

STRUCTURAL CHANGES IN THE ROMANIAN ECONOMY - OPPORTUNITIES FOR NEW WORKPLACES

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ABSTRACT

Structural reforms in the economy, infrastructure quality are an important dimension of the provision of infrastructure in a country, as it improves the efficiency and effectiveness of network services. The quality of the infrastructure means, among other things, the ability of businesses to secure their goods and services in a safe and timely manner in the case of transport and the absence of interruption in the case of energy. It is difficult to measure because it is inherently related to the services it provides. In this article we intend to review the evolution of priority structural transformation in Romania, and new opportunities for structural reforms in Romania, in which we intend to address some aspects of international experience and new opportunities for structural reform has implementation 5G Strategy for Romania, Strategy regarding the modernization of the Romanian educational infrastructure 2017-2023

KEYWORDS: *Structural reforms, structural changes, quality of the infrastructure*

1. INTRODUCTION

The lack of structural reforms, fiscal-budgetary consolidation, the dynamic economic growth registered by Romania, generated mainly by consumption, and investments at a modest level, require us to start a series of actions and urgent measures to enter into real development, sustainable economic growth and favorable to exclusion. However, the cyclical revival of the economy continued in 2017, but in 2018 it is expected to decrease. The growth of real GDP accelerated in 2017, reaching the highest value after the crisis, against the backdrop of expanding private consumption, this being stimulated by the public and private sector wage increases and by the reductions of indirect taxes.

The respective results, of course, also reflected on the labor market, which with the economic growth has also become a more rigid market. (Faggianelli et al., 2018). The increase in the employment rate was positive in 2017 (0.7%), and the unemployment rate fell to 4.9%, being the lowest level recorded in the last 20 years.

In the field of public finances due to tax cuts, public sector wage increases and pensions and the gradual decrease in public debt. In 2017, the indirect taxes, the share of the income tax were reduced, for the natural persons - decreased since January 2018. Although the financial sector consolidation continued, some directions are to be monitored (Burlacu 2009; 2010; 2011; 2018; 2019).

Progress on ensuring the implementation of the national fiscal-budget program with little progress on strengthening fiscal compliance and making tax collection more efficient (Ioniță et al., 2009a).

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Although the banking sector has a good capitalization and the quality of assets has improved the financing and credit of entrepreneurship especially in rural areas remains underfunded (Burlacu & Jiroveanu, 2011; 2012).

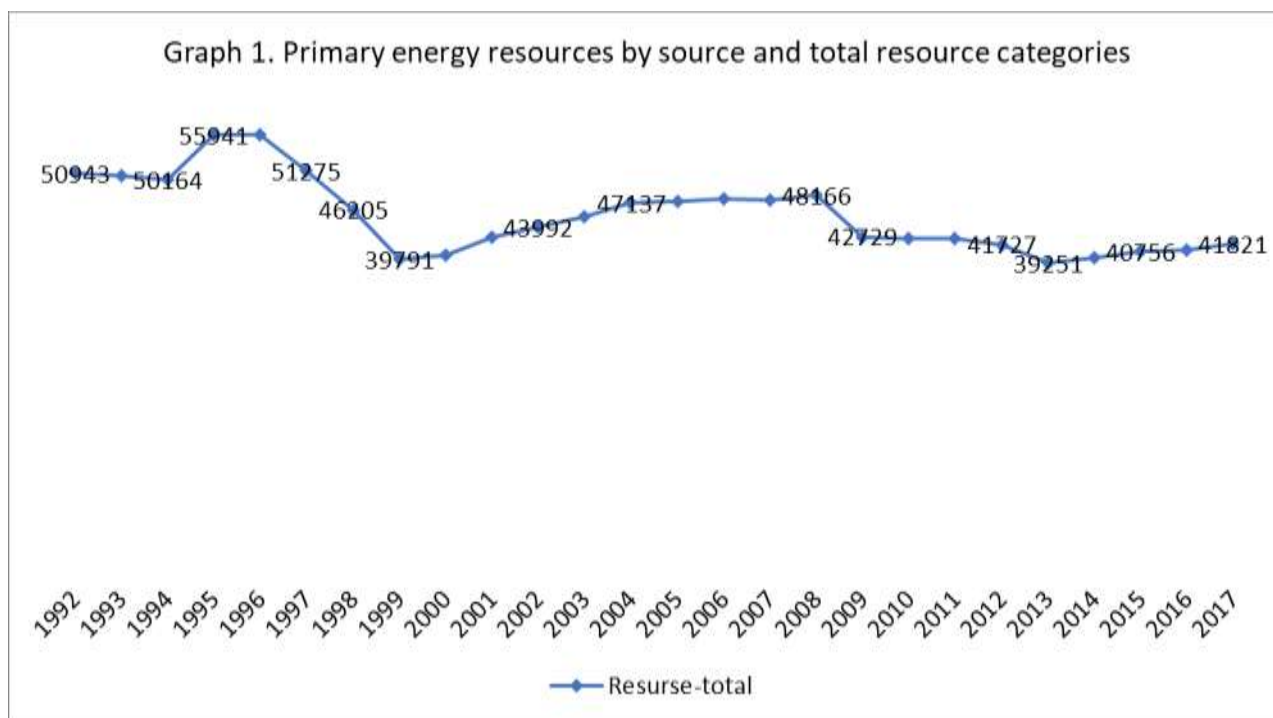
In achieving the national objectives of the Europe 2020 Strategy, Romania has good results in the fields of employment rates, national emissions of greenhouse gases, energy from renewable sources, energy efficiency and tertiary education. The national objective of reducing the number of people at risk of poverty and social exclusion has been achieved (Faggianelli et al., 2018).

Regarding the intensity of research and development, of early school leaving, the objectives remain quite modest and will have to be met (Costache et al., 2015). In addition, Romania faces challenges regarding the indicators in the social dashboard - the foundation of the European Pillar of Social Rights (Carra et al., 2016).

Although employment has improved, and the available incomes of households have increased, we still have in Romania many people who leave school early, many young people are not professionally employed and do not follow an educational or vocational training program. Social dialogue remains more formal, with multiple issues in the field of social protection and inclusion.

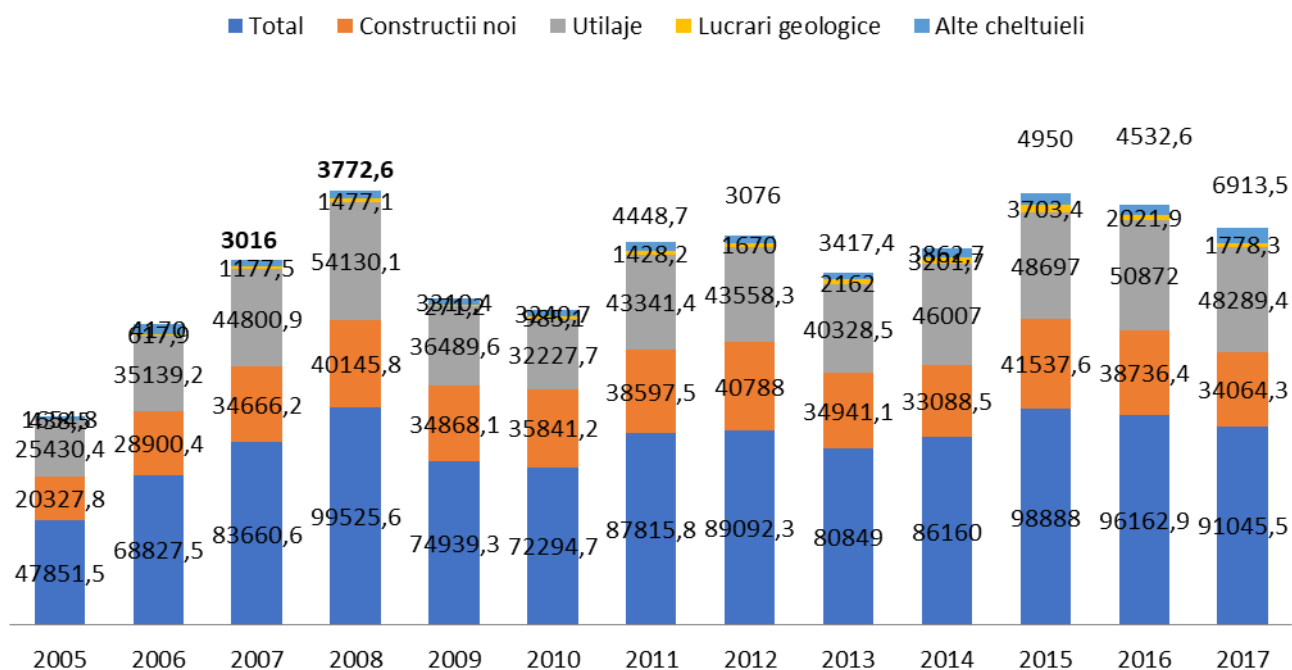
2. EVOLUTION OF PRIORITAR STRUCTURAL TRANSFORMATIONAL

Among the important structural aspects, which reflect the existence of specific challenges for the Romanian economy, we have - The supply of labor and skills does not keep up with the needs in the changes in the economy (Ionita & Burlacu, 2009). Demographic trends are still not favorable, poverty is expanding, income inequality is still high (Bran et al., 2018a). Inequality of opportunity remains a challenge, especially in rural areas (Rădulescu et al., 2018a, b). The income inequality is high, and the effect of the redistribution of the tax system and social benefits is below the EU average . No concrete results have been obtained regarding the reforms of the public administration, and the business environment has weaknesses (Ioniță et al., 2009b).



Source: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table-ND107A> - Primary energy resources from sources and categories of resources

Chart 2. Structural evolutions in the basic branches of the Romanian economy during 2005/2017



Source: www.insse.ro

Table 1. Length of public roads, by category of roads, types of coverage, (km) during the period

	1991	1992	2000	2007	2013	2014	2015	2016	2017	2018
Total	72816	72816	78479	80893	84709	85184	85920	86080	86099	86234
Modernized	16592	16905	19418	22042	29166	30247	32648	33928	34900	36689
From modernized: Highways	:	:	113	281	644	683	747	747	763	823
With light road clothing	20544	20506	19999	21397	22249	22127	21200	21068	21074	21298
Paved	:	:	26633	25347	22287	21935	21506	20660	20037	18714
Of earth	:	:	12429	12107	11007	10875	10566	10424	10088	9533

Source: www.insse.ro

From table 1, we observe that Total length of public roads, by category of roads, types of coverage, (km) during the period increased from 72816 km in 1991, to 86 234 km., The modernization from 16592 km. 36689 km., From modernized: Highways 113 km. in 2000, at 823 km. in 2017. With light road clothing without major changes, from 20544 km. in 1991, at 21,298 km. Paved of earth, 12429 km. in 2000, from 9533 km. in 2017

For adequate economic development, the infrastructure needs are high. The OECD predicts that the need for global infrastructure will be raised in the coming decades, given the increase in air traffic. Expectations are quite high from air traffic, shipping, rail - passengers and freight will increase both globally and at European level. European infrastructure will play an important role in connecting

and integrating markets, in ensuring the transition to a low-carbon circular economy in Romania, the situation is evolving in various areas as follows (*Business environment and public investments*). *Business environment* Romania's business environment deteriorates. Romania fell nine rows in the World Bank's Doing Business Report 2018, to 45 (World Bank, 2017a), while in the Report on global competitiveness it dropped from 62 to 68 (World Economic Forum, 2017). Performance remains particularly poor in terms of governance, workforce qualification, infrastructure, health and education. In this environment, more companies expect a reduction in investment activity than an expansion in the near future (European Investment Bank, 2017). *Public investments*. Investment expenses require greater efficiency to achieve results. Investments have been robust over the last decade and especially after EU accession, when the country became one of the main beneficiaries of EU structural and cohesion funds. However, the high inefficiencies in public investment management have resulted in a slow absorption of EU funds and have prevented the country from fully taking advantage of the increased benefits of capital expenditures and improving the quality of its infrastructure.

According to the study: "The need for investment in the EU is estimated to be raised and refers to both private and public investments. The evolution has been identified in a wide range of sectors, including production, education and healthcare (3). There is a case of increased investments in ICT R&D, innovation and ICT infrastructure, as these are important factors of growth and competitiveness. The digitization of the economy contributes to accelerating productivity growth through several channels, including the investment one". The report shows that there are arguments for increasing investments in more traditional sectors, such as energy and transport. Networks have always played an important role in the economy, as providers of services and infrastructure. Transport networks connect producers and consumers with markets, while energy networks provide essential resources for production and consumption. Energy and transport infrastructure is an essential contribution to the production of an economy, which is complementary to other inputs, labor and capital. The economic importance is reflected in the weight of the total investments directed to these sectors; the share of investments in energy and transport in total gross fixed capital formation. Secondly, they play a vital role in the integration and efficiency of the EU internal market. Investments in cross-border energy infrastructure are needed to improve the EU's energy security and market functioning. Thirdly, energy and transport are essential for the strategic transformation of the EU towards a medium and long term low carbon economy. Investment needs in energy and transport infrastructure remain high in the near future. The debate on the need and merits of stimulating infrastructure investments has intensified in the context of the slow post-crisis economic performance of EU Member States and the associated need to stimulate economic growth. *The contribution of infrastructure to economic growth has become a crucial issue in this period of recession, considering both the challenges of fiscal consolidation and the search for new ways to stimulate economic growth.* Demand for infrastructure investments has been further strengthened in light of low current borrowing costs, which, according to recent contributions, could make infrastructure investments even budget-neutral under certain macroeconomic conditions. The report analyzes the macroeconomic impact of expanding infrastructure networks in the EU, focusing on domestic transport and electricity infrastructure, and evaluates the investment patterns in these sectors in a post-crisis context. Measures have been taken to strengthen the capacity of the public employment service, while the reform plans (especially on the merger of these services with other institutions) may cause some uncertainty in the reform process. Limited skills for estimating qualifications could further affect the supply of labor market. The current assessment of the skills on which the training programs are based is carried out through a standard procedure, which, however, does not sufficiently take into account the rapidly changing needs in the economy (Cedefop, 2017). The ability to anticipate future skills needs and to estimate the expected impact of new technologies, such as important data, biotechnologies, waste reuse technologies, advanced manufacturing, as well as public sector innovations, is therefore weak.

2.1 Vocational education and training are not well linked to the needs of the labor market.

These factors will turn into lost growth opportunities if they are not admitted and assuming that the negative demographics of the country are not reversed. External school evaluation and higher education face continuous challenges. Quality assurance in school education remains largely focused on compliance, due to fragmentation and overlap in responsibilities.

In the traditional telecommunications sector, (European Commission, 2015) we observe the decline of traditional telecommunications services resulting from digitization and the replacement of analog technologies. This means that traditional activities and occupations, such as radiotelegraph and telecommunications technicians, are not required to the same extent as before due to the progress of telephony over Voice over IP, OTT and other new services using existing telecommunications infrastructure. To some extent, we can talk about the "cannibalization" of traditional telecommunications activities through products based on Internet-based technology. In some respects, the ICT sector can be considered a mobile target in terms of employment and borders. For example, the labor force in the basic ICT sector is significantly outperformed by ICT workers in the user sectors, such as the media, financial services, production, retail, logistics, health services, etc.

The technological trend of digitalization, ICT is today a key feature in everyday life and Business. The functions, positions and functions specified in the ICT field quickly form a basis for the workforce, even in traditional sectors, such as textiles or agriculture (not to mention retail with online web portals or the auto industry). Therefore, in general, the digitization of the economy leads to a change of boundaries and makes the definition of the ICT sector relatively complex. The study explored three different definitions of the sectors: A narrow definition, which includes NACE codes 61 (Telecommunications), 62 (Computer programming, consulting and related activities), 63 (Information service activities) and 82.20 (Call center activities); A definition of the average range according to the OECD definition; A broad definition, as provided by the International Telecommunication Union (ITU) in 2012. The results of this study indicate that a definition of the medium range according to the OECD1 Definition (with the subsectors: telecommunications, ICT production, ICT) services and call centers) is preferred and best captures the current and future economy trends in the telecommunications and ICT sectors. The interviewed actors indicate that the narrow definition is outdated and does not include the activities that are present in today's sector. Therefore, a definition is needed that balances sufficient flexibility to cover emerging activities. As a consequence of the development of the sectors, the definition can also be a useful tool in determining the best possible dialogue between relevant stakeholders for both sectors. It should also be noted that the call center subsector needs further analysis in this regard, as it uses telecommunications and ICT tools rather than developing it.

The National Reform Program (N.R.P., 2018 p. 5) (Romanian Government, 2018) is the framework platform for defining the development priorities that guide Romania's evolution until 2020, to reach the objectives of the Europe 2020 Strategy and to define the structural reforms to meet the challenges that Romania faces. The national reform program 2018 has been elaborated in accordance with the EC1 guidelines, taking into account the priorities established in the Annual Growth Analysis 2018 (GMS), the country specific recommendations 2018 (CSR) 3 and the Country Report Romania 2018. The national program Reform 2018 aims to capitalize on the growth potential through increasing competitiveness and productivity, strengthening social and territorial cohesion, creating new jobs - all aimed at reducing the gaps in economic development compared to other EU Member States (EU). *Efficient management of public investments*. The measures aimed at improving the legislation regulating the prioritization of an important public investment projects continued in 2017. In August, the Ministry of Finance finalized the elaboration of a revised version of the normative act for completing and amending the methodological norms regarding the prioritization of public investment projects (Government Decision HG no. 225 / 2014) and presented it at the endorsement circuit. The draft normative act that will improve the budgetary planning and the predictability of public investment projects is currently awaiting approval by the

ministries, which are to be adopted and published in the Official Journal of Romania by the end of the III quarter 2018.

With regard to the process of rationalizing the public investment portfolio, in 2017 the Ministry of Public Finance (MPF) started a pilot exercise in Romania cooperating with Ministry of Transport, to test the mechanisms and rationalizing the criteria proposed by the WB within the technical assistance project entitled Improving the management of public investments (implemented in the year 2014 - 2015). In this respect, a joint MFP-MT order establishing a working, organizing and functioning regulation has been drafted and approved; so far, the group has had several meetings regarding the quality of the information needed to carry out the analyzes, the discussions being mainly focused on the quality of the information provided by MT. By the end of 2018, the working group will complete its activities, and the rationalization criteria will be approved by the management of the MPF, and are included in the legal act.

In order to develop the skills of staff working with public investment projects, a technical assistance project was carried out in 2017 through the Structural Reform Support Program (SRSP); 11 employees from the Public Investment Evaluation Unit (UEIP) - MPF were trained in the field of public investment management.

In addition, two employees are currently working on the new structure set up within the MFP to provide professional assistance to the contracting authorities regarding the preparation, award and implementation of public investment projects - Public Investment Management Directorate; by the end of Q2 / 2018, a competitive selection process for four additional positions will be initiated (approved by me memorandum in December 2017).

For the National Program for Local Development (PNDL) (Romanian Government (2017)) a second stage was established¹², firstly following the balanced distribution of funds from the state budget by counties, based on indicators¹³, and subsequently, their distribution in counties in several stages, taking into account the guiding principles for project selection. The correlation of the sources of financing, the avoidance of overlapping funds and the harmonization of the technical selection criteria for the investment projects remains in the attention of the MRDPA in the next period. The model for allocating the amounts approved by the annual budget law for the financing of PNDL, used in 2017, was established in accordance with the priorities of the Governance Program, with the EU the requirements and obligations assumed by the Treaty of Romania's accession to the European Union regarding the compliance with the directives. European and WB recommendations on prioritizing public investment criteria, taking into account current economic and social realities.

This allocation model was adapted according to one of the models proposed by WB¹⁴, in order to increase the share of funding for social objectives (for example, schools, medical institutions) for endowment of rural areas and to increase the funding share for county roads, essential for the local road transport network while connecting all localities to functional urban areas. In addition, for the county roads there is no other funding source except for the ROP, which offers insufficient funding compared to the needs identified by the World Bank experts at national level.

In 2017, the normative framework regarding the acceptance of construction works was improved by the adoption of Government Document HG no. 343/2017 (Romanian Government, 2019). In addition, expert services were contracted for the cost standard for civil buildings were taken and measures were taken to justify the purchase of services to obtain 10 standard costs¹⁶, in 2018.

In order to reach the objectives of the National Competitiveness Strategy (NCS), by Q2 / 2018 the following documents will be elaborated within a project funded by ACOP⁹⁸: The Economic Atlas of Romania (EAR), as an instrument to be used in the process of substantiation of evidence-based public policies, Romania's Industrial Policy Until 2020, which will establish priorities and directions for the re-industrialization of the Romanian economy and the system for monitoring and evaluating the impact (at all stages) of public policies with an impact on the political industry. So far, the system for developing, monitoring and evaluating the impact (at all stages) of evidence

based on public policy has been completed; Seven ex-ante analyzes of the specific objectives for the elaboration of the industrial policy document have been finalized, as well as the specifications for the realization and implementation of the requested EAR, it is done through the interinstitutional approval procedure. In order to increase the competitiveness of the SMEs in the competitive sectors identified within the NCS and the regional sector, the development plans, the investment projects of the micro-enterprises in the urban area will be financed through the ROP with a total budget of 1,056.5 million lei. At the same time, approximately 400 SMEs will be supported for the creation and expansion of advanced production capacities and the development of services, corresponding to an allocation of 872 million lei. In order to support the entrepreneurial initiatives of SMEs in the fields of plant culture, animal husbandry and aquaculture, a program to stimulate production in the agricultural fields mentioned above is foreseen, by establishing a credit for developing business with state guarantees worth 80% from the production credit.

The duration of the program is eight years and about 10,000 farms and companies with activities within their fields will benefit from. In addition, tax facilities will be granted to agricultural cooperatives (farmers, farms - members of an agricultural cooperative), taking into account the regulations

Law on agricultural cooperatives. In order to increase labor productivity and the competitiveness of agricultural enterprises / farms in the EU the processing and marketing of agricultural food products, financed by the EAFRD 2014-2020, (Romanian Government, 2014) support for agriculture investments in farm development and diversification of the integrated agro-food chain continues.

According to Batyra et.al. (2016, 26) "the structural change in the labor markets comes is important not only in accounting for the rise in early retirement in Europe but also in matching the evolution of other labor market variables." Buchheim & Watzinger (2017) "estimate the causal impact of a considerable investment in the German infrastructure employment program at the county level. The program focused on improving the energy efficiency of school buildings, which makes it possible to use the number of school buildings as an investment tool. We find out that the program was efficient, creating a job for one year for every investment of EUR 25,000. Employment gains peaked after nine months and rapidly declined to zero after program completion. Unemployment reduction was two-thirds of job creation, and employment increased mainly in construction and non-marketable industries".

For Batyra et.al. (2016, 36) "[s]ince the onset of the Great Recession, the effectiveness of fiscal policy in stimulating economic growth and employment has again received special attention from economists and political decision-makers. Although there is new theoretical and empirical evidence on the macroeconomic conditions under which fiscal policy can generally be effective, the evidence regarding which types of specific policies are successful in stimulating job growth and growth is still scarce. The contribution of this paper must demonstrate that infrastructure investment programs can increase employment quickly and cost-effectively in the short term. Infrastructure investments can thus be viable to counter the slowdown in economic growth. However, the efficiency of investment programs can crucially depend on their design. The German investment program studied here has a special focus on financing the renovation of buildings. Building construction is an industry characterized by low levels of specialization and low geographical concentration compared to, for example, the construction of highways." In addition, the draft stimulus law underlined the projects implemented at local level and imposed a deadline for the completion of the project projects. Each of these factors may have contributed to the effectiveness of the program in job creation at the regional level. A question for future research arising from our activity is, therefore, whether there are specific characteristics of investment programs that make them more or less effective. A related question is how the effectiveness of public investment in job creation compares with job creation of other major instruments of fiscal policy, such as direct transfers to households or tax cuts. However, given that job creation is a major policy objective, it is important for decision

makers to know which of their tools are the most appropriate for achieving it. By evaluating the effectiveness of a specific policy, counter-cyclical investments, this paper takes a first step in answering this question. Further research is needed to inform decision-makers about the effects of employment on other policy instruments available to them.

2.2 New opportunities for structural reform are implementation 5G Strategy for Romania

The last two decades mark a period of extraordinary technological development, fueled by the advances made in the communications and information technology sector: the internet and mobile devices have taken root and have experienced a spectacular evolution in Romania and throughout the world, generating, with each new technological generation, more and more direct, indirect benefits and effects of multiplication at the level of savings and training at the level of companies.

Significant growth potential on the Romanian market. The exponential growth of mobile data traffic registered against the background of the massive spread of connections made through increasingly efficient terminals and the diffusion of LTE / 4G technology in the mobile networks in Romania

Emerging trends in Romania and globally. Europe has been a leader in the development and commercialization of many aspects of technologies currently widespread on a global scale, and Romania is taking full advantage of their availability. In the presence of advanced technologies, economies and societies are evolving rapidly.

We list the most popular trends: **Connectivity**; Ubiquitous Internet access; Business digitization; **The Internet of Things (IoT)** represents the next major economic and social innovation, after connectivity. **Network upgrades 6:** Most network upgrades are driven by the need to improve user experiences and streamline operations.

The 5G strategy for Romania has a high potential for capitalizing on synergies with national strategies / action plans in force in other sectors. Some synergies are more evident due to the specific cross-sectoral dependencies.

Distribution of benefits in the economic sectors of Romania In the impact study on the implementation of 5G in Europe, the business environment is expected to obtain 55% of the 5G benefits at the level of 2025. However, regarding the distribution of benefits at the sector level, the impact 5G is likely to be felt differently from one country to another and from one sector to another, depending on the intensity of use of advanced technologies and communications services in intermediate or final production.

2.3 Strategy regarding the modernization of the Romanian educational infrastructure 2017-2023

The education and training infrastructure is an essential factor of the educational process, which has a direct effect on the students (National Authority for Management and Regulation in Communications of Romania, 2018). The minimum standards of infrastructure ensure a basic level of quality, but research has shown that a significant part of the variation in student outcomes can be determined by differences in learning contexts. In Romania, decision makers face a series of challenges of a demographic, financial, social, organizational and educational nature, and at present there is no holistic approach to prioritizing investments in education infrastructure. The most important challenges in education in several countries around the world, including Romania, are related to the quality, relevance and efficiency of education and less access.

The austerity measures adopted in Romania as a result of the global financial crisis of 2008-2009 have significantly reduced public spending, including education expenses. At present, in the context of a decentralized approach, decisions regarding the construction, rehabilitation, modernization and extension of the education infrastructure in Romania are taken at different levels of the administration, which leads to inequalities, inefficiency and generates risks from the perspective of coordination, financing and regulation. At the same time, Romania must focus its efforts to reach

the objectives set by the EU in the field of education, in accordance with the specific national and regional development needs. In order to fulfill the conditionalities, the following national strategies have been elaborated: (i) Strategy for reducing early school leaving; (ii) The National Strategy for tertiary education 2015-2020; (iii) Lifelong learning strategy 2015 - 2020, (iv) Education and vocational training strategy in Romania between 2016-2020, approved by the Government of Romania (GR). The Partnership Agreement 2014-2020 provides that investments in education must be integrated into a national framework, taking into account demographic trends and labor market needs. Investment priorities in educational infrastructure, as outlined in the Partnership Agreement, include: • Supporting nurseries, kindergartens and schools in areas where enrollment rates or student performance are lower; Restructuring the VET network and improving the infrastructure of the community centers of lifelong learning for increasing efficiency, improving quality and increasing participation; Ensuring or improving basic conditions; Providing specialized teaching equipment and equipment for disadvantaged students, including students with special educational requirements. • Investments in infrastructure for the modernization and internationalization of university centers in areas with growth potential through the construction and modernization of research and innovation infrastructure, learning materials, new technologies and ICT.

3. CONCLUSIONS

We are about to assume the responsibility to continue the main structural reforms in the economy. Therefore, a priority role should be the responsibility of the national administration at all levels of decision to contribute to the concentration of the modernization efforts of the Romanian society, of the public institutions and of the economy as a whole, which will allow to support the social-economic convergence within the European Union. High public investments are accompanied by insufficient infrastructure. Romania has had one of the highest rates of public investment in the EU in the last decade. This would suggest an adequate provision of physical infrastructure. However, the recent achievements of the National Program for Local Development, the difference between investments and results in infrastructure, raising questions regarding the efficiency of public capital expenditures.

For the structural reform of the Romanian economy we can make the following conclusions.

European infrastructure will play an important role in connecting and integrating markets, ensuring the transition towards a low-carbon circular. Investment in public investment expenditure requires greater efficiency to achieve results.

Networks have always played an important role in the economy, and infrastructure providers. Transport networks connecting producers and consumers markets, while providing essential resources for energy production networks and consumption. Energy and transport infrastructure is an essential contribution to the production of an economy that is complementary to other inputs, labor and capital. Limited powers to estimate qualifications could still affect demand in the labor market.

The current assessment of the skills underlying the training programs is achieved through a standard procedure, which, however, does not take sufficient account of the rapidly changing needs of the economy. The ability to predict future skill needs and assess the expected impact of new technologies, such as important dates, biotechnology, waste recycling technologies, advanced manufacturing and innovation in the public sector are therefore weak.

Therefore, generally, digitization economy leads to a change of borders and makes the definition of the ICT sector relatively complex. Infrastructure investment programs can quickly and efficiently increase short-term returns. Thus, investment in infrastructure can be viable to counter the economic downturn. However, effectiveness of investment programs may depend crucially on their design. Further research is needed to inform policy makers on employment effects on other policy tools at their disposal.

A national priority that will come with radical changes in reforming its economic returns digital revolution, that today is important for Romania, the implementation strategy 5G Internet and mobile devices have taken root and evolved dramatically in Romania and worldwide generating, with each new generation technology, increasingly more direct benefits, indirect effects of multiplying the savings and training in companies. In the context of a decentralized approach, decisions on the construction, rehabilitation, modernization and expansion of education infrastructure in Romania are taken at different levels of government, leading to inequality, inefficiency and entails risks in terms of coordination.

Meanwhile, Romania should concentrate efforts to achieve the objectives set by the EU in education, in accordance with specific national and regional development. The many challenges facing the education system requires the adoption of a national strategy to modernize the educational infrastructure based on a holistic approach, rooted in evidence and which satisfies the requirements on the use of EU funds.

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