

## DEFINING ASPECTS OF THE NEW ECONOMY IN VALEA JIULUI CARBONIFEROUS BASIN

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**Abstract:** *The new economy of Valea Jiului Carboniferous Basin changes the economic profile of the six localities with urban status in Hunedoara County: Petroșani, Vulcan, Lupeni, Petrila, Uricani and Aninoasa. The changes in the new economic landscape occurred in a relatively short period of time (about 33 years) and created educational, social and political imbalances. The new economy proposes the reintegration of a significant part of the population by abandoning extractive operations, reducing the secondary sector of the economy and focusing on the tertiary sector, the service sector. The business environment in the Valea Jiului coalfield is going through a new stage, which began with the restructuring that began in 1990. It is influenced positively or negatively by technological advances, European Union policies, local, national and international political events and the evolution of demand and supply. Technology and strategic innovators have the opportunity to quickly enter competitive markets and replace or assimilate local players.*

**Keywords:** *social imbalances, economic imbalances, digitization, hypercompetition, entrepreneurship, unemployment*

### 1. Introduction

The new economy in Valea Jiului Carboniferous Basin translates into a change in the economic profile of the 6 localities with urban status in Hunedoara County: the municipalities of Petroșani, Vulcan and Lupeni, the towns of Petrila, Uricani and Aninoasa. The change in the context of the new economy occurred in a relatively short period of time (about 33 years), generating some imbalances at the educational, social and political level. The new economy proposes the reintegration into the economy of a significant mass of the population, by giving up mining operations - reducing the secondary economic sector - and focusing on the service sector, the tertiary. The Carboniferous Basin Valea Jiului is located in a mountainous area, representing an intramountain depression surrounded by the Parâng, Retezat, Vâlcan and Șureanu massifs.

### 2. Discussions

The new economy of Valea Jiului Carboniferous Basin is based on innovation and knowledge and is characterized by a new business environment, digitization, adaptation to changes [1].

Changes are ongoing, complex and fast enough, reducing predictability and generating uncertainties. We believe that the main contributor to the economic changes of the Jiu Valley is globalization, manifested in areas such as production, trade, research and development, affecting communication, leading to economic interdependence, to a so-called openness of business, as well as to hyper-competition [2]. Education does not go unnoticed by these processes.

Businesses in Valea Jiului Carboniferous Basin are experiencing a transition to a new stage, the pace of change being rapid, growth being realized based on a more alert flow of communication and access to information, globalization and innovation [3].

The business environment in Valea Jiului Carboniferous Basin addresses a consumer in the process of adapting to technological advances, who expands and revises his preferences at the pace dictated by the market and access to the promotion of finished products.

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Fig. 1. Valea Jiului Carboniferous Basin (source: Google Earth, satellite image post-processed by the author)

The new economy in Valea Jiului Carboniferous Basin produces discontinuities in the transition process, both in the general economic plan (the transition from the mono-industrial profile to that of services), and in the industrial plan, in the sense in which new industries are created to replace them or even destroy the old ones and accelerate economic development [4].

The new economy in Valea Jiului Carboniferous Basin encourages entrepreneurship and financing for small businesses, the share of small and medium-sized enterprises being constantly increasing and currently encouraged through the Just Transition Program, coordinated by the West Regional Development Agency. At the same pace, new jobs are created, and through the educational process, an adaptation of human resource skills is necessary.

Consumers in Valea Jiului Carboniferous Basin tend to flock to the diversity of products, in full development of hyper-competition and communications. A more particular rhythm of the dissemination of information, ideas, services and products are known [3].

The new economy in Valea Jiului Carboniferous Basin is increasingly customer-oriented, just as education must be person-centred. Customer power is increasing due to globalization and competitive market, consumers are better informed.

Information technology and digitization enable consumers to analyse more efficiently, make intelligent decisions and exploit every option [5]. The profile of the Valea Jiului consumer is constantly changing, from the unconditional acceptance of finished products to the search for alternatives, comparing offers and streamlining options.

A number of finished products are virtual goods today, with online commerce being part of digitization and the new economy. The new economy in Valea Jiului Carboniferous Basin tends to transition from a producer-ruled to a consumer-ruled economy.

Being based on knowledge and continuous learning, the new economy manifested and adapted in the region tends to be led by those who create new products, manage their knowledge effectively, operationalize new services at the expense of competition. As such, the development of the region will in the future be based on the quality of the educational process, as a critical element.

It is necessary for the educational and psycho-social system to align with the changes in the sphere of technology, competition and the workforce, by implementing reforms that ensure the increase of productivity and especially competitiveness in the Jiu Valley. Investments are needed so that the educational system in Valea Jiului Carboniferous Basin responds to the impact of digitization and information technology. Individuals and companies will interact by accessing vast information resources in ever shorter time and at ever lower costs.

Table 1. The staff made redundant when the Petrila, Paroșeni and Uricani Units were closed (Source: European Commission).

Unit / year	2011	2012	2013	2014	2015	2016	2017	2018
E.M. Petrila	359	106	83	92	460	0	0	0
E.M. Paroșeni	248	113	102	86	54	74	300	223
E.M. Uricani	293	31	80	78	181	188	21	183

Even though the phenomenon of globalization is started and present in the Jiului Valley, in recent years it has developed at a more significant speed, moreover, spreading much faster internationally. The new economy reduced the barriers imposed by distance and minimized the disadvantages related to the geographical position and natural setting of the region, the educational system being the main beneficiary of the process. Locally and globally, trade has externalized, and geographical proximity is no longer essential for the business environment. There are significant increases in the Gross Domestic Product, as a result of globalization.

*Table 2. The evolution of the number of unemployed between 2010 and 2018, in the 6 U.A.T. from the Carboniferous Basin Valea Jiului (Source: I.N.S.)*

City / Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
LUPENI	841	668	621	643	545	494	586	468	270
PETROȘANI	1332	1077	1207	1248	1204	1247	985	600	497
VULCAN	892	644	684	770	781	656	898	581	433
ANINOASA	231	185	237	238	194	229	89	72	76
PETRILA	964	643	686	827	749	902	472	379	310
URICANI	250	215	199	225	164	185	132	127	94

There are significant developments in the capital markets, globally and regionally in the Valea Jiului Carboniferous Basin. Local investors are well-informed and innovative, being good actors of the new economy, increasing corporate performance and transparency [1].

The dynamics of the competitive market, which tends to be based on capabilities instead of assets, causes a slight instability in the profitability of companies with a tendency to increase. This fact represents a real challenge for the educational and psycho-social system of the studied region, which finds itself in the position of qualifying a new workforce and innovation.

The new economy involves new specialized skills, requested by companies, which are new for Valea Jiului Carboniferous Basin. The dynamic between employer and employee is constantly changing in the context in which the workforce is empowered. The mobility of employees on the labour market is directly determined and favoured by the acquired skills.

Reforming an educational and psycho-social system must take into account the fact that in the new economy, the relationship between companies and employees is changing rapidly, and employers can no longer guarantee long-term jobs, diminishing the traditional phenomenon of employee loyalty. By emphasizing skills and knowledge, the person becomes paramount in the business environment, and education must also be person-centred.

Authors who have studied and theorized the new economy have identified speed and connectivity as dominant elements of the global socio-economic landscape, with applicability to the region under study. The calculation formula of the competitiveness assessment includes the speed of access to the market, the time between the exposure of the idea and the generation of products based on it, as well as the connectivity to partners, suppliers and customers. It results in alternative ways of pricing both the goods produced and the components required.

Just as power tends to be transferred from the producer to the consumer, by extrapolation at the level of the Valea Jiului Carboniferous Basin, we can propose the transfer of power from the preparer to the person, within the educational system.

The new economy assumes economic, informational and even emotional values. The changes taking place are happening fast enough that precise monetization of them is no longer possible, creating a new challenge for business actors who need to identify hidden values and adapt offerings.

Another determining factor, both in the context of the new economy and the educational and psycho-social system, is the way in which the person exercises his activity, either as an employee or as a direct beneficiary of the educational system.

### 3. Concrete measures applied or designed for each individual city

On August 11, 2021, the Government of Romania certified the City of URICANI as a tourist resort of local interest, having met the minimum criteria strictly necessary for this: the natural setting, the position in relation to the Retezat National Park ("entrance gate"), the accommodation capacity, the ways of communication [6]. Also, at the level of the town of Uricani, within the Sustainable Development Strategy of the locality for the period 2021-2027, three "marginalized areas" were identified - "1 Mai", "Aleea Jiului", "Sterminos", with a negative impact on the potential for abandonment schooling, absent or low formal

education among the adult population, excessive human pressure (high population density), poor collective housing, with lack of access to building infrastructure.

In the framework of the new economy, Straja tourist resort is part of the Lupeni Municipality, which despite the influx of tourists (over 100,000 per year) is still considered "of local interest". The resort has 26 kilometres of ski slopes, 11 cable cars and 210 accommodation units (as of 2023). The access road between Lupeni and Straja, DJ 664A, 8.9 kilometres long, was modernized by taking over the county administration. Lupeni was the terminus of Railway Section 214 Livezeni-Lupeni, currently not operated by a railway transport company.

On the territory of the town of VULCAN is the most recently declared Tourist Resort of local interest, a defining element of the new economy, through the attestation by the Government of Romania in December of 2022. The tourist area of the town of Vulcan is represented by the Pasul Vulcan neighbourhoods (on the slopes of the Mt. Vâlcă) and Babii Hill (on the slope of the Retezat Mountains). The resort meets the criteria through the natural setting, the number of over 100 places to stay, the modernization of the segment DJ 664 "Transvâlcă" related to Hunedoara County (10.7 kilometres long, from the centre of the municipality to Pasul Vulcan), gondola lift inaugurated in 2011 and ski slopes 940 meters long.

The city of ANINOASA is included in the "Strategy for the economic, social and environmental development of the Ji Valley (2021-2030)" financed by the European Commission.

The "Integrated Urban Development Strategy of the Petroșani Municipality 2021-2027" is underway at the PETROȘANI locality level, which deals with early school leaving and the phenomenon of absenteeism [7]. "Dimitrie Leonida" Technological High School was included in the European Commission's program "Let's go to school, a chance for the future" (2018-2021). The same document deals with the Parâng tourist resort of national interest (certified in 2009) - the only one of its kind in Valea Jiului Carboniferous Basin - with 7900 meters of ski slopes, an exceptional natural setting and over 900 accommodation places (at the level of the year 2000).

The new economy in PETRILA has been manifested since 2015, when the local community strongly reacted to the attempt to demolish the surface capacities of the former Petrila Mining, cultural projects of urban regeneration and capitalization of the affected areas being developed.

#### 4. Conclusions

The new economy of Valea Jiului Carboniferous Basin in terms of sustainable development, in close connection with the educational and psycho-social system, proposes the creation of a diverse economic environment focused on strengthening the growth and competitiveness of small and medium-sized enterprises through activities and products with added value, supported of initiatives that promote innovation and local entrepreneurship.

The implementation of the new economy in the studied area aims at:

- identifying and supporting alternatives in obtaining energy, capitalizing on the experience of qualified personnel in the mining field and the other natural resources of the area;
- creating a business environment that attracts investments;
- creating a business environment that is as predictable as possible, which will attract the workforce at the same time as diversifying the fields of activity;
- supporting local economic actors in offering products with high added value, especially those in the tourism market;
- encouraging local entrepreneurship;
- stimulating economic innovation, creativity and the entrepreneurial environment;
- protection of the environment and local traditions in the Jiului Valley;
- creating attractive employment opportunities for the young generation, but also creating new jobs for the current workforce in the extractive industry;
- reducing the phenomenon of labour migration from Valea Jiului Carboniferous Basin to larger cities or even to other countries;
- minimizing the economic development disparities of Hunedoara County, compared to the other counties in the West Region and compared to the figures at the national level;
- making investments to support energy generation based on alternative-renewable resources;
- capitalizing on current assets from the local energy industry in order to produce alternative energy;
- proposal for the establishment of a research, development and innovation centre, focused on Valea Jiului Carboniferous Basin, which would interconnect public institutions with economic actors that have a specific technology and that could undertake studies and implementation of the studies.

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