

THE URBANIZATION IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

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Abstract

The sustainable development of a society also depends on the evolution of the population. The level of education of the members of a community influences the economic development of an urban community. The lack of human capital leads to imbalances in the labor market. Highly developed regions are polarized around developed urban areas. The respective regions are marked by high degrees of economic and social development. The article presents an analysis of the level of education of the population in the developed urban areas of the member countries of the European Union. The promotion of sustainable development can be achieved by people with a high level of education. Under these conditions, the importance that must be given to human resources increases. Also, another indicator of development whose evolution is analyzed is the degree of urbanization. Urban areas influence the efficient use of human resources. A high degree of urbanization makes the urban potential better utilized.

Keywords

Educational attainment level, degree of urbanization.

JEL Classification I25, O18

Introduction

Urban development envisages an interdependence between social, cultural, economic and environmental dimensions. Belonging to an urban community implies involvement both economically and culturally (Xie et al., 2020). Population growth, poverty and migration, along with waste and water scarcity, are aspects that urban communities should consider when developing sustainable development strategies. Demographic growth creates pressure on the environment. The degree of development of urban areas is increasingly dynamic. The expansion of cities can lead to environmental degradation. In order to reduce environmental pollution, urban communities play an important role. Sustainable development refers to both

social and economic as well as human aspects. In urban areas, increasing the importance given to social inclusion and quality of life influences the degree to which individual well-being is ensured. Also, people's resources and daily living are influenced by the quality of life and the quality of the environment. Their degradation can increase pollution and cause damage to the environment. Urban development must take into account the concept of sustainable development defined by the Brundtland Report. Thus, the needs of the present can be met, but the desires to satisfy their own needs by future generations must not be compromised either. The way in which the products are made, but also the way in which they are consumed, should not affect future generations. At the same time, the life of the population in the urban environment is influenced by climate change. Environmental problems can also occur due to the increase of population density in urban areas. All these aspects influence the degree of urbanization.

Increasing the degree to which resources are used can lead to the orientation towards sustainable development of an urban area. Urbanization, by increasing the population, leads to an increase in the consumption of goods and energy, but also of waste. The business strategies of the companies change as a result of the introduction of new technologies. The launch of new products and services is more advantageous for companies in the urban area. Increasing the size of cities and population density influence both their sustainability and liveability (Bush, 2020).

Literature review

At European level, new technologies have led to changes both in the labor force and in the field of education. The development of urban communities can be achieved through investments in education. The growing needs of technologies have led to an increase in the level of qualification of human capital (Burlacu et al., 2019). Acquiring the skills required in the labor market can be achieved through the implementation of new vocational education and training programs (Profiroiu et al., 2019). In this sense, lifelong learning is becoming more and more important (Cedefop, 2018). The emphasis on knowledge increases with the implementation of new manufacturing technologies. People with a high level of qualification are increasingly looking for employment (Bodislav et al., 2019). The tasks that employees must fulfill are becoming more complex. For this reason, there was a need to update the skills (Costache et al., 2015). Non-involvement in this process can produce different degrees of development of urban areas.

Investments in research, as well as the capacity for innovation of human capital, influence the processes of production and lead to economic growth (Castagna et al., 2010). Those urban areas where the job offer is higher allow for higher levels of qualification (Rădulescu et al., 2018). The flexibility of education and training programs is becoming a necessity. The existence in a community of a high percentage of people with a high level of education is influenced by the level of investments in education programs (EC, 2017b).

Globalization influences the educational, economic and social processes (Burlacu et al., 2018). Each urban area must be specifically addressed so that interventions lead to the development of that urban area (UNESCO, 2016). Depending on the share of the population living in urban areas, the administrative units are classified as follows: cities, towns and suburbs and rural areas (EC, 2016; EC, 2017a). Cohesion policies promoted by the European Union aim to reduce the social and economic differences between its regions (EC, 2019). Uncontrolled urbanization influences the environment of cities, contributing to the manifestation of climate change in the respective areas (Wan et al., 2020).

The urban environment is considered to be oriented towards those industries that do not create pressures on the environment (Bran et al., 2018), which have a lower energy consumption, with reduced greenhouse gas emissions (Hao et al., 2020). But nonetheless, urban areas also have the great advantage of providing both efficient housing and transportation. Also, urban

areas provide the labour force and infrastructure needed to carry out economic activities (Torres-Martinez et al., 2020). Urbanization also affects agriculture. Urban expansion and urban enterprises can put pressure on agricultural producers (Satterthwaite et al., 2010). In most developed countries, one consequence of industrialization was the transformation of urban land. These aspects have contributed to the manifestation of economic opportunities (Fan et al., 2020). A reduced entropy is determined by a limited availability of natural resources. Thus, changing economic conditions in urban areas should allow the manifestation of economic interactions (Bran et al., 2014).

Methodology of research

The article addresses sustainable development from the point of view of education. Thus, an analysis of the level of education of the population in urban areas in the member countries of the European Union is offered, for the period 2009-2018. The comparative situation for population from cities and population from towns and suburbs is highlighted separately. Also, an analysis of the evolution of the degree of urbanization for the member countries of the European Union was carried out, for the period 1960-2018.

Results and discussions

Urban areas should provide job opportunities and increase the quality of life of the population (EU, 2016). The urban agenda for the EU considers that cities can offer innovative solutions that lead to the generation of new economic opportunities. The Amsterdam Pact aims to increase the quality of life of the population in the European Union. Urban mobility, employment and skills acquisition are other priority topics of the Urban Agenda. Thus, education is of particular importance. For cities, population from 15 to 64 years by educational attainment level is presented in the Table 1 (%).

Countries	Less than primary, primary and lower secondary education (levels 0-2)		Upper second secondary education (le	lary and post- non-tertiary evels 3 and 4)	Tertiary education (levels 5-8)	
	2009	2018	2009	2018	2009	2018
European Union	29,2	23,8	44,5	41,0	26,4	35,2
Austria	23,5	19,9	55,0	42,4	21,5	37,7
Belgium	33,5	29,4	35,8	32,5	30,6	38,1
Bulgaria	16,8	12,5	54,7	51,5	28,5	36,0
Croatia	15,8	10,2	62,6	54,3	21,6	35,5
Cyprus	26,9	18,1	37,8	36,1	35,3	45,8
Czechia	13,2	10,6	67,0	56,6	19,8	32,8
Denmark	25,9	19,7	39,1	36,0	35,0	44,2
Estonia	13,2	11,9	49,0	43,5	37,8	44,7
Finland	20,5	15,7	40,7	40,2	38,8	44,1
France	31,4	23,7	37,2	36,5	31,5	39,8
Germany	23,0	20,4	52,2	48,8	24,8	30,9
Greece	29,7	19,9	45,2	46,1	25,2	34,0
Hungary	15,9	11,5	56,9	53,0	27,2	35,5
Ireland	26,5	18,0	35,1	33,3	38,4	48,7
Italy	43,7	36,0	40,4	41,1	16,0	22,9
Latvia	15,5	11,1	56,1	52,3	28,3	36,7
Lithuania	12,8	7,8	51,1	43,0	36,1	49,2
Luxembourg	28,5	16,8	35,4	18,7	36,0	64,5
Malta	62,0	45,0	24,8	30,5	13,2	24,5
Netherlands	31,3	24,1	38,8	38,6	29,9	37,2

Table no. 1 Comparative situation of educational attainment level for population from
cities, 15 to 64 years, 2009-2018, (%)

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Poland	12,7	9,5	60,6	50,3	26,7	40,2
Portugal	62,3	43,1	20,0	28,5	17,7	28,5
Romania	15,3	12,0	64,0	57,7	20,7	30,3
Slovakia	11,6	8,9	65,3	53,3	23,1	37,8
Slovenia	14,8	12,8	56,2	48,3	29,0	38,9
Spain	42,2	34,7	25,2	25,9	32,7	39,4
Sweden	20,2	18,1	40,9	35,5	38,8	46,4

Source: own processing according to data published by Eurostat, 2020

In Table 1, for tertiary education (levels 5-8), we can see increases in values for all the member countries of the European Union. The highest increases were registered in: Luxembourg (+28,5%), Austria (+16,2%), Slovakia (+14,7%), Croatia (+13,9%), Poland (+13,5%), Lithuania (+13,1%), Czechia (+13,0%). At the same time, the lowest increases were registered in: Finland (+5,3%), Germany (+6,1%), Spain (+6,7%), Italy (+6,9%), Estonia (+6,9%), Netherlands (+7,3%). In 2018, the countries with the highest values of the population from cities with tertiary education are: Luxembourg (64,5%), Lithuania (49,2%), Ireland (48,7%), Sweden (46,4 %), Cyprus (45,8%), Estonia (44,7%). At the same time, the lowest values were registered in: Italy (22,9%), Malta (24,5%), Portugal (28,5%), Romania (30,3%), Germany (30,9%), Czechia (32,8%).

For towns and suburbs, population from 15 to 64 years by educational attainment level is shown in Table 2 (%). From the data presented, for less than primary, primary and lower secondary education (levels 0-2), it is observed that only in Luxembourg the values increased (+4,6%), in the rest of the member states of the European Union, compared to since 2009, in 2018 the values have decreased. Thus, compared to 2009 figures, the lowest decreases were registered in: Germany (-1,3%), Romania (-1,5%), Latvia (-1,7%), Estonia (-1,8%), Lithuania (-2,5%). Also, in 2018, compared to 2009, the most significant decreases in values were recorded in: Portugal (-23,1%), Croatia (-18,5%), Malta (-18,3%) , Bulgaria (-8,8%), Spain (-7,6%), Cyprus (-7%). However, in 2018, the countries in which the population of towns and suburbs with less than primary, primary and lower secondary education were the most: Portugal (51,6%), Spain (46,3%), Italy (41,9%), Malta (41,1%), Luxembourg (31,3%), Netherlands (28,5%).

	Less than primary, primary and lower secondary education (levels 0-2)		Upper second secondary education (le	lary and post- non-tertiary evels 3 and 4)	Tertiary education (levels 5-8)		
Countries	2009	2018	2009 2018		2009	2018	
European Union	34,8	28,2	46,8	47,9	18,4	23,9	
Austria	23,3	19,2	61,9	51,9	14,8	28,9	
Belgium	30,8	25,4	40,9	39,7	28,3	34,9	
Bulgaria	28,9	20,1	56,2	59,1	14,9	20,8	
Croatia	36,0	17,5	57,4	63,1	6,6	19,4	
Cyprus	32,1	25,1	41,2	40,1	26,7	34,8	
Czechia	15,8	12,6	72,3	67,5	11,9	19,9	
Denmark	33,6	27,5	40,6	42,5	25,8	30,0	
Estonia	18,6	16,8	45,2	51,3	36,2	31,9	
Finland	22,0	18,2	44,6	47,2	33,4	34,6	
France	32,4	25,6	45,1	45,0	22,5	29,3	
Germany	21,8	20,5	58,2	56,9	20,1	22,6	
Greece	31,2	26,4	43,8	44,0	24,9	29,6	
Hungary	23,1	20,0	60,3	59,9	16,7	20,1	
Ireland	26,6 (2012)	21,0	36,7 (2012)	40,9	36,7 (2012)	38,1	

Table no. 2 Comparative situation of educational attainment level for population fromtowns and suburbs, 15 to 64 years, 2009-2018, (%)

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Italy	18.8	/1 0	40.3	13.3	10.0	14.7
Italy	40,0	41,9	40,5	43,5	10,9	14,/
Latvia	15,9	14,2	48,4	54,8	35,7	31,0
Lithuania	14,1 (2012)	11,6	59,8 (2012)	55,8	26,1 (2012)	32,6
Luxembourg	26,7	31,3	43,4	37,0	29,9	31,6
Malta	59,4	41,1	28,9	34,5	11,7	24,4
Netherlands	35,0	28,5	44,0	43,3	21,0	28,2
Poland	18,5	12,0	66,4	61,7	15,1	26,3
Portugal	74,7	51,6	15,7	28,0	9,7	20,4
Romania	25,7	24,2	64,6	63,8	9,8	12,0
Slovakia	15,6	12,2	70,9	65,1	13,5	22,6
Slovenia	20,3	16,2	60,5	54,5	19,2	29,3
Spain	53,9	46,3	22,2	24,8	24,0	28,9
Sweden	26,4	21,8	45,7	44,1	27,9	34,1

Source: own processing according to data published by Eurostat, 2020

From the data presented in Table 2, for upper secondary and post-secondary non-tertiary education (levels 3 and 4), it is observed that compared to 2009, in 2018 the values decreased for: Austria (-10%), Luxembourg (-6,4%), Slovenia (-6%), Slovakia (-5,8%), Czechia (-4,8%), Poland (-4,7%), Lithuania (-4%). Also, the values increased in: Portugal (+12,3%), Latvia (+6,4%), Estonia (+6,1%), Croatia (+5,7%), Malta (+5,6%), Ireland (+4,2%), Italy (+3%). In 2018, the countries with the highest population values from towns and suburbs with upper secondary and post-secondary non-tertiary education are: Czechia (67,5%), Slovakia (65,1%), Romania (63,8%), Croatia (63,1%), Poland (61,7%), Hungary (59,9%). At the same time, the lowest values were registered in: Spain (24,8%), Portugal (28%), Malta (34,5%), Luxembourg (37%), Belgium (39,7%), Cyprus (40,1%). In Table 2, for tertiary education (levels 5-8), we can see increases in values for all the member countries of the European Union, except Estonia and Latvia, where the values decreased by -4.3% and -4.7 respectively. %. The highest increases were registered in: Austria (+14,1%), Croatia (+12,8%), Malta (+12,7%), Poland (+11,2%), Portugal (+10,7%), Slovenia (+10,1%), Slovakia (+9,1%). At the same time, the lowest increases were registered in: Finland (+1,2%), Ireland (+1,4%), Luxembourg (+1,7%), Romania (+2,2%), Germany (+2,5%). In 2018, the countries with the highest values of the population from towns and suburbs with tertiary education are: Ireland (38,1%), Belgium (34,9%), Cyprus (34,8%), Finland (34,6%), Sweden (34,1%), Lithuania (32,6%). At the same time, the lowest values were registered in: Romania (12%), Italy (14,7%), Croatia (19,4%), Czechia (19,9%), Hungary (20,1%), Portugal (20,4%).

Countries	1960	1968	1976	1984	1992	2000	2008	2018
European	1900	1700	1970	190.	1772	2000	2000	2010
Union	61,20816	64,93035	67,7174	69,56794	70,72922	71,76965	73,56551	75,66565
Austria	64,72	65,159	65,351	64,57	62,417	60,213	57,966	58,297
Belgium	92,46	93,569	94,6	95,835	96,542	97,129	97,555	98,001
Bulgaria	37,1	49,768	58,526	64,099	67,056	68,899	71,622	75,008
Croatia	30,154	38,076	44,545	48,937	51,588	53,428	54,819	56,947
Cyprus	35,628	39,726	49,563	64,252	67,598	68,648	67,839	66,81
Czechia	59,548	63,456	71,018	75,394	75,03	73,988	73,394	73,792
Denmark	73,687	78,698	82,6	84,243	84,898	85,1	86,487	87,874
Estonia	57,533	63,577	68,106	70,558	70,86	69,368	68,351	68,88
Finland	55,29	62,106	68,634	75,015	80,128	82,183	83,299	85,382
France	61,88	70,238	72,997	73,575	74,401	75,871	77,868	80,444
Germany	71,384	72,147	72,617	72,943	73,36	74,965	76,575	77,312
Greece	55,936	62,543	67,429	70,327	71,757	72,716	75,568	79,058
Hungary	55,911	59,276	62,65	64,915	65,587	64,575	67,943	71,351
Ireland	45,184	48,956	53,975	56,115	57,293	59,155	61,141	63,17
Italy	59,361	63,309	65,844	66,846	66,742	67,222	68,092	70,438

Table no. 3 Evolution of the degree of urbanization, 1960-2018, (%)

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Latvia	52,867	59,175	64,826	68,283	68,852	68,067	67,834	68,142
Lithuania	39,46	47,507	56,915	64,277	67,464	66,986	66,848	67,679
Luxembourg	69,556	73,425	77,867	80,613	81,528	84,216	87,8	90,981
Malta	90,129	89,682	89,751	89,82	90,611	92,368	93,929	94,612
Netherlands	59,752	61,3	63,498	66,319	70,223	76,795	85,402	91,49
Poland	47,892	51,326	55,929	59,573	61,359	61,716	61,116	60,058
Portugal	34,955	38,025	41,179	44,777	49,13	54,399	59,359	65,211
Romania	34,209	39,328	43,339	48,926	54,227	53,004	53,567	53,998
Slovakia	33,464	39,435	47,331	53,711	56,719	56,233	55,111	53,726
Slovenia	28,204	35,169	43,499	49,424	50,543	50,754	52,209	54,541
Spain	56,567	64,168	70,231	73,982	75,61	76,262	77,976	80,321
Sweden	72,49	79,519	82,802	83,1	83,361	84,026	84,746	87,431

Source: own processing according to data published by World Bank, 2020

Another important indicator of development is the degree of urbanization. It is considered that a high degree of urbanization makes human resources more efficiently used. Table 3 presents the evolution of the degree of urbanization, for the period 1960-2018 (%).

It is noted that in 1960, the countries with the highest levels of urbanization were: Belgium (92,46%), Malta (90,129%), Denmark (73,687%), Sweden (72,49%), Germany (71,384). Compared to 1960, in 2018, the countries with the highest degree of urbanization are: Bulgaria (+37,908%), Netherlands (+31,738%), Cyprus (+31,182%), Portugal (+30,256%), Finland (+30,092%). It is noted that in the period 1960-2018, in Bulgaria, the degree of urbanization has doubled (from 37,1% to 75,008%). The lowest increases are observed for: Malta (+4,483%), Belgium (+5,541%), Germany (+5,928%). At the same time, in Austria, the degree of urbanization decreased from 64,72% (in 1960) to 58.297% (in 2018).

Also, in 2018, the highest values were registered in: Belgium (98,001%), Malta (94,612%), Netherlands (91,49%), Luxembourg (90,981%), Denmark (87,874%), Sweden (87,431%), Finland (85,382%), France (80,444%), Spain (80,321%).

In 2018, the countries with the lowest levels of urbanization are: Slovakia (53,726%), Romania (53,998%), Slovenia (54,541%), Croatia (56,947%), Austria (58,297%).

In view of the information presented above, the following figure shows the evolution of the degree of urbanization for Austria and Bulgaria (%).



Fig. no. 1 Evolution of the degree of urbanization for Austria and Bulgaria (%) Source: own processing according to data published by World Bank, 2020

Thus, for the period 1960-2018, the trend for Austria is decreasing, and for Bulgaria the trend of urbanization is increasing.



Conclusions

Both education and the workforce are changing as a result of the emergence and use of new manufacturing technologies. The labor force market in the urban area requires people with a high level of qualification. The complexity of the tasks that employees have to perform are becoming more complex.

From the analysis presented, it was found that in the member countries of the European Union, for both cities and towns and suburbs (with two exceptions), the percentage of the population from 15 to 64 years with tertiary education (levels 5-8) increased. Also, for both cities and towns and suburbs (with one exception), the percentage of the population from 15 to 64 years with less than primary, primary and lower secondary education (levels 0-2) decreased.

Regarding the degree of urbanization, the analysis shows that, if in 1960 ten countries registered values below 50%, in 2018, all the member countries of the European Union had an urbanization degree of at least 50%.

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