ARE THERE STRATEGIC SECTORS?

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Abstract

Are there strategic sectors? An economic sector is strategic if it benefits from additional attention within national policies consisting in facilities for investment and various forms of subsidization. Viewed from an economic perspective, these subsidies and facilities are designed to reduce production costs and increase product competitiveness in the international trade. At a closer look, when you lay aside the economic importance of strategic sectors, it appears that economic specialization on a specific economic sector or area makes it dependent on other nations in terms of interstate trade.A nation will establish strategic economic sectors when is pursuing the objective of increasing competitiveness in the international market and cashing of benefit cost in economic areas of prime importance (for example, in the field of food or energy). For answer, it has developed a case study on the energy sector in Romania. In this sense were assessed specific indicators (level of energy dependency, domestic production of energy, the share of renewable energy, indices of structure of final energy consumption, energy intensity and the subsidization level of renewable energy) in order to substantiate the strategic character of one sector of the economy. The energy sector has a vital importance for economic and social development and for improving the quality life of the population. According to the adopted national development policies, States can approach strategically the energy sector, through funding and subsidizing it or can consider it as well as any other sector of the economy, without advantage it in any way.

Key words: strategy, sector of the economy, energy, politics

The starting point in the purpose of work is the answer to the questions:

- What are the characteristics of a strategic economic sector?

-What is more important for a nation: the competitiveness on the international market or national autonomy?

MATERIAL AND METHOD

In this work it is used as research method the qualitative and quantitative analysis of power sector through specific indicators. Analysis of strategic sectors was based on a case study on the energy sector in Romania. The material used for the calculation of the indicators was selected mainly from the publications of the National Institute of Statistics (NIS), Eurostat and the National Regulatory Authority in the Field of Energy (NRAE).

RESULTS AND DISCUSSIONS

From the done researches were resulting the main characteristics of a strategic economic "sector:

- To be the main supplier of feedstocks and energy for the economy;
- To represent the economic branch which determines the nation's relative economic independence;
- To secure the national consumption;
- To reduce the degree of dependency of third economies;
- To generate rare and essential products of the national economy;
- To represent the source of satisfay the primary needs.

Based on the characteristics of strategic sector, we can easily identify one of the economic sectors that includes these features: **the energy sector.**

The energy sector has a vital importance for economic and social development and for improving the quality life of the population. Securing energy supply in sufficient volume and wide access to energy services is a basic requirement in the development policy of the nation. Romania has various primary energy resources based on fossil and minerals (coal, crude oil, natural gas, uranium ore), but reduced in quantity, but also has a sub-loan potential of

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renewable resources. The diversity of primary energy resources contribute significantly to increasing safety in the electrical supply of the State. From the data provided by the carrier SC TRANSELECTRICA SA results that the total installed power of the electric power plants in the National Energy System (N.E.S.) was in 2011 of 21,405 MW, of which:

- 59% in thermal power stations;
- 30% in hydroelectric power plants;
- 7% in nuclear power plants;
- 4% in wind power, photovoltaic and biomass.

The primary energy consumption and production evolution

Consumption of primary energy and electricity are correlated with the degree of economic development of the country, the population standard of living, the degree of electrification of the economy, the efficiency of technologies used etc. Romania recorded the start of the phenomenon of the gradual decoupling of energy consumption growth from economic growth, a phenomenon that in developed countries was registered in the period that followed the first oil shock (1973).

Table 1

Primary energy

- thousand tons of oil equivalent -

YEAR	2009	2010	2011
Resources from wich:	**42,729**	**42,467**	**44,155**
- production	28,034	27,428	27,356
- import	11,235	11,239	11,417
Production from wich:	**28,034**	**27,428**	**27,356**
- coal	6,477	5903	6,748
- crude oil	4390	4186	4,129
- natural gas	8,964	8,705	8,407
- electricity	4,242	4,618	4,173
Import from wich:	**11,235**	**11,239**	**11,417**
- coal	640	540	600
- crude oil	6,892	5,820	5,452
- natural gas	1,614	1,834	2,546
- electricity	56	66	67

Source: Statistical Breviary -Romania in figures-2012- National Institute of Statistics

In 2011, the resources of primary energy increased by 4.0% compared to 2010. Due to the limited reserves of primary energy resources, the internal energy production of Romania remained virtually constant at about 27-28 mil. toe.

The degree of dependency on energy

From table 2 we notice that the energy resources of Romania were in 2011 of 44,155 thousand tons of oil equivalent (toe), of which 62% is the production of primary energy (coal, crude oil, natural gas, electricity) and 25.9% represents the imports of energy products. The share of imports in total primary energy resource has decreased in the year 2011 at 25.9% (compared to 26.5% in 2010), imports of crude oil accounting for 47.8% of total imports.

Table 2

Dependence on imports of primary energy for domestic consumption

YEAR	M.U.	2009	2010	2011
Sold import – export	Thou. toe	10,693	6,685	7,187
Domestic consumption of primary energy	Thou. toe	39,658	34,328	34,817
The degree of dependence	**%**	**27.0**	**19.2**	**20.6**

Source: National Institute of Statistics, Eurostat website, own calculations

Primary energy imports are still high, a fact that determines a dependency of Romanian economy of energy resources of other producing countries. We can notice that the evolution of this indicator in the economy follows the favourable trend of the Romanian economy (fell to 27.0% in 2009 to 20.6% in 2011). In 2011 this indicator had a slight increase, but Romania's energy policies based on stimulating investments in renewable generation capacity will ensure the relative economic independence of this sector in the future.

Indices of structure of the final energy consumption

Consumption in the 2009-2011 period had the evolution presented in Table 3. Total electricity consumption had the highest values in the 2009 year (29,334 thousand toe). The largest consumer of energy is represented by the manufacturing industry, with a total consumption of about 40% of the total. Notice that the domestic consumption of energy has a share of about 30% of the total. Domestic energy consumption recorded in this period a rising trend from 7,090 thousand toe in 2009 at 7,124 thousand toe in 2011.

Table 3

Final energy consumption

thousand toe

Year	2009	2010	2011	Structure index (%) - 2011
Final energy consumption, from wich:	**29,334**	**24,441**	**25,177**	**100%**
Manufacturing industry (excluding fuel processing, including capture,treatment, water distribution)	7,474	5,158	5,563	22.10%
Manufacturing industry (excluding capture, treatment, water distribution)	6,400	4,098	4,488	17.83%
Buildings	572	410	407	1.62%
Transports	5,399	5,377	5,107	20.28%
Domestic	7,090	7,037	7,124	28.30%
Agriculture and forestry	293	385	391	1.55%
Services	2,106	1,976	2,097	8.33%

Source: NRAE

Energy intensity

In terms of the efficiency of energy use, its growth has a major contribution to the achievement of security of supply, competitiveness and sustainable development, the primary energy resources saving and reduction of greenhouse gases emissions. The representative synthetic indicator of efficiency energy use at the national level is the energy intensity, or energy consumption to produce one unit of gross domestic product (GDP). The lower value of this indicator indicates the higher efficiency of energy use.

Table 4

The primary energy intensity trend in Romania (2009 – 2011)

Indicator' s name	M.U.	2009	2010	2011
Primary energy intensity using GDP in constant prices	toe/1,000 EURO	0.190	0.177	0.178

Source: National Institute of Statistics, Eurostat website, own calculations

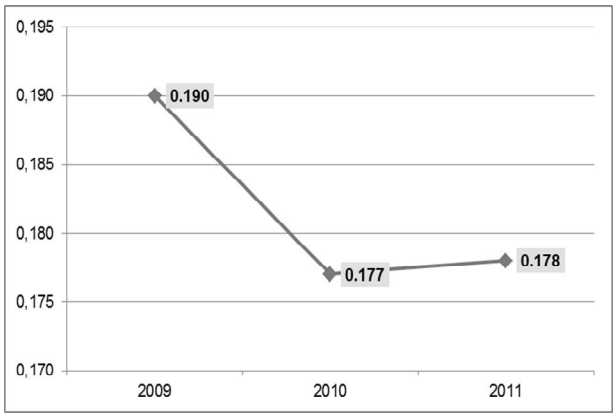

Figure 1 - **Primary energy intensity using GDP in constant prices toe/1,000 EURO**

In recent years, as a result of the structural changes of the economy and the emergence of new economic units effective from energetic point of view, the primary energy intensity recorded significant declines (by 7%) from 0.190 toe/1,000 euro GDP in 2009 to 0.178 toe/1,000 euro GDP in 2011. Instead, in comparison with data at european level it is noted that the intensity of the primary energy in Romania is more than 25% compared to the EU-27 average, although there has been a decrease over time (*tab. 5*).

Table 5

Primary energy intensity trends - european comparisons

-toe/1,000 EUR of GDP -

Primary energy intensity	2009	2010	2011
EU-27	**0.160**	**0.154**	**0.152**
EU-25	**0.158**	**0.152**	**0.150**
EU-15	**0.152**	**0.146**	**0.145**
Czech Republic	0.249	0.234	0.222
Hungary	0.210	0.196	0.188
Poland	0.188	0.181	0.178
Portugal	0.110	0.106	0.102
Ireland	0.132	0.127	0.126
Spain	0.139	0.137	0.131
Greece	0.133	0.133	0.128
Bulgaria	0.304	0.281	0.262
Romania	**0.190**	**0.177**	**0.178**
Percentage ratio (%) Romania/ EU-27	**118.750**	**114.935**	**117.105**

Source: National Institute of Statistics, Eurostat website, own calculations

We remark in Table 5 the highest energy consumption per 1,000 EUR of GDP in 2011 was in Bulgaria, repesctive 0.262 toe/ 1,000 EUR GDP. With an energy efficiency lower than of Romania are the following European countries: Bulgaria, Poland and the Czech Republic.

Notice in Figure 2 that although energy utilization efficiency is lower in Romania, the tendency of improvement of this indicator is higher than in the EU. This development occurs as a result of the emergence of new eco-efficient production technologies, with a low power consumption, with a much higher yield than old technologies. To reduce the disparities between Romania and the EU-27, in terms of energy

efficiency, there are promoted and stimulated investments in new capacity for the production of electrical and thermal energy from renewable sources.

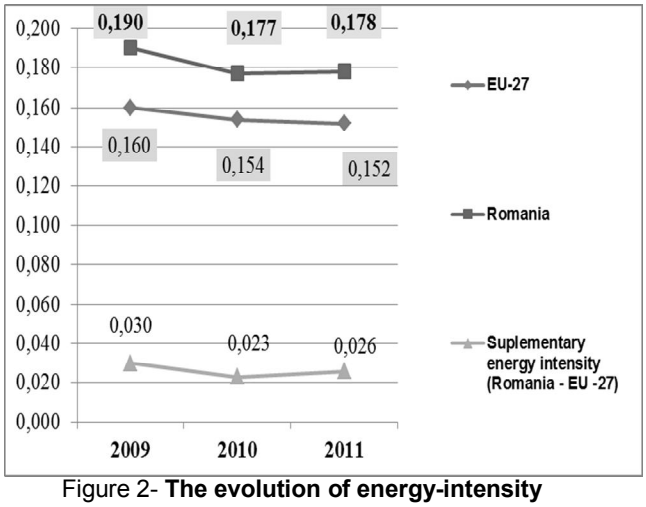

Figure 2- **The evolution of energy-intensity comparison Romania-EU-27**

Share of renewable energy

The share of renewable energy in gross final consumption increased in the 2006-2011 period, from 17.1% to 26.5% (Eurostat). In the 2012 year, at the national level were installed production capacity of renewable energy with a total installed power of 2,560 MW. The great wind and solar energy potential, as well as subsidizing policy through green certificates (GC) have attracted FDI, resulting new production capacity for green energy. Under the Law no. 220/2008 for the establishment of system to promote energy from renewable energy sources, the Romanian authorities have set limits on the price of green certificates market between 27-55 euros per certificate. Number of GC varies depending on renewable energy resource, from 1 GC/MWh for energy produced from biogas to 6 GC/MWh for solar energy (*tab. 6*).

The investments in energy production capacities from renewable source benefits by support measures and programs from national and EU funds, in the amount of up to 70 per cent of the eligible value of the investment. The high level of the support renewable energy tinted the strategic character of the energy sector.

Investing in green energy involves a total cost (economic + social) per unit of energy produced higher than in conventional system, which has a negative effect on final consumers (households) who will pay a higher price for the purchase of needed energy. Even if the economic indicators improve the energy independence and security of consumption, at the social level the impact is negative, the population will feel the electricity prices rise. Why does this happen? ... Since the investiments in this sector have a significant social cost given by the price of green certificates granted to investors, which at first glance appears as a well-deserved help for entrepreneurs who assumes the risk.

Table 6

The green certificates number and periods of support referred to in Law 220/ 2008

RES	Central type/ Group	GC/MWh	The period of support (years)
1. HYDRAULIC energy (used in power plants installed < = 10 MV)	New (commissioned since 1 January 2004)	3 GC	15
	Upgraded/ retooled	2 GC	10
	Put into operation before 1 January 2004 and non-retooled	0,5 GC	3
2. Wind ENERGY	(new)	2 GC until 2007 1 GC starting from 2008	15
	Reused	2 GC until 2007 1 GC starting from 2018	7
3. BIOMASS (regardless of the form of aggregation)	(new) - of all types of biological waste	2 GC	15
	(new)- from energy crops	3 GC	15
	High-efficiency cogeneration (in addition to GC for the biomass power plants mentioned above)	1 GC additonal	15
4. Mud fermentation gas installations in sewage treatment	(new)	1 GC	15
5. Geothermal energy	(new)	2 GC	15
6. SOLAR Energy	(new)	6 GC	15

Source: Law 220/2008- NRAE

The green certificates paid from the State budget in the period of 2011-2016 will be 18,343 million euros (3,057 million euros/year, representing 2% of GDP). In adopting its decision of energy policy and sustainable development, the Government must answer the question: the benefits of investing in renewable energy, respectively the energy independence and

environmental positive effects outweigh the costs they entail? If the answer is positive, then the policy in support of this strategic sector is viable. Conversely, if the answer is negative, it is not justified the energy sector benefiting trough the massive subsidies, but it should be treated as any other sector of the economy, even though it will cause visible higher costs than in the first case. In this situation, the social cost which is hidden in taxes and fees charged to the population will be incorporated in the selling prices of energy products.

According to the national development adopted policies, States can approach strategically the power sector, through funding and subsidizing it or can approach as well as any other sector of the economy, without advantaje it in any way.

CONCLUSIONS

1. For the answer to the fundamental question of the work, has been carried out a case study in the energy sector in Romania.

2. A sector is strategic if: it is the main supplier of feedstocks and energy for the economy, is the main economic branch which determines the relative economic independence of the nation, provide security for national consumption, represents the source of satisfy the primary needs.

3. The energy sector in Romania follows the strategies at EU level and it is based on reducing the dependency of third economies, for ensuring the security of national consumption. It is based on the investment stimulation in new capacity for the production of renewable energy, through the financing programs and direct subsidies on production (green certificates).

4. The energy products is characterized by rarity, given by the indispensability for the nation's economic activity. They are alongside agricultural products and agri-food, source of meeting the primary needs (food safety).

5. The answer to the theme of this work is: Yes, THERE are STRATEGIC SECTORS! with both positive and negative implications on the nation.

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