REGIONAL DEVELOPMENT IN ROMANIA IN THE CONTEXT OF ECONOMIC AND SOCIAL DIGITIZATION

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ABSTRACT
The digital economy is the main instrument in the development of the modern European state. Romania has the intellectual potential, solid experience in the field of information technology, telecommunication and STEM sciences, which are the drain of the digital economy development in all spheres of economic and social activity. In this article, we considered it appropriate to reflect the support of the digital economy for regional development in Romania, which at present faces various economic and social problems. In this article we have proposed a complex approach to the problem in the current conditions of building the knowledge society by addressing the areas of smart specialization at the regional level in Romania, which will be a generator of economic growth of the regions.

KEYWORDS: *Digitization, digital economy, information technology, regional development*

1. INTRODUCTION: THE DIGITAL ECONOMY IS THE MAIN INSTRUMENT IN THE DEVELOPMENT OF THE MODERN EUROPEAN STATE

Entry means, such as research and development, only reflects the resources devoted to innovative production, not the actual production quantity actually produced (Androniceanu et al., 2017). Research and development measures tend, also include efforts to generate innovative activities that are officially carried out, usually in official research and development laboratories (Ionita et al., 2009). They underestimate innovative work in smaller firms, which is often done on a more informal basis (Ionita & Burlacu, 2009). Another disadvantage of spending on research and development is that they tell us nothing about the nature of the innovations produced and about the social aspects of the value of innovations (Burlacu & Jiroveanu, 2009, 2011).

2. AREAS OF SMART SPECIALIZATION IN THE REGIONS OF ROMANIA

At the level of the eight regions in Romania, we propose to review the situation regarding the economic growth and smart specialization in Romania. The analysis is based on Intelligent Specialization Strategies, which are currently in the North-East, South-Muntenia, South-West Oltenia, and West Region. According to the study "Regional innovation strategy for smart specialization of the region South vest Oltenia".

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Table 1. Intelligent areas of specialization in the regions of Romania

Short profile of specialization of the development region	Validated aspects of **comparative advantage** at region level
(1) North-East Region(Bacau, Botosani, Iasi, Neamt, Suceava, Vaslui)	
Bacau University, A. I. Cuza University of Iasi, Technical University "Gh. Asachi ", Iasi, University of Agricultural Sciences and Veterinary Medicine Iasi, UP Gh. Asachi in Iasi there is a technology faculty of the textile industry, Stefan cel Mare University in Suceava there is a forestry faculty	
The North-East Region is characterized by an industry-based economic structure with relatively low added value, with a low technological content, the development of which is based on the cheap cost of labor and important materials. In the context of smart specialization, each sector requires reconfiguration, diversification, a high emphasis on the process of entrepreneurial discovery.	Intelligent specialization involves industries that exist and are well anchored in the regional economy system. Pre-existing research / innovation conditions **- The existence of the Faculty of Chemical Engineering and Environmental Protection at the "Gheorghe Asachi" Technical University in Iasi, with a Doctoral School with 151 PhD students,** with interests in areas such as wood processing At the North-East Region level, comparative advantages were obtained for product groups: “Wood, charcoal and wooden articles", for which the value of exports (12% of the value of exports of the region for 2012)was almost 5 times higher than that of imports, and in the case of Mobile; medical-surgical furniture ",whose export value was double that of imports. The textile and clothing industry is strongly positioned in the structure of the regional economy, recording performance in labor and turnover indicators.
(2) South - East Region (Braila, Buzau, Constanta, Galati, Tulcea, Vrancea)	
	University of Constanta, Lower Danube University of Galati Danubius University
The economic sectors with competitive advantages in the South West Oltenia region are: **1 Agriculture, forestry, fishing.** Research on the improvement of cereals and technical plants, plant cultivation technologies, mechanization, animal breeding (cattle). Production of seeds of superior biological category. Research on new varieties of fruit trees (e.g., walnut, chestnut, hazelnut, plum)	For program interventions to support the economic environment during 2014-2020, taking into account the need to correlate the interventions dedicated to competitiveness from the perspective of territorial dimension and rural development, the National Competitiveness Strategy (CNS) was developed. Within the framework of the strategic document, for the South-West Oltenia region the following sectors of economic specialization are identified:

Improving the vineyard assortment by creating new varieties and clonal selections Creating varieties of vegetables tolerant to adverse environmental factors Creating varieties of plants specific to sandy soils (watermelons, peanuts, etc.) **2 Production and supply of electric and thermal energy, gas, hot water and air conditioning.** Fundamental, applicative and developmental research on heavy water, cryogenic processes for the separation of hydrogen isotopes and rare gases, heavy water and tritium analysis methods, gas separation and purification technologies Research and development in the field of electrotechnical equipment, in the field of large forces, high voltage tests and high power, calibrations. **3. Information and communications.** Advanced Driving Methods with Applications in Biotechnology, Chemistry, Energy, Aeronautics Robotic Systems and mechatronic multimedia systems multimedia intelligent systems distributed advanced systems and technologies for education (e-learning) **4. Professional, scientific and technical activities.** Fundamental, applicative and developmental research on heavy water, cryogenic processes for the separation of hydrogen and rare isotopes, methods for heavy water and tritium analysis, gas separation and purification technologies Design and realization of advanced cryogenic and vacuum equipment and installations **5. Health and social assistance.** The pharmaceutical field, i.e., the mechanisms of action and mechanisms of adverse effects, the pharmacokinetic particularities and pharmacodynamics to support strategies for personalized drug therapy, the design and development of new therapeutic tools with increased efficiency. Study of aging phenomena and diseases associated with this process.	- Dolj (means of transport) - Gorj (plastics, rubber and articles thereof) - Mehedinti (means of transport) - Olt (common metals and their products) - Valcea (plastics, rubber and articles thereof) From the perspective of the relevant industrial agglomerations at regional, county (Mehedinţi and Olt) the active economic environment in the field of "Locomotives and Rolling Stock" has been identified. (Page 72) **Agriculture.** It is important to note that Dolj County holds 4% of the total agricultural area of Romania, second at national level. Between 2005 and 2012, the South-West Oltenia region ranked second at the national level, as regards the area occupied by orchards and fruit nurseries, the county with the largest share in the total region being Valcea. From the perspective of intelligent specialization, the region has large areas cultivated with energy plants (Dolj and Olt counties). **Industry and construction sector.** During the period 2008-2013, the level of all the counties of the region recorded a decrease in the number of persons employed in the manufacturing sector, the monthly gross nominal earnings per employee recorded an increase in the South West Oltenia region, of about 38% (in 2013 compared to 2008). Turnover of local active local units increased by around 19% over the period 2008-2013.At regional level, the value of exports in the manufacturing sector increased by over 30% in 2013, compared to the value of exports in 2011. **Energy industry. South-West Region Oltenia is the most important energy producer in Romania,** with reused energy resources, generating 71.57% of the total hydroelectric power production and 27% of the total national heating energy. The evolution of gross investments in active local units polarizes the territory of South West Oltenia in two categories: attractive counties for investors and less attractive counties for investors in this area. In the first

The specialization potential of the South - West Oltenia Region was identified by analyzing the overall utility of all sectors of activity for which there are statistical data at region level, taking into account the following indicators: active local units, civilian employment, average number of employees, turnover, net investment in local units. **(p. 105-107)**

At the level of 2010, the greatest potential for specialization is the economic activities included in the section "Wholesale and retail trade; repair of motor vehicles and motorcycles ". The manufacturing industry is most useful in terms of the average number of employees, but global utility is lower than trade. It is important, however, to note the high potential of this economic activity in the South - West Oltenia Region. **(p.77)**

According to the analyzed indicators and the available statistical data, in 2013, Dolj County has a great potential for specialization "Manufacturing" and "Wholesale and retail trade; repair of motor vehicles and motorcycles ".We observe the large number of active local commercial units with the highest turnover in the county.

At the **Gorj County** level, the sectors with the most important global utility are "Extractive Industries" and "Wholesale and retail trade; repair of motor vehicles and motorcycles ".**(p.78)**

In Mehedinţi County, "Manufacturing" and "Wholesale and retail trade; repair of motor vehicles and motorcycles "records the highest level of global utility. Both in terms of the number of local active units, turnover and net investment in local units, the sector "Wholesale and retail trade; repair of motor vehicles and motorcycles "has a maximum utility compared to the other sectors analyzed.

Olt County reveals the same sectors ("Manufacturing" and "Wholesale and retail trade; repair of motor vehicles and motorcycles ") with great specialization potential. We can observe the high average number of employees in the manufacturing category belongs mainly Dolj County, followed by Gorj county.

The number of local units active in the chemical and metallurgical industry, at the level of the South-West Oltenia Region, in 2013 it was 140, most of which were operating **in Dolj** (91 units) and **Valcea**(86 units).

The construction sector is another area with specialization potential, showing a rebound in recent years, after mitigating the effects of the economic crisis, the positive trend of the turnover for the companies operating on this market.

The ICT sector has potential for development. The region benefits from the operation of an important one higher education center **in the field of IT - Faculty of Automation, Computers and Electronics of the University of Craiova,** the specialized work force at the regional level.

sector, which generates the highest turnover at the county level. In Valcea County, statistics reveal the great potential of specialization in the "Manufacturing" and "Wholesale and retail trade; repair of motor vehicles and motorcycles "	
(3) South - Muntenia Region counties (Arges, Calarasi, Dambovita, Giurgiu, Ialomita, Prahova, Teleorman) Petroleum and Gas University, Ploiesti	
Construction of machinery, components and production equipment; Agriculture and Food Industry; Bioeconomy: the development of circular economy; Tourism and cultural identity; Smart places. **In the field of tourism development,** creating tourist offers and developing niche brands: religious tourism, medical and leisure tourism, cycling, cultural tourism, camping tourism, sports tourism; Rehabilitation of representative cultural objectives and creation of support infrastructures for the identified niches. **In the field of high technology industry** The identified domain comes from high-tech manufacturing industry, being listed as a sector with competitive and potential advantages in the South Muntenia region. The specific economic activities related to regional priorities are partly or fully identified with the national domains or result in applicable services and products with added value within national priorities. In order to draw up policies and action measures, to reconcile identified areas of expertise and proposed projects with instruments and the funding programs available, it is necessary to carry out the correspondence with the CAEN correspondent of the targeted activities.	The interconnectivity of the intelligent specialization domains in the South Muntenia region with the fields of specialization defined as priority in Romania. In the field of agriculture, farmland yields can be increased more than 5 times under the direct influence of research, development, innovation, technology transfer and the use of advanced technologies. In Bioeconomic, the interest in this field is aimed at producing biofuels, organic fertilizers, biomass plants, plastics and bio composites, mobile biomass processing plants, nutritional supplements, cosmetics, natural medicines. SSIRSM
(4) South-West Oltenia region (Dolj, Gorj, Mehedinti Olt, Valcea) University of Craiova, University of Medicine and Pharmacy of Craiova, University of Agricultural Sciences and Veterinary Medicine Craiova).	
For the development and enhancement of the competitiveness of the **industrial and transport domain** are presented below: sustainable energy and environment with	**1. The field of industrial engineering and transport** is representative for the South-West Oltenia Region, the automotive, electrotechnical and railway industries

development potential, medium and long-term availability of resources, research activity in institutes and centers of expertise. The priority areas of intelligent specialization of the South-West Oltenia region. According to the study, following the aggregation of information collected from various sources of information "the areas proposed with development potential that can provide intelligent specialization of the South-West Oltenia region are:1. Industrial and Transportation Engineering, 2. Sustainable and Medium Energy, 3. Fundamental and Applied Innovative Medicine,4. Agriculture and food industry, 5. Tourism and cultural identity. ITC and eco-technologies are two cross-cutting areas of interest, their evolutions conditional on the proper functioning of the intelligent specialization sectors. "(SSIRSVO, p. 162) The foundation of the intelligent specialization process of the South-West Oltenia region is represented by the functionality and the applicability of RDI activities carried out by the public and private environments within the five selected areas of specialization, namely: industrial engineering and transport, sustainable energy and the environment, fundamental and applied medicine, agriculture and food industry, tourism and cultural identity. Also, considering the nature and cross-cutting importance of the IT sector and eco-technologies for the functioning, organization and development of all branches of the economy, all economic agents operating in these areas are among the key factors that can contribute to the progress of the South-West Oltenia region.	registering the highest level of labor productivity. Rolling stock industry **Construction sector.** In the academic sphere and research in mechanical engineering and transport, the region has several research centers, most of which were established within the University of Craiova: Aerospace Engineering Research Center - CERDIAS, Electrotechnics in Transports and Energy Systems - ELTRES, Electrical Engineering, Electrotechnics and Ecological Technologies - IEEET, Center for Innovation and Technology Transfer - CITT, Scientific Research Center Electromechanical and Quality Systems - SEMEQ etc. Other research entities relevant to engineering and mechanical engineering are: National Research and Development Institute for Electrotechnics - ICMET Craiova, S.C. IPA S.A. -R & D company in automation, S.C. INAS SA - research development institute for engineering, computer assisted design and S.C. Uranus S.R.L. -research development and implementation of industrial automation systems. **Chemical and metallurgical processing. The metallurgical industry concentrates** a large number of employees at the regional level, represented by the largest aluminum producer in Central Europe and the only aluminum producer in the country - ALRO Slatina. 2.Energy and Environment 3. Fundamental and applicative innovative medicine 4. Agriculture and food industry 5. Tourism and cultural identity 6. Information and Communication Technology (IT & C)7. Eco-technologies
(5) West Region (Arad, Caras-Severin, Hunedoara, Timis), Aurel Vlaicu University of Arad, West University of Timisoara, Polytechnic University of Timisoara	
The aim of the **Western Region's Smart Specialization Strategy** is to: - present an overview of the strengths and weaknesses of the productive system of the	To conceive a successful RIS3, it is essential to understand whether this knowledge is a mandatory constraint towards the structural transformation of the region, as this also

economy of the West Region, with details of demand and supply characteristics, comparative advantages and potential for excellence; - investigate the ability of enterprises to adopt new technologies, taking into account the specific determinants of technological upgrading in the sector; - Identifies intelligent niches in target sectors as well as opportunities which appear at the level of cooperation between enterprises and research and technological development infrastructure; - proposes long-term public policies and interventions available at regional and local level to help the private sector invest in key priorities, needs and challenges for knowledge-based development, including information and communication technology (ICT) measures. Based on the idea that this information is asymmetrical and incomplete, the authors argue that a governance structure in the public sector that discourages effective risk and collective decision-making processes that are inevitably inclined to the interests of function holders may make it difficult for the government to adequately select the sectors or products that could cause economic transformation (Ionita et al., 2009). As a result, the effectiveness of research policies and the pursued innovation depends very much on the information available on the market on the existence of sectors with comparative advantages in the region (country) concerned. SSIRV	determines the nature of policy recommendations. According to the Regional Innovation Scoreboard, four groups of regions are distinguished in the European Union: leaders in regional innovation (34 regions); pursuers (57 regions); moderate innovators (68 regions) and modest innovators (31 regions) - WEST REGION. All regional innovation leaders are located in 8 of the 28 Member States, namely Denmark, Germany, Finland, France, Ireland, the Netherlands, Sweden and the United Kingdom, which shows that regions that excel in innovation are located in the Northwest of Europe. Specific objective: "Improving access to specific support services for enterprises in key sectors". Following a sectoral analysis of economic specialization at the West Region level, six sectors were selected as "winning" not only on the basis of the activities themselves but as a result of their relevance and potential in the region's economy. Sectors of intelligence specialization selected: In conclusion, six regions are identified for the West region 1. Automotive component manufacturers sector; 2. Information and Communication Technology; 3. Textile sector; 4. Agro-food industry; 5. Construction sector; 6.Turism.
(6) Northwest Region (Bihor, Bistrita-Nasaud, Cluj, Maramures, Satu-Mare, Salaj) *University of Cluj-Napoca; Oradea University; University of Satu Mare Commercial University*	
(7)Center Region (Alba, Brasov, Covasna, Harghita, Mures, Sibiu)	
University of Alba Iulia, Transilvania university Lucian Blaga University of Sibiu, University of Targu Mures In the Center Region is one of the most powerful universities with a technical profile in Romania - Transilvania University of Brasov, an educational institution	

<table>
<tr><td colspan="2">that has a real scientific and research potential. Solutions are currently being sought to reinvigorate the research-industry link which has been almost discontinued in recent years and For the transfer of research results to the economy. (p.95)</td></tr>
<tr><td>Central Region Strategy The pillars of the Central Region industry are the food industry, the textile apparel industry, woodworking, building materials and the car parts and subassemblies industry.
By working largely on local raw materials, the food industry benefits from the proximity of sales markets and manages to export to European markets.
The textile and textile and footwear industries mainly produce lohn goods for the foreign market. The presence of a well-qualified and cheap workforce has attracted a number of renowned automotive investors, Center Region has become an important supplier of car parts and subassemblies for world famous brands in recent years. Wood processing industries capitalize on the region's important forestry potential. Thus, the Center Region provides about 40%of the national timber production and a fifth of the furniture. Tourism development. With an extremely generous nature and a cultural heritage of great value, The Central Region has a high and diversified tourist potential. From the regional researches and studies 41 it is concluded that the tourism forms with the highest development potential are: balneary tourism, mountain tourism, cultural tourism and rural tourism.
It is important to note that Romania owns one third of Europe's mineral water springs,(Sovata, Covasna, Baile Tusnad, Ocna Sibiului, Borsec, Baile Harghita, Homorod Baths, etc.) are located in the Central Region, which is why the Center Region has the highest density of spa resorts in Romania.).
The Central Region is the first region of the country in terms of mountain tourism potential, almost half of the area being occupied by mountain areas. (SSIRC)</td><td>In the last 15 to 20 years, we have tried to create a modern business infrastructure that responds to the specific requirements of investors in industrial parks and technology centers, business centers, business incubators, etc. Industrial parks have an important place in business structures. They were created on the basis of Law 134/2000, either on the initiative of local authorities or as a result of private initiatives.
The role of industrial parks is to stimulate economic development, achieve technological transfer, attract investment and capitalize on the human resources of the area. There are 11 industrial parks in the Center Region. Seven of these are public property, 3 are privately owned and one is in a public-private partnership. The total area of these parks is 436.75 ha, of which 355.67 ha are greenfield investments.
Cultural tourism has significant resources, with a lot of valuable objectives on the territory of the region and some well-known architectural landmarks as well as traditional prestigious festivals (Puppet Pilgrimage from Sumuleu-Ciuc)

Natural agricultural resources
Climate, relief and soil conditions, that almost half of the surface is occupied by the mountain area in the depressions on the eastern terrain, the lowest temperatures in the country are usually recorded, could be considered factors that make the region Center a less propitious area for agriculture.

(SSIRC)</td></tr>
<tr><td colspan="2">(8) Bucharest Ilfov Region</td></tr>
</table>

Source: Table elaborated by the author based on the Strategies of Intellectual Specialization

We would like to mention that the Bucharest-Ilfov, Central and North-West Regions have not yet elaborated. Regional Strategy of Intelligent Specialization within the Regional Development Strategies in all three regions.

In the author's opinion: "In order to ensure the continued comfort of the members of a local community, local development is needed. To achieve this local development goal, national authorities, through a close and constructive relationship with local authorities, must seek and find the most appropriate means. "

Regionalization is a new reorganization of the country that wants to contribute through local development to the balanced development of Romania. Regionalization is conceived taking into account its historical evolution in Romania, the experience of other states as well as the European Union's concepts and directives in this field. The paper presents a brief history of the approaches to regionalization in Romania and analyzes various theoretical and practical aspects resulting from the specific legislation related to the regionalization process and our current reality. In the conclusion of this article, the author considers that: "The success of the administrative-territorial reorganization action depends on many factors and many elements, among which we mention the prevailing of the firm and officially confirmed economic arguments and the avoidance of compromises as much as possible concessions; Establishing a growth strategy to bring the current economically weaker counties to the best and not the opposite; Taking into account the point of view of the business environment and abandoning local patriotism not supported by deeds; Valuing the current economic image and the best representation of each county in the current region; Conceiving other geographic groups as compared to current ones even by modifying the current number of regions, depending on common projects and interests. "

Demand aggregation is a possible solution, but more serious pitfalls are those related to shortages of human capital. These might be resolved in some rural places, where immigration and return migration bring needed cerebral inputs to rural areas. A final set of improvements concerns how businesses use the Internet and e-commerce. In the end, telecommunications are not a ‘quick fix’ solution for rural development, and the desired improvements will be limited to a fraction of rural places.

An urbanization analysis shows that the use of mobile phones for access to the Internet when away from home or work was higher among people in cities (61%) in the EU-28 in 2016, people living in cities and suburbs (55%) or those living in rural areas (47%). This pattern was observed in almost all EU Member States, except: Luxembourg, where the model was reversed; Belgium and Cyprus (and to a lesser extent France and the United Kingdom), where the incidence was slightly higher in cities and suburbs than in cities; and Ireland (and to a lesser extent Estonia), where the incidence was lower in cities and suburbs than in rural areas.

Table 1. (Percentage of individuals)

GEO/TIME	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
European Union (current composition)	20	25	23	28	31	26	32
European Union (before the accession of Croatia)	20	25	23	29	31	27	32
European Union (15 countries)	21	28	25	30	32	28	33
Euro area (EA11-2000, EA12-2006, EA13-2007, EA15-2008, EA16-2010, EA17-2013, EA18-2014, EA19)	19	22	23	27	29	25	31
Romania	5	5	6	14	20	14	21

Source : https://ec.europa.eu/eurostat/statistics-explained/

Table 2. Structure of households having access to the Internet at home, by occupational status at the level of development regions

A	year B	Occupational status of the head of the household employee 1	self-employed (including employer) 2	Unemployed 3	Retired 4	inactive person (incl. student) 5
TOTAL HOUSEHOLD	**2014**	**58,8**	**9,9**	**2,4**	**25,2**	**3,7**
	2015	**58,8**	**10,4**	**1,6**	**25,8**	**3,4**
	2016	**58,8**	**9,4**	**1,7**	**27,1**	**3,0**
	2017	**56,0**	**11,0**	**1,9**	**27,3**	**3,8**
North - East	2014	50,5	19,9	2,5	22,9	4,2
	2015	54,0	20,3	0,9	20,0	4,8
	2016	55,5	17,7	1,5	21,9	3,4
	2017	52,7	21,4	1,1	22,0	2,8
South East	2014	52,3	11,3	5,4	28,0	3,0
	2015	55,6	11,7	1,4	29,1	2,2
	2016	57,4	13,4	0,8	25,5	2,9
	2017	51,7	14,0	3,1	29,7	1,5
South - Muntenia	2014	53,9	12,0	3,3	27,4	3,4
	2015	55,0	13,6	2,6	27,3	1,5
	2016	53,2	10,4	2,9	31,1	2,4
	2017	55,2	8,6	1,9	31,7	2,6
South - West Oltenia	2014	54,7	7,1	2,8	30,8	4,6
	2015	47,4	11,9	2,6	32,8	5,3
	2016	50,9	14,0	3,1	28,5	3,5
	2017	44,9	14,2	3,0	31,6	6,3
West	2014	70,2	5,3	*	20,6	3,5
	2015	61,5	5,0	1,0	29,3	3,2
	2016	62,9	1,4	2,7	31,2	1,8
	2017	59,4	5,7	2,6	25,1	7,2
Northwest	2014	61,9	10,0	1,6	23,3	3,2
	2015	62,0	10,6	1,1	24,6	1,7
	2016	59,7	8,1	1,3	28,1	2,8
	2017	56,8	10,9	2,0	27,1	3,2
Center	2014	61,0	9,1	2,5	22,2	5,2

	2015	62,8	7,6	2,0	25,1	2,5
	2016	64,9	5,6	1,2	24,6	3,7
	2017	61,6	11,1	1,0	21,7	4,6
Bucharest - Ilfov	2014	65,6	3,1	1,2	26,9	3,2
	2015	68,8	2,1	1,5	21,9	5,7
	2016	65,5	3,6	0,7	26,8	3,4
	2017	63,3	2,2	0,9	29,9	3,7

Source : http://www.insse.ro/cms/ro/tags/accesul-populatiei-la-tehnologia-informatiei-si-comunicatiilor

Table 3. Proportion of households with internet access at home, by occupational status of head of household, by type of connection used and residence environment

	years	Households with internet access Total	Occupational status of the head of the household				
			Employee	self-employed (including employer)	Unemployed	Retired	another person inactive (including student)
A	B	1	2	3	4	5	6
URBAN							
Type of Internet connections							
Broadband connections	2014	90,1	91,2	83,9	95,2	89,1	80,7
	2015	98,1	98,2	98,2	100,0	97,6	99,5
	2016	97,7	98,0	95,7	100,0	97,0	97,4
	2017	97,9	97,7	100,0	96,6	98,1	99,0
narrowband	2014	9,9	8,8	16,1	4,8	10,9	19,3
	2015	11,4	12,5	11,4	-	8,6	15,3
	2016	10,3	11,5	9,6	*	8,1	7,5
	2017	10,6	11,9	9,2	9,6	7,3	13,8
RURAL							
Types of internet connections							
Broadband connections	2014	92,9	92,4	94,0	82,2	93,2	93,0
	2015	93,0	94,7	91,5	100,0	90,3	100,0
	2016	95,1	96,9	91,5	96,3	94,3	100,0
	2017	96,2	96,3	96,1	97,6	96,3	94,4
narrowband	2014	7,1	7,6	6,0	17,8	6,8	8,2
	2015	11,9	9,8	16,1	11,7	12,7	*
	2016	10,3	8,8	12,5	*	11,7	7,7
	2017	7,3	8,7	6,6	9,0	5,9	6,2

Sources : http://www.insse.ro/cms/ro/tags/accesul-populatiei-la-tehnologia-informatiei-si-comunicatiilor

In the study conducted by the European Commission ”Digital competences for work places in Europe” Measuring progress and advancement”† policy recommendations are made to ensure that Europe has enough digital and e-leadership competences. The first recommendation: Launching initiatives in the lagging countries The growth of digital competence activity in Europe in 2013 is encouraging - nevertheless, it is not applicable yet in all member states. As documented in the above-mentioned report, 40% of the member state display a strong policy activity, 10% is on the way of reaching it but 50% still display only low levels and must urgently accelerate their efforts. The second recommendation: To increase the efforts by commitment to long-term policies. The third recommendation: To adapt education and training to digital era. The European Council's conclusions on the 25th October 2013 request ”a higher level of integration of digital competences in education, from the earliest stages to higher education, vocational education, life-long learning and training.” The fourth recommendation: To encourage IT quality and professionalism Because the IT profession is not clearly defined, the informed career choices are faced with the opacity of ICT education and training market. The fifth recommendation: To build bridges for all students, graduates and employees. Too few students follow a career in science, technology, engineering and mathematics (STEM) and yet these offer promising job and career opportunities, irrespective of the fact that these competences are obtained during tertiary education, during on-job training or the period of practical internships during vocational training.

E-Inclusion policies Any program which aims to approach digital exclusion should, therefore, take into consideration 6 key stages to be successful and sustainable: • Identify the main social challenges and the desired results in terms of social inclusion and equal opportunities; • Identify socio-demographic and socio-cultural groups that are marginalized from an economic, social, civic, and personal welfare perspectives of the identified results; • Identify to what extent the digital exclusion of these groups in terms of access, aptitudes, motivation and content/employability prevents the achievement of the desires results; • Identify the best organizations and venues to reach them as well as to support the poorer individuals; • Provide resources for the organizations and people in these place to remove the barriers to digital inclusion, identified as according to item 3, for the specific challenges which these groups face; • Evaluate the implementation and success of these initiatives, analyzing whether the groups have improved their civic status, economic, social, cultural and personal welfare as the result of their increased digital employability. The ITC access types, alphabetization, motivation and employability can be related to certain social results for certain groups in certain countries.

Considering Europe's challenges in terms of digital economy and implicitly the Commission's contribution to the European Council from 2425 October 2013, we emphasize the fact that the modern electronic communication means and on line services, including electronic governance, are the main elements of the change for our economies and societies, which contribute the advancement of growth and occupation of labor force, to the increase of productivity, the decrease of public expense, the consumers' welfare, providing new opportunities of personal expression. Moreover, these represent important economic sectors, self-contained. The digital economy can help the European industry to develop, can provide the infrastructure for tomorrow's companies and can stimulate the growth of recently set-up companies. Developing the digital inclusion debate The emphasis in the debates on digital inclusion is shifted from the digital gap to the extent of digital inclusion, which is accompanied by the changes in focus from the universal access as the central issue of digital inclusion to a digital

†”Competenţe digitale pentru locuri de muncă în Europa” Măsurarea progresului şi avansarea, Comisia Europeană, 2014 (Digital competences for work places in Europe. Measurinh progress and advancement)

alphabetization and awareness raising in terms of the benefits of using ITC in the economic, social, cultural civic and personal welfare by the entire population. This requires including not only access and aptitudes but also indicators of digital motivation inclusion as well as a wide range of use of digital content and platforms, so that citizens engage with ITC in order to reach visible result in these areas of day-to-day life. In order to classify and evaluate the access we need to have a good understanding in terms of quality, ubiquity and mobility; abilities with technical, social, critical and creative elements; motivation and awareness increase of the benefits as determined both by individual and social circumstances; and the commitment driven by the every-day life's needs of individuals by means of the content created by and for them so that the commitment with ITC support is efficient and sustainable. The concrete results of the digital inclusion policy should be correlated with the social inclusion objectives stipulated in the Europa 2020 strategy and the Social Investment Package (SIP). This means that the desired effects of the implementation of the Digital Agenda policies, at the national level necessity, which are to be defined according to the increase of social inclusions and of digital inclusion. If we consider the social results for certain sectors, excluded groups and social innovation areas as a starting point, the policies will be implemented more efficiently and more efficaciously. Any program which aims to approach digital exclusion should, therefore, consider these 6 key stages in order to be successful and sustainable: 1. Identify the main social challenges and the results desired in terms of social inclusion and equal opportunities; 2. Identify the socio-demographic and socio-cultural groups that are marginalized in terms of economic, social, civic, cultural and personal welfare of the identified results; 3. Identify to what extent the digital exclusion of these groups in terms of access, aptitude, motivation and content/commitment prevents the achievement of the desired results; 4. . Identify the best organizations and venues to reach it and to help the poorer ones; 5. Provide the resources for the organizations and people in these areas to remove the barriers to digital inclusions, identified according to item 3, for specific challenges these groups face; 6. Evaluate the implementations and success of these initiatives, analyzing whether the groups have a better civic position, economic, social, cultural and personal welfare as a result of their increased employability. The IT access types, alphabetization, motivation and employability can be correlated with certain social results for certain groups in certain countries. When reporting on the political implementation at this time, it is disconnected and it only seldom refers to removing the social investment objectives for specific groups that are highly exposed to the risk of social and digital exclusion.

3. CONCLUSIONS

Since the beginning of our research, we have proposed a complex approach to the problem in the current conditions of building the knowledge society by addressing the areas of smart specialization at the regional level in Romania, as a generator of economic growth of the regions. The conclusions of our research would be that the generation of this growth could be possible and real with the help of complex digitization processes. In short, we can appreciate that:

- In today's modern society, in the development of the regions an important role belongs to information technologies, telecommunications, and in these fields, Romania has a rich experience and results, but practically we face various social, bureaucratic, institutional phenomena that do not allow a real and viable development.
- Technology has a particular impact on employment in the economy as a whole, which is positive, provided that the mechanisms for translating technology into jobs.

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