coordinating forces of the university system (academic oligarchy, state and market), the changing focus in the internationalization of higher education can be illustrated in terms of actors, strategies and objectives. The laws of the market have a major influence on actors. Internationalization is no longer a marginal phenomenon, but rather an increasingly systematic approach toward achieving economic influence using marketing measures (Isserstedt & Schintzer, 2005).

Student participation in the decision-making processes is seen as another addition to the shape and adoption of best practice mechanisms

and strategies for reaching better outcomes of education and human capital investments. Moreover, an interaction between ''top-down' and ''bottom-up' management approaches can be an important stimulator for fostering the internationalization of higher education into practice, due to its potential to increase the engagement of students in decision-making processes and shaping the joint interests of state, the universities and the business community. Bryan Tracy stated that "Achieving the highest possible return on human capital must be every manager's goal" (Tracy, 2011). Therefore, strong and efficient management can endorse the joint responsibilities of all relevant actors who have a duty to deliver the best results and practices of a functional market economy and to strengthen the capacity of 'knowledge' based economies as a key competitive strategy on the global market.

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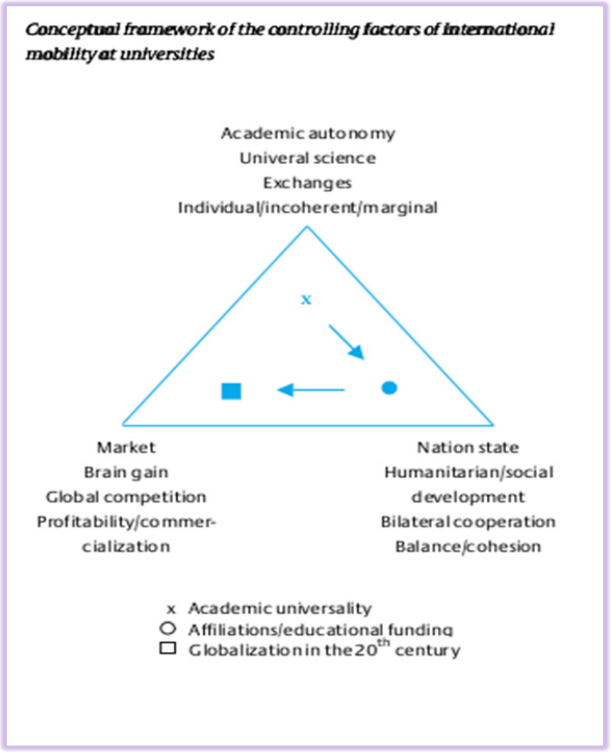

Figure 1.
Illustration of the B. Clark triangle (1983). Source: Isserstedt & Schintzer, 2005. Internationalization of higher education, page. 5. Federal ministry of education and research.

Table 1. Knowledge Economy Index (KEI) 2012 Rankings (46 total)

Rank		Country	KEI	KI	Economic Incentive Regime	Innovation	Education	ICT
1		Sweden	9.43	9.38	9.58	9.74	8.92	9.49
5		Norway	9.11	8.99	9.47	9.01	9.43	8.53
6	+5	Germany	8.90	8.83	9.10	9.11	8.20	9.17
28	+1	Croatia	7.29	7.27	7.35	7.66	6.15	8.00
33	-1	Ukraine	5.73	6.33	3.95	5.76	8.26	4.96
34	+4	Macedonia	5.65	5.63	5.73	4.99	5.15	6.74
46	-1	Tajikistan	3.13	3.33	2.55	2.18	4.66	3.14

The data is available at the official website of World Bank, KAM 2012: *www.worldbank.org/ kam*. The ranking includes 46 countries from Europe and Central Asia. The given data is not complete and it refers to the three countries which are the case study of this paper: Macedonia, Germany and Croatia

Table 2. KEI Ranking: *Long-term unemployment (% of total unemployment)*

Country name	2008	2009	2010
Croatia	63.0	56.2	44.4
Germany	52.6	45.5	47.4
Macedonia	84.9	81.6	83.1

Note: The available data is retrieved from http://data.worldbank.org/indicator/sl.uem.ltrm.zs/countries; The data for the long-term unemployment of the last 2 years is not available.

Table 3. *KEI Ranking, Unemployment, total (% of total labor force)*

Country name	2008	2009	2010
Croatia	8.4	9.0	11.8
Germany	7.5	7.7	7.1
Macedonia	33.8	32.2	32.0 (2013: 29.90)

Note: The available data is retrieved from: http://data.worldbank.org/indicator/sl.uem.ltrm.zs/ countries. Additional data of the long-term unemployment from the last 2 years is not available from the same source. The data of unemployment for the Republic of Macedonia is additionally retrieved from state statistical office of www.tradingeconomies.com. This data indicates 31.2 rate for 2012 and 29.90 percent in the first quarter of 2013.