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Research on Competencies of Human Resources in Transport Sector: Lithuanian Case Study

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Abstract

The primary goal of each organization is to maximize the profits, take the larger share of the market or to provide the best service possible. In order to implement this goal, organizations must have unique resources, i.e. – human resources. Effective management of human resources is an important factor in achieving the goals and benefits of an organization, individual and society. No less important is the acquired qualifications and competencies of the employees. There are cases when the lack of competencies encourages the employers to seek for certain alternatives: either exchange young specialists into experienced ones or invest in them time and money. Additional investments are expensive for the companies, especially in the areas where quick orientation in the current situation is required (eg. Transport sector). Therefore, a qualified transport specialist is a great asset of the company. Theoretical aspects of human resources are discussed in the paper. On the basis of diverse works of the authors, the paper analyses and discusses management processes, human resource competencies in transport sector, issues and perspectives, as well as provides the results of the research.

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1. Introduction

Human resource management is one of the most important processes in each organization. None of the existing organization could achieve its goals without appropriate and qualified specialists. Thus, it must be acknowledged that human resource management is one of the major research objects in the management theory and practice.

A new approach towards an organization is being formed in a constantly changing environment, where employees, i.e. human resources become an important and active part of the system determining the efficiency of the organization's activities. Effective management of human resources is an important factor in achieving the goals and benefits of an organization, individual and society.

In scientific literature, theoretical provisions on human resource management confirm this functional management impact on the overall results of the organization. Fierce competition in current market determines rapid and multifaceted organization development associated with implementation of human resource management objectives. It is essential for organizations operating in a global market to efficiently manage existing or potentially accessible labor resources.

The relevance and novelty of the paper. On the basis of scientific literature, the paper reveals the value of human resources – as the most important competitive advantage in strategic management of the organization. The paper presents human resource management as scientific problem analysis, defining concepts, importance and the essence of theoretical modelling and other methodological aspects.

The Research problem. The current practice in state institutions suggests ineffective human resource management system, which in turn conditions a number of negative phenomena, including failure to meet the goals and objectives. Despite the fact, that the importance of human resource management is constantly emphasized in scientific literature and in developed countries, this issue is perceived as strategic possibility to involve people in diverse problem solving, departments of human resources in institutional structure of our organizations is still perceived as secondary. Additionally, human resources and their competencies are not always in line with the position being held or functional roles.

The Object of the Paper – competencies of human resources in transport sector.

The Aim of the Paper – investigate human resources and their competencies in transport sector and foresee perspectives.

The tasks of the Paper:

- To analyze the role of human resources in the organization;
- To analyze the benefits of investment in human capital and synergies of acquired competencies;
- To carry out the research on human resource competencies in Lithuanian transport sector.

The Methodology of the Paper:

- Analysis of scientific literature;
- Collection, grouping and synthesis of statistical data;
- Quantitative research.

The paper addresses theoretical aspects of human resources, their role and benefits in company's activities. A short overview of Lithuanian transport sector and quantitative research results are provided.

2. The role of human resources in organization

The intensive examination of human resource concept and management starts at fifth and sixth decades of the 20th century. Such scientists as B. Skinner, P. Drucker, W. Ouchy were particularly distinguished. Human resources are people in the company having moral values, short-term and future expectations (Jančauskas 2006).

Human resources – are employees who have an opportunity to constantly improve their skills, adapt to ongoing technological, administrative and other changes. According to E. E. Jančauskas, currently “human resources” are also referred to as “human capital”. Thus, apart from the concept human resources, scientific literature often cites the concept “human capital”. The concept “human capital” is more often used by the economists, while ‘human resources’ is analysed from the perspective of management science. Thus, ‘human resources’ is the overall physical and mental power of people (Parkin 2009).

The general human capital in organizations is formed in educational institutions (schools, vocational schools, higher education institutions, universities) and organizations provide credits to cover the expenses, usually entitled as organizational grant. By investing into development of general human capital and awarding the grants, organizations expect to attract young specialists and acquire competitive advantage and innovations. (Bagdanavičius 2009).

Specific human capital is formed by the means of practical employee training in organizations, as well as theoretical training, which is carried out in external educational organizations.

J. Bagdavičius (2005) adds that organization's innovations and competitive advantage in the market is not only influenced by its human resources, but simultaneously impacts the development of human capital.

Thus, human resources are particularly important as it transform and manage material, financial and other capitals in organizations and create new value. It is possible to conclude, that direction towards information-based economy altered the role and value of human, financial and physical capitals. The organizations' quality increase is directly linked to human resources, human capital value. Human resources as economic institute become the main mechanism in organizations' economic growth and distribution in a competitive labor market. The concept of human capital was formed by conquering traditional views to capital. This is evidenced by approach originated from the ideas of American economist J. Fisher. According to J. Fisher, any revenue is the product of some sort of capital. Therefore, human skills, capacities, knowledge should be treated as the special form of the capital (Bagdanavičius 2009).

All of this is acquired during the period of studies and direct contact with the market. Even though human capital is an intangible production factor, however, it is considered as capital for several reasons: it is inseparable, personal asset of each individual assuring the better income in the future; societal finances are required to form the capital; it is accumulative and can be treated as particular form of storage.

3. Benefits of investment into human capital

Investment – is the most important prerequisite for human capital production, however, it is not the production operating in activity process. Human capital is to be developed in public economic sector by the means of market mechanism. Self-training expenses play determinant role in this process. However, these expenditures eventually are incorporated into societal expenditures as accumulated knowledge, skills and other features may be actualized and evaluated only in the society under active participation of the owner.

C. McConnell and S. Brue provide the following definition: „Investment into human capital can be defined as any action that increases employee qualification and skills, as well as productivity. Expenditures related to productivity increase may be treated as investment since current expenditures are to compensate the earnings in the future“ (Bagdanavičius 2009).

Development of human capital largely depends on investments. Several measures are applied to calculate the value of investments into human capital. These are divided into monetary (the share of GDP allocated to education/learning); Funds allocated to one student; Business expenditures on training) and non-monetary (participation in work-related training; time spent in training, etc., duration of work-related training) (Stroombergen et al. 2002).

Monetary measures are usually determined by private expenditures on educational materials and services, public expenditures on education, private expenditures on human capital development. (Stroombergen et al. 2002).

The most important stage in human capital investment – investment in education. Funds allocated to education, the quality of human resources, is an investment that may determine the economic state of the country.

The value created by human capital is widely analysed issue in scientific literature, especially in addressing the questions of human capital investment. The value created by human capital not only benefits an individual, but the society as well. However, societal education benefit cannot be expressed quantitatively, i.e. the increase in wages depends on general and specific qualifications, *continuous* professional development. In accordance with the form, education and economic efficiency is very similar to the rate of profit. Investment into employee education constitutes his/her human capital and after some time provides an income.

General and specific education improves quality, increases the levels of knowledge, extent and quality of human capital. Investments into higher education provides an opportunity to form highly qualified specialists whose work has major impact on the rates of economic growth.

The main benefit of investments into education is the greater future wage. An investment into education, mastery and knowledge always provides substantial benefits: the more the person is educated, the greater chances that he/she will earn more than the one who is less educated.

It is worth noting, that the benefits of investments into human capital greatly depend on the ways in which the mechanism of practical implementation is effective. Certainly, the better health condition of the members of the society is, the more likely they spend their working age productively. The higher level of education is obtained, the more the person is likely to comply with the requirements of contemporary production. Additionally, the competencies provide prerequisites for easier and faster adaptation in labor market.

Competence – capability to perform a certain activity on the basis of the entirety of acquired knowledge, abilities, skills and values (The Law... 2004). L. M. Spencer and S. M. Spencer distinguish the following competencies for successful work: Impact and Influence, Achievement Orientation, Team-work and Collaboration, Analytical Reasoning, Initiative, Employee Development and Education, Self-confidence, Inter-personal Understanding, Information Search, Leadership, etc.

Laužackas et al. (2008) claim that competence concludes the sequence of human learning objectives, thus becoming a finite process parameter. According to L. Chisholm (2005), competence entails the ability to acquire the knowledge and skills in a stable, recurrent or changing situation. Therefore, human resources and their competencies in the company's activities have a substantial impact on its competitiveness and performance.

4. Research on competencies of human resources in transport sector

The role of transport in Lithuania's economy is exclusive – the generated share of GDP comprises 12.9%, despite the fact that only 5% of the country's working age population work in transport system. This sector encompasses successfully operating major and minor enterprises that are the members of certain transport associations (Batarlienė 2014).

Transport sector in Lithuania is one of the key branches of Economics that is stable and constantly developed. In accordance with the data acquired from Lithuanian Department of Statistics (Statistics Lithuania), transport enterprises can be assigned to the category in which indicators are constantly improving. The growing numbers of sales results in the increase of demand, thus the rate of transportation and freight movement is also increased.

A large number of enterprises providing logistics services were launched due to increased competitiveness. In accordance with 2013 data acquired from Lithuanian Department of Statistics (Statistics Lithuania), road transport enterprises encompass the greater part (78%) in the sector providing transport services.

Currently, there are 6714 enterprises operating in transport sector of which more than two thirds are engaged in road transportation, the remaining ones provide the services of logistics and warehousing. There are 79 000 vehicles transporting goods in Lithuanian and foreign roads, of which more than 50 000 belong to carriers themselves. There are 81 192 employees in the sector. The number of transported cargo has increased by 10.7 percent. The major impact on this increase is to be determined by transportation from Lithuania and cargo transit. Other modes of transport – rail and marine transportation was detected to be of the lesser numbers (Žilinskas 2014).

One of the major factors in competitiveness' resources is the human resources – number of employees, qualification, wage, number of working hours, etc.

A questionnaire method was selected for the analysis of the competencies of human resources in Lithuanian transport sector as it allows collecting statistical data, reflecting factual reality and tendencies, subordination and interaction of diverse phenomena. For information to be objective and revealing the actual situation in the companies, people holding different positions were asked to answer the questions. Upon processing of the data, the respondents were categorized into executives – specialists and laborers. The questions used in the questionnaire were supplemented with the programmed answers. For the results of the questionnaire to be representative, purposive segment was detected.

One of the most important requirement for the samples – it should be representative, i.e. reflect the distribution of the phenomenon under analysis in the whole population. Therefore, employees under investigation were selected on

the basis of systematic probability sample. The extent of the samples or the number of respondents was calculated in accordance with Paniott formula (Paulauskaitė, Vanagas 1998)

$$n = \frac{1}{\Delta^2 + 1/N} \cdot \quad (1)$$

It is suitable for calculation, where probability is 0.954: here n means the required number of the respondents; Δ – error; N – number of entirety of members under analysis (extent of population).

On the basis of this formula, it was calculated that conclusions on transport sector (in which 81 192 employees work in accordance with the data from Lithuanian Department of Statistics (Statistics Lithuania) will be drawn upon questioning 398 employees.

To question this number of respondents, 5 percent of the calculation error will be acquired with 0.95 percent of probability. For example, if to be detected that 50 percent of the respondents selected the answer „n“, thus it is with a 95% of probability possible to claim, that the actual value is between 45% and 55%. Evaluation accuracy reduces when the number of respondents under analysis is reduced

$$n = \frac{1}{0.05^2 + 1/81192} = 398 \text{ respondents} \cdot \quad (2)$$

Therefore, the questionnaire comprising 398 employees guarantees fairly reliable conclusions about competencies and perspectives of human resources in transport sector. Research reliability: 95 percent.

440 Questionnaires were distributed of which 324 returned answered. The number of the respondents results in a 5.53 percent of the calculation error with a 0.95 percent of probability. 58.3% of women and 41.7% of man were questioned. In accordance with the age, the greatest comparative weight comprised the respondents from 18–25, which is equal to 58.3%. The respondents comprising the age group of 26–35, which is equal to 29.2%. The respondents comprising the age group of 36–45, which is equal to 12.5%. The results have shown that the greater proportion of employees in transport sector is composed of young woman.

Distribution of the answers in accordance with education obtained: 66.7% of the respondents indicated, that they have higher university education, 20.8% claimed to have achieved higher non-university education, while 12.5% indicated to have obtained secondary education. In accordance with the results, it is possible to claim, that the greater proportion of the respondents working in transport sector have obtained higher university education. 87% of the respondents claim to work in Lithuanian stock companies, while the rest – 13% work in foreign stock companies.

Distribution of the answers in accordance with the position held: transport or sales manager – 62.5%; head of the department – 20.8%; specialists or team leaders: 8.3%; other – 8.4%.

The wages of the majority of the respondents working (54.20%) in transport sector starts from 1000 up to 2500 LTL (1 ETU \approx 3,45 LTL). 37.50% claim to receive from 2500 to 4500, and only 8.30% to 1000 LTL. On the basis of the acquired results, it is possible to claim, that people working in transport sector receive higher than minimum wage in Lithuania. On the other hand, uneven distribution in the wages is linked to position being held and obtained education.

Motivation in the workplace becomes a relevant issue in the conditions of contemporary economics. In accordance with the answers indicated by the respondents, the most motivating factors are as follows:

Overall, it is possible to claim, that wage increase is the most motivating factor for 50% of the respondents.

No less important factor is the possibility to study and improve professional skills. Distribution in accordance with the statements:

- “My employer offers training for his/her employees in order to improve the skills”; 20.8% of the respondents gave 1 point to this arguing that they do not agree with the statement. The same number of the respondents gave 7 points to this statement.
- “My employer encourages his/her employees to improve their skills”, the greater proportion of the respondents gave 7 points out of 10.

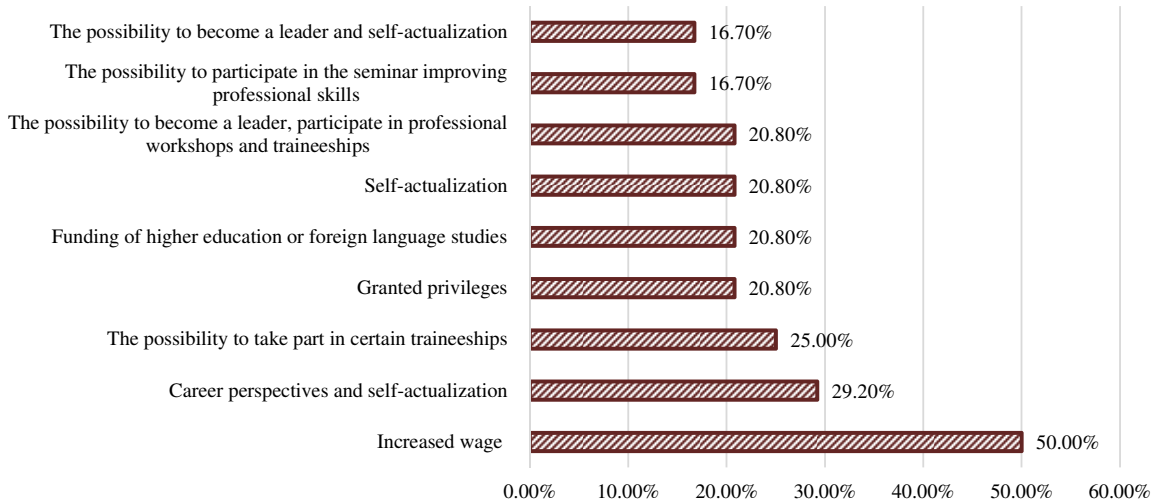


Fig. 1. The most motivating factors of human resources in transport sector workplace.

- “My employer educates his/her employees in order for them to improve their individual activity results” 20.8% of the respondents gave 5 points out of 10.
- “My employer advises employees and suggests training for the work to be done better” 16.7% gave 6 and 8 points out of 10.
- “I am satisfied with activity results evaluation system applied in our company”. The results from 41 (12.5%) respondents are diverse – 4.6 and 8 out of 10.

To summarize the points allocated by the respondents, it is possible to claim, that statement connected with employers’ suggestions for training in order to improve the professional skills for work, received the lowest evaluation. The respondents indicated, that employers do not offer any training to achieve better activity results. Apart from employers’ efforts and investments into human resources, the research confirmed, that in the times of contemporary and competitive market, the competencies of the specialists in transport sector should satisfy the following criteria:

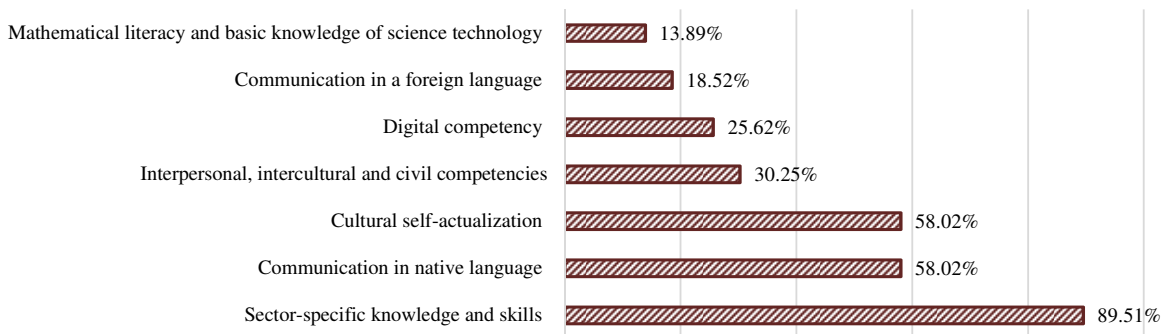


Fig. 2. Criteria that should be satisfied by transport and logistics specialists.

However, specific, field-related competencies should not be forgotten, of which the respondents (especially management personnel) indicated the following:

Taking into consideration these and aforementioned factors, it is possible to claim, that requirements for competencies of human resources in transport sector will increase qualitatively in the future. Research also revealed,

that the majority of the respondents (89.51%), that the wages should be more diversified in accordance with the level of qualification. Thus, the wages of highly qualified specialists should proportionally increase.

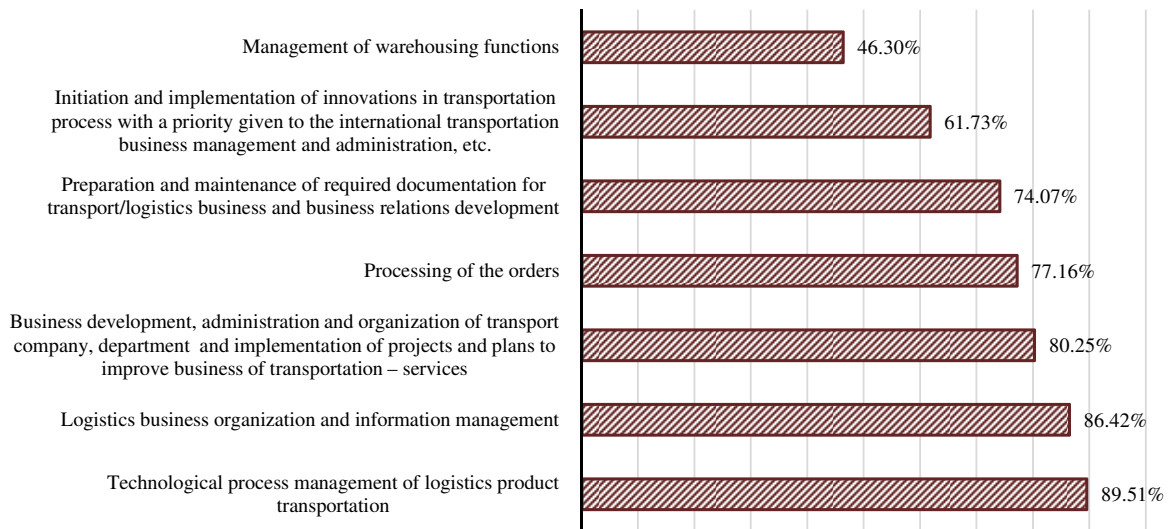


Fig. 3. Specific competencies for employees in transport and logistics sector.

5. Conclusions

Human capital is the most valuable resource of the modern country. It is even more important than natural resources or material assets, since human and satisfaction of his/her demands is the main factor of economic and social progress.

Human resources and its Management in an organization become particularly important in creating the value of an organization. Employees are understood not in terms of the working hands, but as valuable human capital with an accumulative knowledge, mastery and skills acquired during formal education and working experience.

Human resource management and acquired competencies reflect a connection between human resource management and organization's achievements. Human resource management solutions enable to formulate the competencies of organization.

Research has shown that employees in transport sector do comprehend the value of competencies and the benefits it provides for professional improvement and organization. The ability to apply the knowledge acquired during the period of studies is understood in terms of the greater salary.

Considering future perspectives, it is possible to claim, that requirements for human resources in transport sector will increase qualitatively, not quantitatively. This factor will proportionally increase the wage.

References

- Bagdanavičius, J. 2005. Socialinės sferos sociologija: teorinis metodologinis aspektas. Vilniaus pedagoginis universitetas: Vilnius: VPU leidykla .
- Bagdanavičius, J. 2009. Žmogiškasis kapitalas. Vilnius: VPU leidykla.
- Bagdonienė, D.; Stancikas, E. R. 2003. Gyventojų kokybės struktūra, vertinimas ir jo poveikis aktyvinimui, *Organizacijų vadyba: sisteminiai tyrimai* 26: 27–41. Kaunas: Vytauto Didžiojo universitetas.
- Batarlienė, N. 2014. Transporto sektorius – tarp prioritetinių mokslo sričių. [Cited 25 July 2015]. Available from internet: <<http://mokslolietuva.lt/2014/01/transporto-sektorius-tarp-prioritetiniu-mokslo-sriciu/>>.
- Becker, G. 2008. Investments in Human Capital: Effects on Earnings. New York: Human Capital.
- Bontis, N. 2006. Intellectual Capital: an Exploratory Study That Develops Measures and Models. *Management Decision*. 180 p.

- Bowen, H.R. 2007. Investment in learning. San Francisco: Jossey-Bass.
- Bowles, S.; Gintis, H.; Osborne, M. 2001. The determinants of earnings: A behavioural approach, *Journal of Economic Literature* 39(4): 1137–1176.
- Daugėlienė, R. 2002. Neapibrėžtos žinios kaip žmogiškojo kapitalo komponentas. *Ekonomika ir vadyba* – 2002: tarptautinės mokslinės konferencijos pranešimų medžiaga. Kaunas: Technologija.
- Dessler, G. 2001. Personal valdymo pagrindai. Kaunas: Poligrafija ir informatika. 156 p.
- Edvinsson, L.; Sullivan, P. 2006. Developing a model for managing intellectual capital, *European management journal*.
- Ekelund, R. B.; Tollison, R. D. 2007. Economics. New York. 30.
- Erickson, G. S.; Rothberg, H. N. 2004. Intellectual Capital and Competitiveness: Guidelines for Policy, *Competitiveness Review* 10(2): 192.
- Fleischhauer, K. J. 2007. *A Review of Human Capital Theory: Microeconomics*. Discussion. Paper. University of St. Gallen: Department of Economics.
- Fuente, I.; Ciccone, A. 2002. *Human Capital in a Global and Knowledge-Based Economy*. Final Report. European Commission. Directorate-General for Employment and Social Affairs. [Cited 28 February 2015]. Available from internet: <http://ec.europa.eu/employment_social/publications/2003/ke4602775_en.html>
- Ginevičius, R.; Paliulis, N. K. 2006. *XXI amžiaus iššūkiai: organizacijų ir visuomenės pokyčiai*. Monography. Vilnius: Technika.
- Gižienė, V.; Šimanavičienė, Ž. 2009. Žmogiškųjų išteklių ekonominis vertinimas, *Ekonomika ir vadyba* 14: 237–245. Kaunas: KTU.
- Hyun, H.; Son, N. 2010. *Human Capital Development: Asian Development Bank*. Philippines.
- Jančauskas, E. E. 2006. Žmogiškųjų išteklių vadyba. Vilnius: VVAM.
- Loyd, B. 2010. *Intellectual Capital Accounts* [cited 14 July 2015]. Available from internet: <<http://www.efs.dk/publikationer/rapporter/engvidenregn/kap05001.html>>.
- Mačerinskienė, I. 1998. *Švietimo paslauga vartojimo ir investavimo į žmogiškąjį kapitalą aspektu. Edukologijos idėjos Lietuvos švietimo sistemos modernizavimui*. Monografija. Kaunas.
- Mačerinskienė, I.; Viržintaitė, R. 2003. Human Capital Measurement Theory and Methods, *Organizacijų vadyba: sisteminiai tyrimai* 28: 71.
- Mikulėnienė, R.; Jucevičius, R. 2000. Organizacijos intelektinis kapitalas: sandaros ir pagrindinių sąvokų interpretacijos, *Socialiniai mokslai* 3(24): 69.
- Nasrin, F. 2009. *Investment in Graduate and Professional Degree Education: Evidence of State Workforce Productivity Growth*. Xavier University of Louisiana.
- Nordhaug, O. 2012. *Human Capital in Organizations: Competence*. Training and Learning. Oslo. 18 p.
- Nordstrom, K. A.; Ridderstale, J. 2002. Funky business: talent makes capital dance. London: Prentice Hall, Financial Times, 9 p.
- Okpala, P.; Okwy, Y. 2010. *Human Capital Accounting and its Relevance to Stock*. Department of Accounting, University of Lagos, Nigeria.
- Parkin, M. (2009) Economics. New York. 16 p.
- Paulauskaitė, N.; Vanagas, P. 1998. Organizacijos kultūros tyrimas įgyvendinant visuotinės kokybės vadybą. Kaunas: Technologija.
- Paulavičienė, E. 2002. Strateginis žmogiškojo kapitalo formavimas. *Ekonomika ir vadyba*. Kaunas: Technologija.
- Sakalas, A. 2008. Human Resources Management as Science and Studies at KTU Economics and Management Faculty, *Engineering Economics* (4): 47–52.
- Sakalas, A.; Šilingienė, V. 2003. Personal valdymas. Kaunas: Technologija.
- Schneider, W. J.; Jones, G. 2006. *Intelligence, Human Capital, and Economic Growth: A Bayesian Averaging of Classical Estimates (BACE)*. Approach. Illinois State University
- Seniūnaitė, L. 2002. *Žmogiškojo kapitalo įtaka šalies vystymuisi. Žmogiškojo kapitalo formavimo problemos*. *Ekonomika ir vadyba*. Kaunas: Technologija, 48 p.
- Shultz, T.W. 1998. Investavimas į žmones. Gyventojų kokybės ekonomika. Vilnius: Eugrimas. 56 p.
- Šileika, A.; Tamašauskienė, Z. 2003. Investicijos į žmogiškąjį kapitalą ir jų efektyvumas. *Ekonomika*, 64. Vilnius: VPU, 48 p.
- Spencer, L. M.; Spencer, S. M. 2003. *Competence at Work*. Hoboken, NJ: John Wiley&Sons, Inc.
- Stancikas, E. R. 2000. Investavimo į žmoginį kapitalą efektyvumas. *Ekonomika*. 51. 108 p. Statistics Lithuania
- Stewart, T. A. 2001. *Intellectual capital: Ten Years Later, How far we've come*. Fortuke, 182 p.
- Stroombergen, A.; Rose, D.; Nana G. 2002. *Review of the Statistical Measurement of Human Capital*. Statistics New Zealand, 69 p.
- Stoner, J. 2005. *Vadyba*. Kaunas: Poligrafija ir informatika, pp. 32–46.
- Tamašauskienė, Z. 2002. Investicijų į žmoniškąjį kapitalą optimalios apimties nustatymo modeliai, *Ekonomika ir vadyba*: 23–35. Kaunas: Technologija.
- The Law of the Republic of Lithuania on Education, 2004. [Cited 20 February 2015]. Available from internet: http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=238646&p_query=6.%20Kompetencija%20%96%20mok%EBjimas%20atlikti%20am%20tikr%20veikl%20%2C%20remiantis%20%20E1gyt%20FEini%20%20E1g%20FBd%20FEi%20%20geb%EBjim%20%20vertybini%20nuostat%20%20visuma.&p_tr2=2
- Woodhall, M. 2007. *Human Capital Concepts*//International Encyclopedia of Economics of Education. (2nd edition). Cambridge, 472 p.
- Žilinskas, S. 2014. *Transporto sektoriuje augimas tęsiasi, tačiau kliūčių daugėja* [cited 21 February 2015]. Available from internet: <<http://www.balsas.lt/naujiena/778774/transporto-sektoriuje-augimas-tesiasi-taciau-kliuciu-daugeja>>.
- Критский, М. М. 2006. *Человеческий капитал*. Л.: изд-во Ленинградского университета. 189 p.
- Полицук, Е. А. 2005. Человеческий капитал в экономике современной России: проблемы формирования и реализации. Ижевский гос. техн. университет, 183 p.