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The International Institute for Education

Policy, Planning and Management

Strategic Development of Higher Education and Science in Georgia
Policy Analysis of Higher Education according
to Five Strategic Directions

V – Higher Education and Employment
Expert – Tamar Bregvadze

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1. The main trends and priorities in the world

In the era of the knowledge economy, higher education is driving force for development and competition in the world. It is regarded as the "engine of economy" which promotes constant development of creation new knowledge and competencies of the workforce through research and innovation. (Sursock and Smidt, 2012).

Based on this assumption higher education in Europe and the world are constantly expanding for the last decades. For example, in 2000-2009 population of students involved in higher education in Europe increased for average of 22% (2.7% annual growth rate) (Eurostat, 2012). This trend of expanding higher education system is based on the idea of more education benefits to individuals and to society, in terms of economic (income and employment growth , the development of human capital) as well as social context (supporting social mobility, increase of social stability and prosperity) (Machin and McNally, 2007).

How effectively does higher education perform these functions? Whether or not do the growing private and public investment in higher education work? The efficiency of higher education as open system is determined primarily by how it responds to environmental demands. Therefore, monitoring of education system compliance with requirements of labour market is effective tool for evaluating the effectiveness of the present system.

In recent years, several international reports were devoted to the issue of higher education compatibility. Among others are OECD 2011 thematic report and UNESCO global monitoring report – Education for All 2012. Thematic reports and analysis of the scientific literature shows that the development and coordination of trends in the job market and higher education system is important in tree strategic directions:

a. The first strand is a supply of labour market with human resources and providing balance of demand on this resource (quantitative indicator of the system):
By the interaction of demand and supply, increase in the numbers of graduates if other things equal, will lead to decrease in their salaries as the employer will have a wider choice of people with same qualification. However this simple reason does not always work. The higher education system, according to modern theories, is not just reacting to shifts in market demand, but also can lead to an increase in market demand for graduates (Machin and McNally, 2007). Consequently, achievement of demand – supply balance, constant analysis of the situation and determine the right strategy for higher education policy represents a major challenge.

b. Second direction is to increase compliance with the requirements of the competencies of higher education graduate with the market (qualitative indicator of the system):

Structural changes in the economy puts Europe in front of new challenges because of the skills needed for economic development. Modern labour market dynamics is reflected not only in the emergence of relatively new jobs (other jobs disappearing in the background), but also changes in qualification requirements of the workplaces (European Centre for the Development of Vocational Training, 2010).

Ensuring compliance of graduates' skills with requirements of the job market is particularly important in light of rising unemployment, since the recession period in Europe.

c. Another important task is to increase the role of higher education in terms of social mobility and social equality.

Recent studies show that higher education is a prerequisite for higher salaries, as well as for employment perspectives. Access to this level of formal education, therefore, should be provided to vulnerable groups.

Measurements of the effectiveness in higher education

There are two quantitative and qualitative measurement tools in order to determine compliance of higher education return and market requirements: return on education and relative benefits by levels of education.

1. **Return on Higher Education** (return on investment for higher education expenses) is a relation between spending on education (public and private) and public and personal benefits.

   There are private and public returns:

   The private return is a ratio of private individual's salary (after paying taxes) with expenses on higher education.

   The public return is a ratio of state expenditure on higher education with income from employment (before taxes). Social benefits indicator from education is used to evaluate efficiency of state funding on education (Psacharopoulos, 2009).

2. **The relative benefits of higher education by level of education** are another measurement of the effectiveness of the system. To determine this indicator, incomes of individuals with higher education are compared with their chances for employment; for example, same indicator of individuals with only primary or secondary education is compared and the difference between the corresponding figures is calculated.

   The difference in wage income according to level of education is called "wage bonus".

The return on higher education and the relative benefits measure in different angles and show how demanded the competencies of people with higher education are on the market. Accordingly, these figures are used as indirect measures of the demand-supply, as well as a competence coincidence. For more detailed analysis, relative benefits and returns of higher education are calculated according to the

learning areas (for example, social sciences, natural and exact sciences…) or by type of institution (private/public).

By comparing these indicators for different social groups, we can make some conclusions on how higher education performs as an equalizer of social inequality.

The general picture and main challenges

Based on the analysis of the relative benefits and return of higher education across Europe, several notable conclusions emerge about effectiveness of higher education:

1. <u>In recent decades, along with the growth of supply, the demand for higher education is increasing. Moreover, in many countries at present time, the demand on individuals with higher education exceeds supply.</u>
   Early studies show that primary education had the highest rate of return and the rate is gradually decreasing with the increase in years of education (Psacharopoulos, 1994). Nowadays the traditional idea of labour market returns is changing - a big part of today's research confirms that higher education has a much higher rate of return compared to all other levels of education (Fasih, 2008).
   OECD's recent survey shows that, those with higher education in European countries have 55% more income from employment - compared with persons with general education. This difference increases with age. The difference in the 25-34 age group is 37% and in the 55-64 age group is 69%. It should be noted that the two levels of higher education - A (Academic) and B (professional) have different effects on income. The effects of B-cycle growth rate in time is relatively low (OECD, 2012). On average, in OECD countries, revenues of individuals with higher education increased by 10%, in 2000-2010 period.
   Recent studies carried out in the European countries, show that employment rates of relatively low-skilled (secondary education or lower) individuals are significantly lower compared to individuals with higher education. In addition, the situation for low-skilled individuals over the past 30 years is even worsening and the likelihood of their employment is constantly decreasing (McIntosh, 2004).
   In terms of explaining the growth in demand for graduates of higher education in Europe, there is great difference of opinions, however, the most common hypothesis is that this increase is primarily due to technological changes (Machin & McNally, 2007).
   Interestingly, the demand for highly qualified personnel is increasing not only in developed countries but also in the less industrialized, middle or low-income countries (Venezuela, Chile, Uruguay, Guatemala, Republic of Korea, the Indian subcontinent and Africa) (McIntosh, 2004).

2. <u>Growth of the higher education funding leads to an increase in the system efficiency.</u>
   Recent studies also indicate a strong and significant relationship between education funding and the situation on the market. In particular, income is influenced by annual consumption on person

involved in higher education, the total state expenditure on education effects employment rates, and gross domestic expenditure on research (per capita) strongly correlated with both employment and income indicators (Ionescu, 2012).

By both parameters the best picture emerges in Denmark, Norway and Sweden, where rates of employment and income as well as rate of investment in education are high. The opposite situation is observed in Romania and Slovakia, where the investment in system is low, as well as the system return (wages, employment) figures.

The results of this study are important for policymakers, because it indicates that it is possible to increase employment rate by investing larger share of GDP in education, while increase funding of education and research is an effective strategy for increasing salary (Ionescu, 2012).

In light of the positive trends in recent studies, higher education system is facing some challenges:

1. <u>In light of recession, number of jobs in Europe is decreasing; especially high unemployment rates are among the younger generation.</u>

   Growth of unemployment and youth unemployment rates in this decade is one of the most important challenges for Europe and the world. Youth unemployment for a year can cause 21% of the reduction in revenue by age of 42 (Gregg and Tominey, 2005). Unemployment of additional three months until the age of 23 will increase unemployment by the age of 28-33 by additional two months. These problems are compounded in the case of long-term unemployment, and the probability of transition of this situation to their children is increasing. Except individual loss, unemployment means unused economic resources, thus reducing the potential return, and hampering economic growth (OECD, 2012).

   According to a recent OECD study, over the last 10 years, the unemployment rate in the young population of Europe is more than twice as high as in the elder population. According to EU in November 2011, youth unemployment rate comprised 22%.

   Approximately 40% of young people have expressed interest in self-employment and state supports business start-ups and numerous programs for this age groups. Although there are few studies of the effects of these programmes demonstrating the success of these interventions, the issue needs further research.

2. <u>Despite the potentially large effects of upward social mobility, the higher education role of equalization does not work properly, as the limited access to higher education for vulnerable groups still remains.</u>
   In modern society, there is very strong linkage between social origin and achieved social status; education has a dividing role in this linkage (Blau and Duncan 1967). For example, level of education is the most important predictor for employment status. This means that education also plays an important role in terms of providing social mobility. However, the research also shows that

educational status itself is largely dependent on social factors and, therefore, education contributes to the reproduction of intergenerational social inequality (Triventi, 2011).

According to recent data from the Organization for Economic Cooperation and Development, on average in OECD countries, about half of the 25-34 age group has obtained a parent education, and, out of this number only 15% is higher education. Upward mobility rate is the lowest in Turkey, Spain, Portugal and Italy, where 30% to 60% of the 25-34 age group stop at the low education level just as their parents.

3. <u>In Europe the Skill Mismatch trend is evident (market expectations of higher education system in most cases do not correspond to a return).</u>

An analysis of 25 European countries in terms of skills compatibility shows that, on average 59% of work force do not fit market requirements, however, the rate ranges from 15% - from the Netherlands, 79% - to Estonia (European Centre for the Development of Vocational Training, 2010).

Transitional and developed countries from OECD are now more focused on the so-called life skills that are more easily adaptable to the demands of the market in terms of volatility, while technical skills are aging very quickly (Machin & McNally 2007, Fasih 2008). This trend is evident in Britain and Spain (Cruz-Castro and Conlon, 2001), as well as in countries with transition type of economies such as Bulgaria, Poland, Russia (World Bank, 2008).

The situation is exacerbated by the fact that Europe's population is aging, according to this, the training of existing resources to new market requirements is gaining special importance to market.

European Commission communiqué about skills and manpower (2008) emphasizes the negative impact of the competencies conflict for further development and implementation of the idea of social equality.

Higher then required qualified individuals receive the same salary as their counterparts with lower qualifications. Also, the people who just do not fit the market demand for competencies can take damage in terms of wages. This trend has negative impact on the economy, as resources of higher then required skilled persons are not adequately utilized and performance indicators are falling, while low-skilled individuals receive the same salary as their highly-skilled workers, they cannot see the need for development and lose motivation for further education.

Inconsistency of skill reduces the social benefits of education, as it increases labour discontent, and the health rates and well-being of the workforce are falling (European Centre for the Development of Vocational Training, 2010).

Guidelines for hypothetical model

Considering this reality, the European countries use following general strategy in order to increase compliance with higher education:

- Monitoring of quantitative indicators of the system outputs (number of graduates) in relation to the market demand, identification of inconsistencies and forecasting; particular agencies are responsible for data collection and processing on national level.
- Monitoring of qualitative parameters of the system outputs (graduates competencies) in compliance with the requirements of the market, reform of the system of higher education degrees and qualifications in accordance with these requirements.
- Applied research is encouraged in higher education institutions in order to increase employment rates of graduates;
- Specification of roles and responsibilities of stakeholders in relation to maintain demand-supply balance (higher education institutions, government and employers). Employer's participation in the development and delivery of training programmes, quality assurance schemes and accreditation processes (Centre for Higher Education Policy Studies, 2011).
- Improvement of youth employment and self-employment rates, which implies the involvement of higher education institutions to provide information, mentoring and consulting, financial assistance and infrastructure support programmes (youth business incubators and networks).

As Georgia strives towards integration into the European space of higher education, a hypothetical model could imagine a situation where the policy for the development higher education in Georgia provides refinement and launch of above strategies.

Specific examples of using these strategies from European countries are given in Annex 1. In Europe, higher education development strategies, underlines the necessity of complex implementation of interventions - not only in higher education but in formal education at all levels, as well as non-formal educational programs.

OECD strategic platform of competencies also points out that, improvement of return of higher education quality interventions fail to bring adequate results, if states do not fully implement supportive measures for increasing demand on return. In particular, it is important to pay attention to social protection mechanisms and dynamics of FDI inflows, as well as various economic sectors of the domestic financing mechanisms.

## 2. Higher education and the labour force in Georgia - Situation Analysis

Information about the relationship between higher education and the job market today is very scarce in Georgia. This shortfall is primarily due to the fact that at the national level, there is no systematic approach to analyze the relationship between the market and the education system; required variables are not integrated with important instruments, such as the population census questionnaires, quarterly household survey instruments. There is no meaningful data interoperability and aggregation strategy, the inside or outside the Ministry, there is no authority that will be responsible for this type of data analysis; there is no specific information integration strategy in higher education policy development. For example, based on National Statistical Service database, it is impossible to estimate return and the benefits of higher education, by the relative levels of higher education (doctorate, bachelor's degree, master's degree) or by academic education directions; and this is at a time when state funding for higher education in Georgia is operated by different schemes (according the Decree No. 79 of the Minister of Education and Science of Georgia, in 2013-2014 tuition fees for separate program directions in state high education institutions is fully funded by the state). Consequently, during the identification of priority programme areas the Ministry has not relied on credible empirical material.

Alumni and students' employment and income data are not collected systematically at the level of higher education institutions. Although programme accreditation standard requires the higher education institutions to fit in the market requirements, corresponding number of performance indicators and verification sources are vague, is not sufficiently detailed in self-evaluation and external evaluation instruments and therefore, does not allow possibility to fully and objectively assess separate programmes or on the entire higher educational level.

Today it is not mandatory for educational institutions to publish self-assessment reports, which limits accountability to the society and in this regard hinders competition between higher education institutions. In the majority of higher education institutions, career developments services are not working.

In terms of unavailability of appropriate databases, the research implemented at national level is very expensive, episodic in nature and is not properly reflected in education policy. Nevertheless, in the last few years in Georgia, enough empirical material is still accumulated to analyze relationship between the market and higher education. The information provided by the present document is based mainly on 2010-2012 reports and studies of the International Institute for Education Policy, Planning and Management, the TEMPUS Programme in Georgia, Economic Policy Research Centre and the International Organization for Migration, and gives possibility for general conclusions about the relation of the job market and higher education. These findings are consistent with the challenges and pictures of Europe:

1. <u>According to the 2013 data, higher education is a significant factor in determining the indicators of income and employment in Georgia.</u>

   - Income of an individual with higher education exceeds that of an individual with basic education at least twice.

   - Taking into account the gender, age and place of residence, the chances of an individual with higher education in terms of employment increases at least twice if compared to an individual with only basic education, while the chances of getting hired on contractual basis – increases at least five times.

   - Obtaining Master's degree does not guarantee a significant increase of income, but increases the chance of getting a job by at least 70% if compared to an individual with only Bachelor's degree. Therefore, graduate studies are means of increasing employment chances in Georgia, and not that of income.

   - The process of reimbursement of expenses made on higher education in Georgia lasts approximately for the same period as in European countries with the similar income.

2. <u>Average indicator of employment income, as well as the employment indicator significantly differs according to gender and higher education.</u>

   - The probability of employment for male individuals with higher education exceeds that of female individuals with higher education at least 1.2 times. It should also be highlighted, that the difference according to gender is calculated taking into account the sphere of education/specialty. In other words, in engineering the probability of employing a female with Bachelor's or Master's degree is lower than that of males.

   - Gender significantly affects the income. This effect also remains when comparing individuals with the education in the same sphere. For example, if both, female and male individuals are educated in the sphere of business administration and have similar characteristics foreseen by the study (i.e. age, place of residence), the salary of the male individual is more by GEL 176 on average than that of the female.

   - The chances of employment of an individual with a diploma in exact and natural sciences are higher by 1.3-1.4 times than that of an individual with a diploma in humanities.

   - The income of an individual educated in business or engineering is higher than that of an individual educated in humanities.

3. <u>The hindering factors for further growth are a low compatibility of individuals having higher education with the requirements of the labour market and a low indicator of self-employment.</u>

   - In Georgia, about 60% of employed individuals having academic degree are employed in their specialties. This means that only ¼ of Georgian citizens with higher education is employed within their professions.

   - The share of individuals employed within their profession, also differs significantly. The lowest indicator in these terms is in engineering.

- It should be pointed out that employment rate within their professions is higher in case of Master graduates (compared to Bachelors). Master's level in this case is an instrument of professional reorientation and orientation on the market.

- About half of employers interviewed within the scope of various studies, think that alumni competences do not meet their requirements.

- Just as in many European countries, in Georgia as well the share of self-employed young people with higher education is low, that prevents the creation of new jobs.

4. <u>Higher education is a potentially effective instrument for eradication of social inequality in the society, although accessibility to higher education still remains limited for vulnerable groups.</u>

- The additional (Master's) level of higher education increases the chances of employment more than socio-economic indicator of a family, such as parents' education. There are no significant differences in terms of income for individuals with higher education correlated to the parents' education.

- Personal income of individuals with higher education does not vary in accordance to his/her family well-being before admission to university.

- The indicator of the poorest population's involvement in the higher education is 9%, while that of the richest population is 38%. The share of young people with higher education is particularly high in the group where the older members of a family also have higher education (73%) compared to those families where the older members have only general education (18%).
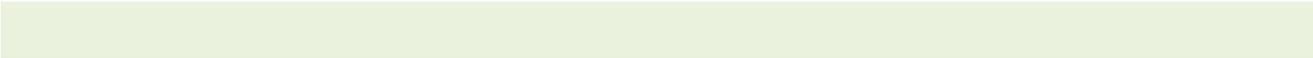
3. Recommendations for policy planning in higher education

Considering the increasing tendencies in return and the relative benefits of higher education, **it is appropriate to increase the funding of higher education in Georgia (including research funding),** as the international studies show that the increase in funding for higher education leads to employment and increasing income from employment.

Analysis of the effects of higher education on employment and income in Georgia shows that there are obvious benefits from investment in higher education, but human capital created in higher education system is not used in an effective way. Accordingly, along with the growth of the state investment in higher education, additional measures for increasing community return from higher education are important. Possible strategies in this regards are:

a. Rationalization of public expenditures for higher education, taking into account empirical data;

b. Promoting compatibility of growth of the results of the higher education results with the market requirements;

c. Total revenue growth from higher education;

d. Increasing access to higher education for vulnerable groups

a. For rationalizing costs of higher education, it is very important **to consider real rates of return according to the education directions when subsidizing higher education. The supreme objective at this point is an enactment of monitoring system for collecting education profitability and trend indicators in Georgia.** Since currently there is no such system in Georgia, we recommend the following steps to improve the situation in this regard:

- Classification revision for employment areas, education sectors and qualifications with consideration of UNESCO and the International Labour Organization (ILO) International Classification (International Standard Classification of Education http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf; ISCED Fields of Education and Training http://www.uis.unesco.org/Education/Documents/isced-fos-consultation-draft-2013-en.pdf; International Standard Classification of Occupations (ISCO) http://www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm).

  Gathering and regulating information with such classifications would provide access to information about employment indicators by academic directions and sub-directions, as well as comparability of collected data from Georgia with the data from other countries;

- Modifying National Statistics office research tools (add new variables) to make it possible to calculate income according to education directions (including employment and self-employment);

- To establish a new body at the Ministry of Education and Science of Georgia, which will be responsible for analysis of education return and employment indicators (for example, the Public Education Information Management System)

- To specify the integration process policy of monitoring the effects of employment and education return. (Which agencies will participate in drafting the report, which department will prepare a final report, which one will present and with what frequency, what specific decisions will be made considering this information).

b. For increasing compatibility of the higher education system with the market requirements, it is important to **enforce result-oriented control mechanisms in monitoring mechanisms of the quality of higher education**. In particular:

- To ensure the existence of career development centres in higher education institutions, as necessary structural units;

- To ensure publicity of programs self-assessment reports. The verification of academic program self-evaluation and external evaluation instruments, with market demand requirements (For example, a survey of employers and graduates, the intensity and diversity of forms of employers cooperation);

- Integrating employment indicators in the rating system of higher education institutions will be created. Possibility of comparing higher education institutions in several education directions is very important in this kind of rating.

c. **Stimulating of self-employment of individuals with higher education** can be strategic move for revenue growth from higher education, which, in itself, will help to increase the number of jobs in the country. **Also, the important task is to promote the effective use of competencies of graduates, in terms of implementing innovations in private and public sector, as well as preventing highly skilled resources to flee from the country.** In this regard, specific interventions might include:

- Competency development courses necessary for self-employment to be implemented in all areas of higher education curricula (humanities, social science, exact sciences, etc.) as well as in school curriculum.

- Stimulating the development of the self-employment supporting infrastructure (such initiatives may represent the creation of business incubators within institutions of higher education, university and state loans and grants to students and graduates for small business support).

- Increasing funding of research activities for public and business sector joint initiatives within governmental funding. At the same time it is important to develop specific indicators for assessing applied research.

- Promoting programme internationalizing and <u>the mobility of students and academic staff in priority areas</u> (identified by monitoring market trends and education return) within target programmes.

- <u>Creating the strategy guarantees</u> for domestic use of doctoral and master's graduates, as well as <u>government-sponsored high skilled resources involved in international mobility</u>.

d. Equal access to higher education for vulnerable groups is one of the most important objectives for the state. Education return data analysis shows that higher education is potentially reducing inequality between different social groups with regards to employment and income; however, our analysis shows that the involvement of socially vulnerable groups in higher education remains low. In order to improve the situation in this regard, **financial barriers for the access to higher education should be eliminated**, which may include changes in current funding and student aid system to fit two criteria: (1) private return from education and (2) student solvency. The first one is discussed in the previous recommendations, where we argued about improving technologies for education return calculation, which would allow more efficient allocation of the state subsidies. As to the second criteria, it uses the principle of social stability and the assumption that it is in the state interest to increase the upward social mobility. <u>Concrete steps in this direction could be to increase the share of social grants in higher education funding and the enactment of student loans mechanism.</u>

Bibliography:

Education and Labour Market:

Centre for Higher Education Policy Studies. (2011). Perspectives of Higher Education and the Labour Market: Review of international policy developments

The World Bank. (2012). World Development Report. Jobs

UNESCO (2012). EFA global monitoring report. Youth and Skills: Putting education to work.

Sursock, A. and Smidt. H. (2012). Trends 2010: a decade of change in European Higher Education. EUA Publications.

Machin, S. and McNally, S. (2007). Tertiary Education Systems and Labour Markets. OECD

Buchanan, J. et al. (2010), "Skills Demand and Utilisation: International Review of Approaches to Measurement and Policy Development", OECD Local Economic and Employment Development (LEED) Working Papers, 2010/04, OECD Publishing.
http://dx.doi.org/10.1787/5km8zddfr2jk-en

Bussi, M. 2012. Quality Education for Quality jobs. European Trade Union Confederation (ETUC)

Martins J.O, et al. 2009. The Policy Determinants of Investment in Tertiary Education. OECD journal: Economic Studies

Lubyova, M. 2009. Labour market institutions and policies in the CIS: post-transitional outcomes. Subregional Office for Eastern Europe and Central Asia. ILO, Moscow.

OECD (2011), Skills for Innovation and Research, OECD Publishing.
http://dx.doi.org/10.1787/9789264097490-en

McIntosh, S. (2004). Education and Employment in OECD countries. UNESCO. International Institute for Education Planning. Paris.

Altonji, J.G et al. 2012. Heterogenity in Human Capital Investments: High school curriculum, college major, and careers. Working Paper 17985. National Bureau of Economic Research. Cambridge, MA
http://www.nber.org/papers/w17985

Triventi, M. 2011. The role of higher education stratification in the reproduction of social inequality in the labour market. A comparative study of recent European graduates. University of Milan-Bicocca
http://mpra.ub.uni-muenchen.de/35996/

Fasih, T. 2008. Linking Education Policy to Labour Market Outcomes. The World Bank.

Ionescu, A. M. 2012. How does education affect labour market outcomes? Review of Applied Socio-Economic Research. (Volume 4, Issue 2/ 2012), pp. 130
http://www.reaser.eu

Youth Self-employment and Entrepreneurship

ILO. 2012. The youth employment crisis: A call for action. Resolution and conclusions of the 101st Session of the International Labour Conference, Geneva, 2012.

OECD. 2012. Policy Brief on Youth Entrepreneurship: Entrepreneurial Activities in Europe

Competencies:

ILO. 2008. Conclusions on skills for improved productivity, employment growth and development. International Labour Conference, 2008, Geneva.

ILO. 2008. Formulating a National Policy on Skills Development. Policy Brief.

OECD (2012), Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies, OECD Publishing. http://dx.doi.org/10.1787/9789264177338-en

ILO. 2010. A Skilled Workforce for Strong, Sustainable and Balanced Growth. Geneva.

European Centre for the Development of Vocational Training, 2010. The skill matching

Challenge: Analysing skill mismatch and policy implications. Publications Office of the European Union, Luxemburg.

IOM. 2008. Employer demand of workforce. Tbilisi

Economic Policy Research Center (EPRC). 2011. Employment and unemployment tendencies in Georgia. Tbilisi

Salmi, J. and Andguladze, N. 2012. Tertiary Education Governance and Financing in Georgia. The World Bank

Local Sources:

International Institute for Education Policy, Planning and Management. 2008. Outcomes of Higher Education Reform: descriptive Report according to Bologna Process Indicators

International Institute for Education Policy, Planning and Management. 2012. Private Tutoring in Georgia

International Institute for Education Policy, Planning and Management. 2013. Higher Education and Workforce in Georgia

Khitarishvili, T. 2010. Assessing the Returns to Education in Georgia. Levy Economics Institute of Bard College

Javakhishvili, N. et al. 2011. Higher Education Institutions of Georgia Aiding Student Employment. European Commission/Tempus program.

Education Return:

Altonji, J. G., Blom, E., & Meghir, C. (2012, April). *Heterogeneity in Human Capital Investments: High School Curriculum, College Major and Carriers.* Retrieved March 13, 2013 from National Bureau of Economic Research: http://www.nber.org/papers/w17985.pdf?new_window=1

Becker, G., & Tomes, N. (1979). An Equilibrium Theory of Distribution of Income and intergenerational Mobility. *Journal of Political Economy, 87* (6j), 53-89.

Campbel , D. (2011, August). *Centre for Economic Performance.* Retrieved January 16, 2013 from London School of Economics: http://cep.lse.ac.uk/seminarpapers/18-01-02-CAM.pdf

Card, D., & Krueger, A. B. (1992). Does school quality matter? Returns to education and the characteristics of public schools in the United States. *Journal of Political Economy, 100* (1), 1-40.

Chevalier, A., Harmon, C., Walker, I., & Zhu, Y. (2004). Does Education Raise Productivity or Just Reflect it? *Economic Journal, 114*, pp. 499- 517.

Nord, S. (1987). Schooling and changes in the inequality in male and female earnings in the United States over the 1970s. *Applied Economics, 19* (8).

Machin, S., & McNally, S. (2007). *Tertiary Education Systems and Labour Markets.* Paris: OECD.

Machin, S., & Puhani, P. A. (2002, August). *Subject of Degree and the Gender Wage Differential.* Retrieved January 15, 2013 from Institute of Labour Studies: http://ftp.iza.org/dp553.pdf

Paglin, M., & Rufolo, A. M. (1990). Heterogeneous Human Capital, Occupational Choice, and Male-Female Earnings Differences. *Journal of Labour Economics, 8* (1), p123. 22p.

Psacharopoulos, G. (1972). Rates of Return on Investment in Education around the World. *Comparative Education Review*, 54-67

Psacharopoulos, G. (1993). *Returns to Investment in Education.* Policy Research, World Bank, Office of the Director Latin America and the Caribbean, Washington DC.

Psacharopoulos, G. (1972). The Economic Returns to Higher Education in Twenty-Five Countries. *Higher Education*, 141-158.

Psacharopoulos, G., & Partinos, H. (2004). Returns to Investment in Education: a Further Update. *Education Economics*.

Psacharopoulos, G., & Patrinos, H. A. (2002). *Return to Investment in Education.* Washington: The World Bank.

Walker, I., & Zhu, Y. (2011). Differences by Degree: Evidence of the Net Financial Rates of Return to Undergraduate Study for England and Wales. *Economics of Education Review, 30* (6), 1177-1186.