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THE ROLE OF EDUCATION AND KNOWLEDGE WORKERS IN THE ECONOMIC DEVELOPMENT PROCESS

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Summary

Since the time of Adam Smith and David Ricardo, economists have been interested in the issues of economic development and the causes generating them. The first models of economic development and growth were formalised in the mid 20th century. These early models, known as the "neoclassical approach" to economic development, had a number of shortcomings. A series of much more sophisticated models, which were based on new theories of economic development, appeared in the early 1980s. These models were significantly different from the earlier models and were directed at highlighting the importance of human capital and entrepreneurship as important determinants of economic development. The new theories also highlighted the fact that government policies need to play an important role in determining long-term development and economic growth of a country and provided a useful model for understanding the influences of education on economic development through designing an adequate education policy. These more recent models of economic development underline that education contributes to economic development by increasing the productivity of workers and generating the development of knowledge, ideas and technological innovations. Education is the key entry point to the process of research sector development, which produces new knowledge and ideas. Education has an indirect effect on economic development and research has shown that a higher level of human

capital, i.e. a larger number of knowledge workers, is connected to a significantly higher level of investments, a higher level of technological transfer and longer life expectancy. In one of his most creative moments of farsighted lucidity a great theorist of management Peter Drucker, who died last November, wrote: "To make knowledge-work productive will be the great management task of this century, just as to make manual work productive was the great management task of the last century". Knowledge workers and entrepreneurs are the heart of a modern economy. Economic growth is not generated on the shoulders of bureaucracy. Economic development is led by persons who possess courage and knowledge for producing and presenting new ideas, products and services, which not only satisfy needs, but also generate the increase of production, revenues and employment.

Keywords: *economic development, education, human capital, knowledge workers, entrepreneurship*

1. Introduction

The environment in which various businesses, even entire economies and societies, function is becoming increasingly complex and dynamic under the contemporary conditions of technological, economic and overall social development. Global political, economic, social, technological, legislative and cultural changes, which constitute the environment in the broadest sense, affect the strategic and operational aspect of planning, managing and organising both the activities of certain companies and activities concerning the economic development of certain states. Considering the fact that the basic types of business organisation and their configuration depend on contingency factors, one of which is the environment in which a given business exists with all its modifications concerning un/availability, in/stability, un/certainty and complexity, together with the modern trends of internationalization and globalization of business, it can be expected with great certainty that the environment will become increasingly turbulent in the future and that business will favour basic types of organisation concerning the mentioned organisational context.

Namely, less importance will be given to mechanistic types of organisation, such as the conventional machine type for example, which can be used in a simple and stable environment, while the modern innovative basic type of organisation, characteristic of a complex and dynamic environment, will take primacy. Another trend, which is becoming more of a reality, can also be seen and it concerns the conventional types of organisation, such as the classical machine type. It is becoming a matrix for organising business according to the system of organizational outsourcing, which has its business strategy based on efficiency, while innovative businesses become leaders of key competencies and sustainable competitive advantages with a strategic commitment based on differentiation. Every strategy is a result of a process of strategic management which consists of the process of defining objectives, i.e. the mission of a certain organisation, external analysis, internal analysis defining a business strategy, its implementation and strategic control. The basic strategic orientation chosen by a certain organisation, be it a company or a certain state, is the strategy of cost leadership or the differentiation strategy. The future development and position of a certain organisation in the global competitive context depend on what strategy it chooses. It should also be noted that the differentiation strategy requires greater investment into education and the development of human resources, but also includes greater independence of organisations in defining future guidelines of their development. On the other hand, the strategy of cost leadership requires greater engagement of the "blue collar" sector and brings the organisation into the position of being a dependent cluster of some other organisation which has its strategic orientation based on differentiation. All this implies that different categories of labour force are predominantly represented in different organizational forms. Within the machine organisation, "blue collar" workers represent the majority, while innovative and professional organisations largely employ experts and professionals from various fields, who, ultimately, comprise the category of knowledge workers.

Because of the reasons mentioned above, this text will focus on knowledge workers who will be analysed in the context of characteristics of a new labour force, whose creativity and sophisticated perception is increasingly affecting the shape of both the micro and macro environment within which modern economies and businesses function. Since knowledge workers are the leaders of the most important activities concerning creative

and innovative business, special emphasis will be placed on the human resource management strategy and its relation towards the innovative and creative potentials of employees in the context of their characteristics in terms of education and their influence on economic development. Besides the characteristics of this special segment of the labour force, this text will also discuss trends caused by them and the ways in which they perceive and experience business, politics and the society as a whole, thus creating a new and more humane global system of values.

Realization that knowledge, as a result of the education process and a new type of capital, is having a growing effect on the economic development of a certain country is emerging as an important determinant of contemporary global economic trends such as globalisation and transition to a post-industrial society. According to UNESCO figures more than 660 million people are covered by the education process in the world today. However, there is a difference between the level of education in developed countries, where enrolment in elementary schools is almost a hundred percent, from that in developing countries. Naturally, with an increase in the level of education, i.e. the institutional level of formal education, the enrolment percentage drops within the developed countries as well and according to their statistics it is not at a satisfactory level.

There is no doubt that the broad spectrum of positive non-market effects of education confirms the correctness of the fact under which more and more funds are being invested into education, while at the same time it is the topic of analysis of numerous scientific studies. The following thematic units, besides providing basic terminology which more closely defines education as a factor of economic development, will also explain the characteristics of knowledge workers as bearers of the added value of the education process and their influence on the metamorphosis of social, economic and political relations. In the context of modern economic trends it needs to be noted that there is a link between labour market structure movements and economic development, both ambivalently and as a cause and consequence of such trends, while analysing this phenomenon through the prism of the education process and the existence of a higher percentage of educated labour force in economically developed countries.

Based on the facts cited above and the realization that well educated human resources are the most important factor of economic development and the production of key competencies of companies and states, a number

of questions arise: How to integrate the education process into the economic development strategy? What benefit does an individual see and what benefit does the social community see from education? Why does a social community need to be interested in increasing the literacy of its population? What are the basic characteristics of well educated people? What is their influence on ongoing changes? What is the cost of education? What is the simplest model for financing the education process and what trends in changes concerning the education process can be expected in the future? From what has been mentioned above, it is evident that the basic task of the following thematic units will be to offer answers to the raised questions in a rather systematic and comprehensive way by placing the emphasis on knowledge workers and human resources.

2. Basic Factors and Determinants of Economic Development

Generally speaking, the direct factors of economic development are country, capital and labour, or stated in different terms, geographical and raw material capacities, technical-technological resources and human resources as the bearers of a special form of capital, i.e. knowledge, without which the first two resources carry little importance. For reasons mentioned above, which indicate that human resources in a post-industrial society constitute the basic platform in the development of key competencies for any type of organisation, and consequently the entire economy, the further analysis of education as a factor of economic development will focus on the population, i.e. human resources as the basic bearer of the modern kind of capital.

One of the basic macroeconomic objectives set before every country, and through which the validity of a certain economic strategy is also confirmed, is economic development. What is meant under *economic development* are various activities of individuals and economic organisations undertaken in a society, which result in the creation of material and other values that satisfy the needs of both the individual and the social community at a qualitatively higher level.[1] Put differently, economic development represents an increase in output accompanied by progres-

[1] Kasim I. Begić, (2000), "Economic Policy", Sarajevo, p. 83

sive changes of the technological, human and production aspect. Since economic development is consisted of two components, the material-manufacturing component and the social component[2], it is safe to say that in a given country it is determined by factors and determinants. The material-manufacturing component, as an area in which changes that result in the increase of GDP, is linked to factors of economic development, which are divided into factors of economic and non-economic character, i.e. into direct and indirect, depending on whether they directly influence the process of economic development or not. The group of indirect factors includes: labour force (human resources), subjects of labour (country) and instruments of labour (technology), while direct or derived factors are recognized as accumulation, technical-technological progress, social conditions of work and all other factors that are derived from the direct factors and which determine economic development. Regarding the determinants of economic development, it needs to be underlined that they primarily have an indirect effect on economic development and are in most cases of non-economic character. Determinants of economic development define the social environment in which the process of economic development of a country is taking place and influence economic development through its social component[3]. Population, or put more simply human resources, i.e. labour force, represents one of the most important indirect factors of economic development. Two roles in which population appears are important for economic development from a macro aspect, including the role of producer and the role of consumers[4]. Population, through the mentioned roles, on one hand determines production by influencing the labour force contingent, and on the other hand determines the consumer potential in both size and structure. Population, as a factor of economic development, appears at the beginning of the reproduction cycle (a sort of an input as it ensures labour), as well as in the last phase, in which through the consumption of output it provides a final valorisation of the performed

[2] See: Kasim I. Begić, (2000), "Economic Policy", Sarajevo

[3] Professor Begic, in the book Kasim I. Begić, (2000), "Economic Policy", Sarajevo, analyses the material-manufacturing component linking it to factors of economic growth, while the social component, according to him, comes from the environment in which the economic process is taking place, and it is then linked to determinants of economic development, especially the legal system, political regime, education system, etc.

[4] Kasim I. Begić, (2000), "Economic Policy", Sarajevo, page 86

labour and shapes the curve of demand. Pursuant to this double role of the population, an analysis of the influence which a population of a certain country has on its economic development will require an analysis of two properties: the size of the population and the structure of the population. The size of the population is important because on one hand population determines the labour force contingent and on the other it affects the dimension of demand and gives impulses for further economic activities which will have as their final result economic development, one characterised by the faster growth of the GDP than by the rate of population growth[5]. When considering the population structure in the context of development the following factors have a special position: educational, economic-social, age, gender and the division of the population to labour active and passive. The educational structure concerns population characteristics in terms of the level of education, i.e. qualifications, which contributes to the better utilization of other inputs and higher effectiveness and efficiency of organisation, but also the other dimension of influences concerning the change of demand, i.e. the qualitatively different structure of consumption. Under modern conditions of doing business, which exhibit a permanent change of the economic structure and a change of the population employment structure in certain fields and areas and which is caused by technical-technological progress, but also other phenomena[6], education appears as an important factor of economic development.

To sum up, the education structure of a population, in terms of the existence of a highly sophisticated, i.e. qualified and educated labour force, by increasing the productivity of labour has a positive effect on the economic development of a certain country. From what has been stated above it is possible to draw the conclusion that the education of workers can be viewed as a derived factor of economic development of a certain country. However, it needs to be noted that the education of workers can also be viewed as a result of an efficient and effective education system, which is a part of a wider social system and which appears in the context

[5] However, it needs to be noted that an entirely different situation can appear in an economy of a certain state, for example if those two rates rise at the same rate, we say that stagnation is taking place, i.e. regression, if the GDP is lower than the rate of population growth**.**

[6] In countries going through transition, the privatisation process often had, as an accompanying effect, the need for retraining and additional training of workers.

of the determinants of economic development. This points to a systemic connection between factors and determinants of economic development. As this presentation continues, it will focus on education, the educational structure of the labour force and knowledge workers as a special component of the labour force in a post-industrial society, while other aspects of the human resource structure will only be mentioned in the context of explaining certain aspects of the educational structure.

3. Correlation between Education and Economic Development

Education represents a multidimensional process which develops a man in more than just a professional and expert sense[7]. Education has a significantly broader effect because it impacts the development of a man's **consciousness, principles and personality in general.** In this context, one of the basic characteristics of education is the increasing dependence (on) and relationship with economic development, i.e. the increasing interfusion of the education with the economic system, which results in the fact that investment into education and human capital is the basic prerequisite for accelerated economic growth. Naturally, this takes into account both the formal and informal education system, because in both cases there is a positive effect on economic development, but it is of different intensity and is implemented in different ways.

The issue of influence and the importance of education for economic development[8], although highly topical, is not a product of modern science, because it had been dealt with by the founders of economy such as Adam Smith, when he talks about education as an important driving force of economic development, or Alfred Marshall, according to whom education represents one of the major national investments. More recent and deeper scientific research and analysis[9], which appear

[7] Marko Beroš, (1999), „Economic Development", Sarajevo, page 67

[8] Perhaps the best indicator of the importance of education is the fact that education economy has appeared as a special scientific discipline, a special field of economy dealing with changes of working abilities of people, which are a result of the effects of education.

[9] Numerous international organisations such as UNESCO are also systematically studying education economy and education itself with the aim of advancing peace in the world through cooperation in fields of education, science and culture.

as a consequence of social and economic transformation, especially in developed countries, have brought to light many positive correlations between certain economic categories and education systems, both from the micro and macro aspect, such as[10]:

- relationship between the qualification structure of labour, i.e. engaged human resources, and international competitiveness of a country,
- relationship between education and productivity of labour,
- relationship between the level of education and the system of compensations,
- planning of investments and spending into education, which is connected with the planning of human resources,
- measuring the influence of education on economic development,
- measuring the effectiveness of investments into education,
- relationship between investments into education and overall social development,
- effect of investments into education on the development and re-definition of the political system, culture and other sub-systems of the social system,
- finding the best possible model for financing education,
- influence of human resource management on increasing the effectiveness and efficiency of business,
- influence of education on the development of certain activities and the redefinition of the economic structure,
- presence of direct and indirect benefits from education,
- increasing income of future generations as a result of better education of the present generation,
- ensuring an efficient mechanism for finding and cultivating potential talents,
- education as an instrument that ensures flexibility in employment of labour force and through that on reducing unemployment,
- higher level of education helps create an intellectual environment which stimulates research in science and technology, which has a positive effect on economic development,

[10] See more: Vladmira Polić, (1976), "Education and Economic Development", Školska knjiga, Zagreb, page 9

- encouragement of forms of behaviour that respect legal standards and lead to the increase of personal responsibility in personal activities, while both reduce demand for financing of social services from public funds for taking preventive and repressive measures,
- leads to a tendency of strengthening political stability by developing informed voters and a competent political leadership,
- education leads to the occurrence of "cultural continuity and social cohesion" by transferring common cultural heritage from one generation to the next,
- education broadens the intellectual horizons of the educated, thus contributing to the increase of enjoyment and leisure.

Decisions on investing into education are made at both the micro and macro level. Expected benefits from investment into education, as well as the costs of investment into education, appear at the level of the individual and at the level of the society as a whole. Since investments into education often have an infrastructural character (investment character, dominantly external economies, education as a category of public service), the effects of invested funds into education appear through the influence on economic development and the welfare of the individual. A valid description of the effects of education on the economic development of a country cannot be provided without looking at and analysing the multidimensional correlation between education and economic development. Mutual conditioning and interrelatedness of education and economic development can be viewed through the ambivalent mechanism which can be described as follows:

a. economic development, as a result of increased investment into the education process, leads to the improvement of the education system and therefore it can be viewed as a factor which has a positive effect on the education system,
b. improvement of the education system, on the other hand, has a positive effect on qualifications, i.e. the potential and functional literacy of human resources (labour force), which increases the productivity of labour and the more effective use of other inputs, which in turn leads to an increase of GDP per capita and, consequently, education appears as a factor of economic development.

An increase of the education level has a direct effect on the increase of productivity and the growth of GDP, i.e. GDP per capita. According to

Engel's laws, the proportionate participation of spending for satisfying basic needs is reduced as income increases, while the proportionate participation of spending for satisfying needs at a higher level, including education, increases. The daily increase of the quality and quantity of needs requires a proportionate increase in the production of goods and services, which can only be generated with the help of a highly qualified labour force, while, on the other hand, increased income provides an opportunity for education of higher quality, which is the main characteristic of highly sophisticated expert workers. We can now conclude that education appears, on one hand, as consumption, in cases when it is financed by the individual and contributes to the improvement of the individual's quality of life, and, on the other hand, as investment, in which education as an investment has for a consequence growth of the GDP, i.e. prosperity of the society, as well as of the individual[11]. This other form of manifestation of education opens a wide array of questions concerning the choice of modalities for investing into education, in the context of private and public aspect of investing into education and the benefit from education, all of which will be discussed in the further text.

4. Education as a Factor of Economic Development

The importance and position of the education system have changed significantly during the past century. That change is a reflection of change in the pyramid of importance of certain factors for the economic development of a certain country. Under the modern conditions of doing business, with natural resources no longer playing the most important role in the development of a country, a qualified labour force comes to the forefront. A qualified labour force serves the economic process, which is characterised by highly sophisticated equipment, while the equipment and technology, the use of which requires adequate knowledge, undergo changes and improvements on a daily basis. This results in more funds for investment into education at the same time or, in certain countries, even at the expense of funds for production. It is then safe to conclude that

[11] See: Vladmira Polić, (1976), "Education and Economic Development", Školska knjiga, Zagreb, page 11

modern conditions of doing business provide a new dimension concerning education, which reveals itself through the following aspects[12]:

a. use of modern equipment and technology in the business process at a large number of work places requires the employment of sophisticated, qualified and educated human resources, which leads to changes in the structure of labour force demand. The final result at the labour market is the domination of demand for highly qualified and expert (high school education) labour force. On the other hand, labour force possessing elementary education is practically unable to meet adequate demand, which is manifested as structural unemployment, and such a trend continues to rapidly unfold accompanied with the raising of the education threshold;
b. changes in demand for highly educated/qualified labour force influence changes of the size and structure of the cost of education, which now increases more rapidly compared to the cost of material-production funds;
c. the influence of qualified labour on economic development leads to the redefinition of the term "accumulation of capital", which now acquires a wider economic meaning and includes not only the accumulation of material-production funds, but also the qualitative development of human capital-resources;
d. the consequence of the need for more educated and expert workers is the need for changing the structure of education capacities both in terms of quality and quantity, thus allowing relevant knowledge to be provided to as many people as possible, which in turn leads to greater demand for employment of persons in education institutions (teachers, professors, trainers…), and this means more investments into higher education and other informal forms of education.

The use of highly sophisticated techniques and technologies in business has imposed a change in the demand for labour, which has influenced changes to the importance of the education system, but at the same time actualizes the problem of pace at which education becomes

[12] It needs to be stressed that most authors dealing with the issue of economic development have compatible views concerning some of the mentioned changes in the role of education.

obsolete. Human work, when viewed as input in the business process compared to other inputs, has two unique features within which the problem of obsoleting of knowledge and the need for permanent education appears. The first concerns the passage of time needed for education and the acquisition of knowledge by workers, which allows for additional technical-technological changes to inevitably happen in that time span (8-16 years) and this, in turn, requires the acquisition of new skills. The other concerns the man's active life, which in most cases does not match the operating life of machines and equipment, i.e. the instruments of labour, and is, in most cases, longer, which means that in order to be able to use modern techniques and "tools" in the business process workers need to permanently acquire knowledge, which constantly becomes obsolete. The importance of the problem of obsoleting of knowledge and the permanent acquisition of knowledge has initiated numerous researches, which aimed at providing answers to a wide range of questions, such as answers concerning the nature of the obsoleting of knowledge; forms, degrees and pace of the obsoleting of knowledge. In this context, it is interesting to underline an almost generally accepted division of the obsoleting of knowledge according to form:

a. professional obsoleting of knowledge – when the knowledge of an individual significantly falls behind the available achievements in a certain field. This type of obsoleting always exists and it is especially prominent in less developed countries in which the application of modern information and communication equipment is not widespread, i.e. in which a form of "information isolation" exists;
b. specialist obsoleting of knowledge – when an individual ceases to be an expert in the immediate field of his expertise;
c. general managerial obsoleting of knowledge – concerns the obsoleting of knowledge in management which results in lower effectiveness and efficiency of the management and business activities of an organisation;
d. obsoleting of knowledge in terms of human resource management – concerns the obsoleting of knowledge in human resource management which reflects on the reduction of their productivity.

Obsoleting of knowledge and the issue of permanent acquisition of knowledge during the entire lifetime show that regular education does

not provide the necessary education for an entire active life and that it should be planned so as to allow permanent and the easiest possible acquisition and adoption of knowledge at the lowest possible cost while, at the same time, increasing the level of general culture. The issue of increasing general culture, as a knowledge that is acquired in addition to the expert-vocational knowledge, is of special importance because it provides individuals the possibility to grasp and understand the phenomenon of society and social occurrences and to adjust their lives according to those facts, thus affecting the development of their overall personalities.

5. Education and the Labour Force Market

The purpose of this presentation is not aimed at understanding the classic theoretical framework concerning conventional macroeconomic aspects of the labour market by defining the basic concepts such as the labour market, offer and demand of labour force, the definition of wages and how they are fixed. The focus of the analysis represents a special segment of labour force, which, as it will become evident, unquestionably has a significant effect on economic development, with the tendency of further growth. The labour force market in this case cannot be easily defined as the market of other resources, because the labour force market deals with a special type of resources – "human resources", which require a special approach and treatment. Despite this assertion, some authors continue to view human resources and investment into their development only through the prism of economy and return, thus ignoring the socio-psychological component of human resources, which has proved a wrong approach a long time ago.

When the labour (labour force) market term is mentioned, economists are inclined to immediately bring it into connection with that the formation of the price of labour force through forces of offer and demand, or to think about the establishment of the minimal or, less often, the maximal wage of a certain country. This way of thinking often refers to a macroeconomic calculation of increasing/reducing spending on an economy as a whole depending on whether or not minimal wages have been fixed in a given national economy. The term un/employment is often linked to the terms labour force and labour force market. We shall here briefly mention certain types of unemployment in order to draw conclusions

concerning the labour force market, both concerning the general and specific term identified here as the new labour force, placing the emphasis on knowledge workers and managers at various levels as its dominant types. In general, unemployment can be divided into frictional, structural and cyclic.

Frictional unemployment[13] is the easiest form to define and is described as the constant pehenomenon of the arrival of certain persons to the position of demand for employment through population migration, completion of high school and university education, or the return of formerly pregnant women to work in a certain economic area.

Structural unemployment appears as a consequence of hyperproduction of a certain type of workers for which there is no real effective demand. It is not a rare thing to see unemployment in one segment and great demand for some other profession to exist at the same time. The basic solution for such a situation, in a short period of time, is requalification, something the EU member states and the US have spent billions of dollars on during the 1970s and 1980s, and this again is closely linked with the education system. The next segment of this presentation will especially deal with a special segment of labour force (knowlede workers and global managers) and will include comments on the impulses of offer and demand for this highly sophisticated type of labour force and their influence on economic development. On the long run the problem of structural unemployment requires reform and the development of a more flexibile education system and policy, which are able to quickly and efficiently react to signals from the labour force market.

Cyclic unemployment is related to global macroeconomic cycles, thus massive unemployment and dismissals of workers occur at times of recession due to a general fall in economic activity in certain national economies. This concerns the global aspect because it is generally recognised that when a fall in economic activity happens in the world's largest economies this has a spill-over effect on all the world's economies, as they are practically their clusters.

[13] It should be noted that certain authors link frictional unemployment to the market's inability to timely and efficiently perform its basic function of merging offer and demand of labour, i.e. that it is slow to react to changes in offer and demand. See: Kasim I. Begić, "Economic Policy", Sarajevo, 2000

Furthermore, this text will not deal with the determinants of the Philips curve, which shows a relationship between inflation and unemployment, or explain the tangled curve of labour force offer, which appears as an economic phenomenon in small businesses or artisan shops, in which the offer of labour force drops despite the increase of wages. This happens because of the fact that persons affected by this phenomenon give greater importance to rest time than the effective wage. It is therefore important for the remainder of this presentation to understand the existence of trends in education and their consequences, as follows:

- changes at the labour market, both in structure and intensity, are constant – every individual needs to be prepared both at his work-place and personal career to deal with changes and to manage them;
- continual education and training simultaneously change the mindset and the traditional behaviour of the individual;
- structural changes narrow the time horizon within which certain qualifications can be reliably planned;
- the problem of so-called functional literacy emerges and its threshold constantly moves to a higher level – skills gained in the past no longer match the new conditions. The "threshold of minimal skills" (knowledge of a foreign language, computer literacy – together with the additional specific area of a workers' competence) is identified as the general objective of education activities;
- the economic environment has changed and the labour market has evolved so that it valorises the economic importance of the human factor;
- the global character of changes has a simultaneous effect on the working environment and the individual – continual adjustment in both cases is an integral part of a man's future life;
- education gains on importance as a determinant which influences the position of the individual both at the labour market and in the social context;
- demographic and other changes which affect the present and future labour force will affect the level and nature of demand for certain types of education;
- education requires constant upgrade: lifelong education allows vertical and horizontal mobility of people in the society and improves chances of employment;

- changes to the institutional framework of education lead to the weakening of the authority of "conventional" education institutions and the strengthening of the role of informal education institutions together with increased competitiveness within the education industry in general;
- closer cooperation is expected between the business organisations, the state and universities with the aim of alleviating the problem of unemployment (due to age and inadequate education).

Based on what has been mentioned in the text above, and also in the context of education and economic development, it is by no means difficult to conclude that nothing will remain the same in the decades to come. The mentioned trends indicate that economic development will increasingly depend on how well the human resources are educated, which, in turn, means that demand for education will continually increase, which will lead to the sharpening of the blade of competition within the education industry. English is becoming the global language of education and economy and competition in the field of education is, thus, acquiring a global character. This means that the mentioned trends will also demand of educators, both in terms of their own references and in terms of the references of the institutions they work for, a different approach to their own status at the labour market and investments into the development of their potentials.

6. Historical Context of the Development of Different Categories of Labour Force

One century ago, most people in developed countries performed manual labour: at farms, in households, small artisan shops and (in small numbers at that time) in factories. Fifty years later, the proportion of manual workers in the overall labour force in the US and the EU has dropped by half and the number of workers in factories has increased, comprising 35% of the overall labour force. Today, less than a quarter of the labour force lives from manual labour. Workers in factories (blue-collar workers) still comprise the majority in the category of manual workers even though their share in the overall labour force has dropped to approximately 15%, roughly to what it was a little over 100 years ago. The US and some EU member states today have the lowest proportion of factory workers in

their overall labour force of all bigger and more developed countries. Great Britain is not far behind them. In Japan and Germany, their proportion is still at one quarter of the overall number of workers, but it is gradually declining. Based on these structural indicators, one can see that alongside with economic development related to the structure of the national economies, in a narrower sense, as well as economic integrations, in a wider sense, there are two convergent processes. Simultaneously with economic development, in light of the faster growth of the tertiary and quarterly sector in the structure of the overall economy, a faster growth of the highly sophisticated labour force in the overall structure of labour force in developed countries is taking place. It is evident that these two parallel, convergent processes are mutually entwined and that they represent catalysts for each other, as well as for modern economic development trends. Economic and technological development lead to the increasing recruitment of that category of labour force which can be classified as "knowledge workers" in the widest sense of the word, while, on the other hand, it is exactly those knowledge workers that are the bearers of the overall process of economic and technological development. "Knowledge workers" are therefore said to represent the bearers of modern processes of globalisation and internationalization of business and economy, which leads to a faster process of overall economic and political integrative processes.

Contemporary research papers in many European economic magazines talk about the trend of changes at the EU labour force market, with special emphasis being placed on certain national economies within the EU which are increasingly losing sovereignty to the EU as a whole. Based on statistically derived relevant indicators, it is difficult to discover what is really happening at the labour force market, while a real qualitative understanding requires a structural analysis on top of basic assessments of the unemployment rate in individual countries. Based on the fact that the average unemployment rate for the Eurozone is 10%, which is approximately 30 million unemployed persons, it is impossible to draw a precise conclusion concerning the real developments at the labour force market. "A structural analysis and the categorization of the labour force to blue-collar workers, white-collar workers, experts of various types and managers, allows an understanding of modern trends of certain segments of the labour force through the presentation of their basic

characteristics"[14]. Despite all that has been said, there is one fact that is increasingly becoming reality in all European countries, and that is the trend of growing flexibility of the labour force market in European countries. This means that in spite of the strong and well organised unions in European countries and the concept of codetermination and collective bargaining, the labour force market in European countries, as a result of pressures of globalisation and external competition, which themselves carry positive conditions for the effective development and employment of highly sophisticated experts of different types to general benefit, ceases to be rigid and is becoming increasingly flexible. "Twenty years ago, when people got a job they thought that they would stay in the same company until retirement and receive a golden watch as a farewell present. Today, this is no longer the case. Instead, people often change jobs, especially young people, and they use breaks between jobs to improve skills and education in order to apply for better jobs"[15].

7. Definition of the Term Knowledge Worker

With no intention to provide a classic definition of the term "knowledge worker", this presentation will try, through a series of examples, characteristics and applications, to create a picture and more closely illustrate the essence of knowledge workers as a new labour force. "Under modern conditions, the only rapidly growing category of labour force in America, the EU and other developed countries are 'knowledge workers' – people whose jobs demand of them to constantly improve their education"[16]. They now comprise approximately a third of the overall labour force in these countries, with a tendency of further growth, and they outnumber factory workers by a 2:1 ratio. In the next twenty years they would comprise two fifths of the overall labour force in all more developed countries. Terms such as "knowledge industry", "knowledge work" and "knowledge worker" are only some fifty years

[14] Aziz Šunje, (2003), Top-Manager, Visionary and Strategist, Sarajevo, Tirada, page 225

[15] Business Week, "Wanted jobs",, page 21, May, 2003

[16] Aziz Šunje, (2002), New Workforce Sarajevo, Revicon, Commentary and Translation

old. They appeared spontaneously at around 1960, but independently one of the other. The first term comes from a Princeton economist, Fritz Maclup, while the second and third were invented by Peter F. Drucker. These terms have been used frequently, but only a few know and understand their implications concerning human values, human behaviour, work with people and their productivity, effect on the economy, business and politics. What is already apparent is that the developing knowledge society and knowledge economy will be radically different from the society and economy of the late 20th century. In order to understand the repercussions of knowledge workers on economic development and all future changes concerning social, technological and political trends, it is necessary to more closely define the mentioned term by presenting the basic education and other characteristics, which more precisely distinguish **knowledge workers** as a special labour force category.

Knowledge is the new form of capital – The first characteristic of knowledge workers is that they represent **new capitalists**. Knowledge is becoming the main resource, and to that a rare one as well. This means that knowledge workers collectively possess the instruments of production. As a very influential group, they have become capitalists in the original sense of the word. Through their role in investment funds, they have become majority shareholders in big businesses in the knowledge society. Human resources, with their skills regarding communication, motivation and technological knowledge, which represent the basic levers in the development of modern business, are the bearers of knowledge as a rare and valuable resource.

Specialization – The second characteristic concerns the fact that efficient knowledge has specialized. This means that knowledge workers need access to an organisation which gathers the class of knowledge workers and utilizes their specialized skills towards a common final product. For example, high schools need math professors, successful businesses need consultants for product development in the same way as computer manufacturers need software developers. Knowledge workers, therefore, see themselves as equal to businesses that need them and consider themselves to be 'professionals', rather than classic 'workers'.

The knowledge society is a society of seniors and juniors, rather than a society of superiors and subordinates. A distinguished management theoretician Parkinson says that a phenomenon of surplus experts of certain

types can be seen today and that if people wish to get a job it is no longer enough to complete some general knowledge program. **Continual education and specialization are also necessary.**

Genderlessness – The third characteristic of knowledge workers is genderlessness. All this carries significant implications for the role of women in the labour force. Viewed through history, the participation of women in the world of labour was not always equal to the participation of men. A relaxed woman in the 19th century society of the wealthy was a rare sight. In order to be considered reliable, a farm, artisan business or small shop had to be led by a married couple. In the early 20th century, a doctor would not be able to open a practice before he married. However, even though women have always worked, their jobs were different from those of men. There were male and female jobs. Even religious books cite countless women going to the fountain to fetch water, never men. Knowledge work is genderless, not because of the pressure of feminists, but because both men and women can perform it equally well. The first modern knowledge tasks were designed for only one gender or the other. Lecturing as a profession was founded in 1794, the same year when Ecole Normale was established in Paris, and it was viewed as a strictly man's job. Sixty years later, during the Crimean War (1853-1856), Florence Nightingale established the second knowledge nursing service. This was considered an exclusively female job, but, in 1850, teaching became a profession for both genders. In 2004 two fifths of all students in nursing schools in developed countries were men.

Formal education – The fourth characteristic of knowledge workers is the **possession of formal university education.** Knowledge workers, of either gender, are professionals who apply their knowledge, perform the same tasks, regulated by the same standards and measured by the same criteria. Highly educated knowledge workers, such as doctors, lawyers, scientists in various fields, professors and clerks have existed for a long time, but their number has significantly increased during the last one hundred years. The largest group of knowledge workers barely existed until the start of the 20th century and it rapidly increased after World War II. They are the knowledge technologists – people who perform most of their work manually (and in that context represent the successors of trained workers), but their salaries are determined by their knowledge, which they carry in their heads, and which they gained through formal

education, not through the process of training or practical courses. In the field of medicine, for example, they include radiologists, physical therapists, ultrasound specialists, dentists etc. In the last thirty years health technologists have become the fastest growing segment of the labour force in developing countries. The number of knowledge technologists in production and education should grow even faster in the next 20 to 30 years. It should be noted that this growth is no coincidence and if one takes a closer look it can be seen that the invisible, but well known forces of the market, have again led to this trend. People with the greatest purchasing power in developed countries are pensioners and spending on certain types of medical services represents the biggest portion in their spending structure. This means that these people are not only spending vast amounts of their income directly on treatment, but also indirectly, through various types of therapeutic treatments, aesthetic surgeries, trips and visits to different hotels, together with rehabilitation treatments. Even thought the category of money, as a special motivation technique, is not of ultimate importance for knowledge workers, it is possible to draw the following conclusion; if a certain item, no matter how sophisticated it may be, is to survive at the market, there needs to be an impulse of effective demand for that item.

Continuity of education – The fifth characteristic of knowledge workers is the need for education through the entire active life and life in general (lifelong education), which allows them to upgrade their knowledge and remain competitive. Formal education has been present for centuries for the better known categories of knowledge workers such as doctors, lawyers and clerks. However, only a handful of countries have been ensuring a systematic and adequate education process for knowledge workers of other types. Education institutions responsible for educating knowledge workers will rapidly grow in the developed countries, but also in the developing countries, in the next several decades. What is different now is the need for continual education of knowledge workers. In the past, education would stop with the start of employment. In the knowledge society education never stops. Modern sophisticated forms of knowledge are different from the traditional skills, which change slowly. As opposed to traditional skills, knowledge in the modern conditions obsoletes quickly and knowledge workers need to constantly return to school. **Obsoleting of knowledge**, as already stated in this presentation, can be professional,

specialist and managerial, and, as a result, these categories of knowledge workers need to be continually educated in order to keep track with the new developments in science. Continuation of education of highly educated experts will become a fast growing economic field in the future society. However, most of that knowledge will be transferred to non-traditional, less formal methods, ranging from weekend seminars to online training, and only in a small number of cases within traditional universities.

Identification with a profession – The sixth characteristic of knowledge workers is that they try to identify with their knowledge. They represent themselves as anthropologists, physical therapists, lawyers, or economists, and can be proud of the organisation they are a part of, be it a company, faculty or a governmental organisation. However, they work in that organisation; they do not belong to it. Most of them feel to have something more in **common** with someone of the same specialization than with their colleagues in the same institution who work in a different field of science. This is evident from a simple fact that people of the same profession find it easier to communicate because they are familiar with the technical terminology specific to that field, while communication between people of different knowledge profiles can be troubled and fraught with difficulties because of frequent misunderstandings.

Maximal mobility – The seventh characteristic of knowledge workers is mobility in the sense of freedom of movement both along the horizontal and vertical social hierarchical ladder. Two types of mobility typical of knowledge workers can be distinguished:

- Mobility within the knowledge area - The first form of mobility concerns the fact that knowledge workers, even though the promotion of knowledge, as an important resource increasingly requires specialization, are highly mobile within their specializations. It is no problem for them to move from one organisation or country to another as long as they remain within the same field of science. In such examples, it is clearly a case of horizontal lateral mobility. There is much talk of efforts to increase loyalty of knowledge workers towards the organisation that employs them, but these efforts will never be fully successful because knowledge workers are free professionals fully aware of their rights and values. Knowledge workers can be devoted to an organisation and feel comfortable in it, but their basic loyalty will be primarily towards their specialized field of science.

- **Mobility to the higher spheres of society** – Besides the above mentioned form of mobility, the knowledge society is primarily a human society within which mobility to the higher spheres is unrestricted. Knowledge is different from all other resources, or the so-called instruments of production, in that it cannot be innate. It has to be acquired and everyone needs to be faced with the same lack of knowledge all over again. Knowledge needs to be universally available, or soon become such. All this makes the knowledge society very mobile from the vertical aspect. Anyone can acquire any form of knowledge in school through the learning process, rather than through practice. Until 1850, or even 1900, there was little mobility in any society. The Indian caste system, in which birth determines not only the status of individuals in the society, but also their profession, represents another extreme case and in most cases the only possible mobility in such a society is the one downwards. Even in America and the EU, which are considered areas of boundless opportunity, there was much less upward mobility than was generally believed. The knowledge society fully accepts the free upward mobility and thinks that any limitation of upward mobility is a form of discrimination leading to the deceleration of economic and social development.

8. Global Managers and Their Influence on Economic Development

Managers, as a special category of labour force within every society, represent the leaders of economic development in every national economy; they are the pioneers of all modern trends concerning globalization and the internationalization of business in general. European companies and their executive directors, i.e. managers, as a special category of knowledge workers, are becoming more and more mobile, flexible and transnational. Europe has united more in an economic and business sense than in an administrative, i.e. constitutional-legal, sense. The new and united Europe is giving birth to a new type of managers – "global managers", in addition to favouring the earlier mentioned category of workers identified as knowledge workers. Cross-cultural management and global business are becoming a European reality. In order to understand the impact of global managers on economic development and all future changes concerning social, technological and political trends, it is necessary to more closely

define this term by presenting the basic **characteristics of global managers in the following way:**

Ingenuity and entrepreneurship – "Global economy is creating a new business elite: men and women who easily move across national borders, change languages and culture with equal ease with which they type away on their always present mobile phones and laptops."[17] They bring a breath of fresh air to once narrow-minded companies and banks, they bring new ideas and offer a challenge to the conventional. As the elite grows, its members are finally able to bring down barriers protecting many European companies. Their internationalism is already slowly entering politics and culture, pushing Europe closer to that economic and social union to which it has been long striving for. Their common language (English) is rapidly becoming the language of global economy and business. Ingenuity and entrepreneurship represent the basic generator of economic development in all countries, and the basic bearers of the mentioned characteristics are the intuitive human resources related to the category of global managers. Entrepreneurship represents the blood and blood line of every economy. Economy is not built on the shoulders and foundations of bureaucracy. It is built on the platform of individuals who have the courage to generate new markets and produce new products and services demanded by those markets and who not only satisfy the needs of the customers, but also lead to the increase of income, production and employment. "The entrepreneurial spirit of the today's America is partly explained by the fact that all immigrants from Europe, when they decided to leave the continent and head into the unknown, were also gamblers to a sufficient extent. The play-safe genes remained at home", Edward de Bono said[18]. This De Bono's spot on assessment remains valid even today, because new immigrants from across the world bring the entrepreneurial spirit to America today, while entrepreneurship represents the basic generator of economic development.

Mobility – New global managers are prepared to go anywhere where there are new opportunities, and this introduces a new kind of

[17] Aziz Šunje, (2001), Managers without Borders, Sarajevo, Revicon, Commentary and Translation

[18] Milenko Dostić, (2002), Small and Medium Enterprises' Management, Svjetlost štampa, Sarajevo, page 51, 52

positive unpredictability to old ways of running business. Forget about loyalty to your country and company. These transnational managers see themselves as free agents[19], changing jobs at great speed in order to search for new experiences and enrich their biographies. "For the first time we can see, even in Europe, people taking on themselves to go to other countries, to develop skills of being able to function in a variety of different places", said Maury Peiperl, a professor at the London Business School, who studies the careers of European executive directors. "Even global administrations and certain positions of supranational associations of any kind primarily recruit to senior positions in those organisations people who possess the characteristics of knowledge workers and global managers, with exceptionally high ethical values."[20]

Integration ability – Everything started some twenty years ago when the more active processes of economic globalization began. That is also how the free flow of capital, flow of goods and today finally the flow of labour force started in Europe. In reality, less than 2% of the EU population work outside their countries of origin. However, according to figures of the Executive Search Consultants association, 40 out of 200 largest European companies are led by managers from other countries. Furthermore, data from the leading European schools such as LBS (the London Business School) and INSEAD (a business school in the vicinity of Paris) shows that at least a half of their graduates work outside their homelands. This is a significant change from what used to be the classic course of a career in European countries. Often the road to success leads from an elite national university, through engagement in government, to a managerial position, where cultivating relations is the most important thing. With the integration of companies from different states and acquisitions, which since early 1999 total 2,75 trillion USD in Europe alone, companies now need managers who are able to manage transnational teams, to be successful in the bumpy filed of newly integrated companies

[19] Global manager Carlos Ghosn puts in a double effort today: He now leads two companies – the French Renault and the Japanese Nissan, thus developing a sense of urgency. He runs the activities of these companies on three continents and so generates the development of at least two national economies. See: FORBES May 22 2006, page 104

[20] Mark H. Moore, (1995), Creating Public Value „Strategic Management in Government", Copyright by the President and Fellows of Harvard College, p. 295

and to understand different cultural situations. Since the quarter of all shares of European companies that were on public offer are now owned by foreigners, shareholders are not limited by loyalty to their country: they only want managers who bring results, regardless of which country they come from. This explains why "Renault" former general manager Louis Schweitzer before retiring brought on board Carlos Ghosn, a Brazilian of Lebanese descent. Carlos Ghosn spent more than 10 years with Groupe Michelin in the US and South America, and was then in charge of Renault production. Quickly this global manager earned the title "Le Cost Killer" for curbing inefficiency. Ghosn's experience has shown one thing: sometimes it is easier to bring a foreigner to make painful decisions. Based on the facts presented so far we can conclude that global managers possess also all the other characteristics of knowledge workers, and in effect, represent a special category of knowledge workers with a great prospect of growth. "It is practically impossible for multinational corporations to exploit the benefits of the global economy by maximizing the transfer of knowledge or to develop a global mindset without understanding the characteristics of knowledge workers and their aspirations"[21].

9. Education Externalities

Education, as one of the factors of economic development, besides its direct effects, by increasing the productivity of the labour force, also creates indirect effects, i.e. externalities (which can again appear in a direct form – the education of women has a positive effect on the upbringing of children and family planning, or indirectly through a monetary effect – higher income influences the life expectancy of children). One of the objectives of the economics of education is the realization of the possible positive externalities generated by education, followed by the process of accumulation of knowledge, as well as the development of the simplest models for transferring acquired knowledge. Not only the individual possessing knowledge has benefit from it, but also the wider social community[22]. When we mention education externalities, we also need to keep in mind the effects of the application of knowledge by others.

[21] Anil K. Gupta, (2003), Smart Globalization „Designing Global Strategies, Creating Global Networks", Copyright by John Wiley and Sons, inc, p. 249

[22] Kasim Tatić, (2002), „Study Notes for Microeconomy Exam", Sarajevo

For example, if children learn to write, draw and paint in school, they not only prepare themselves to be better individuals and future competitors at the labour market, but also to be better neighbours, i.e. to be better in communication and relationships with others. This process continues in high school and at faculties. Many governments also include growth models into economic policy concepts which are based on education and which offer predictions of results or effects of education policy reform as a part of the macroeconomic policy[23].

It is safe to say that the issue of ensuring quality education and an efficient education system is of vital importance for both the economic and the overall development of a country. In making decisions on the amount and quality of education, what should ensure an efficient education system, i.e. ways of financing education and its position in the economy, it is necessary to be careful about establishing a balance between individual marginal spending and individual marginal benefit. If education, research and development are left to unregulated market forces, then little will be gained from these activities. Decisions on the quality and quantity of the education system are made by the government. In achieving an efficient allocation of resources and the presence of externalities from education, research and development, the government[24] has three instruments at its disposal:

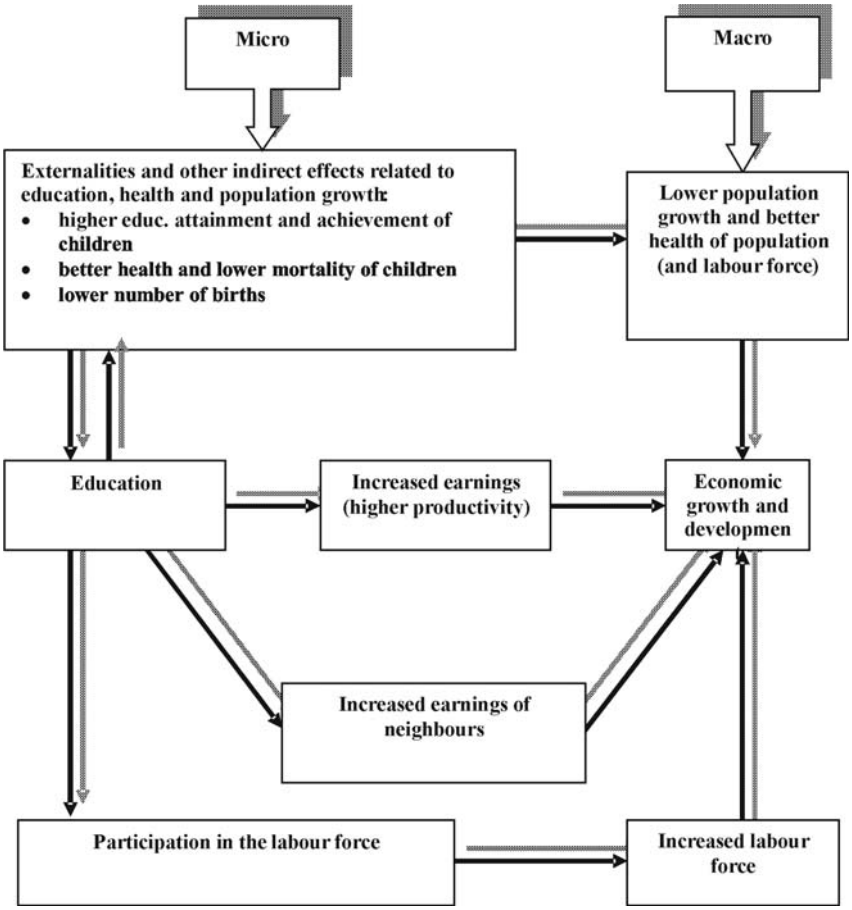
- subventions – as payments by the government to private education institutions,
- measures for reducing cost – government establishes public education institutions,
- patents, licences and copyrights – as a protection system, but also a system for stimulating development and research work.

[23] Certain empirical studies of the GDP growth rate in the US show that years of education in high schools and higher schools have a positive effect on economic growth. Certain researches of special importance for the development of the nation require larger activities to be taken, especially in cases of countries with low income, such as groth models which show the benefit of political decisions.

[24] In June 2002 the US administration announced the doubling of funds for the African Education Initiative. Overall US spending on education in Africa will total 630 million USD annually over the next five years. Such action is motivated by confidence that education of children in developing countries "represents a way to future economic growth, lasting peace, democracy, a factor for the establishment of political stability and improvement of the living standard".

Education externalities appear in different segments of social life, influencing the improvement of the quality of life at the community level, thus positively correlating with the social system in general, which additionally justifies government investment into education. The most interesting and, according to many authors, the most important externalities are in the fields of health and life of people, democratisation, human rights and political stability, protection of the environment, reduction of poverty and income inequality and crime. Image 1 concisely illustrates the direct and indirect benefits from education, considering them from a micro and macro aspect.

Image 1. *Katharina Michaelova*, (2000), *Returns to Education in Low Income Countries: Evidence for Education Influence"- http/:www.hwwa.de* (15. 5. 2006)



Direct effects of education are manifested through the increase of the wages of individuals, which is a result of greater productivity caused by the attainment of knowledge and expertise. If workers are paid in accordance with the value of their marginal product, that will mean that better education of workers ensures them higher income. In addition to direct effects, indirect effects also appear in many studies. Studies have shown that there is a positive effect of education and schooling of mothers on the health of their children, especially in developed countries. Healthier children can be much more productive than those that are less healthy, and this will result in their better performance at school. Similarly, better educated parents have more information helping them better plan and raise children, which has a direct effect on the size of their family. Smaller families allow parents to focus more closely on the education of every individual child, which has a direct effect on the achievement of better results by children in school. Stronger commitment in terms of education can, in the future, result in higher wages from those of the neighbours. Michaelova analysed this on farmers, who apply different agricultural technologies, which is a result of different levels of their education. The size of individual return from education can therefore be determined by comparing the increases of income, which are a result of the application of better knowledge and higher productivity. If we link this to GDP growth, then the importance of the human capital resources[25] can be seen. The evaluation of the benefits of individual education includes several components, including the number of years spent in school, the quality of education, the strain of education, all of which, due to the nature of these components, leaves space for a certain level of inaccuracy. Of all these components only the number of years spent in school can be directly noticed. In microeconomic analyses, income change is in the function of education, years of an individual's education are taken as an independently variable value. This method requires the use of information available in developed countries, but it does not include the differences in the quality of transferred knowledge. One shortcoming of this method is, for example, that people who have recently completed

[25] Certain empirical studies have shown that human capital is significantly positively correlated to GDP growth, while other studies have shown that link to be insignificant.

college are considered to possess higher education[26]. It needs to be stressed that empirical and statistical analyses, i.e. various types of scientific research, have shown that there is a positive effect of education on population growth, i.e. on the health of human resources, in the form of reduction of mortality and an effect on life expectancy, and also a positive effect of education on the protection of human rights, democratisation and political stability, as well as the reduction of serious crimes and crimes against property.

10. Conclusion

Changes in the environment lead to increased professionalizaiton and specialization of jobs at the global level, which results in the international accreditation of experts in certain fields. One of the most important characteristics of education today is its connection to economic growth, where the education of a population, or put simply the development of

[26] Macroeconomic analyses often exclude human capital. The reason for this is because human capital includes characteristics such as education, working experience, health, which directly complicates the survey of human capital. Every survey of the overall human capital in a certain country needs to have the following characteristics:

- it needs to be comparable with the situation in other countries;
- the limit, i.e. criteria, according to which human capital is evaluated needs to be set;
- it needs to include human capital elements for which information is readily available.

Educated labour force is a key component in the quality of human capital and the economy as a whole, thus the average number of years spent by the labour force in education can serve as a component in the evaluation of human capital. The age average can conceal the distribution of education effects, which can have consequences for the potential economic growth. An economy in which the majority or all individuals base their knowledge on elementary education can grow more rapidly than the one in which a minority has a high level education and the majority has no education at all. Recommended surveys of the quantity and quality of education include spending per student, spending on books, the number of PhDs per student… There is no uniform opinion regarding the ideal combination for every survey in the creation of an index for education quality. No survey can, on its own, provide correct information on the quality of education (for example, no mention is made of the quality of teaching during the early years of education at college).

human resources, appears as a factor of economic development. This increases the need for investment into the intellectual capital, thus the process of education does not end with the completion of regular education, but lasts an entire lifetime. Intellectual capital is the most important factor which affects the effectiveness of overall assets invested into a certain business enterprise. It is a dynamic category which can be manifested in different ways under different conditions and which is difficult to measure. A higher qualified labour force has a positive effect on the increase of efficiency and effectiveness of every organisation, but also on the increase of potentials and productivity of every individual, as well as the increase of per capita income. Education not only contributes to the productivity of labour and GDP growth, it also has a positive effect on the health of people, standardization and the protection of human rights, achievement of a higher level of democratization and political stability, as well as a positive effect on higher environmental awareness and the reduction of crime. In light of this fact, education is expected to become even more important in the years to come, both from a state and a private point of view. It is also expected that most investments will be directed into the development of human resources to ensure the competitiveness of private businesses and the state as a whole. These investments and the demand for education will influence the expansion of the education industry as an important and specific sector of the economy. The education industry represents a specific phenomenon because the output of this process is an educated man with a higher level of functional literacy and not a mere product or service. This means that human resources, as a special category of resource, cannot be put on the same plane with other resources in an organisation, because all other resources in an organisation, including the products and services of an organisation, even the organisation itself, are a product of creative thinking of highly educated and functionally literate human resources who are an output of the education process. If this mechanism is viewed from the macro aspect, it is then clear that the strategy of education development and the economic policy are a result of a process of strategic thinking by macroeconomic managers, i.e. government officials who hold different positions that represent points of decision-making in certain states. These persons are a product of a certain education process, and the economic results of a certain country, both in terms of quality and quantity, will depend on the level and quality of their education.

Rational macroeconomic managers will naturally involve education institutions in the process of devising and drafting development strategies depending on the segment and sector that is under observation, thus education and education institutions emerge as generators of economic development in this way as well.

A research conducted by the University of Cambridge in cooperation with University of Bremen provided conclusions that confirmed views derived on the basis of global trends in the movement of labour force structure in developed countries. Namely, education as modern capital is increasingly affecting all service businesses of various types and is increasingly making them knowledge intensive sectors, thus knowledge workers again have the greatest opportunity for employment in such fields. Besides what has been said, we should also mention a divergent process concerning knowledge workers, i.e. the simultaneous occurrence of specialization and professionalization of jobs on one hand and team work and joint learning on the other. This process, although divergent, is at the same time compatible with trends in the environment and provides even greater opportunities for a successful career to participants in those processes. Every global company, as well as its competitive advantages, depends on the ability to coordinate critical resources and information dispersed to different geographic locations. It is through the globalization process that ingenuity is becoming increasingly important as a core-competence of modern business, but also a core organisational force on the platform of which the core strategic commitment of modern organisations is based. The process of globalization and internationalization of economy and business is an unstoppable process, but also a process of redefining the labour force market as is its cause on one hand, and as a consequence of the mentioned processes on the other, which further leads to the favouring of knowledge workers and global managers as the leaders of such activities.

Rational consideration based on the earlier mentioned facts leads to the conclusion that technology, machines and capital in the conventional sense are not the most important conditions for the internal recovery of the economy in Bosnia and Herzegovina. Quite the opposite, human resources with the abilities of innovative and strategic consideration need to be treated as the basic source of prosperity in this region. Entrepreneurship as an activity and process represents the basic condition for the development of small and medium businesses, i.e. the expansion of business activities

and the range of products and services offered by major companies.It is exactly the highly competitive companies, together with the earlier mentioned abilities of human resources and entrepreneurship as their operational dimension, that represent the basis of development of a given country. This means that every creator of economic policy in Bosnia and Herzegovina and manager of every company in Bosnia and Herzegovina should possess the potential and abilities sufficient for the job he is performing and should be specialized for the field he is working in so that the society as a whole can benefit from him and so that the competitive advantages of the country as a whole can be increased. Finally, reform of the education system in Bosnia and Herzegovina, if viewed as a form of state intervention at the labour force market, in addition to fulfilling certain international standards, should primarily be in the function of economic development of the country by anticipating the qualitative and quantitative changes at the labour force market and generating human resources, which will ensure a higher level of competitiveness of Bosnia and Herzegovina in the global context.

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