ABSTRACT
Nowadays digital technologies induce significant changes in the traditional employment practices and offer creative alternative for employment of youth population. The information and communication technologies (ICTs) have contributed for relativisation of the spatial dimension of employment and provide easier access of youth to labor market. This paper is focused on perceiving the opportunities for enhancing youth employment in South-Eastern Europe\(^1\) (SEE) through exploiting the potential of digital technologies. More specifically, the main objective of this article is to examine the ICT-enabled opportunities for dealing with the problem of youth unemployment in South-Eastern Europe whereas the emphasis is primarily put on the possibilities for online employment.

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INTRODUCTION
A general rule of thumb is that young population that enters the labour force face higher risk of becoming unemployed. The empirical evidence shows that even in most developed countries the youth unemployment rates are approximately twice the adult rates. The situation in less developed regions such as South-Eastern Europe with respect to youth unemployment is even worse. Namely, South-East European countries have recorded extremely high rates of youth unemployment that in 2014 range between 32.5% in Albania to 62.9% in Bosnia and Herzegovina. All countries in the region, with the exception of Albania and Montenegro, have youth unemployment rates higher than 45% (World Bank, 2015 a). The situation related to the youth unemployment is the reflection of the overall unemployment trends in the region. Namely, the total unemployment rates in the region is very high ranging from 17.5% in Albania to 35.3% in Kosovo (World Bank, 2015 a). The average unemployment rate in the region is the highest in Europe and twice the EU average.

The main reason for higher unemployment among young workers is a lack of skills and work experience which make them less competitive on the labour market compared to prime-age and more mature workers. Moreover, the formal education and training systems often have been ineffective at easing the transition from school to work or slow to adapt to the changing requirements arising from the rapidly changing industrial structure. The persistence of high youth unemployment rates exerts long-term scarring effects on the adult workforce of the next generations. Due to the low employment prospects, young workers are more likely resort to various alternative labour market adjustment mechanisms such as informal work and emigration. Namely, given high unemployment in South-Eastern Europe, many youth have left their countries to look for jobs abroad, which has been considered as a source of brain drain and lost investment in education in the home country.

Now-a-days, the ICT development facilitates the youth access to the global labour market and opens a significant employment opportunities. Hence, the main objective of this study is to examine the ICT-enabled opportunities for dealing with the problem of youth unemployment in South-East Europe whereas the emphasis is primarily put on the possibilities for online employment. Following this introduction, the first section of the paper is focused on literature review related to the ICT-enabled opportunities for employment. The next section examines the role of digital technologies for enhancing youth employment in South-Eastern Europe. Identification and estimation of the ICT-related factors that affect youth employment in SEE will be performed by using a SWOT analysis. The final section of the paper discusses the prospects, potentials and further activities for exploiting the ICT-related employment opportunities. The research has been conducted by using qualitative methodological approach based on utilization of the secondary data. In this context, it is mainly based on studies, analyzes and reports related to the researched issue, ICT statistics from relevant international and national institutions and critical assessment of results from previously conducted empirical studies.

Taking into account the need of encompassing wider range of youth populations which corresponds to the real processes and problems in the domain of youth unemployment, in this article we focus on the age group from 15 to 29. Namely, according to the commonly accepted statistical standards the youth population is restricted to the age group from 15 to 24. However, from the employment perspective this categorization of youths is not appropriate since a large share of them are outside the labour market. Namely, many youths are studying full time and are not available for work which explains why youth unemployment rates are generally higher than overall unemployment rates (Eurostat, 2015 a). Hence, according to ILO it has been emphasized that “there is a growing momentum to increase the upper age limit to better reflect increasing educational attainment and postponement of labour market entry beyond the age of 24” (ILO, 2015). In addition, Eurostat in its statistical reviews points out that ‘young people’ is a collective term used to describe those aged 16-29 (Eurostat, 2015 b). We have to note that the existing statistics do not include all indicators for youth in this age group which limits the opportunities for providing relevant data.

Literature review
Digital technologies nowadays represent a significant generator of changes in the domain of employment. In this context, the internet has opened up a wide range of

\(^1\) The region of ‘South-Eastern Europe’ includes the following countries: Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Serbia and Macedonia.
opportunities for employment through providing easier access to the global labour market and developing new forms of employment. The recent studies in this domain indicate that online platforms provide job opportunities for those otherwise excluded through geographic borders, gender, or ability (Kende, 2015). Certain authors define this practice as ‘teleworking’ or ‘remote’ working which represents ‘geographical decentralisation’ of work, i.e., possibility for performing the work at a distance (Burns, 1998; Eurofound, 2010; de Hoyos et al., 2013).

OECD identifies four different ways of Internet’s impacts on jobs: (i) creation of new jobs. The Internet leads to the creation of new jobs that are directly tied to the technology or to the related eco-system. In addition, the internet contributes to job growth in traditional occupations by supporting the creation of new businesses (for example entrepreneurship) or the expansion of existing firms; (ii) Transformed jobs. Technology transforms the work practices in existing jobs and imposes a need for acquiring new skills of workers that will be in compliance with the new technological requirements; (iii) Jobs moving internationally. The Internet also supports the global outsourcing of tasks so as to take cost advantages of different locations and/or to obtain workers with specific skills; (iv) Lost jobs. The Internet may imply a loss of certain jobs since the technology replaces tasks previously undertaken by individuals (OECD, 2014).

Similarly, Min and Rosotto (2012) specify four ways of job creation influenced by Broadband, such as: (i) Direct job creation connected with the construction of broadband networks; (ii) Indirect job creation comprising incremental employment generated by providing goods and services to those directly involved in broadband network construction; (iii) Induced job creation including jobs induced by household spending based on the income earned from direct and indirect effects; and (iv) Transformational job creation, including new jobs created by new businesses as well as business innovations and flexible work practices in existing firms, enabled through broadband adoption. It is evident that broadband Internet technology contributes for job creation in many ways whereas the online employment is considered as one of the possibilities for job creation (Fornelfeld et al., 2008; Katz & Suter, 2009). In this context, the latest analysis of the World Bank emphasize that the online outsourcing has become a promising alternative to traditional employment (World Bank, 2015 b). Online outsourcing refers to the supply of services or performance of tasks conducted over the Internet by workers from anywhere in the world, using online marketplaces or exchanges (World Bank, 2015 b, Beschorner et al., 2015). The World Bank study identifies dual benefits from the online outsourcing. For employers, it provides broader access to specialized skills, more flexible and faster hiring processes, and 24-hour productivity. For workers, this form of outsourcing creates new opportunities for accessing and competing on global job markets, from anywhere at any time, as long as they have computer and Internet access (World Bank, 2015 b).

These developments may play a significant enabling role in helping to offset some of the traditional challenges that youth face in employment opportunities (Anderson, et al. 2013). Having in mind that millennial generation is mostly represented by young people whose daily routines are inevitably related to the use of digital technologies, their ICT skills are relatively more advanced compared to mature generations. Consequently, their integration into the digital labour market is easier, more effective and quite common. Nowadays, the use of web-platforms for crowd sourcing, microwork and cloud computing marks significant expansion and represents a useful alternative for youth in providing employment. For instance, almost 74% of registered freelancers are aged 16-35, while 26% are aged 16-26 (Elance-oDesk, 2014). In addition, the contemporary young entrepreneurs perceive the global market as a space for realisation of their entrepreneurial ideas, while digital technologies ease the global processes and creation of new jobs. Youth entrepreneurship can be a pathway to decent work and sustainable enterprise for some young people and should be a component of national efforts to address the youth employment crisis (ILO, 2012).

However, although ICTs have implied many positive effects on employment certain studies indicate negative impacts that mainly arise from process optimization and capital-labour substitution in traditional industries (Min & Rosotto, 2012). According to these insights the internet induces specific changes on the job market, such as: the end of job stability, and the rise of freelancing, self-employment and odd-jobs (Brittin, 2015). However, it should be noted that arguments about net positive effects prevail indicating that new technologies generate new types of employment. Many empirical studies confirm this conclusion. According to Fornelfeld et al. (2008) broadband-related innovation in knowledge-intensive activities has caused significant job growth. At the same time, this employment creation compensates the loss of jobs due to process optimization and structural displacements within the economy. The study estimates positive employment impact of broadband, with a net creation of new jobs in Europe.

**Online jobs as a new opportunity for youth**

Tackling the problem of youth unemployment is one of the highest priorities for the SEE countries. In this context, on the last Western Balkans Summit it has been pointed out that “Improving the perspectives of young generations is of paramount importance in ensuring stability, sustainable development and progress of the region” (WBS, 2015). According to the World Bank analysis the current young generation is the first to have been fully educated post-transition so they bring to the labour market a new mindset and skills. Failing to integrate this generation into the labour force could be a reason for countries to miss out their most productive generation to date (World Bank, 2014). Hence, the economic and development prospects of the SEE countries are directly associated with the resolution of existing problems in the youth unemployment. Youth unemployment in this region receives dramatic dimensions recording permanent growth which is significantly higher compared to other countries (Figure 1). At the end of 2012,

![Figure 1: Youth unemployment rates in SEE countries](http://www.journals.cz)
the total unemployment rate in SEE countries increased by around 5 percentage points relative to pre crisis levels whereas youth unemployment rates rose by twice as much (World Bank, 2014).

The empirical study conducted in 2014 indicates that youth unemployment rate in Bosnia and Herzegovina is even four times higher than in the EU countries (Ziga et al., 2015). The most recent analyses point to the fact that the youth unemployment is high and persistent while the labour market situation of young people is characterized by involuntary unemployment, underemployment and discouragement (Gligorov & Vidovic, 2013). The high unemployment rates in the region and the obstacles that youth face in finding employment are reasons for emigration in developed countries. According to the World Bank estimates since the early 1990s about 4.9 million people have emigrated from SEE in EU, which represents almost 25% of the total population in the region. In this context, it has been emphasised that these are predominantly economic emigrants of working age, and generally with higher educational attainment than the respective age group in the home countries (World Bank, 2015 a).

In addition, in some SEE countries, such for example Macedonia, it is noticeable an increasing trend of continuation of higher education, which causes a changing educational structure of the labour force. In the same time, the youth do not enter the labour market as active job seekers which might be considered as a reason for ‘postponed unemployment’. Namely, the increase in higher education enrolments has not contributed for any visible improvement in the employment prospects of youth. On the contrary, it is considered that higher enrolments may aggravate the local mismatch between the supply of and demand for young people with tertiary education (La Cava et al., 2006).

The existing traditional policies for treating the youth unemployment have not been sufficiently effective which implies the need for implementation of new methods and policy approaches. In this context, the development of ICT incorporates new possibilities and opens a wide room for including the young population from the region into the global labour market. The development of digital society is set as one of the key priorities in SEE 2020 strategy where acquisition of digital skills is underlined as significant factor for expanding employment opportunities (SEE, 2020). The global outsourcing industry offers considerable potential for job creation in SEE countries enabling young people to start their careers and to gain first-hand experience. Recent studies indicate that SEE countries are identified worldwide as attractive outsourcing destinations because of the effective combination of a cost-solution and high quality service. This is particularly evident in the field of the IT outsourcing whereas software development operations are performed by highly specialized personnel located in this low-cost environment (Alexandrova, 2009).

For instance, some countries in the region have marked significant participation in the online outsourcing activities such for example Serbia, where 2.6% of country’s total labour force are registered as online workers in 2013 (World Bank, 2015 b). Similarly, according to the report of Elance-oDesk (2014), Bosnia and Herzegovina and Montenegro belong to the group of fastest-growing freelancer countries. However, it must be notified that online employment is relatively new phenomenon which is still not assessed and no relevant data and information can be provided in order to analyse the participation of these countries in various forms of online-based employment. Hence, in order to assess the current situation, conditions and potentials in the SEE countries for exploiting the digital opportunities for youth employment we further apply a SWOT analysis which is mainly focused on the supply side factors as determinant for creation of online employment.

**SWOT analysis**

**Strengths**

- Skilled and educated workforce: For example, the analysis of the workforce educational structure in Macedonia shows that almost 22 percent have completed some higher education. The workers with university level of education experience the highest employment rate. In contrast, workers who have primary or incomplete primary education face the highest unemployment rate. These findings are in accord with underlying theoretical background as well as with the empirical evidence in other transition countries, where despite the initial recession workers with higher education enjoyed better economic prospects relative to those with lower levels of education.

- High level of Internet usage: The percentage of individuals using the Internet in 2014 accounts 65.3% in Serbia, 56.8% in Montenegro, 60.1% in Albania, 61.2% in Macedonia, 67.9% in Bosnia and Herzegovina and 84.4% in Kosovo (ITU, 2015).

- English language proficiency: The young people in the region have good English language proficiency which is the most incorporated foreign language within the regular study programmes from the very beginning of the education process.

- Low labour costs in the region: The average monthly wage range from 352 Euro in Macedonia to 473 Euro in Montenegro, which means that the average labour costs amount between 2-3 USD per hour. These wage levels represent competitive advantage vis-à-vis other outsourcing destinations such as India, China, Malaysia, Indonesia, Brazil etc. For example, the average wage in India is about 2.09 USD, while in China is 3.5 USD. In addition, the labour costs from the perspective of performing online jobs are favourable. In this context, a recent survey conducted by Payoneer (2015) which comprised over 23,000 freelancers worldwide showed that average earning of freelancer is 21 USD per hour. However, almost half of freelancers charge under 10 USD per hour for their work.

- Highly developed Internet infrastructure and relatively low costs for Internet access: Almost all countries in the region have a good telecommunication infrastructure and developed broadband Internet, which by its speed, quality and costs provide good communication of youth with the on-line markets. According to the ITU reports, all SEE countries except Kosovo have relatively high ICT development index2, which in 2013 ranges from 4.72 in Albania to 6.24 in Serbia. With respect to this, SEE countries belong to the upper level of ICT development. The simple comparisons show that the highest IDI value is 8.86 in Denmark, while the lowest is 0.96 in Central African Republic (ITU, 2014).

- Easy access to the on-line payment services: Namely, these types of services such as Pay Pal are accessible...

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2 The ICT Development Index (IDI) is a composite index combining 11 indicators into one benchmark. The IDI is divided into three sub-indices: the access sub-index, the use sub-index and the skills sub-index, each capturing different aspects and components of the ICT development process.
from the countries in the region except Kosovo, which enables easy and secure transfer of compensations for the performed tasks.

Weaknesses
- Existing stereotypes about employment: According to the traditional view, the employment is perceived only as providing secure job with permanent contract in the private or public companies (‘safe and sound’ full time work).
- Lack of information: Most of the youth are not familiar with the digital potentials for employment, nor there exist appropriate sources of information about the forms and modalities for participation on the digital labour market. Nowadays, the youth in the SEE countries are limited in exploiting the opportunities for employment that offer digital technologies with exception of individual sporadic initiatives.
- Slowly changing education process: There is an evident absence of embedded mechanisms within the education process which would create incentives for proactive approach regarding the employment and undertaking entrepreneurial initiatives and activities. Given that the awareness among the social partners involved in the process of designing new curricula and modernisation of the existing ones is still on the relatively low level, incentives should be created among employers to participate in designing the study programmes.
- Lack of work experience and soft skills: The youth from the region are not competitive on the labour market due to the lack of experience and soft skills.

Opportunities
- Good business climate: According to the latest ranking for doing business the SEE countries are relatively good positioned: Macedonia (12), Montenegro (46), Albania (97), Kosovo (66), Serbia (59) and Bosnia and Herzegovina (79) out of 189 countries. Hence, they could be promoted as attractive outsourcing destinations.
- Strategic approach: The development of ICT and knowledge economy represents key strategic priority of the SEE countries.
- Employment as a part time work: This opportunity is particularly attractive for students since there are limited options for formal employment.

Threats
- Brain drain: The SEE countries face high emigration outflows which mainly comprise the young population aged between 18 and 35. The emigration is particularly present among highly educated workforce, which will have negative implications on the economic growth, the demographic structure and the competitiveness of the entire region.
- Uncertainty with respect to digital jobs: There exists low willingness and awareness among young population to accept the challenge of digital jobs.

CONCLUSION
The recent studies indicate that nowadays ICTs act as a vector of social development and transformation by improving access to basic services, enhancing connectivity, and creating employment opportunities (WEF, 2015). The changes in the labour markets as a result of the ICT development assume various possibilities for youth employment. Nowadays, youth can benefit from digital technologies due to the access to a wider market, reduced barriers for entering the labour market and providing a basis for formal employment.

Taking into account that youth unemployment is one of the most pressing problems in the SEE countries, in this article we identify the potential ways how ICTs can alleviate this problem. In order to enable a greater utilisation of these opportunities for youth it is necessary to design various measures and to implement proactive policies for promotion of such types of employment. In this context, the SWOT analysis indicates that these countries have competitive advantages and possess an important potential for exploiting the opportunities for online employment.

With respect to the above considerations, as suitable activities we recommend the following: First, mapping the existing forms and options of ICT-enabled employment opportunities and dissemination of information to youth. Second, developing educational programmes for youth in order to gain and develop their digital skills. Third, informing youth about the techniques for job search and access to information for career development in the domain of digital technologies. Finally, as an appropriate measure we recommend improving the educational curricula by including elements of digital entrepreneurship and carrying out training for digital entrepreneurship.

REFERENCES