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Abstract

Purpose – Smart cities can be understood as an inclusive space for each and everyone to achieve their best options, within the framework of sustainable development, where institutions boost information and technology environments that help achieve the highest individual and social well-being with the aim of improving the lives of citizens. The youth group (between 15 and 24 years) was severely affected by the crisis. In this paper, youth employability, in relation to the new challenges of smart cities, is analyzed in the EU with the aim of assessing the influence of information and communication technologies (ICTs) skills on youth employability.

Design/methodology/approach – By means of a mean analysis and structural equation modeling, the differences between the Eurozone and the other countries in the EU is analyzed, as well as the importance of information technologies and the computer skills for increasing youth employability.

Findings – The results indicate that awareness of the importance of IT skills is greater in the Eurozone and that computer skills are highly significant to explain the employability of young people.

Practical implications – The achieved conclusions point out to the training on computers skills as a key factor for boosting youth employment.

Social implications – This work could provide some tools to help policymakers design instruments for increasing youth employment, as well as to provide training mechanisms to obtain the skilled workforce needed for the enterprises that emerged in the environment of smart cities.

Originality/value – The main original value of this work is to relate computers skills and the employment rates for youth in the framework of the European Union.

Keywords European Union, Smart cities, ICTs, Structural equation modeling (SEM), Youth employment

Paper type Research paper

1. Introduction

Sustainable development is related to social issues as well as environmental and economic ones. In addition, technological and communication issues are also closely involved in that they boost sustainability in all of these areas. "A Smart City is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership" (European Union, 2014 Directorate General for Internal Policies. Policy Department A: Economic and Scientific Policy).

Another interesting definition can be found in Angelidou (2015), Komninos (2015) and Mora, Bolici and Deakin (2017). Smart cities are a key point for urban sustainable development, which is focused on achieving more inclusive, egalitarian and just societies,

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where the wellbeing of the people is the main objective. They target "smart" development by means of improving information and communication technologies (ICTs) in their area. The spread of ICTs aims to improve the wellbeing of people living in these urban areas by creating a "smart" environment accessible to everyone, which means achieving a more inclusive society. Then, it could be stated that achieving a more inclusive society could be considered one of the most important reasons for supporting the so called "smart cities". Despite the great differences on the definition about what a smart city is, there is a common agreement on their intrinsic character linked to sustainable development and ICTs for all, according EU 2020 goals (European Union, 2010). Actually, a smart life is the one that makes people feel and live better (Ho *et al.*, 2015). The literature on smart cities is wide and multidisciplinary (Bibri and Krogstie, 2017), and some authors underlined the importance of the integration of technical and social perspectives (Levy and Ellis, 2006; Webster and Watson, 2002). Some definitions are provided in Table I.

This is the "smart era" (Lyons, 2016), where a great number of devices around are called "smart". But the real smartness is not in the devices themselves, in fact, it is in the way they are used, to achieve well-being and avoid inequalities, exclusion and poverty. "Intelligent

Table I.
Some definitions of smart city

Definition	Source
The use of smart computing technologies to make the critical infrastructure components and services of a city – which include city administration, education, healthcare, public safety, real estate, transportation and utilities – more intelligent, interconnected and efficient	Washburn *et al.* (2009). Helping CIOs understand "smart city" initiatives: Defining the Smart City, Its Drivers, and the Role of CIO. Cambridge, MS: Forrester Research, Inc.
A city well performing in a forward-looking way in economy, people, governance, mobility, environment and living, built on the smart combination of endowments and activities of self-decisive, independent and aware citizens	Griffinger *et al.* (2016). Smart cities-ranking of european medium-sized cities. Rapport technique, Vienna Centre of Regional Science
A city striving to make itself "smarter" (more efficient, sustainable, equitable and livable)	NRDC (Website: www.nrdc.org/)
A city that monitors and integrates conditions of all of its critical infrastructures, including roads, bridges, tunnels, rails, subways, airports, seaports, communications, water, power, even major buildings, can better optimize its resources, plan its preventive maintenance activities and monitor security aspects while maximizing services to its citizens	Hall (2000) The vision of a smart city. In Proceedings of th 2nd International Life Extension Technology Workshop (Paris, France, Sep 28)
An instrumented, interconnected and intelligent city	Harrison *et al.* (2010). Foundations for smarter cities. IBM Journal of Research and Development, 54(4), 1-16
A city that gives inspiration, shares culture, knowledge and life, a city that motivates its inhabitants to create and flourish in their own lives	Rios (2012). Creating "The Smart City" (Doctoral dissertation)
A city where ICTs strengthen the freedom of speech and the accessibility to public information and services	Partridge (2004). Developing a human perspective to the digital divide in the "smart city". The proceedings of the biennal company of the Australian Library and Information Association

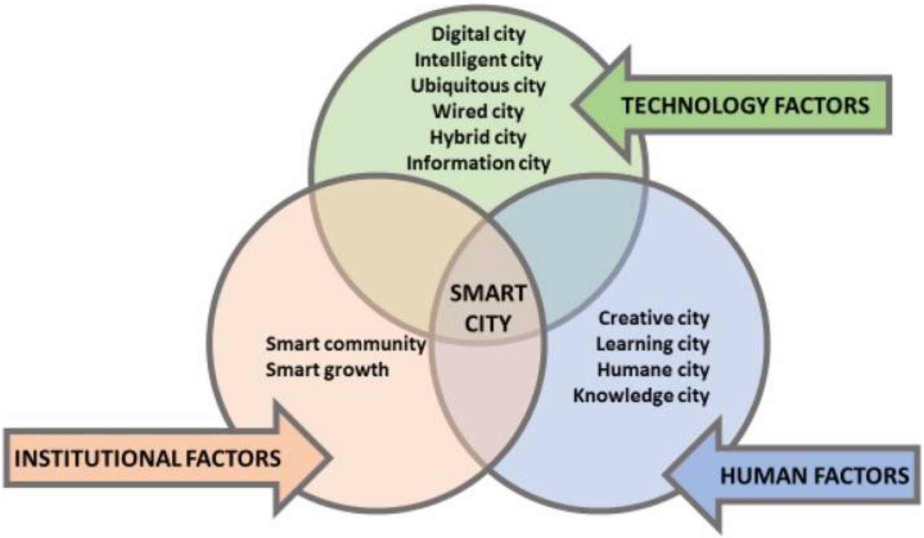
Source: Adaptation from Nam and Pardo (2011)

Communities are those which have –whether through crisis or foresight– come to understand the enormous challenges of the Broadband Economy, and have taken conscious steps to create an economy capable of prospering in it" (Intelligent Community Forum)[1].

There are some opinions about the origin of the concept of smart city. Gabrys (2014) stated that the germen of this kind of cities began to appear in urban development plans from the 1980s, but there is no a common agreement about this point. In addition, there is no clear conceptual framework for smart cities. "The label smart city is a fuzzy concept and is used in ways that are not always consistent" (Figure 1) (Hollands, 2008; Nam and Pardo, 2011).

In this paper, the smart city is understood as an inclusive space for each and every one to achieve their own options, within the framework of sustainable development, where institutions boost information and technology environments that help achieve the highest individual and social well-being. Then, everyone is able to achieve his or her best option to live.

Some nuances should be made on the concept of smart city, particularly about the concept of sustainable city. Sometimes such identification is not so clear and some additional investigation in this field should be done (Bibri and Krogstie, 2017). Taking account of the systematic perspective on and the universal character of sustainability, it is necessary to define a holistic and shared model of the smart sustainable city. In addition, it is important to explain its relation to inclusive societies for all, because it is the pillar for real sustainable development (Novo-Corti *et al.*, 2015). Then, these cities face the challenge of combining competitiveness and sustainable urban development simultaneously. Despite the great importance of technological dimension, the more important dimension of the concept of smart city is improving wellbeing for all its inhabitants. Intellectual social capital are fundamental pillars for smart cities. It allows developing human potential by means of promoting education and getting more skilled workers, and that is why these cities have



Source: Adapted from Nam and Pardo (2011)

Figure 1. Fundamental components of a smart city

better educated people in a better endowed labor market: because of these high-skilled workers (Glaeser and Berry, 2006). Then the conjunction of knowledge, education and ICTs skills become key factors for analyzing all issues related to smart cities.

In difficult times for the economy, the response of smart cities, reinforcing social cohesion becomes essential. One of the population sectors more affected by the economic crisis are the youth (Scarpetta, Sonnet and Manfredi, 2010). Their opportunities were diminished because of the global economic situation, and some of them had to emigrate, others still remain unemployed and all of them are victims of this situation, that at the moment of writing this paper (2017) seems to be changing. Tackling youth unemployment is one of the main goals for smart cities (Monzon, 2015). This goal could be achieved by means of promoting informal courses in ICTs to increase ICT skills in youth. One key feature of smart cities is the increase in new spaces and workplace positions which are an advantage for the youngest who have to previously acquire those skills for offering their workforce in these new positions (López-Arranz, 2017).

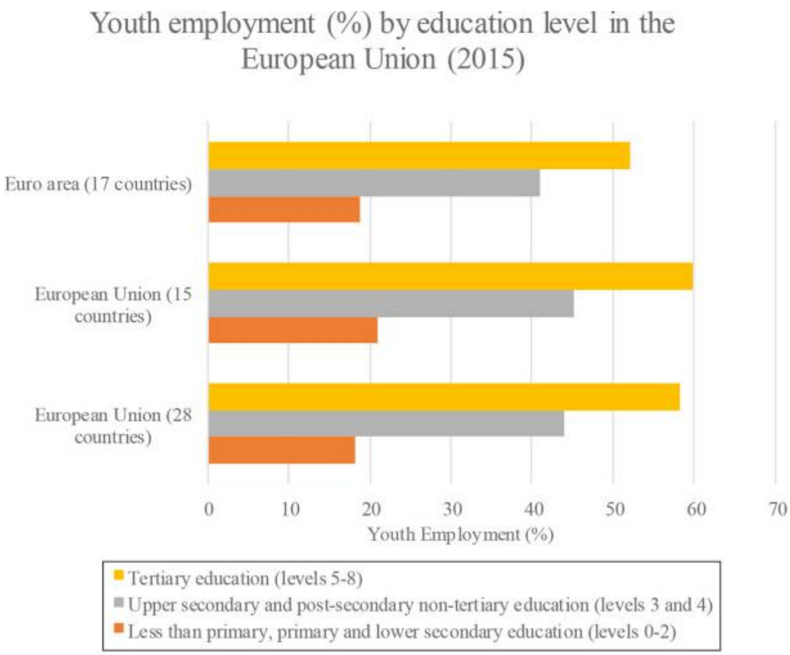
In this paper, youth employment from 15 to 24 years in European Union is analyzed related to their ICTs knowledge. In the first section, the main concepts and hypotheses are shown. In the second one, the method is explained, and the third explains results and discussion. The last section summarizes some conclusions and provides some reflections that may support policymakers in their decision-making process.

2. Labor market and information and communication technologies competences in youth aged 15-24 in the EU

The main trends of the new labor structure in rent years was analyzed by (Castells, 2011), who indicates that youth labor possibilities will be in a dual labor market context, which is characterized, on the one hand by its growing flexibility of labor as well as a smaller portion of long-term employed workers, who will have an unpredictable career path, then, the youth will face a more flexible and insecure context. But, on the other hand, there will be a simultaneous growth in highly educated occupations these workers will be the educated knowledge workers so valuable for their companies, that they will be often referred to as "talent" (Castells, 2011). Then, two types of workers will appear: the "self-programmable labor" and "generic labor", as per the label given by (Castells, 2011). Young people should, therefore, be aware of the importance of acquiring cross-cutting ICT skills, as it is a key issue for employability. In this paper, the employment of youth between 15 and 24 years in the European Union is analyzed in relation with the education level and their skills on computers and internet. Figure 2 shows the youth employment (15-24 years) by education level in the European Union. For all countries' conglomerates, the higher the education level, the higher the employment. Thus, employability is narrowly related to education (López-Arranz, 2017). In addition, these possibilities are related to the requirements of the companies (Rumberger, 1981). In a smart city, the enhancing of ICTs and their use will need an entrepreneurial context ready to face this challenge for which skilled workers are needed. In addition, a smarter city could help to avoid involuntary migration flows (Visvizi *et al.*, 2017).

Some information on youth employment and ICTs skills for conglomerates of countries in the European Union are provided, respectively, on Figures 2 and 3.

Together with traditional education at colleges and universities, there is another source of skills, which is related to informal education. Informal education is related to flexible educative processes which do not have pre-established time; are capable of adapting to particular interests (Dib, 1988) and involve any activity pursuing the understanding, knowledge or skill outside the curricula of educational institutions (Livingstone, 1999). This

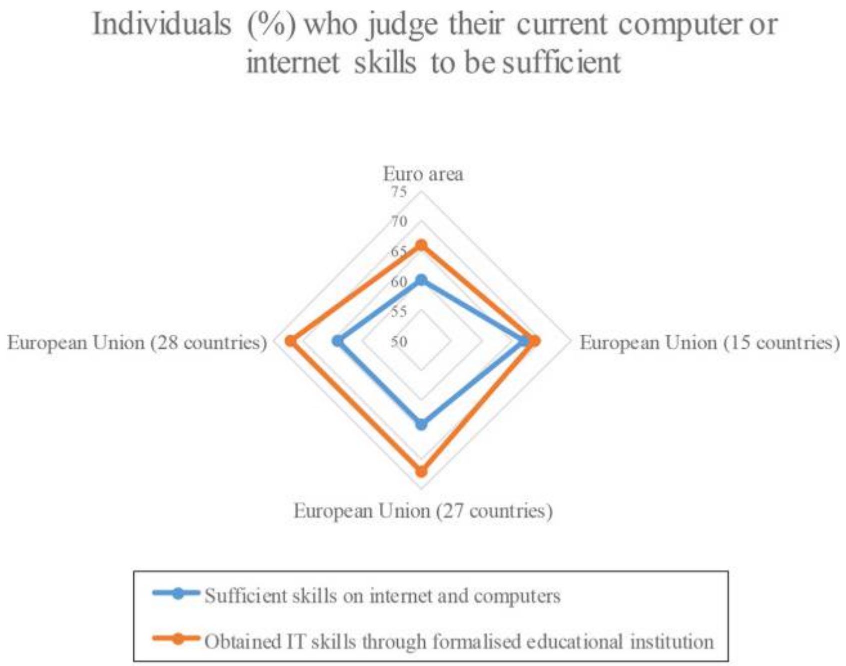


Source: Own elaboration from EUROSTAT data

Figure 2.
Youth employment (15-24 years) by education level in the European Union (2015)

source of skills is particularly interesting for these subjects belonging to the area of the IT. In the information era, these requirements are changing so fast that sometimes traditional education environments can provide this knowledge (Brynjolfsson and McAfee, 2012). On the other hand, the "learning by doing" is a key factor for acquiring skills on ICTs and computers (Schugurensky, 2000). Figure 3 shows the EUROSTAT data for youth between 15 and 24 years old according to their self-assessment of their internet and computer skills and their IT skills obtained through a formalized educational institution.

These two indicators show lower levels for the Eurozone; that can be interpreted in two different ways: the youth are aware about their lack of IT skills (then it is a sign of that youth see the necessity of improving) or that the young people in the Eurozone really are less skilled. Anyway, there are some differences between European countries that justify the comparative analysis. Youth employment rates are highest in the European Union (15 countries) for all educational levels, and lower in the Eurozone (17 countries). For the whole youth these rates are 41 per cent, 45.2 per cent and 43.9 per cent for Eurozone (17 countries), European Union (15 countries), and European Union (28 countries), respectively. The European Union (15 countries) comprises Belgium, France, Germany, Italy, Luxembourg, Netherlands, Denmark, Ireland, United Kingdom, Greece, Portugal, Spain, Austria, Finland and Sweden. With the expansion to new countries (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Bulgaria, Romania and Croatia) the European Union has 28 Member States. The Eurozone was created in 1999. The 11 founding states were: Germany, Austria, Belgium, Spain, Finland, France, Ireland, Italy, Luxembourg, The Netherlands and Portugal. Since then, Greece (2001), Slovenia (2007), Malta and Cyprus (2008), Slovakia (2009), Estonia (2011), Latvia, (2014) and Lithuania (2015)



Source: Own elaboration from EUROSTAT data

Figure 3.
Individuals (%) who judge their current computer or internet skills to be sufficient if they were to look for a job or change job within a year and who have obtained IT skills through formalized educational institution (school, college, university, etc.), (data 2011); people aged between 15 and 24 years

have been incorporated. The 17 states that make up the Eurozone are: Austria, Belgium, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, The Netherlands, Portugal, Slovenia and Spain. The youth employment rates reflecting the different situation in the Eurozone are mainly because of the effects of the economic crisis in this area. As can be seen by analyzing the situation in Greece, Portugal, Italy and Spain, these countries have suffered heavily from the impact of the economic crisis on their overall economy and on their employment rates in particular.

OECD states that the countries with well-established vocational and educational training (VET) and apprenticeship programs have been more effective in holding the line on youth unemployment (OECD, 2016). It is true that there are some opinions pointing out the employment destruction because of new innovative production processes and technological changes, but other opinions are just pointing to the opposite direction (Dachs *et al.*, 2017), on the other hand, nobody can be sure about the direction of changes in the future (Biagi and Falk, 2017). Nevertheless, to be willing to accept the technological changes and being proactive to getting skills for facing them, will help improve both personal and social positions in the near future. The changes in smart cities are a proof of this willingness in society and this is a great step to boost citizenship attitudes.

This paper focuses on the assessment of the youth situation in the European Union in the framework of smart cities and EU-2020 goals; more specifically, this paper analyzes their competences in ICTs and tries to find causal relations between their ICTs skills and their employability in the context of the European Union. Differences between the groups of countries are analyzed. Two main research questions are specified and some hypotheses for helping to answering these research questions are specified:

RQ1. Are there differences between the groups of countries of the European Union according the youth adaptation to the digital world?

H1.1. There are differences between the Eurozone and the other European countries in awareness of the importance of IT for youth between 15 and 24 years.

H1.2. There are differences between the Eurozone and the other European countries in ICTs learning for youth between 15 and 24 years.

H1.3. There are differences between the Eurozone and the other European countries in internet use for youth between 15 and 24 years.

H1.4. There are differences between the Eurozone and the other European countries in computers use for youth between 15 and 24 years.

H1.5. There are differences between the Eurozone and the other European countries in the IT skills through learning for youth between 15 and 24 years.

RQ2. Is there a causal relation between computer skills and employability of youth aged 15-24 in the EU?

H2.1. Computer skills are not significant for explaining the employability of youth aged 15-24 in the EU.

3. Method

Smart cities promote a smart, inclusive and sustainable development and it requires a sustainable labor market. This paper analyzes youth employability focusing on their computer skills in the framework of the European Union. The research questions RQ1 and RQ2 are crucial for the knowledge of the geography of smart cities in Europe and the youth digital skills for the labor market.

The main innovation of this work is to test the influence of computer skills on the possibilities of obtaining a job among the youth in the European Union framework. The results achieved in this research can help managers of social and economic policies in decision-making. On the other hand, these results are especially relevant in the context of an intelligent city, where designing actions that encourage young people to increase their training in computers are essential. In addition, the conclusions of this work can be useful in promoting the development of a sustainable labor market, in the context of the objectives of smart, inclusive and sustainable growth in which smart cities are developed.

For testing *RQ1* of ICTs, a means comparison between the Eurozone and the other countries in the EU was conducted, as well as the previous Levene test for groups' equal variances. Additionally, a structural equation modeling method was applied for solving the *RQ2* (*RQ2*). This method is the adequate in this situation, because it is intended to assess a causal relation by means of a regression analysis with one dependent variable (the Computers skills) and other independent variable (The Computes Skills): this is the so-called "structural model". These variables are not easy to measure, because they are "constructs" or "latent variables", which are composited or constructed by means of several indicators, the relation between the latent and observable variables is in Table III.

SEMs are very valuable in this type of analysis, especially in two aspects. On the one hand, they allow working with variables that cannot be observed directly; in this research, the variable "Computers Skills" because it is a multidimensional variable composed of very different aspects. Thus, in this work, this multidimensional variable can be "constructed" by its various components. On the other hand, the SEM methodology allows explaining the causal relationships between these latent variables. In our work, it allows us to answer *RQ2* (*RQ2*) which tries to test the causal relationship between the abilities of young people in computers and their employability.

The proposed method has to be analyzed taking into account three main issues: the global fit of the model, the structural and the measure models. The global fit of the model should be taken into account for assessing the model's adequateness and it has to give the satisfactory scores to test the global validity of the model. For this measurement, the minimum discrepancy rate (Chi-Squared/df) (Browne, 1982; Browne and Crudeck, 1993), the comparative fit index (CFI) (Bentler, 1980) and the root mean square error of approximation (RMSEA) (Browne and Cudeck, 1993) were analyzed and all results were plenty satisfactory, as can be seen in Table V. In addition, two are the models that should be analyzed: the measurement and the structural ones. The first one explains the causal relations between the latent variables, while the second one analyzes the reliability and internal consistency of the model, by means of the measure of the relation between each construct and its measurable indicators. The most commonly stated are the Cronbach's Alpha (Cronbach, 1951), the rate of composite reliability (Bacon *et al.*, 1995) and the extracted variance (Fornell and Larcker, 1981). The latent variables and their indicators are shown in Table II.

Data were obtained from the EUROSTAT (European Union, 2017), from the specific section about "youth" (yth) contained in the database "Population and social conditions". The EUROSTAT criteria are followed in this work for classifying the young people as "youth": they are those people between 15 and 24 years old. All data were updated at the most recent level provided by the European Union Statistics Office. The software was the IBM statistics SPSS 21 and the AMOS 21.

4. Results

For answering the *RQ1* a means comparison analysis was undertaken. Previous to the *t*-test, it is necessary to test equal variances between the groups by means of the Levene Test. The results of the calculation of this test are shown in Table III and indicate that equal variances should not be assumed because the null hypothesis is assuming equal variances and the *p*-value is lower than 0.05, so this null hypothesis should be rejected. Figure 3 displays the information about individuals (per cent) who judge their current computer or internet skills

Table II.
Latent variables and indicators

Latent variable	Indicator
Computers Skills	Individuals who judge their current computer or internet skills to be sufficient if they were to look for a job or change job within a year
	Individuals who judge their current computer or internet skills to be sufficient to communicate with relatives, friends, colleagues over the internet
	Individuals who judge their current computer or internet skills to be sufficient to protect their personal data
	Individuals who judge their current computer or internet skills to be sufficient to protect their private computer from virus or other computer infection
Employment	Education attainment level 0-2
	Education attainment level 3-4
	Education attainment level 5-8

Comparison between the Eurozone and the other member states of the EU	Levene test for equal variances F	Sig.	t test for equal means t	DF	Sig. (two tiled)	Means difference	Difference standard error
Individuals who have obtained IT skills through training courses and adult education centers, on own initiative	9.793	0.004	2.686	25,361	0.013	3.082	1.147

Note: Equal variances were not assumed

Table III.
Means difference test

to be sufficient if they were to look for a job or change job within a year and who have obtained ICTs skills through formalized educational institution (school, college, university, etc.), (data 2011); people aged between 15 and 24 years.

The comparison between the Eurozone and the other Member States of the EU has shown only differences for one item (Table III). The previous Levene test was conducted for analyzing the equality of variances, whose results indicate that equal variances should not be assumed.

For the item "Individuals who have obtained IT skills through training courses and adult education centers, on own initiative" the means are 6.526 and 3.444, respectively, then the difference is 3.082 and statistic significant (0.01).

For answering the *RQ2*, SEM was conducted. The results for the measurement model are summarized in Table IV. The measurement model analyzes the consistence of latent variables and their adequate measure, by means of their observable indicators. Then, the factor structure was tested of this model, by means of a confirmatory factor analysis, with the intention of checking the reliability and validity of the measurement scale, previously the factor loadings of all items was checked to proof the required minimum thresholds, which are usually accepted for <0.5, since all the results exceed these values, then the convergent validity of the scale is expected (Fornell and Larcker, 1981).

To check the reliability and internal consistency of the model, the Cronbach's alpha, rates of composite reliability and variance extracted values were calculated. The reference scores are: Alpha ≥ 0.7 (Anderson and Gerbing, 1988; Hair *et al.*, 1999), composite reliability (CR) should take scores ≥ 0.5 (Bagozzi and Yi, 1988) for confirming the internal consistency of constructs; for measuring the accuracy with which the analysis instrument represents the variables, the average variance extracted (AVE) values exceed 0.5 (Hair *et al.*, 1999). Each latent variable's AVE was larger than the squared correlation between each pair of latent

Latent variable	Item	λ	Cronbach's alpha	CR	AVE
Youth employability	1-2	0.674	0.876	0.685	0.825
	3-4	0.833			
	5-8	0.544			
Youth computer skills	Job	0.575	0.933	0.790	0.884
	Communication	0.712			
	Data Protection	0.950			
	Virus Protection	0.922			

Table IV.
The measurement model: Reliability and internal consistence of the latent variables

variables, thus demonstrating good discriminant validity of the scale (Fornell and Larcker, 1981).

To analyze the global fit of the model the more common indexes were analyzed, and its reference scores are shown in Table V. Our model has a good or acceptable fitting, according all indexes.

The reference values indicates that χ^2 values $1 \leq \chi^2 \leq 2$df are compatible with an acceptable fitting (Carmines and McIver, 1981). In our model the interval is $1 \leq \chi^2/\text{df} = 1.136 \leq 2$. For the comparative fit index, is considered a good adjustment when $0.95 \leq \text{CF} \leq 1.00$, and acceptable for $0.94 \leq \text{CF} \leq 1.00$, due that the score in this model is 0.989, it is a very good fit. The typical range for TLI lies between zero and one, but it is not limited to that range (Bentler and Bonett, 1980; Bollen, 1989). TLI values close to 1 indicate an acceptable fit. The normed fit index (NFI) indicates a good fitting when $0.95 \leq \text{NFI} \leq 1.00$ and acceptable when $0.90 \leq \text{NFI} \leq 0.95$ (Bentler and Bonett, 1980; Bollen, 1989), this is the case of this model (0.982). The good and acceptable values for the Root mean square error of approximation (RMSEA) are $0.00 \leq \text{RMSEA} \leq 0.05$ and $0.05 \leq \text{RMSEA} \leq 0.10$, respectively, in this model the score is 0.071 (Browne and Crudeck, 1993; Steiger and Lind, 1980). Then, it is possible to conclude that, in general terms, the model is suitable for analyzing the proposed problem. Nevertheless, the scale of the fit indices is not always easy to interpret (Bentler and Bonett, 1980).

The structural model results are shown in Table VI and in Figure 4. This model is a linear regression analysis, but it also contains concatenated effects and loops between variables.

Employment is explained by computer skills, which is significant ($p < 0.001$) and the fitted R^2 is 0.399; thus, this model explains 40 per cent of youth employability according to their skills in computers.

5. Discussion and conclusions

The youth living in the Eurozone countries are sensible about the importance of being updated on IT knowledge because the means comparison results indicate that there are no differences between formal learning and other ways of training; nevertheless, there is statistic significant difference on the item "Individuals who have obtained IT skills through

Table V.
Goodness of model fitting

Fit index	Score	Reference scores: Good	Acceptable
χ^2/df	1.136	$0 \leq \chi^2/\text{df} \leq 2$	$2 \leq \chi^2/\text{df} \leq 3$
CFI (Comparative fit index)	0.989	$0.97 \leq \text{NFI} \leq 1.00$	$0.95 \leq \text{NFI} \leq 0.97$
TLI (The Tucker-Lewis coefficient)	0.982	As close as possible to 1	
NFI (Normed fit index)	0.916	$0.95 \leq \text{NFI} \leq 1.00$	$0.90 \leq \text{NFI} \leq 0.95$
RMSEA (Root mean square error of approximation)	0.071	$0 \leq \text{RMSEA} \leq 0.05$	$0.05 \leq \text{RMSEA} \leq 0.10$

Table VI.
Results for the structural model

Dependent variable	Independent variable	Estimator	Standard estimator	Significance	R^2 fitted
Youth employability	Youth Computer Skills	0.529	0.632	***	0.399

Note: ***$p < 0.001$

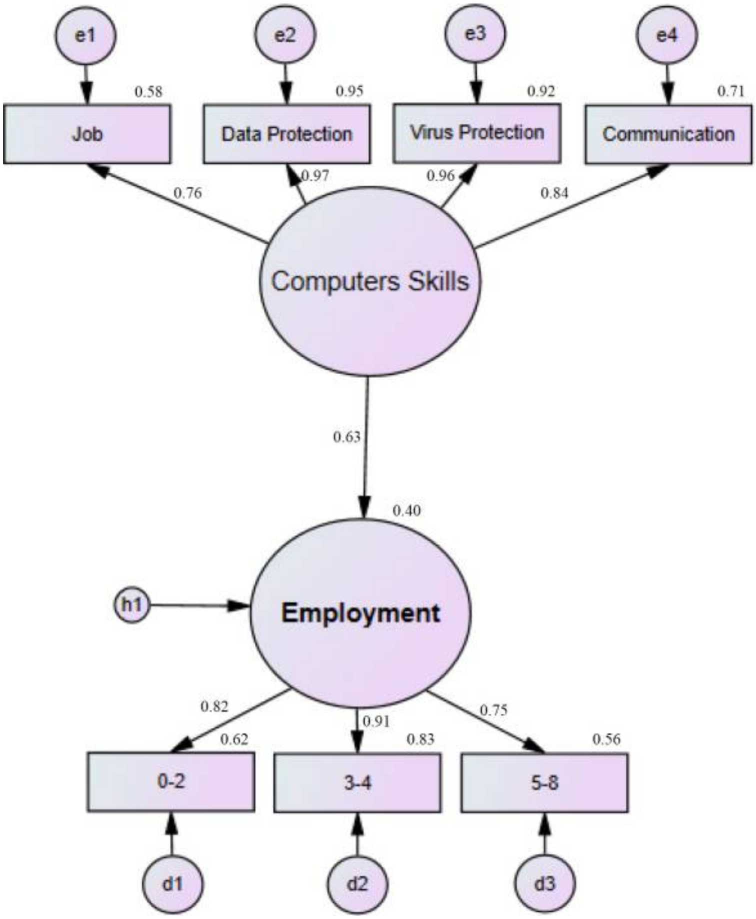


Figure 4.
Results

training courses and adult education centers, on own initiative", that is to say, that for the same level of knowledge, they are attending more courses by their own initiative. The means are 6.526 and 3.444, respectively, which indicate that youth in the Eurozone are more aware on the necessity of training, as they are demanding these training courses on their own initiative.

The answer to *RQ1*, taking into account the tested hypotheses, is shown in Table VII. The results indicate that there is an essential difference between the Eurozone and the other EU countries (tested on *H1.5*).

We conclude that five of the six tested hypotheses are rejected; that is to say, *H1.6*, is the only accepted hypothesis. The one that focuses on awareness of the importance of ICTs skills, and it has been proven in literature (López-Arranz, 2017) to be a key factor for employability in the context of new workplaces arising in the smart cities.

About *RQ2* (*RQ2*), the SEM proved that the computer skills is a relevant factor to explain youth employability in the European Union and that *H2.1* should be rejected.

RQ	Hypotheses	Result
RQ1	*H1.1*: There are differences between the Eurozone and the other European countries in awareness of the importance of IT for youth between 15 and 24 years	Rejected
	H1.2: There are differences between the Eurozone and the other European countries in the ICTs learning for youth between 15 and 24 years	Rejected
	H1.3: There are differences between the Eurozone and the other European countries in internet use for youth between 15 and 24 years	Rejected
	H1.4: There are differences between the Eurozone and the other European countries in computer use for youth between 15 and 24 years	Rejected
	H1.5: There are differences between the Eurozone and the other European countries in IT skills through learning for youth between 15 and 24 years	Accepted
RQ2	*H2.1*: Computer skills is not significant for explaining the employability among youth aged 15-24 in the EU	Rejected

Table VII.
Hypotheses results

To summarize, the main conclusion of this work is that the smart cities can provide some new workplace possibilities for those who are skilled to develop the requirements for these positions. The youth awareness of the importance of IT in general terms, and long-life learning, in particular, will be the most suitable for getting these jobs by means of being more qualified to obtain a higher employability level. Boosting these educational skills among youth is recommended to policymakers to improve youth employment levels and to provide a qualified workforce to those companies involved in the support and promotion of smart cities.

Smart cities are essentially inclusive cities that promote sustainable development in a broad sense. This justified their commitment to developing policies to improve youth ICT skills. These actions not only favor this particular group, but also the labor market as a whole and the economy in general. In short, this is one more way for smart cities to contribute to smart and sustainable development and growth.

Note

1. The Intelligent Community Forum is a global network with a think tank at its center. It connects hundreds of cities and regions on five continents for collaboration on economic development and for exchange of expertise and information that drives progress. Through this network, ICF researches how Intelligent Communities use information and communications technology to build inclusive prosperity, solve social problems and enrich their quality of life in our connected century. (see www.intelligentcommunity.org/what_is_an_intelligent_community)

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