THE ROLE OF VOCATIONAL EDUCATION AND TRAINING IN THE YOUTH EMPLOYABILITY

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Abstract

The current slow economic development and high unemployment in the EU have increased the need for policies that have a real impact in the short term. The pressure of high unemployment, especially high youth unemployment is growing.

Investment in skills is a challenge and the policy agenda in Europe has put more labour market relevant vocational education and training (VET) in the scope of strategies for economic competitiveness. VET is designed to enable participants to develop practical skills and understanding needed to find employment in a particular occupation. It is at the core of Europe's response to the economic crisis and is an essential part of the Europe 2020 strategy. In Europe, about half of all jobs require a medium level qualification, primarily acquired through VET.

There is no single European VET system. It is very diverse with the variations in systems, providers, regions and sectors. Croatia is involved in VET modernization through new regulations in order to speed up the process of change.

This article provides a discussion of the role of VET in the youth employability in the EU and Croatia. It poses two main goals: first, systematically analyzing and presenting the issue of youth employability and the second, analyzing the system of Croatian VET in the European environment.

JEL Classification: I21, I25, I28

Keywords: vocational education and training, labour market, unemployment, youth employability

Introduction

Vocational education and training (VET) has in recent years experienced a revival in academic research as well as in the economic and political area. For instance, the World Bank advocates vocational education to reduce poverty, promote economic growth and increase competitiveness (Biavaschi et al.; 2010). Also, it is of particular interest because there are reasons to believe that it is superior to general education from the social point of view, as well as in promoting access to the labour market (Nilsson; 2010). Therefore, the global economic system requires urgent and innovative responses in the field of technical and vocational education and training services so the demand for skills is now higher than ever before (Maclean and Lai; 2011).

According to the Organization for Economic Co-operation and Development (OECD; 2009) there are three factors that stand out as reasons for the growing interest of policy makers in VET today. Many OECD countries are concerned with ever-increasing global competition. Since OECD countries cannot compete with less developed countries on labour costs, they will need to compete in terms of the quality of goods and services they provide. That means a highly skilled labour force, with a range of mid-level trade technical and professional skills. VET is seen as the right vehicle for up skilling those who would otherwise be unskilled and ensuring a transition into the labour market. VET can play a central role in preparing young people for work, developing the skills of adults and responding to the labour-market needs of the economy. Despite this role, it has been neglected and marginalised in policy discussions, often overshadowed by the increasing emphasis on general academic education and the role of schools in preparing students for university education.

Many of the unskilled jobs existing a generation ago are disappearing fast because they have been replaced by technology. Provision in vocational programmes reflects fast-changing employer needs. It means building a foundation of basic and transferable skills into vocational qualifications, to reflect a world of career flow and development rather than one job for life. Also, it means an effective partnership between government, employers and unions to ensure that the learning is connected at all levels with the world of work. Strong vocational programmes increase competitiveness but many programmes fail to meet labour market needs. Countries need to compete on the quality of goods and services require a well-skilled labour force, with a range of mid-level trade, technical and professional skills alongside

those high-level skills associated with university education. More often than not, the skills are delivered through vocational programmes.

The concept of VET is a multidimensional concept and it is constantly changing. Because its relation to the other parts of education system and working life differs among countries and changes over time, it is not possible to give one definition. One of them is given by the European Centre for the Development of Vocational Training as *all structured activities that aim to provide people with knowledge, skills and competencies necessary to perform a job or set of jobs, whether or not they lead to formal qualification* (CEDEFOP; 2009, 8).

In a European context, VET is seen as a major tool in the transformation of the European economy. Needing to modernise education and training systems, the European Union launched the Copenhagen process (European Commission; 2002) to strengthen cooperation in vocational education and training. To build on progress, at Bruges (Council of the European Union; European Commission; 2010), the Member States and social partners established a new framework for European VET policy for 2010-20, which included qualitative priorities to support the Europe 2020 strategy for smart, sustainable and inclusive growth (European Commission; 2010a).

In a Croatian context, recent authors (Bejaković; 2004, Lamza-Maronić & Glavaš; 2008, Matković; 2011) investigate problems to match education system to labour market. Therefore, this research represents a contribution to the development of this phenomenon analysing the role of VET in the youth employability into three parts. The first part deals with the youth's labour market situation. This section explains how youth unemployment rates in European Union are affected by the transition of young adults from education to the labour market. The second part presents the European countries vocational education systems and their main differences. The cross-country analysis presents that beyond the core of general education, VET is a valued alternative, with the dual system seeming to be more effective than school-based VET. In the third part of this paper there is an analysis of the research results. In many countries, strengthening the vocational part of the educational or schooling system and bringing existing vocational education and training systems closer to the current needs of the labour market would help young people have a smoother transition into work.

1. Youth unemployment: general economic problem

The youth unemployment statistics on the global level is concerned. Unemployment rates among youths (aged 18 to 24) have soared since the Great Recession of 2008, doubling that of the adult population in many developed and developing countries. The global youth unemployment rate, estimated at 12.6% in 2013, is close to its crisis peak. This means that 73 million young people were unemployed in 2013. Youth unemployment increased by as much as 24.9% in the Developed Economies and European Union between 2008 and 2012. On current projections, the youth unemployment rate in the region will not drop below 17% before 2016 (ILO; 2013).

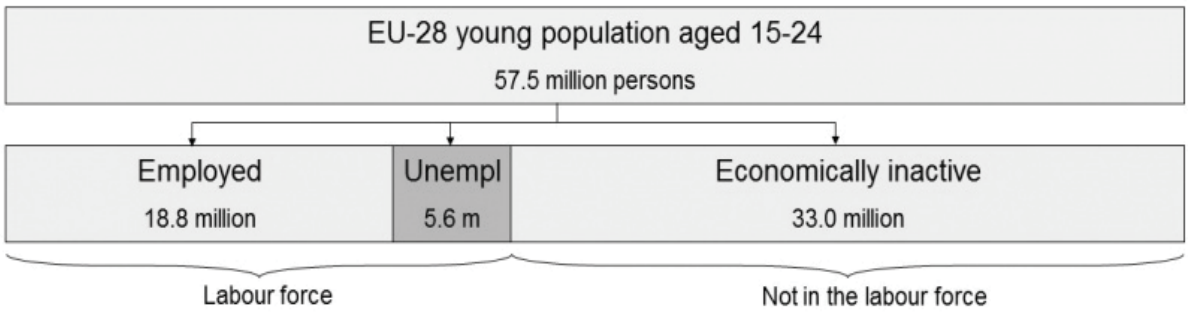
While many young people have responded to the sluggish labour market prospects by continuing tertiary education and investing in their human capital, others have altogether withdrawn from education, training and employment. Within its abilities, the European Commission tries to fight youth unemployment by targeted stimulus and to support reforms in the member states. First, the program "*Youth on the Move*," existing since 2010 as a part of the Commission's strategy for a "Europe 2020", needs to be mentioned. This program aims at improving the general education, vocational training, higher education, the mobility of young apprentices and job seekers as well as to support start-ups and the labour market entrance of young people in EU countries with youth unemployment rates above average (European Commission; 2010b). At the same time, the program "Youth on the Move" intends to implement a European "*Youth Guarantee*" that enables every EU inhabitant aged 15 to 24 to claim the right for employment, vocational training, or participation in a training programme.

Youth unemployment includes all the youth between the ages of 15 and 24 who are unemployed. The main indicator of youth unemployment is the youth unemployment rate for the age group 15-24. This uses the same standard definition as the unemployment rate for the population of working age. For a given age group, it is the number of those unemployed divided by the total number of people in the labour market (employed plus unemployed).

As figure 1 shows in the EU-28 in 2012, there were on average 5.6 million unemployed people aged 15-24 and 24.4 million persons of that age group in the labour market, according to the EU labour force survey. This gives a youth unemployment rate of 23.0 %.

The dimension of the problem can be illustrated by statistics.[1] The unemployment rate among young persons in 2012 was higher than the rate for those aged between 25 and 74 in all Member States. In Greece (55.4 %), Spain (53.2 %), Portugal (37.7 %), Italy (35.3 %), Slovakia (34.0 %) and Ireland (30.4 %) youth unemployment rates were particularly high. Germany (8.1 %), Austria (8.7 %) and the Netherlands (9.5 %) were the only Member States with a youth unemployment rate below 10 %.

Figure 1 Population employed/unemployed/inactive, 2012.

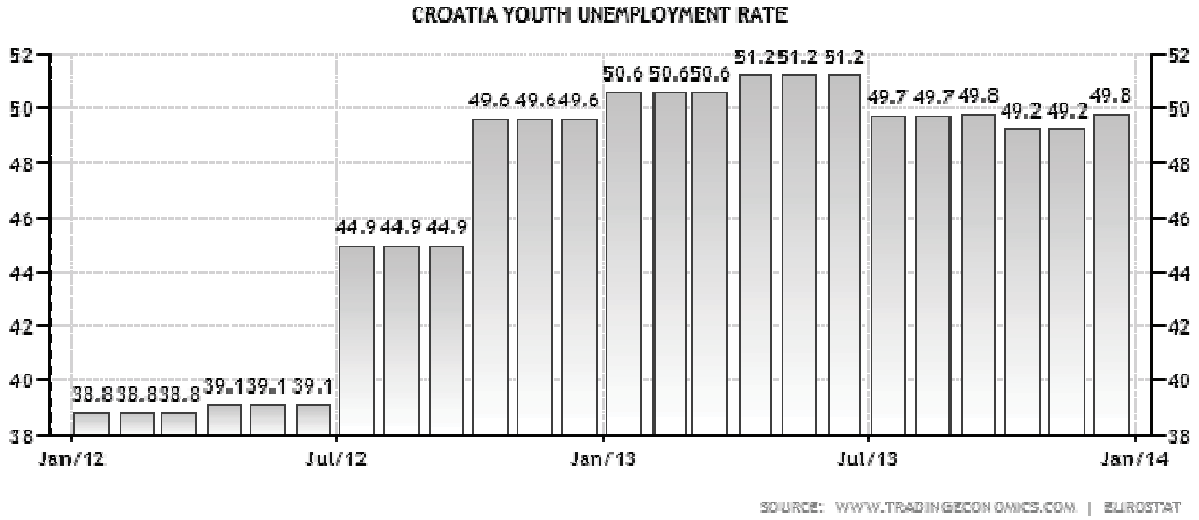


Source: Eurostat, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Youth_unemployment [12/01/2014]

Croatia's youth unemployment rate average in 2013 reaches up to 51.2 % placing it at the very top of the infamous chart of EU youth unemployment record holders. According to Eurostat (Figure 2) youth unemployment rate in Croatia increased to 49.80 % in December of 2013. It averaged 33.95% from 2000 until 2013, reaching an all time high of 51.20 % in April of 2013 and a record low of 21.50% in July of 2008.

[1] Following data was generated through the database of the Eurostat Service on http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Unemployment_statistics , (15.01. 2014)

Figure 2 Croatia youth unemployment rate



Source: Eurostat, http://www.tradingeconomics.com/croatia/youth-unemployment-rate [10/01/2014]

From a school-to-work-transition perspective, the target destination is satisfactory integration into the labour market (Ryan; 2001).

In addition to, in the next chapter we shall analyse connection between youth unemployment with a school to work transition perspective which serves as a framework for analysing an individual's path from education to stable employment on an institutional basis.

2. Development of VET across the Europe

VET around the world can be classified into three different systems: (i) a school-based education, (ii) a dual apprenticeship system combining school training with a firm-based approach, and (iii) informal-based. The supply of VET by the government through the educational system can be justified as a means to improve the opportunities of youths who lack the skills demanded in the labour market, or the ability or motivation to continue with higher education. Individuals might prefer this option to academic education as it implies shorter investment of human capital and facilitates earlier entry into the labour market.

Evidence available from cross-country comparisons in Europe (Woessmann; 2008, CEDEFOP; 2013) points to several systematic elements of VET success:

(i) To ensure relevance of curricula, all stakeholders (government, employers, social partners, educational institutions) are involved in its development.

(ii) To maintain a close contact to the labour market, a system of continuous feedback from employers and private-sector institutions is required.

(iii) To maintain a high level of training quality, a decentralized system of accreditation and quality assurance is important.

Despite many European countries maintain a large vocational schooling system as a part of their upper-secondary education, they generally differ with respect to how the vocational system is operated (CEDEFOP; 2013). Only few countries have well-developed dual training systems which are basically apprenticeship systems. By linking training with workplaces these systems have the advantage that they are able to impart competences needed in the world of work. Therefore, we start our analyzing European VET systems with this.

2.1. Dual VET System

The term "Dual System" (Deissinger; 2007, 365) refers to an institutional framework including legal provisions and training arrangements which is determined by the partnership of two "learning sites": the firm providing the apprenticeship and the vocational part-time school.

The system is more complex than the term indicates as it unfolds a network of private, semi-private and public interests and responsibilities including the trade unions and, above all, the chambers (of industry and commerce, the crafts and the professions) which are in charge of monitoring in-company training and off holding exams.

Dual VET is common in Austria, Denmark and Germany and partly in France. This countries share some common and distinctive features in the set-up of the dual vocational education, which we outline using the example of Germany (Eichhorst et al.; 2007), with the four key institutional elements of the dual system described below:

- A high degree of formalization that only provides training in centrally accredited occupational qualifications. The training content is continuously adapted to meet the changing requirements of the labour market.
- Strong involvement of social partners in developing and maintaining curricula at the governmental and federal level, through representative advisory boards. The implementation and monitoring is undertaken by regional trade and/or occupational committees.

- The school-based part of the dual apprenticeships is provided by vocational schools, covering both general and occupation-specific education. The costs of training in the schools are financed by the government.
- Firms have to meet certain technical standards to be accredited as a training firm. Offering apprenticeships is optional for companies, with a match between firms and trainees following standard application procedures. The costs of training within the firm are covered by the training companies.

The advantage of VET in Germany was grounded in the fact that on the one hand companies could train a well-prepared work force, and on the other hand young people with low levels of qualifications from basic schooling could be integrated into professional life. Young people with learning difficulties and early school leavers could pass into the less qualifying dual training programs.

Austria and Denmark are most similar to Germany in also relying on a strong dual apprenticeship system as part of their upper secondary vocational education. However, variations in the institutional details arise across the respective countries due to institutional, political and economic differences. Differences between the Danish and German system arise in terms of a more decentralized planning of the educational content in the vocational schools in Denmark (Cort; 2008).

While the German system issues training plans in the school-based part at the state level, the local entity in Denmark is much smaller and represented by 115 vocational colleges. Furthermore, these colleges enjoy a higher level of autonomy in terms of designing curricula, as the Ministry only issues directives rather than concrete plans. In contrast, the Austrian system is entirely centralized, with school and firm curricula developed at the state level. This leads to a higher degree of standardization of the occupational degrees, potentially enhancing the mobility of workers across firms and regions (Ebner; 2009).

All countries face the problem of cyclical variations in the supply of apprenticeship places due to the voluntary participation of the firms in dual apprenticeship systems, which might leave youths entering unemployment before integrating in VET. Hence, incentive mechanisms have been implemented for firms to stimulate supply.

For instance, Austria offers financial incentives for firms to become a training company or increase their training activities (Ibw; 2009). In Denmark, an "employers' reimbursement fund" was established already in 1977, with all compa-

nies having to contribute as a function of their company size, yet independent of whether they participate in the system. When they participate, 90 percent of the wages paid to trainees during the school-based training periods are financed by this fund (Cort; 2008).

2.2. School-based vocational education

VET in Southern European countries such as Spain, Portugal, Italy and Greece as well as France only plays a marginal role, and is largely school-based. There are only 4% of those in vocational upper-secondary education in Spain combining school and work-based training, in contrast with the 74% share in Germany, where dual VET is most prominent (CEDEFOP; 2010). The relatively marginal role of VET in these countries can be explained by a limited interest of employers in more formal VET and also by strong expectations of young people and their families, thus creating strong preference in academic training. Finally, the focus on subsidizing youth employment in these countries has backfired. Over the last 30 years, Spain has reduced employers' costs of hiring young workers via subsidies. Similarly, there has been a long tradition of subsidizing temporary employment and training contracts in both Italy and France (Eichhorst et al.; 2007).

In the countries of Eastern Europe such as Poland, Czech Republic, Hungary, Estonia, Latvia, Lithuania and Romania there is an expansion of a general education and the dilution of vocational education to the technical variant which typically has mixture of theoretical and general subject matter. This meant that students from these tracks are not successfully progressing to higher education and have no very specific vocational skills to enter the labour market. This has frequently given rise to the expansion of post-secondary, non-tertiary programmes taken immediately after secondary education. Hungary is a good example (West; 2013). Its 4-year technical stream has now become largely pre-vocational and its students who do not go onto higher education specialize vocationally, often at the same institution, for further 1-2 years. Romania's "Post High Schools" are somewhat similar.

As part of the modernization programme many countries have undertaken a curriculum reform. This has not only involved up-dating vocational curricula to reflect changes in the industrial and commercial world, but introducing entirely new syllabuses (typically in IT, mechatronics and business services).

2.3. VET in Croatia

VET schools in Croatia are technical, industrial, trade and others. They are defined by the type of instructional plan and program they offer, carry out an instructional plan and program of from one to five years, at the end of which students receive a secondary professional degree, and programs of from one to two years, at the end of which students receive a basic professional degree.

There are two separate systems of training for professional occupations in Croatia. Within the dual system for the crafts there is a standardized system of vocational education training programs that connect theoretical and practical training. On the other hand, there are four-year vocational training programs with a low share of the practical training. The framework of vocational education is divided between the "short professional profile", most of which are less attractive due to poor promotion opportunities and the "long vocational profile" which mainly aim to continue their education and their content is too often focused on theory.

3. VET education: chance for the youth employment

VET is frequently perceived as a solution to improving the opportunities of the youth who lack the resources, skills or motivation to continue with higher education. It provides useful skills to prepare the youth to enter into the labour force and improve their chances of a successful professional career. Figure 3 presents the role of VET in the youth employment.

Therefore, the young people in countries with strong VET systems, with a close connection between school and work-based components, are much more likely to be employed than their general education counterparts and to benefit from a faster transition to the labour market.

Factoring in differences in national labour market institutions and policies suggests that success or failure of education programme orientation depends on a complex interaction between policies and institutions that are particular for each national context.

It is generally found within cross-country comparisons that those maintaining a substantial dual apprenticeship system, such as Germany, Austria and Denmark exhibit a much smoother transition from school to work (CEDEFOP; 2013).

Figure 3 The VET and the youth employment

	Role of vocational training vs. general education	Major features of the labour market	Major outcomes regarding youth	Main challenges
Continental Europe, mainly German speaking countries	Dominance of dual vocational training	Relative resilience of employment	Relatively smooth transition from school to work, low youth unemployment	Labour market integration of youths failing to enter vocational training
Mediterranean countries, in particular Spain	Some school-based vocational training, but general education tends to dominate, problem with early school leaving	Severe dualization with fixed-term contracts, subsidized forms of employment	High youth unemployment, mainly unstable jobs for young people	Bringing academic education closer to the labor market, strengthening apprenticeships, prevent youth exclusion
Anglo-Saxon countries	Clear division between school based education and learning on the job	In general, relatively flexible and volatile labour markets	Strong youth unemployment increase during the economic crisis	Ensure better general schooling completion, establish links between schools and world of work
Transition countries (Croatia included)	Dual vocational training declined, now mostly school-based, expansion of tertiary education	Ageing issue, moderate economic growth, low employment protection, poor enforcement of labour laws	Youth often in volatile positions	Expand existing vocational training to include employers

Source: adapted according to Biavaschi et al. (2012; 22)

For the case of Germany, study by Deissinger (2007) shows that participation in the dual apprenticeship has a particular advantage compared with other options of the vocational schooling system of improving an early labour market attachment and a faster and more structured integration into the labour market.

Dual VET aims to combine general, transferable skills acquired during class based VET with structured learning on the job and actual work experience within a training company. In a world of technological change, a dual VET system is expected to be less prone to problems of an educational mismatch early in the career, with firms expected to timely adapt their training curricula to changes in the skills demanded.

While the adaptation of school-based education crucially depends on continuous and accurate labour market feedback, firm-based training is expected to lead to a natural levelling of labour supply and demand. In addition, with the immediate putting-into-action of acquired skills and the exposure to an adult working life, the dual system might provide a more beneficial learning and working environment for practically oriented youths, increasing their motivation and engagement in training. Finally, by establishing an early contact to firms and work experience, the youth enter faster into the labour market and learn about the types of jobs and occupations that they may prefer.

The youth in Southern European countries such as Spain, Portugal, Italy, Greece as well as Croatia face particular difficulties when trying to enter the labour market, with these long-standing problems aggravated by the recent economic crisis.

Despite having above-average the youth not in employment, education or training (NEET) rates, labour market entry is difficult for both low and high skilled young people. One major factor is the deep segmentation of the labour market between permanent and fixed-term contracts, which can be attributed to strict dismissal protection and largely liberalized temporary employment. In these countries, transition to a permanent position is difficult.

While dual training exhibits advantages from a societal and individual perspective, establishing an efficient dual apprenticeship system depends crucially on the willingness of firms to participate. The loss of enterprises linked to schools, particularly to the lower vocational (typically 3 year) stream, has meant that obtaining practical work for students has become a challenge. A response was to increase theoretical and general elements in the curriculum. Both responses were expensive and risked irrelevance to the new labour market. So drives to promote real work experience have been a feature in many countries. This is often referred to as apprenticeship, but is probably more correctly described as alternance, since in most cases there is not a contract of apprenticeship between an employer and an individual student. Poland seems to be the only country with a sizeable and distinct apprenticeship sector, accounting for something like 15% of VET students (OECD; 2009).

Smaller apprenticeship arrangements are present in Latvia, Slovenia and Croatia, organized through craft chambers, and half of the Hungarian basic vocational school students have individual contracts with employers for their work experience. A number of countries (Estonia, Lithuania and Romania) have recently introduced

regulations to recognize apprenticeship as an educational form, but so far take-up seems very limited. Despite these attempts to secure employer involvement in one way or another, a lot of practical work in the region is still undertaken in, often poorly equipped, school workshops.

In addition, the results of CEDEFOP (2013b) research indicate that VET is able to speed up the transition from education to work. Relative to medium-level general education graduates, VET graduates enjoy a faster transition to work, are more likely to have a permanent first job, and are less likely to find a first job with a qualification mismatch. In interpreting these results, it should be remembered that general education programmes tend to orient their graduates towards further education. They are more likely to continue studying, with lower participation in the labour market, particularly in the younger age groups. In contrast, VET graduates are more likely to participate in the labour market. The report also shows that, in terms of labour market outcomes, there are substantial cross-country differences in the returns to VET.

Conclusion

The research reviewed in this paper highlights that VET systems can enhance employability and increase the chance of entering into a stable job if employers are involved systematically.

While dual vocational training facilitates a relatively smooth transition from school to work, international experiences show that attempts at implementing such schemes often fail. Dual vocational training – and vocational training in general – only works sustainably if there is significant institutional support and acceptance by major actors. Dual vocational training can only be effective if employers engage with this type of structure and systematic training and if training curricula are up to date. This requires the participation of employers in the design of training schemes as only they know their current and expected needs. Furthermore, vocational training only works if it is generally accepted as an attractive option for starting a career in a given national labour market.

School-based vocational training clearly shares some of the potentials of the dual model as it can also contribute to the acquisition of occupation specific skills, but school-based vocational training tends to lack a clear link to current needs of employers. Problems arise in such a system if it relies on outdated training standards or on declining sectors. These systems must be adapted to changing econom-

ic structures and new types of occupations and jobs. Hence, vocational schooling needs to be kept up-to-date by bringing employers in. Otherwise it runs the risk of become obsolete and unattractive to both employers and youths. Particular problems arise in countries with a strong expansion of tertiary education where young people expect to enter the public sector. If this fails, their formal qualification is of questionable use as their skills are quite detached from private sector needs.

In particular, vocational education provided in the framework of secondary schooling should be modernized and complemented with phases of practical work experience, such as internships or passing the final year with an employer. Employers should also be consulted regarding the design of vocational schooling curricula, which requires a systematic coordination with networks or associations of employers. Furthermore, in order to avoid a negative perception of vocational education as a dead-end option, transition to further education, including tertiary education, should be facilitated. Finally, reducing vocational education fees can help to raise enrolment in some countries.

While the recent economic crisis has shown that youth integration into the labour market is problematic, some countries have been able to maintain stable employment over the last years, also in times of recession, while elsewhere unemployment rates increased steeply. This clearly shows that institutional settings and public policies play a prominent role in influencing the transition from school to work.

References

1. Bejaković, P. (2006), Uloga obrazovnog sustava u postizanju zapošljivosti i konkurentnosti radne snage u Hrvatskoj, Društvena istraživanja, 15 (3): 401-425.
2. Bell, D.N.F & Blanchflower, D.G. (2011), Young people and the great recession, IZA Discussion Paper No. 5674, Bonn, available at: http://ftp.iza.org/dp5674.pdf , [approach: 16/12/2013]
3. Biavaschi, C. et. al. (2012), Youth Unemployment and Vocational Training, World Bank, Washington, DC. World Bank, available at: https://openknowledge.worldbank.org/handle/10986/12150 [approach: 16/12/2013]
4. CEDEFOP (2010), Employer-provided vocational training in Europe, available at: http://www.cedefop.europa.eu/EN/Files/5502_en.pdf, [approach: 18/12/2013]
5. CEDEFOP (2013a), On the way to 2020: data for vocational education and training policies: Indicator overviews, available at: http://www.cedefop.europa.eu/EN/Files/5533_en.pdf [approach: 12/01/2014]

6. CEDEFOP (2013b), Labour market outcomes of vocational education in Europe Evidence from the European Union labour force survey, available at: http://www.cedefop.europa.eu/EN/Files/5532_en.pdf , [approach: 16/01/2014]
7. Cort, P. (2008), The Danish Vocational Training and Education System. Second edition, Copenhagen
8. Council of the European Union; European Commission (2010), The Bruges communiqué, available at: http://libserver.cedefop.europa.eu/vetelib/2010/75928.pdf [approach: 21/10/2013]
9. Deissinger, T. (2007), Making schools practical: Practice firms and their function in the full-time vocational school system in Germany, Education and training, 49 (5): 364-379
10. Ebner, Ch. (2009), Neue Wege für die duale Berufsausbildung- Ein Blick auf Österreich, die Schweiz und Dänemark." WZB Brief Arbeit Nr. 4, available at: http://bibliothek.wzb.eu/wzbrief-arbeit/WZBriefArbeit042009_ebner.pdf , [approach: 20/03/2013]
11. Eichhorst W. et al. (2012), A Roadmap to Vocational Education and Training Systems Around the World, IZA, Discussion Paper No. 7110, available at: http://ftp.iza.org/dp7110.pdf , [approach: 21/11/2013]
12. European Commission (2002), The Copenhagen Declaration, available at: http://ec.europa.eu/education/policy/vocational-policy/doc/copenhagen-declaration_en.pdf , [approach: 19/03/2013]
13. European Commission (2010a), Europe 2020: a strategy for smart, sustainable and inclusive growth: communication from the Commission, available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF [approach: 19/03/2013]
14. European Commission (2010b), Youth on the Move – An initiative to unleash the potential of young people to achieve smart, sustainable and inclusive growth in the European Union
15. Hippach-Schneider U. et al. (2007), Vocational education and training in Germany: Short description, Cedefop Panorama series; 138, Luxembourg: Office for Official Publications of the European Communities, available at: http://www.cedefop.europa.eu/EN/Files/5173_en.pdf , [approach: 19/03/2013]
16. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Youth_unemployment_rate, [approach: 12/01/2014]
17. Ibw:Institut zur Bildungsforschung der Wirtschaft (2009), Die Lehre. Duale Berufsausbildung in Österreich. Bundesministerium für Wirtschaft, Familie und Jugend, Wien

18. ILO (2013), Global Employment Trends for Youth 2013, A generation at risk, International Labour Office, Geneva, available at: http://www.ilo.org/global/research/global-reports/global-employment-trends/youth/2013/lang--en/index.htm , [approach: 12/01/2014]
19. Lamza-Maronić, M. & Glavaš, J. (2008), Labour Mobility – The Risk of Future Knowledge Society. In: The Programm Committee ICES2008, ur. Transitional Challenges of EU Integration and Globalization. Sarajevo: School of Economics and Business, University of Sarajevo, pp. 1-9.
20. Maclean, R. & Lai, A. (2011), Future of Technical and Vocational Education and Training: Global challenges and possibilities, International Journal of Training Research, 9(1–2), pp. 2–15
21. Matković, T. (2011), Obrasci tranzicije iz obrazovnog sustava u svijet rada u Hrvatskoj. Doktorski rad. Zagreb: Sveučilište u Zagrebu, Pravni fakultet, Studijski centar socijalnog rada.
22. Nilsson, A. (2010), Vocational education and training – an engine for economic growth and a vehicle for social inclusion?, International Journal of Training and Development, 14 (4), pp. 251–272.
23. OECD, (2009), Learning for Jobs, Reviews of Vocational Education and Training Initial Report, available at: http://www.oecd.org/dataoecd/36/24/43926141.pdf , [approach: 12/01/2014]
24. Quintini Glenda & Sebastien Martin (2006), Starting well or losing their way? The position of youth in the labour market in OECD countries, OECD Social, Employment and Migration Working Papers 39, Paris
25. Ryan, P. (2001), The School-to-Work Transition: A Cross-national Perspective, Journal of Economic Literature, 39, pp. 34–92.
26. West, J. (2013), Vocational Education and Training in Eastern Europe: Transition and Influence, published by the Centre for Learning and Life Chances in Knowledge Economies and Societies, available at: http://www.llakes.org, [approach: 12/01/2014]
27. Woessmann, L. (2008), Efficiency and Equity of European education and training policies, International Tax and Public Finance, 15 (2), pp. 199 -230.