TAXATION, GLOBALIZATION AND TECHNOLOGICAL-INDUSTRIAL REVOLUTION - EFFECTS ON COMPANIES

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Abstract: *The paper aims to highlight the main fiscal changes in companies due to globalization and the technological revolution (digitalization), as well as the influence on the environment in which companies operate, respectively the obstacles / barriers and fiscal facilities necessary to continue their activity in a favorable economic environment. In this sense, we took into account the evolution of the implicit tax rate at the level of the European Union, in the period 2006-2018 (we used this type of rate because it captures the best the tax changes in the analyzed period), the methodology used being a descriptive one, by appealing to various bibliographic sources, mainly from foreign specialty literature.*

Keywords*: firms, implicit tax rate, market entry/ exit barriers, tax facilities, EU.*
Jel Classification*: F61, F62.*

1. Introduction

Globalization means, first of all, the opening of markets in the states of the world, namely the free movement of economic capital, but also the establishment of rules that facilitate trade between various countries and regions. However, although statistics show that the economy, companies and people (in part) benefited from the effects of globalization, these benefits are not automatic, nor are distributed equally among European regions and between citizens.

The positive effects of globalization on the economy as a whole (increasing jobs, quality of life, attracting foreign investment and thus improving the performance of companies, especially large ones) are well known, but also the negative ones, which affect categories of actors participating in economic life (by increasing inequalities, in the case of individuals, or, for companies, transferring profits / moving activity to areas with tax-friendly legislation, wealthy households can move their assets to tax havens).

Therefore, new business models should encourage entrepreneurial spirit, while ensuring fair competition conditions and the regulatory environment should be simple and favorable for entrepreneurs (especially SMEs).

Our objectives are to identify the tax effects of globalization and the technological revolution on companies, and in this context we use the implicit tax rate at EU level (which reflects the best the fiscal changes in the period analyzed), as well as measures to eliminate barriers in order the companies to continue their economic activity and to develop in a friendly economic environment.

2. Aspects regarding globalization and companies`s taxation. The Implicit tax rate (ITR)

Corporate income tax influences both the firms location and domestic and foreign direct investment. Tax rates, the way in which the tax base is defined and the issues related to tax compliance are determinants of the economic effects of taxation. The tax treatment of various sources of financing, the development of tax incentives and the time allocated by companies to tax compliance can influence productive investments. Profit tax differences can cause multinational companies to shift profits from high to low-taxation countries.

Effective tax rates reflect a wide range of factors that are not limited to corporate income tax, such as the elements of the tax base, the source of financing (debt, reported result or equity increase) and the asset in which investments are made (machinery, buildings, intangible assets, stocks and financial assets). There are important differences between the average effective corporate income tax rates, which range from 38,4% in France to 9% in Bulgaria.

The decision to increase or reduce investment is influenced by the effective marginal tax rate. The lower the effective marginal tax rate, the more investment-friendly the tax regime is. There are several ways to reduce the marginal effective tax rate and to design a tax system favorable to investment. These include: acceleration of fiscal amortization schedules or immediate accounting as expenses; offering the possibility to deduct capital costs; improving the conditions for carrying forward losses; granting fiscal incentives for research and development.

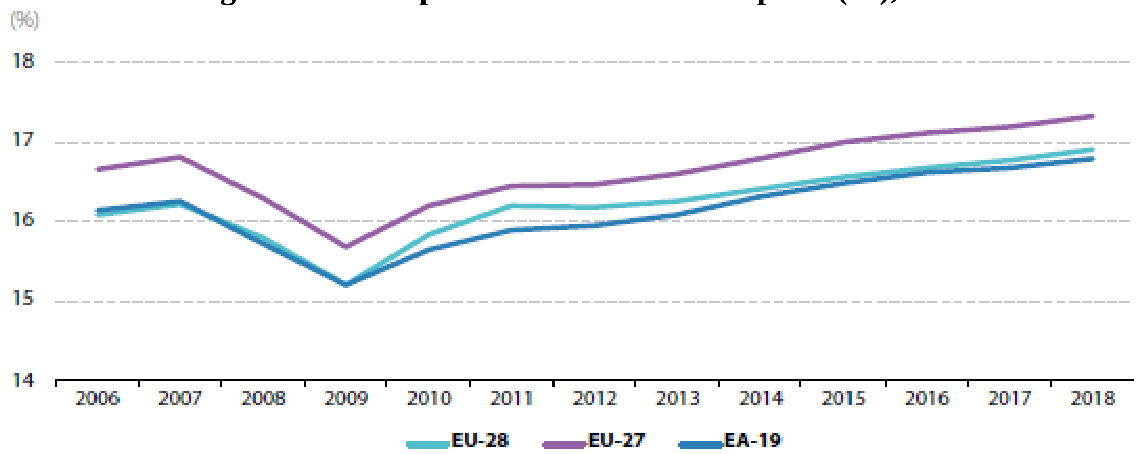
We will further analyze how globalization has affected taxation at European level, more precisely we highlight the level of implicit tax rates (ITR) on consumption, corporate income and employment in European countries, in the period 2006-2018 (data used in the Taxation Trends 2020 Report, European Commission).

We refer to the implicit tax rate, as it highlights the best the changes in the tax burden during that period. The companies statutory tax rates on capital or income "come" directly from the Fiscal Code, but do not take into account the taxable base. Effective marginal and average tax rates also use data from the Fiscal Code. They measure the tax burden on a hypothetical investment project based on real tax legislation.

There are big differences between tax rates across the EU. The implicit tax ratemeasures the average effective tax rate and thus incorporates the effects of tax rates and the width of the tax base, including various exemptions.

The differences between consumption tax rates, labor tax rates and corporate income tax rates are significant. In 2018, the implicit consumption tax rates ranged from 14% in Spain to 26% in Hungary, labor taxes (including social security contributions paid by both employer and employee) ranged from 25% in Bulgaria to 44% in Slovakia and the implicit corporate tax rate is less or equal to 10% in Cyprus, Luxembourg, Hungary, Netherlands and Ireland, while in France it exceeds 35%.

Figure no. 1. Implicit tax rate on consumption (%), 2006 -2018



Source: European Commission, 2020. *Taxation Trends in the European Union*. [online] Available at: <https://ec.europa.eu/taxation_customs/taxation-trends-european-union_en> [Accessed 1 February 2021].

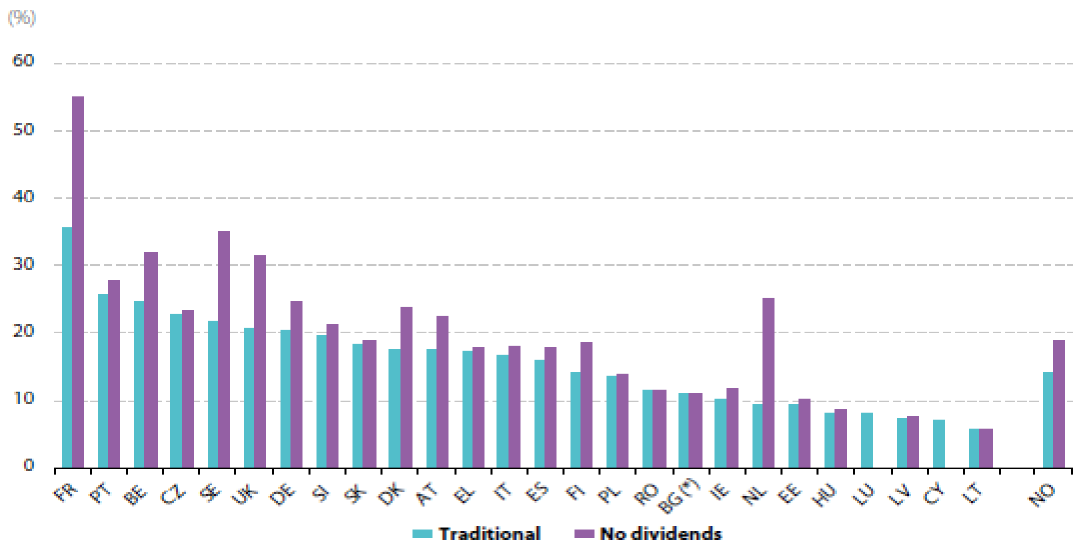
ITR on consumption in EU-27 have recorded an upward trend since 2009, reaching 17,3% in 2018; it have risen in 20 Member States and fallen in seven more, and remained constant in the other states. The biggest increases were in Hungary, Cyprus and Latvia, and the largest decrease was in Ireland. Therefore, at EU level, fiscal measures taken during this period have encouraged consumption, and globalization has been a factor in encouraging this. According to statistics, consumption ITRs have relatively low values, but there is a difference between the developed and the developing countries.

Implicit tax rate on companies` income/ profit is defined as the income tax revenues / corporate profits (including holding gains) and all corporate taxable capital and business income. The numerator includes taxes on the company's income, and the denominator is defined as the sum of the net operating surplus and the balance of income in the sector.

A complete definition and description of the methodology can be found in Annex B to the European Commission (Taxation Trends 2020). This indicator is called the "traditional" version by the European Commission. There is a "no dividend" alternative version, which excludes all dividends from the denominator, due to the widespread tax exemption for dividends received.

The figure below shows the differences between the two versions of the ITR on company revenues in 2018; the figure establishes a clear division between Member States in terms of the extent of the differences observed between the two indicators. These differences are significantly larger (more than 10 pp) in two Member States: France and the Netherlands.

Figure no. 2. Implicit tax rate on corporate income differences (traditional version versus non-dividend version), 2018



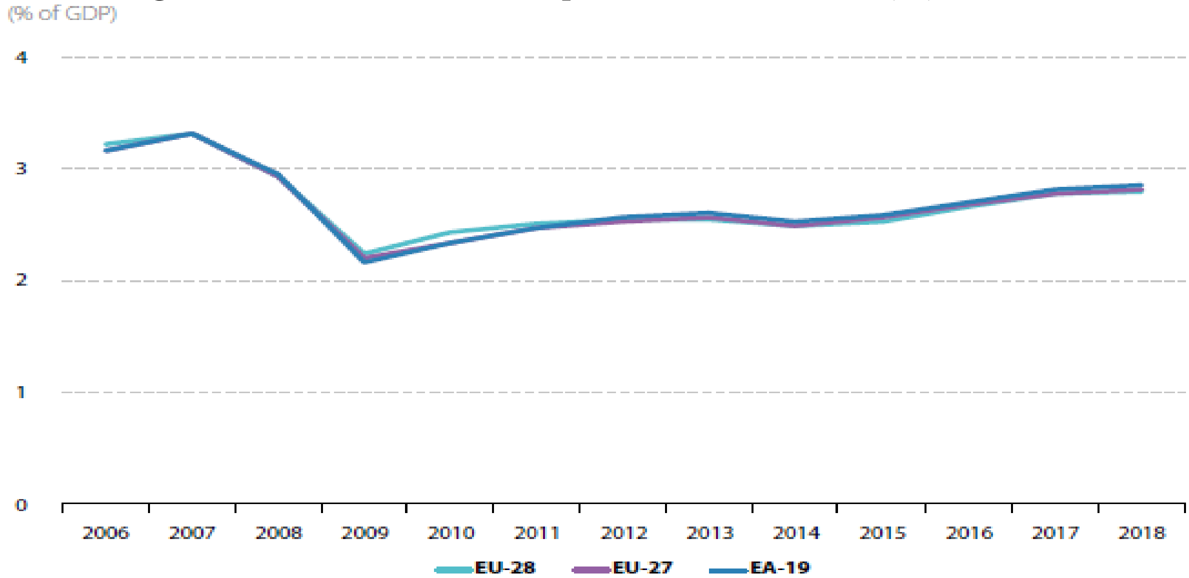
Source: European Commission, 2020. *Taxation Trends in the European Union*. [online] Available at: <https://ec.europa.eu/taxation_customs/taxation-trends-european-union_en> [Accessed 1 February 2021].

Low corporate taxation, along with permissive regulation, could create conditions similar to tax havens even in the European Union. This also derives from the Garcia-Bernardo workpaper (2017), according to which the Netherlands and Ireland (along with UK, Switzerland and Singapore) are attractive destinations in directing international investments and allow the transfer of capital without taxation, as well as Luxembourg and Cyprus, which attract and retain foreign capital through low taxation and permissive regulations.

As for EU corporate income tax rates, they continue to fall. The average corporate income tax rate in the EU-27 was 21,5% at the beginning of 2020. Since 2013, the average rate for the EU-27 has decreased by 1,7 percentage points, and the legal corporate income tax rate varies between a minimum of 9% in Hungary and a maximum of about 30% in Malta, Portugal, France and Germany. Belgium, Greece and France significantly reduced their tax rates in 2020 (4,6 pp and 4,0 pp, respectively).

Revenues from corporate income taxation remained at 2,8% of GDP in 2018. After their sharp decline in 2007-2009, corporate revenues gradually increased, but have not yet reached the pre-crisis levels.

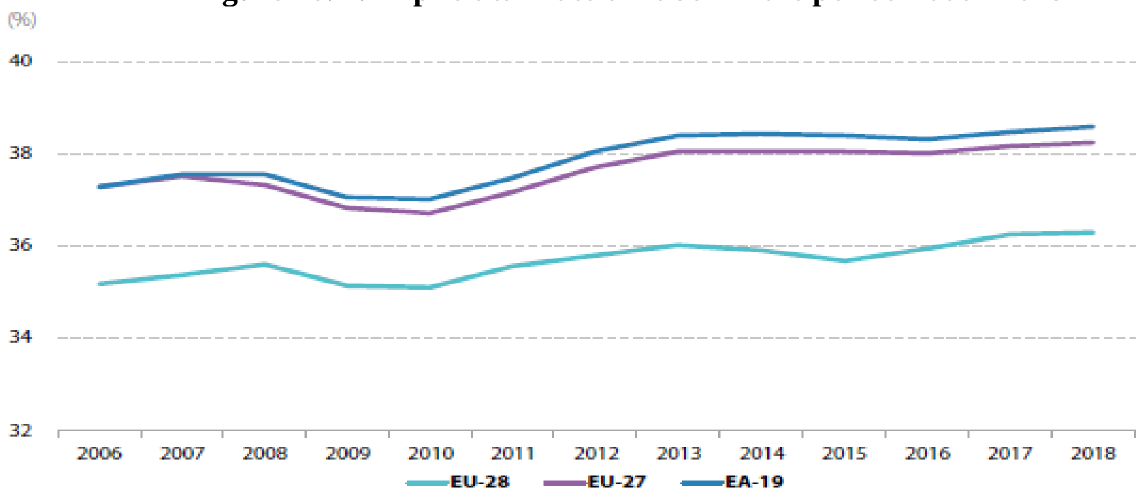
Figure no. 3. Revenues from corporate income taxation (%), 2006- 2018



Source: European Commission, 2020. *Taxation Trends in the European Union*. [online] Available at: <https://ec.europa.eu/taxation_customs/taxation-trends-european-union_en> [Accessed 1 February 2021].

The implicit tax rate on labor is defined as the sum of all direct and indirect taxes and social contributions of employees and employers levied on the income from employment divided to the total compensation of employees. It is calculated only for the employed labor force (thus excluding the tax burden on social transfers, including pensions).

Figure no. 4. Implicit tax rate on labor in the period 2006 - 2018



Source: European Commission, 2020. *Taxation Trends in the European Union*. [online] Available at: <https://ec.europa.eu/taxation_customs/taxation-trends-european-union_en> [Accessed 1 February 2021].

The ITR on labor for the EU-27 was 38,2% in 2018, the same as in 2017 and 1,5 pp above the level reached in 2010; this value is approaching the rate in the euro area (38,6% in 2018), but with a significant gap compared to the EU-28, due to low labor taxation in the UK (ITR on work of 25,6% in 2018).

The level of the tax burden on labor varied substantially between Member States in 2018. The highest ITRs on labor are found in Slovakia (43,8% in 2018), Greece (43,2%) and Italy (42,7 %), and the lowest in Bulgaria (24,7%), Great Britain (25,6%) and Malta (25,7%).

In the EU-27, most Member States recorded increases in ITRs on labor between 2017 and 2018, with the highest increase in Malta (from 23,5% in 2017 to 25,7% in 2018), and the largest decrease in Hungary (from 39,6% to 38,9%).

3. Ensuring a friendly environment for companies in the context of globalization

With the new changes brought by globalization and the industrial revolution, a new dynamics of enterprise development and competition has been created, by changing their organization, production, marketing and distribution at national and global level. In this way, companies are also changing the nature of competition, which increasingly includes, at the international level, inter and intra-sectoral relations.

The nature of the sector to which the company belongs plays a certain role; the more innovative and competitive this sector is, the easier it is for the company to adapt and remain competitive, exploiting externalities or “knowledge dissemination effects” through intra-sectoral cooperation.

The key elements of the development of companies and their competitiveness in the rapidly changing global economic environment are the capabilities: to adapt to new market conditions; to identify new outlets; to induce innovations within the company, to reduce as much as possible the costs of marketing and technology development by using networks and establishing links with other companies.

3.1. Market entry and exit barriers. Indicators of Doing Business Report

In industries characterized by rapid technological change or international mobility, not removing barriers to competition can lead to disadvantages for small businesses and the economy as a whole. Therefore, an increasing number of countries have tried in recent years to reduce these barriers (the regulations) in order to improve their quality and effectiveness.

In time, globalization has affected the environment in which companies operate, by imposing different types of barriers. We refer in the paper to the barriers to entry / exit the market, more precisely, t*he legislative and administrative barriers to entry and exit the markets*, which have the effect of limiting entrepreneurial initiatives and restricting competition, and is materialized as an additional cost for companies.

Small and medium-sized firms are affected in particular; there are studies confirming that when the costs created by entrance barriers, especially fixed costs, are high, the average size of firms entering the market will be higher. Instead, firms already in the market will rely on the gain generated by the existence of these barriers and will be less interested in increasing their productivity and efficiency.

At the same time, regulations with a restrictive effect on entering and leaving markets affect the allocation of resources and change the structure of investments.

As a result, they have the effect of redistributing resources from favorable market areas, where they would naturally invest, to less profitable ones. But the tendency of economic agents to serve profitable markets remains: they try to overcome administrative bottlenecks by various means. This explains the fact that the countries where the costs of entering the market are high are also those where the corruption and the underground economy are significantly higher.

We also believe that in the context of globalization, entry / exit barriers for companies can be reflected in the indicators below, indicators that characterize the ease of doing business (Doing Business, conducted by the World Bank and PricewaterhouseCoopers).

Table no. 1. Doing Business indicators and their meaning

Indicator	Explication
Starting a business	Procedures, time, cost, minimum capital paid to set up a SRL
Obtaining building permits	Proceduri, timp, cost pentru a completa formalităţile cu construcţia unui depozit, controlul calităţii şi mecanismele de siguranţă
Getting electricity	Proceduri, timp, cost in vederea conectarii la reteaua electrica, fiabilitatea furnizarii electrice si costul consumului de electricitate
Property registration	Procedures, time, cost of transfer of ownership and quality of land management system
Obtaining loans	Collateral laws and credit information systems
Protecting minority investors	Minority shareholders' rights in transactions and corporate governance
Paying taxes	Payments, time, the total tax rate for a company in order to comply with tax legislation
Cross-border transactions	Time and cost of exporting products with comparative advantages and importing automotive components
Development of contracts	Time and cost of resolving a trade dispute and the quality of legal proceedings
Solving insolvencies	Time, cost, result and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency
Labor regulation	Flexibility of labor regulation and aspects of work quality

Source: World Bank Group, 2020. *Doing Business 2020. Comparing Business Regulation in 190 Economies.* [online] Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf> [Accessed 1 February 2021].

At the international level, the efforts in the fight against bureaucracy have been intensified, by supporting the private sector, respectively by implementing 294 reforms for the business environment. These reforms focused on starting a business, managing construction permits and trading across borders.

The Starting a Business indicator continued to improve, with 50 reforms in the year under review. The indicators Enforcing Contracts and Getting Electricity also recorded significant values at the level of reforms (49, respectively 26).

In addition to reforms that have addressed issues related to starting a business, managing building permits, getting electricity and paying taxes, measures have also been implemented on the functionality of credit bureaus and registries, the development or improvement of online platforms to comply with regulatory requirements, improve the reliability of electricity supply, reduce certain taxes, strengthen the protection of minority investors, streamline property registration processes and international automation of commercial logistics, insolvency resolution (a characteristic feature of these reforms was the introduction of a reorganization procedure).

Therefore, the most frequent regulatory changes in the last 17 years that have helped to develop a friendly business environment include simplifying the requirements for setting up a company, facilitating tax compliance tasks, increasing access to credit and ensuring the survival of viable businesses.

It should be noted, however, that not all measures aiming at removing barriers reached their original purpose, in 2018/19, being implemented reforms that actually produced the opposite effects. We can list in this sense the increase of regulatory costs (we refer to the costs of setting up companies) or the problems of design and implementation.

3.2. Investment barriers for Romanian companies

We bring into discussion the Romanian companies, more precisely, the problems they face, according to the National Bank of Romania (NBR) (2020, December), respectively the production and labor costs, the availability of well-trained labor and the lack of demand. Also, the level of taxation, respectively the unpredictability of the fiscal environment, as well as the access to financing are considered to be a problem at the level of companies.

From a structural point of view, for large companies, the lack of a well-trained workforce is a much more pressing problem compared to SMEs, which are not affected to such an extent by this aspect. The analysis by activity sectors shows that the industry strongly feels the lack of a well-trained workforce. Sectors that are characterized by a higher degree of technology and / or automation have a more negative perception of the problem of lack of well-trained staff.

According to the latest EIB Investment Survey (European Investment Bank EIBIS 2020), the share of Romanian companies making investments continues to remain one of the lowest compared to the European Union, respectively only 71% of Romanian companies have invested, compared 85% at EU level.

The main investment obstacles of Romanian companies, respectively the internal barriers within enterprises, as well as the main obstacles in the operating environment of companies, according to EIBIS 2020, are:

◄ weaker financial situations of companies - Low profitability and high debt burden primarily limit the cash flow of the company, as well as access to external sources of financing (banks, non-bank financial institutions, etc.);

◄ the financial health of companies determines their access to credit, and Romania has a significant share of companies, which are undercapitalized or operate with negative equity.

In addition to financial constraints, corporate investment activity can be hampered by a number of obstacles in the business environment: uncertainty, business and labor market regulation as key issues for Romanian companies (frequency and unpredictability of regulatory changes, which can cause difficulties in long-term investment planning and therefore impede investment).

We also discuss the digital transformations implemented by Romanian companies, compared to those in the EU. Little over half of companies (56%) say they have implemented at least one digital technology, partly or wholly, close to the average of 63% of all EU companies. Comparing the implementation of individual digital technologies, Romanian manufacturing companies use less 3D printing and automation through advanced robotics compared to those in the EU. We also have more reluctance to use drones and augmented or virtual reality, but we are more open about using platform technologies.

3.3. Fiscal facilities in order to support the activity of companies in the context of globalization and the industrial revolution

A friendly business environment, from a fiscal perspective, means adequate tax legislation, which favors the establishment of companies and the continuity of their activity, through the existence of few barriers / constraints on entrance / exit the market, but also the granting of fiscal incentives in order to help them.

At EU level, in addition to reducing corporate tax rates, measures have been taken on a number of tax facilities to support business activity. Research and development, as well as other actions aimed at encouraging business development, receive more support from governments to be competitive - Denmark, Germany, Italy, Poland (increase in general tax deduction, special provisions for SMEs).

Measures are also being taken to encourage innovative businesses and start-ups - Latvia, Ireland (a reduction in capital gains tax for entrepreneurs). In terms of capital investment, Hungary, Portugal and Cyprus have introduced tax incentives for investors offering financing to young businesses.

Tax incentives are granted, among other things, depending on the objectives proposed at a given time (increasing private investment in a specific field, stimulating small and innovative companies, stimulating skilled labor in a specific field), which have the possibility to choose from a wide range of types of tax facilities, including:

- tax incentives focused on volume - additional deduction of research and development expenses for the calculation of taxable profit, profit tax exemption for those who carry out exclusively research and development activities;
- tax incentives addressed to certain categories of companies (for startups or small and medium enterprises);
- tax incentives addressed to employees working in the field of research and development, if the skilled labor force is not sufficient: reductions in income tax and / or mandatory social contributions related to the salaries of staff engaged in research and development.

In addition to the above ones, there are also types of tax facilities that can have beneficial effects on stimulating this type of activity, namely tax facilities granted by the authorities to encourage investment in a less economically favored region, or in a certain sector of activity: tax facilities on reinvested profit, favorable treatment for individual investors (business angels), exemptions or favorable tax rates for local taxes.

As for the investments made in the field of research and development, they are particularly important, with a direct impact on employment, business development, development and economic growth.

At EU level, according to the SME Annual Report 2018-2019, in most countries there was a significant difference between the research and development expenditures of SMEs and large enterprises. Large companies have shown higher spending on research and development in 24 of the 27 Member States for which data is available. The exceptions were Bulgaria, the Czech Republic, Lithuania and Romania, where SMEs spent more on research and development than large companies.

Investments in research and development and innovation are essential in the context of the transformations generated by new technologies, being necessary for Romania to adopt a model of economic growth specific to developed countries, based on value creation. A positive example of the effects that tax facilities can have is the IT industry, which has evolved in the last almost two decades, currently reaching over 6% of GDP.

We believe that, in addition to the existing facilities, a legislative framework favorable to intellectual property rights should be considered, as fiscal incentives can be granted in this context, both in the investment years, namely in the research and development phase, and in the exploitation of the related intellectual property rights, through Innovation Box or Patent Box regimes, as they exist in other states.

For such facilities, there are good practices identified by other countries to boost investment in intangible assets - trademarks, patents, software, trade secrets and others - through attractive tax policies. For example, UK Patent Box law allows companies to apply a lower corporate tax rate (10% compared to the standard 20% rate) to profits from patented inventions and other equivalent forms of intellectual property.

Other countries, such as Belgium, Switzerland, France, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Spain, Hungary, offered companies, in 2017, various tax facilities that promoted innovation and research - development. Therefore, Romania could also introduce, in turn, a Patent Box regime that would provide a lower corporate tax rate for profits from the exploitation of intellectual property rights - obtained through a full or partial exemption from income eligible.

Also, a tax advantage held by Romania for potential investors is the “holding” tax regime (introduced in 2014), according to which companies of this type registered in Romania benefit from a special tax treatment: non-taxation of capital gains from the sale of shares in companies from Romania or from states that have concluded double taxation agreements with Romania if the seller meets the minimum holding conditions: at least 10% for at least one year. Under similar conditions, the holding companies from states with which Romania has concluded Conventions for the avoidance of double taxation can benefit from the non-taxation of the gains from the sale of shares in Romanian companies

It is also possible to obtain a reduced taxation (or even a non-taxation) of dividends received from abroad Romania, as well as for those paid to non-residents, under the Conventions for the avoidance of double taxation, or according to the European Directive on the common tax regime applicable to parent companies and their subsidiaries in different Member States under certain conditions.

As the global tax legislation, namely the rules against aggressive tax structures / anti-abuse rules, which is constantly changing, it is expected that the trend in the coming years will be to pay more attention to how to structure any investments, because the tax benefits might not be granted if such holding companies do not have a real economic substance and are used strictly to obtain tax advantages.

Specifically, under legislation introduced in recent years, such transactions will be reported to the tax authorities in the EU (according to the "DAC 6"), and will be interpreted as that, if they were used mainly for tax purposes (obtaining facilities such as the holding regime), the non-taxation applied by such companies could be challenged by the authorities, resulting in additional tax payment obligations.

Fiscal measures can attract capital in the extent they support the business environment and regulate the complex situations of the current economy, and the current fiscal provisions for the holding regime represent a strong point for Romania to foreign investors. Also, other “attractions” for investors are the relatively low corporate tax rate (16%), a network developed by Conventions to avoid double taxation (around 90 treaties) or the carry-over and transmission of fiscal losses in the context of internal reorganizations.

Thus, in terms of taxation, in addition to the place in the ranking in terms of favorable tax regimes or relatively low tax rates, attention must be paid to the stability and predictability of tax legislation, but also to the ease of tax administration by digitizing and reforming ANAF in order to allow investors to manage medium and long-term plans

4. Conclusions

The objective of this paper was to highlight the main fiscal changes in companies due to globalization and the technological revolution (digitalization), and in this sense we used the evolution of the implicit tax rate in the European Union, in the period 2006-2018 (we used this type of rate because it captures the best the fiscal changes that occurred in the analyzed interval).

The differences between consumption tax rates, labor tax rates, corporate income tax rates are significant. In 2018, the implicit consumption tax rate ranged from 14% in Spain to 26% in Hungary, labor taxes (including social security contributions paid by both employer and employee) ranged from 25% in Bulgaria to 44% in Slovakia, and the implicit corporate tax rate is less or equal to 10% in Cyprus, Luxembourg, Hungary, the Netherlands and Ireland, while in France it is over 35%.

We also discussed the influence of globalization on the environment in which companies operate, respectively the obstacles / barriers encountered, as well as the fiscal facilities necessary to continue their activity in a favorable economic environment (facilities for research and development, various tax incentives , as well as the comparative situation of Romania with the European Union).

In our opinion, the main barriers in the way of carrying out the activity by the companies are concretized in the Doing Business indicators (especially regulatory barriers). With the intensification of globalization, the trend of reducing / eliminating barriers has intensified globally, and the Doing Business Report highlights the best this aspect, through indicators that refer to aspects related to starting a business, managing building permits, getting electricity, paying taxes, the functionality of credit bureaus and registries, the development or improvement of online platforms to comply with regulatory requirements, improving the reliability of electricity supply, reducing certain taxes, strengthening the protection of minority investors, streamlining property registration processes and international automation of commercial logistics, solving insolvencies.

It should be mentioned that globalization has had positive effects on legislative barriers worldwide, which materialized through the implementation of 294 reforms for the business environment, the aim being precisely to reduce / eliminate the obstacles. Significant progress has been made globally, digitalisation being a key factor in this context.

References

1. European Commission, 2020. *Taxation Trends in the European Union*. [online] Available at: <https://ec.europa.eu/taxation_customs/taxation-trends-european-union_en> [Accessed 1 February 2021].
2. European Commission, 2019. *Annual Report on European SMEs 2018/2019*. Luxembourg: Publications Office of the European Union.
3. European Investment Bank, 2020. *EIB Group survey on investment and investment finance 2020, Country overview - Romania (EIBIS).* [online] Available at: <https://www.eib.org/attachments/efs/eibis_2020_romania_en.pdf> [Accessed 1 February 2021].

4. Keen, M. and Konrad, K.A., 2012. *The Theory of International Tax Competition and Coordination.* Max Planck Institute for Tax Law and Public Finance Working Paper.
5. Klapper, L., Laeven, L., Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, 82(3), pp. 591-629.
6. National Bank of Romania, 2019. *Survey on access to finance for non-financial companies in Romania.* [online] Available at: <https://www.bnr.ro/DocumentInformation.aspx?idInfoClass=16645&idDocument=33293&directLink=1> [Accessed 1 February 2021].
7. World Bank Group, 2020. *Doing Business 2020. Comparing Business Regulation in 190 Economies.* [online] Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf> [Accessed 1 February 2021].