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THE EUROPEAN PATH TOWARDS A NEW PARADIGM OF ENERGY PRODUCTION AND CONSUMPTION

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***Abstract**: The European Union has decided to follow a new path in terms of energy production and consumption, migrating as quickly as possible to the production of green energy. This decision came about as an inevitable consequence of climate change and global environmental issues. This article reveals some consequences of the multiple crises (economic, political, monetary, trust in state institutions etc.) and especially of the energy crisis triggered around this decision, in the European Union including Romania, starting from the hesitations of the factors determined to apply the tough but necessary measures for changing the paradigm in the field of energy sectors (this also on the background of the war from Ukraine). The article also discusses Romania's particular situation from an energy perspective. On the one hand, we are talking about a rate of dependence on imports much lower than the average European rate, and on the other hand, we are talking about a population that for many decades has achieved the lowest energy consumption per inhabitant in Europe (and as a result of the massive dislocation of the national industrial branches. Would it therefore be appropriate for the Romanian population to be imposed an additional austerity regime at this time? The article cites some relevant international and Romanian publications in the field, using international statistics documents (from Eurostat, EC, WB etc.) as well as national data (INS, BNR etc.).*

***Keywords:** multiple crisis, price, politics, national interest, consumption models*

1. The problem of rising prices and the economic truth about their level

In the modern era (12th - 20th centuries), many Western countries, and also some Asian countries, succeeded somehow to steal the start of the global economic development competition, imposing their own terms in the international transactions, concluded especially with the developing countries ready to export their raw materials

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or energy. Many developing countries supposed to export their strategic natural resources or agricultural products, were politically or militarily subordinated, or were states treated as colonial regimes. Often, such policies were the result of secret agreements between powerful states, in order to fix the lowest possible purchase prices. As a result, the prices of many traded natural resources were massively distorted by the imposition of the economic interests of various companies, and therefore most prices had little in common with the economic truth regarding their strategic importance. Thus, countries possessing strategic natural resources (electricity, oil, natural gas, coal, but also a number of raw materials, such as grain or other strategic food products), have been forced to sell at ridiculous prices for centuries.

The price of oil

Over time, the price of oil has known several ways of formation, depending on the economic and historical context, but especially depending on the power relations on the market. Until the formation of OPEC in 1960, the market was dominated by the big Western oil companies which, although they were constantly in competition, also resorted to secret understandings and agreements to control production and price. After its formation, OPEC gained control over the market. If during the 1960s the Organization managed to prevent the reduction of prices, during the oil shocks it managed to impose its will in the formation of the sale price of oil. An essential landmark in the formation of the oil price is the introduction of oil futures transactions at the New York Stock Exchange in 1983. The introduction of oil on the stock exchange meant the transformation of price formation mechanisms, becoming impersonal, open and competitive. (Câmpean, 2011)

This is how it became possible that, for over two centuries, the prices of many energy resources assimilated by numerous Western economies were predominantly very low, and the economic progress in Western states determined the manifestation of consumerism.

In reports of this type or similar, Romania was found, more than once, which, for example, with various motivations, as early as the 19th century, had acquired a reputation as the granary of Europe - being forced to annually sell cereals in large quantities, but at incredibly low prices, to the West, at the same time, for protectionist reasons, limiting its imports.

Romanian trade in the interwar period

The economic policy carried out by the state regarding foreign trade, in the period 1929 - 1933, when the Romanian economy was strongly affected by the global economic crisis of overproduction, consisted, on the one hand, in forcing the export (cereals, oil, wood, etc.) for to obtain the necessary foreign exchange for imports and the import compression, on the other hand, to protect domestic industry and reduce the volume of foreign exchange payments. (INS, 2018).

At least a century before the 1940s, when the war has shown the true relations between the states of the world, in the West, the international traffic of goods had become dominated by natural resources and cheap goods, coming from the countries of the third world. The appearance in the history of world trade of commodity exchanges has somewhat corrected this situation, by introducing into the price structure, some information regarding the limits of resource deposits, or the ephemeral nature of certain offers.

Thus, for centuries, Western consumers have had abundant resources and goods at their disposal, at particularly affordable prices. The behavior of economic agents made possible an industrial age that was extremely competitive but also aggressive towards the environment, which facilitated the modern way of consumption, which proved inclined to excesses, waste and economic irrationality.

As time goes by, however, some countries that store raw materials or energy, although poorly developed economically, or perhaps precisely because of that, have begun to exercise their right to development, political autonomy, and well-being. As a result, cheap goods started not being so cheap anymore, became more and more rare, and the competition for cheap natural resources intensified. Such poorly developed states in the modern period of the West, which at that stage still managed to accumulate economic and knowledge resources, but also a higher level of demographic consistency (India, China, Brazil, etc.), currently, and - they consolidated their position on world markets, claiming their own right to pollute the planet. Many such speeches by such states have produced deep emotion in the Western world.

On the other hand, the bill of environmental conditions has begun to reflect alarming climate change even in the Western space. At present, the reality of climate change, attested by some specialists, is, however, strongly disputed by others, and things are stagnant in an area of dispute. But the truth is that, although obvious, the stakes of openly acknowledging the realities of global warming are enormous from the perspective of today's high-profit industries. One thing is certain, namely, the world can no longer continue to develop according to the models of the past and a series of radical changes must take place.

In the year 2021, when the pressure of climate change seemed to have calmed down somewhat (as an effect of the decrease in economic activities from the pandemic) EC decision-makers, without much public debate, launched a new challenge. In July 2021, the European Commission made public an extremely ambitious legislative project to abandon fossil fuels, under the explanation of the need to stop the ongoing process of carbonization of the atmosphere. At the time of the introduction of this initiative, Europe's natural gas production had already been in decline for several years, actually increasing the continent's dependence on imports. And Russia - a highly unpredictable energy supplier - has been in a position for several years to consolidate its status as the EU's main energy supplier, with the completion of the Nord Stream 2 project, in which Gazprom and its EU partners have invested combined, around $11 billion (Bloomberg (1), 2022).

One might think, given the above, that the world has finally reached a critical point in its reflection on the fate of the planet. However, such a moment of maturing reflection had the misfortune of coinciding with the deepening of the energy crisis through the war in Ukraine.

However, evaluating, even partially, the true economic and social effects of this multiple crisis, in the Western world but not only, we will discover that the decision to abandon the consumption of conventional fuels now (if it was taken in good faith) was, to say the least, ill-timed, because it already bankrupted an enormous number of businesses, and produced despair for large masses of the population, at least in the poorer states of the south-east of the EU, including Romania.

2. Western concern over the costs of the energy crisis. The need for market regulation but ignoring the ethics of applied politics

In order to reduce the devastating economic and social impact of the crisis of rising energy prices, European states have allocated a total of about 500 billion euro (1.7% of EU.27 GDP) (Bloomberg, 2022). The 27 EU member states have already spent around 314 billion euro for the economic support of companies, the largest amount being allocated by Germany - over 100 billion euro (other sources talk about 200 billion in October 2022 – 5.6% of GDP) - the equivalent of 2.8% of own GDP. Britain has allocated 178 billion euro for this purpose - this country currently having an industrial sector that competes closely with that of Germany.

Romania allocated only 6.9 billion euro, i.e. the equivalent of 2.88% of GDP, which places it in sixth place in the EU.27 in this chapter, after Croatia (4.1% of GDP), Greece (3, 7% of GDP), Italy (3.3% of GDP), Latvia (3.2% of GDP) and Spain (2.9% of GDP). Among the first ten European states that have had initiatives in this regard are also Italy with 59.2% of GDP, France with 53.6% of GDP, Spain with 35.5% of GDP, Poland with 10.6% of GDP, Austria with 8.9% of GDP, Denmark with 6.8% of GDP, the Netherlands with 6.2% of GDP (Tagliapietra, Zachmann, Sqaravatti, 2022, Bruegel, 2022).

We observe the enormous gaps that intervene in terms of protecting economies against the energy crisis, both through the weights in the GDP of the compensations, and through the different sizes of the GDP of each state. However, the European states with higher decision-making authority at the top of the EU (Germany, France) at one point insisted on imposing a total stop on the import of natural gas from Russia and egalitarianism regarding the waiver to the use of conventional fuels in all European states.

This, although practically, Germany, Poland, etc. they would by no means conform to the observance of such rigors. At the level of public discourse, there was a plea for restrictions imposed on imports from Russia in order to reduce its financial resources, but on the other hand, the large European importers of Russian gas were having problems because they did not have much possibility to pay for their gas in rubles.

Romania, at the beginning, unconditionally accepted the renunciation of the use of conventional fuels, imposed by the leadership of the EU.27 (it is not known whether the Romanian politicians did this understanding the planetary urgency of greening, or out of simple obedience). A few months later, however, seeing that one is the public discourse of the great powers, and another is the applied economic practices, Romania returned (like other states) on this decision. But the recovery was not fast enough to prevent many Romanian businesses from going bankrupt due to the unstoppable rise in prices.

3. Energy dependence of the EU27 on imports

EU.27 is a net importer of energy. In 2020, 58% of the energy available in the EU was produced outside EU member states. In 2020, the EU had an energy dependency rate of 57.5%. The situation varied greatly from one state to another: Estonia had a dependency rate of 10.5%, Germany 63.7%, Greece 81.4%, and Malta over 97%.

The decline in primary energy production in the EU in recent decades has led to increased imports of primary energy and energy products. This growth slowed in 2020 due to the drop in demand during the COVID-19 pandemic. Oil ranked first as an import level, with 18,675 PJ in 2020, still remaining 14% lower than a decade ago and 13% lower than 2019 The amount of natural gas imported doubled between 1990-2020, reaching 13,786 PJ. Natural gas is the second imported energy product. Current imports are 8.6% lower than in 2019, when record import levels were recorded. (Eurostat, 2022, Complete energy balances).

Table 1. Dependence of EU states on energy imports in 2020 (%)

Country	Energy import dependence	Country	Energy import dependence
Average EU.27	**57.5**	Latvia	45.4
Belgium	78.0	Lithuania	74.9
Bulgaria	37.8	Luxembourg	92.4
Czech Republic	38.8	Hungary	56.6
Denmark	44.8	Malta	97.5
Germany	63.7	Netherlands	68.0
Estonia	10.5	Austria	58.3
Ireland	71.3	Poland	42.7
Greece	81.4	Portugal	65.2
Spain	67.8	***Romania***	***28.2***
Franc e	44.4	Slovenia	45.8
Croatia	53.5	Slovakia	56.3
Italy	73.4	Finland	42.0
Cyprus	93.0	Sweden	33.5

Source: European Council, Council of the European Union, 2022, Infografice - Consilium (europa.eu)

The gross energy available in the EU in 2020 was 57,767 PJ, which is 8.1% lower than in 2019. This was the lowest figure recorded in the period 1990-2020.

Even under these conditions, in Luxembourg and Finland, the gross energy available in 2020 was over 240 TJ per inhabitant, while in Romania, ranked last among the EU27 countries, it was below 70 TJ per inhabitant. The EU average in 2020 was 129 TJ per inhabitant. However, according to the latest European documents, austerity policies will be non-discriminatory at the level of all EU states. 27.

In the period of 1990 - 2020, the EU average of gross available electricity per inhabitant fell by 13.5%. And currently there are large differences between the available gross average energy of different European states. The highest increase in available gross energy per inhabitant in the period of 1990 - 2020 was recorded in Malta (+152.9 %). This was followed by Portugal (+20%) and Austria (+9.2%). The sharpest decreases of this indicator were recorded in Estonia (-48.4%), Germany (-39.8 %) (Eurostat, 2022).

Faced with this situation, the European Commission nevertheless proposes an emergency intervention on the European energy markets, in order to face the recent price increases, through measures to reduce energy demand, in order to reduce the cost of electricity for consumers, as well as measures to redistribution of surplus revenues from the energy sector to final consumers. One of the proposals is the obligation of EU member states to reduce electricity consumption by at least 5% during peak hours (CE.2022, HotNews.ro, 2022).

4. Romania within the European energy production and consumption models. Austerity policies in the EU.27 energy consumption – all countries will give up at least 5% during peak hours

Primary energy production in the EU.27 amounted to 24,027 petajoules (PJ) in 2020, 7.1% lower than in 2019. The downward trend in fossil fuel production continued (-16.5%), as and that of natural gas (-21.2 %), or oil and oil products (-5.2 %). In 2020, there was also a significant decrease in primary energy production from nuclear power plants (-10.7%) (*Eurostat, 2022).*

The production of renewable energies had a positive trend (except for 2011), having the highest share (40.8 %), next to the production of primary energy in the EU in 2020, followed by atomic energy (30.5 %) , solid fossil fuels (14.6%), natural gas (7.2%), oil and oil products (3.7%) and non-renewable waste (2.4%).

In the decade 2010-2020, the trend in primary energy production in the EU27 was generally downward for solid fossil fuels, oil, natural gas and nuclear power. In this decade, natural gas production recorded the largest decline (-62.4%), followed by solid fossil fuels and oil and petroleum products (down 43.0% and 35.1%, respectively).

The main indicators of energy consumption derive from the volume and quality of primary energy production, energy imports and exports, available gross energy, and final energy consumption. In European states, both oil and natural gas consumption were down in 2020, by 12.6% and 2.4%, respectively. In the contribution of renewable energy sources to the overall energy mix, renewable energies surpassed solid fossil fuels

in 2018, 2019 and 2020. Consumption of solid fossil fuels decreased by 18.4% in 2020, reaching the lowest value since 1990.

Final energy consumption in the EU in 2020 amounted to 37 086 PJ, 5.6% less than in 2019. Since 1994 when consumption started to increase, European countries have reached the highest value of energy consumption - 41,445 Mtoe in 2006. Then, by 2020, European final energy consumption has fallen from its peak by 10.5%.

Between 1990 and 2020, the amount and share of solid fossil fuels in final energy consumption decreased significantly (from 9.6% in 1990 to 3.6% in 2000, 2.8% in 2010 and 2.1% in 2020). Renewable energy sources have increased their share in total consumption, rising from 4.3% in 1990 to 5.3% in 2000 and 8.8% in 2010, finally reaching 11.8% in 2020. Natural gas remained fairly stable during this period, ranging from 18.8% (in 1990) to 22.6% (in 2005), its share in the total amounting to 21.9% in 2020.

Oil and oil products accounted for the largest share (35.0%) in the structure of final energy consumption in 2020, followed by electricity (23.2%) and natural gas (21.9%). Solid fossil fuels contributed only 2.1% to the final energy consumption.

The total energy consumption of the transport sector in the EU amounted to 10 549 PJ in 2020. Energy consumption for transport increased steadily from 1990 to 2007. With the onset of the global financial and economic crisis in 2008, energy consumption from transport European decreased by 1.4%. From 2014, the increase in transport energy consumption continued until 2019, although the level of 2007 was not reached. The largest decrease in transport energy consumption was recorded in 2020, -12.8% compared to 2019, due to the COVID-19 pandemic.

Table 2. Energy consumption model of the EU.27 economies by energy use sectors in 2020

Sector	Transport	Households	Industry	Services	Agriculture	Others
Share in consumption	28.4%	28.0%	26.1%	13.7%	3.2%	28.4%

Source: Eurostat, 2022, Final energy consumption by sector, EU, 1990-2020

The final use of energy in the EU.27 in 2020 reveals three dominant categories: transport (28.4%), households (28.0%) and industry (26.1%).

The energy consumption model of Romanian households, like the European one, is dominated by four household needs: the thermal conditioning of the home (62.5%), followed by the provision of hot water (13.8%), the lighting of the rooms (13.9%), cooked (9.8%). We note the extremely high level of similarity of the Romanians' energy consumption model (table 3), compared to the European average, specifying that, perhaps, Romanians attach more importance to cooking food in their own homes than other Europeans.

Table 3. Model of energy consumption of households in Romania, compared to the model of the European average in 2020

Utility/share in consumption	Home heating	Hot water	Hot water	Cooking	Air conditioning	Others
Average EU.27	**62.8%**	**15.1%**	**14.5%**	**6.1%**	**0.4%**	**1.0%**
Romania	62.2%	13.8%	13.9%	9.8%	0.3%	...

Source: Eurostat, 2022, Energy consumption in households, Energy_consumption_in_households_ by_type_of_use

The final energy consumption in the residential sector in Romania compared to the average of EU27 countries, based on the type of fuel used, in 2020, is dominated by renewable energy (38.2%), natural gas (34.3%) and electricity (14.6%).

Table 4. Model of final energy consumption of the residential sector in Romania compared to the EU.27 average, based on the type of fuel used

Categories of fuels used/ Share in consumption	Natural gas	Electricity	Renewable energies	Oil and petroleum products	Derived thermal energy	Solid fuels
Average EU.27	**31.7%**	**24.8%**	**20.3%**	**12.3%**	**8.2%**	**2.7%**
Romania	34.3%	14.6%	38.2%	3.4%	8.9%	0.6%

Sources: Eurostat, 2022, Final energy consumption in the residential sector by fuel, EU, 2020, Eurostat, 2020, Table 1: Share of fuels in the final energy consumption in the residential sector, 2020

In the EU27 countries, unlike Romania, electricity is in second place in terms of importance, and renewable energy is in third place.

5. Effects of the COVID 19 crisis on energy consumption

Starting from 2020, the 27 EU states have imposed some restrictive measures to limit the spread of COVID-19, by closing factories, schools and restaurants and limiting the movement of the urban and rural population. These measures have determined some changes in the consumption behavior of the population in the energy field. The representations of the changes in energy consumption show that if in 2020, except for Estonia, in all EU states27 there were decreases in energy consumption, in 2021, a number of 10 states still continued to consume below the level of 2019, the rest of the states more or less exceeding that level. Among the latter, Romania also entered, which exceeded the consumption achieved in 2019 at a level below 1%.

6. National energy policies, production, and consumption in the last decade

Traditionally, Romania registers the third lowest dependence rate in the European Union, in relation to energy imports. Romania has natural gas and oil reserves and a relatively well-developed electricity generation sector. However, starting from 2019, Romania became a net importer of electricity, mainly due to the trend of renouncing domestic coal production. Until coal was phased out, the composition of agents used for electricity generation was among the most balanced in the EU.

However, except for the wind and solar exploitation technology, the Romanian energy system is quite old and because of this it achieves one of the lowest yields. Therefore, it requires a general re-evaluation and an extensive reconditioning process. Currently, although officially there would be an installed capacity of 22 GW, the average power delivered by the system is about 7 GW. In the year 2020 it became clear that a demand of about 8 GW could be met only with the contribution of some imports.

Electricity production in Romania before 2020. Nuclear power plants and large hydropower plants, about 98% of coal mining and 73% of natural gas-based units are still owned by the Romanian state. In October 2021, through the National Recovery and Resilience Plan, Romania committed to phase out coal production by 2032.

Officially, the national energy system still uses 13 coal units serving 7 coal-fired power plants with a gross installed capacity of 2895 MW. Basically, there are two large coal mining companies that manage both the power plants and the mines: Oltenia Energy Complex (OEC) which manages 4 power plants and 10 lignite-based mines, normally delivers about 90% of the electricity based on of coal of the country. Another large coal processing company is the Hunedoara Energy Complex (HEC). According to data from 2019, none of the coal-fired power plants in Romania complied with the regulations regarding CO2 emissions. Gradually, however, some renovations of certain thermal power plants were carried out and some capacities became functional again. For example, during the years 2020 and 2021, the Oltenia Energy Complex was modernized and thus, the thermal power plants in Craiova, Işalniţa, Turceni and Rovinari started operating again. (Bankwatch, 2022).

The Romanian production of wind electricity has increased, thanks to the high wind potential and supporting policies to produce renewable energy. Romania's wind energy potential is considered to be the largest in South-Eastern Europe, being estimated at approximately 14,000 MW, capable of generating around 23 TWh per year.

Between the years 2008-2013, the main investments were made in wind farms, which in 2020 had an installed capacity of 3023 MW, and in photovoltaic panels with an installed capacity of 1391 MW. The development of electricity production from renewable sources was strongly slowed down in 2013, by changing the subsidy scheme that reduced the number of green certificates granted. However, this has led to increased general interest in solar installations. According to the National Energy Strategy, Romania's solar potential can generate around 1.2 TWh of electricity per year, which

represents about 2.5% of the current national consumption (experts say that such an estimate would be minimal).

Currently, the energy intensity of Romania's economy is twice as high as the European average, which indicates massive system regeneration needs.

The relatively low energy performance of buildings in Romania causes a relatively high energy consumption in the field. The household sector together with the tertiary sector (offices, commercial premises, non-residential buildings) accounts for about 46% of the national energy consumption.

The big reductions in energy consumption in Romania in the last three decades did not occur through the modernization of energy exploitation, but through the closure of large industrial consumers.

For at least three decades, Romania has had, and still has, its own and particularly consistent reasons for initiating a large-scale reform in the national energy sector. Although on several occasions, some reform strategies were formulated, they remained far from being implemented, given the high stakes and interests, in proportion to the profits in the system. The past has shown, however, that the privatizations carried out in the system have not been able to bring other major changes than the closing of some production capacities and the increase in the price of energy.

The current fundamental European discourse, regarding the need to introduce a paradigm shift both in the way of production and consumption of energy in Europe, is particularly present in the public consciousness in Romania, although, on the other hand, the population vehemently disputes the inadequate way of managing the energy crisis by the current political decision-makers.

The energy crisis in Romania, as in other EU states, was less accentuated by the outbreak of the war in Ukraine, and more by the chronic deficit of reforming policies in the system, and the absence of investments in resource and energy production.

System indicators show that, in the last 15 years, domestic energy production has decreased as a result of the progressive decline in exploitation technology, against the background of a variation in consumption that did not exceed 8,000 tep (tons of equivalent oil).

As a result, since 2019, Romania is a net importer of electricity (INS, 2022).

The resource exploitation system has progressively deteriorated over the last decade, even though such a relatively low level of consumption. That is why Romania had to import energy, as a rule, at the highest prices on the free market.

Romania's primary energy production decreased by 18.1% from 2007 to 2020, reaching 22.35 million toes (1 toe = the amount of conventional fuel with a calorific value of 10,000 Kcal/Kg). Production of electricity decreased by 9 percent, to about 55.93 billion kWh (INS, 2022).

Final energy consumption also decreased by 4.6% (4 times slower than production), this due to the decrease in industry consumption and not due to the increase in energy

efficiency (INS, 2022, Energy Statistics). So, even with the lowest consumption in Europe, Romania consumes much more than it produces, as a result it has to import even though it has domestic resources. For example, electricity consumption is 6 times higher than domestic production. Officially, Romania currently has production capacities for electricity with a power of over 18.3 million kW, although the National Energy Authority (ANRE) estimates that several million of this amount would still not be available.

The only fossil fuel electricity generation capacity built after 1990 is that of OMV Petrom with 860 MW (860,000 kW) in Brazi, completed in 2012. Electricity imports increased six times from 2007 to 2020, to 7.6 billion kWh. Under the pressure of rising prices, gas imports also decreased by 16.3% in 7 months 2022 / 7 months 2021 but remained higher than in 2019.

Some investments have also been made in wind farms, which now have a capacity of 3,015 MW (3.01 million kW), partially subsidized in the years 2010–2015.

And so, while the oil and gas reserves in operation are being depleted, the putting into operation of new reserves (as in the case of the Black Sea gas) is continually postponed, amid various pressures from business interests outside the country.

The great reduction of Romanian production of fossil fuels. Coal production was reduced by over 62% from 2007 to 2020 reaching 2.6 million toe.

After the rise in gas prices, Romania returned to coal mining, and production of coal increased by almost 11% in 2021 compared to 2020 and by more than 22% in Semester 1 of 2022 compared to 2021 (INS, 2022). But in semester 2 of 2022, Romania is again supposed to renounce to the fossil fuels and to prospect the potential of producing green energy.

Renewable energy - After the annual multiplication of renewable energy production from 2011 – 2015, when wind electricity production increased by almost 23 to exceed 6.94 billion kWh, it increased by another 17% in 2022 (INS data, 2022). Romania's potential is immense on the Romanian continental platform of the Black Sea, where a capacity of 94 million kW (more than 5 times greater than that currently installed) is not exploited.

7. Conclusions. Social-economic effects of the energy crisis

a) Romanian inflation – an anticipatory reflex towards energy crisis in the global context. Trying to fight inflation only through financial instruments doesn't stand much chance. The increase in ROBOR by the National Bank of Romania, beyond 8%, far exceeded the monetary policy rate, which will continuously worsen the economic situation of the population with bank loans. As a result, the issue of *personal bankruptcy* and the *loss of ownership of some assets* contracted through bank loans by the population will soon reach the public discourse.

Anti-crisis measures in the EU concept 27

On September 30, 2022, ministers from the 27 EU member states approved measures to limit the impact of rising energy prices and agreed on the imposition of taxes on the exceptional profits of energy companies, a possible ceiling on the price of natural gas at the level of the entire Union. The measures are temporary and extraordinary in nature and apply from 1 December 2022 to 31 December 2023. The reduction in energy consumption applies until 31 March 2023 and the mandatory market revenue capping measures apply until 30 June 2023 Among the measures adopted, we mention:

Reducing the demand for electricity. The EC agreed on a global objective of a 10% reduction in gross electricity consumption - this being voluntary. Another objective was the mandatory 5% reduction in electricity consumption during peak hours. Member States are called upon to establish peak times and related measures to meet both objectives between 1 December 2022 and 31 March 2023.

Capping market revenues for infra marginal producers.

The EC has set the market revenue cap for electricity producers, including intermediaries, using so-called inframarginal technologies to produce electricity, such as renewables, nuclear and lignite, at EUR 180/MWh.

Solidarity tax for the fossil fuel sector. The EC established the establishment of a mandatory temporary solidarity tax applicable depending on the profit of companies active in the energy sector (crude oil, natural gas, coal, refining). The solidarity tax will be applied in addition to the usual taxes and duties applicable in the Member States, for enterprises with an annual taxable profit higher than 20% compared to the average taxable profits starting from the year 2018 in the financial year starting in 2022 and/or in 2023. The proceeds from this tax will serve to financially support households and businesses.

(HotNews.ro, 2022)

According to NIS data (2022), the annual inflation rate rose to 15.3% in August 2022, 2.6% in 2020 and 5.1% in 2021 (NIS, 2022). The current inflation in Romania has three main sources:

- Monetary inflation, generated by the issue of currency decided by the Government of Romania, in order to be able to manage the additional expenses assumed by the combined crises.
- System inflation - generated as a result of the deficit structure of the national economy at the level of economic branches.
- import inflation, constituted internally by the importation of inflationary consequences from the global level, but also by the deficit of the foreign trade balance.

b. Prices list. The highest price increases were recorded for natural gas, potatoes, and oil. August 2022 prices compared to July 2022 increased by 0.6% for consumer goods and services. The prices of food goods - as a chapter of the Romanian consumption model - increased the most - by 18.22%, those of non-food goods by 15.98%, and services by 8.26%. At the level of August 2022, the highest price increases by product category were recorded for: natural gas 70%, potatoes 54%, oil 46%, electricity 36%, flour 34%, plane tickets 33.9%, sugar 30.9%, butter 29.5%, vegetables 27.7%, bread 25%. Fuels have registered an increase of almost 32%, and thermal energy has become more expensive by 23%, in the last 12 months.

The social risk created by high energy prices in the EU is expected to be long-term, even if Romania registers the least dependence on Russian energy.

The most consistent influence in terms of economic setback for Romania may come from the decrease in the pace of economic activity in the Euro zone, because that is where Romania's main trading partners are currently located.

c. Top of new insolvencies in Romania - sem. I 2022: construction (710), retail trade (467) wholesale trade and distribution (407) (Coface, 2022).

In the first semester of 2022, 3,510 new insolvencies were opened, 16% more than in 2021 (first semester). New insolvencies opened in the first half of 2022 exceeded the pre-Covid-19 pandemic level by 6%. Financial difficulties have driven insolvencies/1,000 active companies to nearly 20, twice the regional average (Central and South-Eastern Europe). After trade, the sectors with new open insolvencies are: transport (328), other services (305), hotels and restaurants (292), textile factories, clothing and footwear factories (162), manufacture of wood and wood products (132), agriculture (128), food and beverage industry (108), metallurgical industry (85) (Mailat (2), 2022).

Other probable economic consequences: the emergence of economic-financial blockages due to difficulties in repaying commercial and financial debts in the context of rising interest rates; the deceleration of investment due to rising interest rates; decrease in consumption and fiscal uncertainties.

d. Foreseeable social consequences

- The massive deterioration of the current employment situation through the bankruptcy of enterprises
- The dramatic reduction in the standard of living by the closure of hospitals, schools, and other institutions, but above all by the unbridled increase in prices
- The explosion of the phenomenon of poverty
- The risk of a large part of the population becoming homeless as a result of non-payment of maintenance expenses or bank loans on time (rates doubled from 2021 to 2022)

– The risk of increasing emigration among the younger generations and the working population

Currently, Romania ranks 28th in a ranking of the 34 most attractive countries in Europe, the Middle East and Africa (EMEA) for private companies (MEA Entrepreneurial & Private Business Heat to turn again to more green energy by map, PwC). The ranking considers 37 parameters from various fields: macroeconomics, fiscal and regulatory framework, public health, technology, infrastructure, business environment, education/skills/talents (AICI-LINK).

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