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SPECIAL ISSUE − Industrial Culture in Urban and Regional Development
ORIGINAL PAPER

GEOSCAPE

Industrial culture of former mining communities from Romania

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Abstract

The paper aims to unfold the intangible elements that form the industrial culture based on the analysis of two former mining communities from Romania. Research conducted in 2014 in two former mining cities located in the northern part of the country highlights their particular characteristics and the strategies employed by individuals to cope with mine closure. The research found a strong occupational identity among former miners, which affected the way they perceived themselves, the surrounding environment and the opportunities they had after restructuring. The self-perception of what people could work hindered the economic redevelopment process. We found that after living and working for many years in a state-led regime, people expected the state to take care of them and to create new jobs in their communities. Even though many stakeholders acknowledged the importance of preserving industrial heritage for collective memory, few projects were implemented, and no mining museum was built. In both cities, a large number of people migrated abroad or returned to their hometowns to compensate for the job scarcity. Miners coming from other regions to work in younger mining communities experienced a lower level of community integration.

Keywords

Mining communities, Industrial culture, Occupational identity, State dependency, Romania

Received:
9 April 2018
Received in revised form:
10 June 2018
Accepted:
11 June 2018

Highlights for public administration, management and planning:

- Mining communities have particular characteristics, such as mono-industrial character, location in remote areas, and overdependence on the mining company, which make them more difficult to redevelop.
- Mining communities need to develop projects that strengthen the solidarity among people who originate from different regions to enhance their attachment to the community.
- Rehabilitation of the built heritage is important for the preservation of community identity and for advertising the unique character of the area.
- Restructuring strategies should be planned well in advance, even during the profitable stage of the mining activity, to minimize the social impact of mine closure and to prevent migration of young people out of the community.

1 Introduction - An overview of the mining sector in Romania

Mining was a traditional activity in the territories that form Romania nowadays. Gold resources were extracted in several locations since the second century, and the salt resources were rich and played an important role in the local economy. Also, for many centuries coal was extracted in the region called Jiu Valley. The extraction of mineral resources intensified during the communist regime, as the country went through a process of rapid industrialization. Former dictator Nicolae Ceaușescu wanted to reduce the dependency of the country on imports. Therefore the internal production had to be much diversified to cover internal needs. Diversification of the economy was possible only through a systematic process of identifying and capitalizing natural resources. Heavily industrialized areas of the country developed close to raw materials to reduce transportation costs (Dumitrescu 2008), but some industrial cities were artificially created, and they depended on the imports of raw materials from other regions. For example, iron and steel industry was planted in the cities of Călărași and Galați because they were located on the lower course of Danube, and the raw

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materials were shipped by water from other areas of the country (Săgeată 2013).

By the 1980s Romania's industry tended to become highly inefficient due to the concentration of investments in heavy industry, which was energy intensive, and by stopping the influx of technology from developed countries. The volume of the production did not take into account the domestic and foreign demand; also, it was the policy of communist party to provide jobs to all people, and therefore state-owned companies tended to hire more employees than it was economically profitable. The mining sector also had developed unprofitable because, in some cases, minerals of low quality were extracted and the technology used was outdated. For example, in the case of coal, it did not matter where and how it was extracted, as long it was extracted. The consequence was that large capital investments were made for the extraction of low caloric layers of coal, which were difficult to exploit. The production costs were larger than the output value, and the gap enlarged over time (Rus 2003). The low productivity of technology was compensated by a larger workforce brought from other regions of the country (Chiribucă 2016). The mining sector was a strategic sector for the industry, and people working in this sector were well paid, well organized and influential, even though mining extraction became unprofitable over time (Dani et al. 2006).

Many communities serving mining extractions grew in size as they attracted people from rural areas or other parts of the country (Dumitrescu 2008; Popescu 2014). Some mining settlements were built with the only purpose to host the workforce of a new mine (for example, cities of Stei and Nucet in Bihor County were developed for extraction of uranium). The number of mono-industrial cities grew significantly. Another distinctive feature of mining cities is that they tended to be part of a larger industrial area where units for ore processing were built. According to the Agency for Mining Areas, in 1997 when the restructuring of the mining sector began, 383 communities throughout the country were considered to be dependent on the mining activity (meaning that a part of the workforce was employed in mining or related economic activities). The most affected counties from Romania were Hunedoara and Maramureș. Hunedoara County had 52 out of 69 localities affected by mining and industrial restructuring, while Maramureș County 48 out of 76 settlements (Radu 2016).

Mining sector restructuring in Romania started in September 1997 and consisted in a massive layoff of workers in a relatively short period. The restructuring was carried out through stimulating miners to voluntary leave the system by offering them severance payments ranging from 12 to 20 salaries. Miners who were at least 45 years old and who worked for 20 years in the mine had the right to retire. According to the Romanian National Institute of Statistics, between 1996 and 2016, the number of people working in the extractive industry decreased from 250 300 to 54 200. The largest downsize was in 1997 when 66,500 workers in extractive industry (26.57%) either retired or voluntarily renounced to their jobs. However, the layoff process was not smooth throughout the country. Miners from Jiu Valley protested strongly against the government decision. They marched to Bucharest on several occasions, and they fought with police forces to defend their privileged positions and obtain government assistance (Bruha et al. 2005). In the following years, all mining communities suffered a sharp economic and demographic decline, and deterioration of local infrastructure and social services (Dani et al. 2006). Population migrated either abroad in the search for jobs or in their hometowns where they owned a house and land. When industrial and mining restructuring began, there were no government programs to absorb the redundant workforce, stimulate job creation or local entrepreneurship (Radu 2016); however, such programs were adopted in the following years, and they were financed through two loans taken by the Romanian Government from the World Bank. The government expected that the miners would use the severance payments to overcome the period until finding a new job, for starting a business or for returning to the hometown (Haney & Shkaratan 2003). This expectation proved inaccurate because many families spent the money quickly for buying goods that they could not afford otherwise, and therefore continued to represent social problems for the government. In this context, many communities suffered major losses of the population; also, the restructuring of the industrial and extractive industries generated further decline of employment in the services sector.

The article aims to distinguish the elements that compose the industrial culture of the mining communities in Romania. The analysis is based on case studies conducted in two mining communities from the northern part of Romania. The research goal was to understand better how the cultural characteristics of the settlements influenced their trajectories in the aftermath of mine closure, the individual strategies adopted by individuals to deal with the scarcity of jobs, the impact of restructuring on family relations, and the strategies employed by residents to preserve community identity. Section two consists of a liter-

GeoScape 12(1) - 2018: 39–51 doi: 10.2478/geosc-2018-0005 Available online at www.degruyter.com

ature review of the industrial culture of mining communities and it highlights those characteristics that distinguish them from other types of settlements. In the third section, we describe the two communities analyzed and the research methodology. In the fourth part we present the findings of the research, and in the fifth part, we conclude on the elements that form the industrial culture of mining communities in Romania.

2 Characteristics of the mining communities

Mineral resources throughout the world are important sources of wealth and prosperity for individuals, companies and countries. The mining activity transforms the surrounding landscape, attracts a large number of people, gives birth to new settlements, and provides the context for technological progress. Even though rich resources might generate economic development, several studies have shown that countries with abundant mineral resources might suffer corruption, poverty and civil wars (Radu 2015). Also, the economic performance might decline being affected by such economic problems as "resource course" or "Dutch disease" (Auty 1993; Ross 1999).

Mining communities have particular characteristics that form their industrial culture (Eaton 2016), or what other authors labelled industrial atmosphere (Marshal in Grabher 1993; Sadler & Thompson 2001), mining culture (Stephenson & Wray 2005) or company town mentality (Neil & Lea 1992). Mining towns might be misrepresented as gloomy, depleted and environmentally polluted places that lack cultural assets (Ianca & Stoica 2010). Even so, the architectural landscape, including industrial buildings, machines, the living quarters of miners and a planning system specific to mining communities, has technological, historical, esthetical and cultural values that testify the technological progress of industrial activities (Chelcea 2008) and the way of living of past generations. The widespread meaning of industrial culture is related to tangible industrial heritage (Harfst et al. 2016) and its significance is demonstrated through inclusion of former industrial cities and larger industrialized areas on UNESCO World Heritage List (such as: Røros (Norway), Sewell (Chile), the Carboniferous Basin of Wallonia (Belgium), the Mining Basin Nor-Pas de Calais (France), mining area around Copper Mountain, Falun (Sweden), and mining area Cornwall and West Devon (UK)). There is an increasing interest in valorizing industrial buildings through artistic events, some organized in connection with European Capital of Culture (as was the case of Ruhr area in 2012).

However, the meaning of industrial culture is much broader, and it incorporates symbolic characteristics, such as beliefs, stories, discourses, practices, ceremonies, language and rituals of daily life that actors construct around existing local resources, and that shape people's responses to proposed strategies (Sadler & Thompson 2001; Warsewa 2012; Häyrynen & Nyman 2012; Eaton 2016). From this perspective, the intangible cultural assets provide a set of skills and habits that guide people's preferences and actions (Swidler 1986).

Former mining communities are characterized by strong occupational identity and a "company town" culture (Popescu 2014), as these communities face problems such as emotional degradation, community anomie and path dependency. The mining communities are dominated by gender division of labor (Parry 2003; Dale 2002), and there are appropriate roles for men and women: men are breadwinners and females are housewives (Bell & York, 2010).

The mining communities are examples of communities where work dominates the place (Strangleman 2001; Stephenson & Wray 2005). The hardship of the working conditions fosters the sentiment of pride and distinctiveness (Mackenzie et al. 2006; Warwick & Littlejohn 1992), solidarity among former miners (Strangleman 2001; Neil & Lea 1992), and attachment to a place (Sampson & Goodrich 2005). During the time of mining restructuring, the strong camaraderie permeates outside work into former miners' lives (Mackenzie et al. 2006). Former miners tend to provide each other mutual support for job searches, and they share information regarding the access to training and available jobs. Often older miners are nostalgic about the glorious days when the mining activity flourished, and the community was prosperous (Strangleman 2012).

In the mining communities, the anticipatory socialization (Roberts in Stephenson & Wray 2005:184) prepares young generations for understanding the conditions and requirements for working in the mine. For young people working in the mine meant to follow a family tradition of several generations. Because their grandfathers, fathers and brothers have worked in the mine, they thought the mine would always be there; therefore, they tended not to study hard and to have a low level of formal education (Eikeland 1992:120). However, in the context of mine closure, older former miners and those people with a lower level of education faced difficulties finding jobs.

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A culture of dependency developed between the mining company and the community (Dale 2002; Liljenäs 1992; Bell 2009). Dale (2002) described Norwegian mining communities as auto-sufficient settlements, dominated by local paternalism. Mining companies had built the entire social and physical infrastructure of the communities and provided miners with houses, schools, shops, roads, and public utilities (Dale 2002). In these communities, the residents expected to be taken care of by the mining company and to be provided with jobs. In consequence, during the times of restructuring or closure, miners anticipated that it was the company's or the national government's responsibility to create new jobs (Dale 2002:14), and an atmosphere of powerlessness and resignation characterized those communities. Liljenäs (1992:247) found in many Sweden settlements a distinct company culture, characterized by strong company influence, which was not favorable for the growth of companies from within the communities, as residents had access to permanent well-paid jobs.

The overdependence on the mining company as the main source of revenue discouraged local entrepreneurship among residents, in the aftermath of mine closure, younger educated people and people with higher level of specialization tended to leave the community first (Eikeland 1992). Therefore, this selective migration (Chiribucă et al. 2000:16) - even though a normal phenomenon - emphasizes the difficulties of restructuring and indirectly reduces the development opportunities of the region. The localities most in need of development were critically lacking entrepreneurs as primary development agents (Lockie et al. 2009). Studies have shown that communities should start the diversification efforts well before mine closure, and should support the development of several small businesses, preferably complementary, to prevent migration of well-educated workforce (Keyes 1992; Lockie et al. 2009). Mining communities which successfully transitioned the period were those who enhanced the diversification potential by investing in public works and amenity development that would improve the quality of life in the community (Keyes 1992).

The high dependency on mining activity hinders the economic and emotional regeneration of these communities. Johnstone and Lionais (2004:218) characterized former mining communities as "depleted communities", meaning communities that are in economic decline, and lack the resources and mechanisms for redevelopment. Residents of mining towns suffered a deterioration of the "social psych" (Bell 2009:654) and emotional degradation (Stephenson & Wray 2005). Former miners reported a loss of social support, opportunities for interaction and the pride associated with mining occupation. The closer of mining activity generated destruction of the relationship between locality and work (Gilbert in Stephenson & Wray 2005:177), and the mining communities were thrown in community anomie, which is a breakdown in the community's social trust and social norms (Bell 2009:655).

Characteristics of mining communities do not only distinguish them as unique places but also influence the redevelopment strategies. Communities dependent on mineral resources are more difficult to be redeveloped than communities dominated by another type of industry because: (a) the minerals are non-renewable resources (Haney & Shkaratan 2003) and have a finite time of extraction which depends on the richness of the ore; (b) some of them tend to be located in remote areas, as it is the case of some mining communities in Canada (Keyes 1992), and their local economy is difficult to be diversified; or (c) they are located in the proximity of industrial centers where the raw materials are processed (Wirth et al. 2012), which increases the dependency of the region on related economic activities, and consequently, in case of the economic downturn, the decline spreads throughout the entire region. Grabher (1993) analyzed the redevelopment process of the Ruhr area and found that the initial strengths of the region turned into obstacles to innovation. The area was highly specialized in coal extraction, and iron and steel production, and over the time strong relations developed between the core firms and their suppliers. The strong ties favored a common orientation toward preserving the traditional activities, and generated a vicious circle that locked in the firms and prevented them from finding alternative ways for redevelopment. The author called this "the weakness of strong ties". Grabher (1993) found that the consensus of the local and regional redevelopment agencies to preserve the traditional activities of the Ruhr area locked the region in a dead-end trajectory and undermined its ability to learn and self-organize. The consensus culture, the defensive strategy (Hospers 2004), and the lack of a creative conflict delayed the reconversion of the economy.

3 Methodology

The present article aims to analyze the social characteristics of the mining communities from Romania after the restructuring of the mining activity.

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The analysis is based on two case studies conducted in two cities from the northern part of Romania, namely Borșa and Cavnic located in Maramureș County (Fig. 1). Maramureș area is one of the historic mining regions of Romania and is well known for the extraction of non-ferrous metals.It was one of the regions of the country most affected by the mining and industrial restructuring.

Fig. 1 Map depicting the locations of the two study areas

3.1 Study areas

We chose the two cities based on the similarities and differences that exist between them, and that might influence their development. A mixture of non-ferrous metals (copper, lead, zinc, silver and gold) was extracted in the mines from both cities. The same mining company, REMIN Baia Mare, managed the mines from Cavnic and Borșa. In 1997, when mining restructuring began in Romania, 52.08% of the workforce in Borșa worked in mining, while in Cavnic 77.53%. In Cavnic, mining was a traditional activity, while in Borșa mining developed strongly during the communist regime, mainly between 1970 and 1980. In both communities, the mines are closed at the moment. There are only a few people still employed who are responsible for guarding the mines. The two communities differ in terms of their size: Borșa is a middle size city having a population of approximately 27 108 people according to the 2011 census, while Cavnic is a small city of 4 976 people. Borșa is located at a larger distance from other major cities, while Cavnic is closer to a larger city which is the city residence of Maramureș County. Both cities are located in rather mountain areas, and forests dominate the surrounding landscape. In both cities miners were either residents or residents of the surrounding communities who commuted daily; also, people from other regions of the country were brought to work in mines, and the housing provided to them were different between the two communities. In Cavnic they lived in temporary housing during the weekdays, and on the weekends they returned home. In Borșa they lived in permanent apartment buildings located in a new miners' neighborhood, called Baia Borșa, which was built in the proximity of the mine and at six kilometers away from the city; the mining company was heavily involved in the management of this neighborhood. Dani et al. (2003:349) found that the mining company functioned as de facto mayor for Baia Borșa.

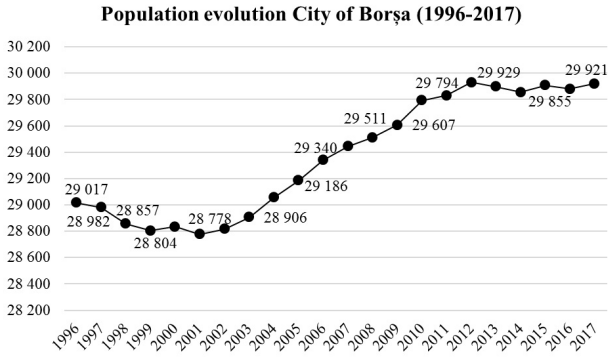

Fig. 2 City of Borșa stable population at 1st of January (source: Romanian National Institute of Statistics)

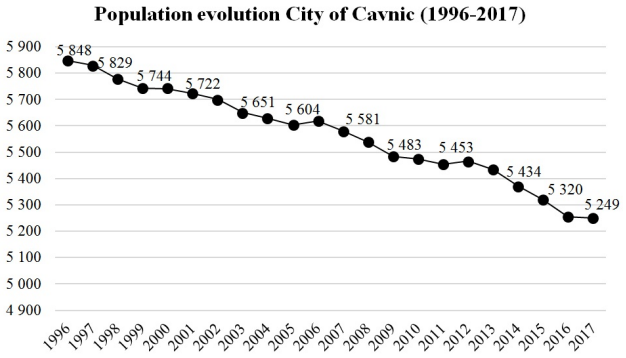

Fig. 3 City of Cavnic stable population at 1st of January (source: Romanian National Institute of Statistics)

After mining restructuring started, cities of Borșa and Cavnic followed different demographic trends. Statistical data shows that population of Borșa increased with approximately 900 people, as it increased from 29 017 in 1996 to 29 921 in 2017, while the population of Cavnic decreased from 5 848 in 1996 to 5 249 in 2017. The demographic trends do not accurately reflect the strong migration movement of population that takes place in both

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communities. A large proportion of Borșa workforce migrates abroad temporary or permanently, and people return home during religious holidays or in August (Anghel 2009). Even though migrants are counted in the permanent population of the city, they work abroad most of the year. Therefore, even though statistical data shows a population increase in Borșa, in reality, many people live and work abroad. The City of Cavnic also faces migration of the workforce, even though the trend is not as strong as in Borșa.

The total number of jobs declined drastically in both communities after the restructuring of the mining sector started (Fig. 4 and 5). The city of Borșa lost more than 1,300 jobs between 1996 and 1997, while Cavnic lost 670 jobs in the same period. The decline of the overall economy continued in the following years. The revitalization trend taking place in the last years cannot compensate for the loss of jobs in mining.

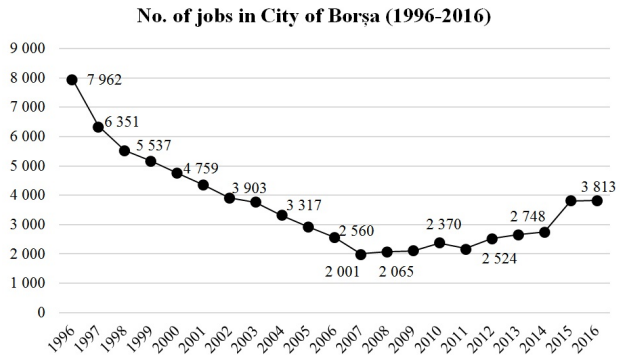

Fig. 4 Number of jobs in City of Borșa between 1996 and 2016 (source: Romanian National Institute of Statistics)

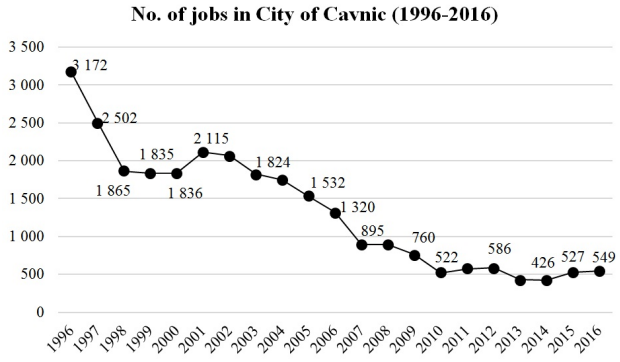

Fig. 5 Number of jobs in City of Cavnic between 1996 and 2016 (source: Romanian National Institute of Statistics)

Table 1 shows that by the time mining restructuring began in 1997; the mining sector was already losing jobs in the two cities. Within three years, the number of jobs reduced to half in Borșa, Cavnic lost 814 jobs in the following three years. Currently, there are only a few people employed by the mining company, mainly for guarding the tailing ponds.

3.2 Methods for collecting data

The research is based on interviews conducted with 31 stakeholders from these two communities between April and September 2014. 18 interviews were conducted in Borșa and 13 interviews in Cavnic. We interviewed different stakeholders that provided us with a variety of opinions about the mining activity and the characteristics of the two communities. We interviewed: former miners who still lived in the cities, two employees of the mining company, women who performed auxiliary jobs in the mining company, a former head of the mining company from Maramureș area, a former employee of the Agency for Mining Areas, employees of the City Halls from Borșa and Cavnic (including one mayor, one former mayor), pupils from Cavnic high school, a teacher, and business owners from two communities. Supplement 1 provides a full list of all people interviewed.

We used two strategies to identify the people to interview. We used a snowball sampling, and we asked people we knew to recommend other people from the community who worked in the mine or who could provide us with relevant information about the mining activity and its impact. In the same time, we walked through miners' quarters, and we interviewed people we met, such as former miners playing chess in a park or chatting in front of their apartment building. The sample of people interviewed includes different categories of people from the two communities. Therefore, the opinions collected are diverse and representative for the two communities.

The research focused mainly on understanding the factors that influenced the trajectories of the two communities after mine closure.It included questions about the feelings generated by mine closure, strategies employed by different categories of residents to cope with the loss of jobs, the relations between residents, people's attitude toward redevelopment programs and entrepreneurship, and the dynamic of family relations.

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Table 1 Number of jobs in mining between 1991 and 2012 in Borșa and Cavnic

No. of jobs in mining	1991	1994	1997	2000	2003	2006	2009	2012
Borsa	4 446	4 129	3 308	1 771	1 335	318	48	29
Cavnic	2 900	2 567	1 940	1 126	993	568	14	10

Source: Maramureș County Statistics Department.

4 Results

Closure of the mines happened slightly over a short period. Borșa and Cavnic cities experienced a different process. Miners from Cavnic disbelieved the rumors at the beginning, and they thought the decision was hasty considering that mines still had rich resources. One miner said, *"At how much ore there was … how to close the mine?"* (M8, male, 60s). His view was confirmed by the opinion of a former director of Cavnic mines who believed that the mining activity could have continued for hundreds of years. Therefore, the closure of mines was difficult to accept by the miners, and some of them experienced a loss of their sense of belonging: *"People do not have where to work. They belong to no one"*, as one man said (M9, male, 60s). In Borșa the attitude towards mine closure was different because there were gradual layoffs over the past years, and people knew that mines were unprofitable; therefore they accepted the decision more easily. The equipment was outdated, and more money was invested in the ore extraction than it was obtained. An engineer who still worked at Baia Borșa mine described the process as being unproductive: *"In 1990 the mine registered a loss of 10 000 to 1000. We invested 10 000 lei for extraction, and we obtained 1000 lei. The main reason was the outdated equipment that we used, which was from the 1970s. We had not been equipped at all, nothing new had been brought to us; everything was outdated."* (V.Ș., male, 40s).

When the restructuring process began, many employees of the mining company voluntarily decided to leave their jobs because the large severance payments appealed them. A former director of the preparation plant in Baia Borșa remembered the downsizing process: *"You could lay off people who were not competent, but 95% of those who left requested to leave. There were waves of people leaving the next day. It was the herd effect. The severance payments were tempting. Both competent and incompetent people left. Nobody could stop them. In that summer we had to close half of the preparation plant because of insufficient personnel. There were 800 employees when the restructuring began, and in two weeks only 360 people remained."* (G.T., male, 50s).

Severance payments were meant to help people go through the transition period to a new job. However, many people spent that money quickly and very few invested them (M10, male, 50s). A former miner from Cavnic said: *"The severance payments were good for those living in rural communities because they invested the money in buying a tractor, and they worked the land and searched for another job in the same time. They were not good for town people because they "ate" the money; they had that money only for two days"* (M11, male, 50s). A former director of REMIN Baia Mare said that at the time of restructuring there should have been some programs to assist people to develop new businesses or to organize training courses for jobs better fitted with the economic profile of the area. In his perspective, former miners spent the money for goods they could not afford otherwise. After six months they were left with no money and started to demand social assistance: *"Having 18 million lei in their pockets, miners immediately bought a fridge, TV, a beer … and after six months when all the money was gone they started to sell the goods they bought, and after a year or two they started to participate in social protests in front of the Prefecture. At least, people should have been put to do some community work to have the feeling that they earned that money."* (V.C., male, 60s).

The programs for the economic redevelopment of the former mining areas started to be implemented in Romania several years later, and their impact was much reduced. A local office of the Agency for Mining Areas was created in Baia Borșa and was responsible for implementing components of the programs. The opinions were divided regarding their success. One interviewee said that the impact of the training courses was null because it was tough to retrain a miner (M2, male, 60s). Another person said: *"I never heard of a former miner to participate in a retraining course, and if he did, what for? Where to go? No factory was opened here. A person is attached to a place. Where should he go? There are some attempts with tourism. But the tourism brings us to the same place, bad roads, and poor infrastructure. Tourism is no longer vi-*

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able in the area." (V.Ș., male, 40s). However, over time different institutions organized training courses, but, according to a former employee of the Agency for Mining Areas, few former miners benefited from them (O.P., female, 30s). The courses were opened to all members of the communities because it was assumed that the entire area was affected by the mining restructuring. The topics of the courses were not always correlated with the market demand, but rather they were organized on those domains for which practice could be ensured at local companies (A.C., female, 30s); therefore the impact was reduced.

The mining restructuring generated degradation of the housing stock and public infrastructure (Dani et al. 2003). In the aftermath of mine closure, the transfer of properties from the mining company to City Halls was complicated because it was difficult to reach an agreement regarding the value of the buildings and the land, and the municipalities did not have the resources to purchase the buildings (Dani et al. 2003). Residents of Baia Borșa miners' quarters experienced a deterioration of human relations. They described that there was no much solidarity among people when it came to solving community problems (M3, male, 60s). People originating from other regions perceived themselves as being disregarded by residents who call them "vinitișuri" (newcomers), and considered that they should not have a strong saying in the community (M6, female, 60s). However, miners thought that they were entitled to be perceived as residents since they lived for more than 40-50 years in the community and they worked in the mine, which made the city prosperous once (M1, male, 60s; M4, male, 60s).

The research showed that former miners shared an occupational identity which influenced their capacity to work, the type of jobs they would be able or willing to take, and the amount of pension that they received. Former miners referred to the hard working conditions and inadequate working equipment, and that they ruined their health while working in the mine. Some of them said that even though they felt like being able to work, there were no jobs adequate to their training and skills. A 63−year-old miner who worked 32 years as a driver on a truck transporting the ore said that *"there are some private companies in the wood business which need men who know how to cut trees, but there are no car repair shops or taxi companies"* (M2). Another man said that *"If young people do not find places to work, then what are we going to do?"* (M3, male, 60s). Men who performed jobs requiring a higher level of specialization were not willing to accept any type of job. For example, a man who worked as an engineer for 20 years said that he was not willing to go abroad and take low skilled jobs (G.C., male, 50s). Miners perceived themselves through the lens of the hardship of the work they performed in the past and therefore considered that their pensions were not equitable comparatively with the pensions of other professions, which were exposed to lower risks (G.C., male, 50s). Even though the miners' pensions could cover their daily expenses, in case of illness or larger expenses the money would not be enough (N.V., female, 50s).

Former miners were nostalgic about the heydays of their communities, the prosperity and the order that existed. The memories of the past were used to analyze the present situation, which was portrayed as insecure, gloomy and dominated by poverty. A former miner remembered the old days when he had money to go on vacation, and he could even save money: "During Ceaușescu's time I went nine times to seaside in vacation with money earned from my honest work, now with democracy ... not one time." (M2, male, 60s). A 64-year-old woman who worked as janitor 29 years in the administrative buildings of the mining company was nostalgic about the discipline and safety that existed in the community: *"During Ceaușescu's time, people were not afraid to get out of the house or to walk on the street. I used to go to the bus station in the morning, and I was not afraid that somebody will get out and will steal my money or hurt me."* (M6, female, 60s). Another person regretted that the former dictator was killed because during his time people had jobs (M5, female, 50s). Another miner was nostalgic about the richness of mineral resources from Cavnic, saying that the mine provided jobs for people as far as 70 kilometers away (M12, male, 50s).

After living and working for many years in a state-led regime, people expected the state/City Hall to create new jobs. They were reluctant about the success of the programs implemented for the redevelopment of the mining areas. One miner described his perspective on state intervention: *"Some people say that it is not the City Hall's job to create a milk factory, but, I think that it is the City Hall's job to create a milk factory, demonstrate it is profitable, and then sell it. Then, the City Hall can use the money to create a sausage plant or a plant for preserving forest fruits."* (G.C., male, 50s). Another miner said: *"Definitely! The mayor should help us with something"* (M13, male, 60s). However, this view was not shared by all people interviewed, some of whom acknowledged the limited capacity of the municipality to overcome the remote position of both Cavnic and Borșa cities and the

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bad roads, which discouraged investors from coming in the area (R.V., male, 40s; N.B., male, 60s; A.D., male, 50s; D.P., male, 40s).

We did not find a clear-cut gender division of labor within families. An explanation might be that during the communist regime the rate of working women was high as they were provided with jobs adequate to their skills and knowledge. In mining companies, women performed jobs such as secretaries, accountants, janitors, and worked in the cantina or prepared equipment for miners. After mine closure, as it became more difficult for men to find jobs, women started to migrate abroad, to Italy or Spain, where they worked as babysitters, housekeepers, elderly caretakers, or in agriculture. Migration of women changed the gender earnings gap and the position of women within the family. According to a former miner, the number of divorces increased in the community as a consequence (V.Ș., male, 40s).

In the aftermath of mining restructuring, migration was the main strategy adopted by individuals to cope with the scarcity of jobs. The migration took three forms: the return of miners to their hometowns, migration to other cities from Romania, and migration abroad. Some miners who owned houses and land in their hometowns returned home. Others who got married in the area had a family and purchased a house, settled in the community. Some former miners interviewed said that after working and living for more than 40 years in the area, the linkages with their homelands became loose, and they did not find a reason to return home (M2, male, 60s; M3, male, 60s). They felt attached to the community and perceived themselves as being local people. However, many apartments where miners lived were left empty, and Baia Borșa miners' quarter looks depleted. Another form of migration is to other cities from Romania. Usually, graduates of high schools from the two cities who go to universities in other cities from the region decide to settle there because they can find jobs in their field of specialization. A group of pupils from Cavnic high school said that once they go to university, they would not return home because there was no future for them at home (P1, female, 18; P2, female, 18; P3, female, 16).

Migration of population abroad started before mine restructuring (Anghel 2009), but the largest groups of people migrated when it became difficult to find jobs after mining restructuring. The leading country of destination was Italy, mainly in the Milano area. Networks based on family relations developed to help people go abroad; once a member of a family found a well-paid job and learnt about other working opportunities, he/she helped other members of his/her family to go. The families from Borșa and Cavnic overcame the problem of mining restructuring due to the money sent home by migrants. Money was used to cover household expenses and to renovate the houses or to build new ones. In the beginning, migration was temporary as people were firmly attached to their hometowns, but later fewer people returned home because they made a life for themselves and their families abroad. Some of them found challenging to re-adapt to conditions from Romania. Even those families who remained in Borșa and Cavnic advised their children not to return home because they would not be able to have a good life. Some of the houses that were built for the case families would return home, were left empty.

Retired people, some of whom worked in the mines, remained at home and helped their families. When people retired from the mining company, they were still young, being in their 40s or 50s, and therefore they took care of their grandchildren and managed the money sent home by their children, such for building a new house. In the same time, during the 2008 economic crisis, their pensions were a constant and secure income for their families. A woman working at Borșa City Hall said: *"It was a good thing that they retired at 45-year-old, and it is a good thing that there are retirees in the city. They are still young; they can help the families of their children and take care of their grandchildren. They manage the money sent from abroad, which is also beneficial."* (M8, female, 50s).

Migration of population hindered the redevelopment efforts of local entrepreneurs. Local businesses faced problems finding the trained workforce, and, on the other hand, people were not willing to work for low salaries when they could earn more working abroad (V.D., female, 50s). A former employee of Baia Borșa Office of the Agency for Mining Areas described the difficulties faced by an investor who opened two factories: *"An investor opened two small tailoring factories, but faced problems hiring people because they expected to receive salaries of 1,000 Euro. The investor could not give them 1,000 Euro from the beginning because he did not have money. People said that if they did not receive that much money they would go to work abroad where they would earn more. The investor had to restructure the business, and in a couple of years closed it."* (O.P., female, 30s).

The struggle of each municipality to manage the increasing number of administrative problems with fewer financial resources left no room for projects preserving the built heritage of mining activity. The transfer of property rights over buildings, tools, machines or mine galleries from the mining com-

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pany to the City Halls was complicated to be carried out because the mining company was in the process of liquidation, and the fix assets had to be evaluated and debts paid. The transformation of mining galleries and other machines into museums were also hampered by the fact that many metal objects were stolen and sold as scrap metals as the mines were barely guarded[1]. All these factors made the general context in the area somewhat unfavorable to any projects that would valorize mining heritage (M9, male, 30s).

Cavnic City Hall had a proposal for creating a mining museum and requested some buildings from the mining company in compensation for the company's debts to local budget. However, the two sides did not reach an agreement about the value of the buildings and land, and the idea was abandoned. The only projects aimed at valorizing the mining history of the area came from a group of pupils from Cavnic high school who created an association to promote the city to tourists (C.S., female, 40s). They prepared advertising materials, such as information brochures, postcards and magnets, and posted information boards presenting the most important landmarks in the city. To inform tourists about their former occupation of the area, the members of the association bought and rehabilitated a mine cart, and then located it in the middle of the city as a symbol of the mining activity (P1; P2; P3). Indirectly, all these activities contributed toward the preservation of the local identity formed around buildings, traditions, dances, artefacts and landscape.

In both cities, tourism was seen as the most viable opportunity for redevelopment, and City Halls implemented projects to create the infrastructure that would attract private investors and tourists (N.B., male, 60s; A.D., male, 50s; M9, male, 30s). However, the results were modest in both cities because the roads were in awful conditions, and the cities were located at considerable distances from major transportation corridors. The insufficient financing and frequent changes of the mayors weakened the administrative capacity of the City Halls to finalize the projects started in the tourism field. City of Cavnic is known as a skiing destination at regional level; however, more investments are needed in order to attract a larger number of tourists.

5 Conclusions

The paper analyzed the industrial culture of mining communities from Romania from the perspective of practices, beliefs and attitudes of people in the aftermath of mine closure. The research was conducted in two former mining settlements from the northern part of Romania, and it showed that the culture of these communities was characterized by strong occupational identity, overdependence on state institutions, lower entrepreneurial capacity, and physical and emotional degradation. Even though public institutions acknowledged the cultural value of industrial built heritage, there were very few projects toward preservation and valorization of buildings, tools and machines for tourism development. The low administrative capacity for strategy development and scarce public funding characterized these communities.

The research highlighted that mining dominated the community and individual identity. The occupational identity was stronger in the city of Cavnic, which had a long tradition in mining extraction. We did not find a clear-cut division of gender roles within the family as large number of women also had jobs. This was a consequence of how the workforce was planned during the communist regime, which aimed to increase the rate of working population among both males and females. Mining restructuring was conducted through voluntary layoffs and retirement of miners, and no programs to mitigate social consequences, and to encourage regional migration, local entrepreneurship and economic redevelopment were in place at that time. Mine closure decision was perceived differently by the residents of the two communities. While people of Cavnic disbelieved the rumors, residents of Borșa accepted more natural the decision because the gradual process of mining restructuring already started a couple of years in advance. Miners from Cavnic experienced a stronger feeling of being lost because the mining was the traditional occupation in the area. Being socialized in a state-led culture, former miners expected the state institutions to take care of them and to provide them with jobs. The level of entrepreneurial skills was low among former miners, and many of them did not know how to use wisely the severance payments received.

Migration was the main strategy adopted by the residents of the two communities to overcome the scarcity of jobs, and migration abroad was widespread among many families from Borșa. Some of the former miners returned to their hometowns. Those who remained in the community perceived that residents did not fully accept them in the com-

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munity. Even though preservation of occupational identity was acknowledged as being important, municipalities encountered difficulties in transferring properties from the mining company for creating a mining museum. Pupils from Cavnic high school implemented projects aiming to preserve and promote the mining identity of the community.

The elements that we identified as forming the industrial culture of the analyzed mining communities are typical characteristics of other mining communities from Romania. However, cultural characteristics of mining communities are embedded in and influenced by the cultural characteristics of regions where they are located in. Therefore, we expect differences regarding the industrial culture to exist between different mining regions of the country. Also, the culture of the former mining communities has to be analyzed in connection with the influence of other characteristics of these settlements that might influence their redevelopmental patterns. Such features might include: distance from a major urban center, the area covered with agricultural land, the quality of local infrastructure, local administrative capacity and the redevelopment programs implemented. The case of Borșa stands out as a distinctive one because local people are perceived as having a different attitude when facing life difficulties. Some of the interviewees reported that the residents of Borșa are different from the residents of Cavnic because they fight more for their welling, they are eager to earn more money and to have nicer houses. These characteristics are reflected in the higher proportion of residents who migrated abroad even before the local economy started to decline and who reinvested their savings in building houses in their hometown. This attitude stands in contrast with the attitude of residents from Jiu Valley, the largest coal mining area from Romania, where miners protested and marched to Bucharest in several occasions, and even fought with police forces to defend their jobs. Therefore, in addition to general characteristics of mining communities, local context and attitudes of residents have to be understood when portraying the industrial culture of former mining communities.

Analyzing and understanding the particular features that form the culture of mining communities is essential for the successful implementation of redevelopment strategies. Their specific culture makes the redevelopment process more difficult, and communities need to analyze further how to transform their weaknesses into strengths.

Acknowledgements

The article has been prepared with the support of the Grant for Young Researchers no. 31811 funded by Babeș-Bolyai University between 2016 and 2017.

Notes

[1]In addition, Maramureș area was perceived as being polluted after two accidents led to the pollution of water and land, and caught the international attention. In the night of January 30, 2000 a tailing dam near City of Baia Mare (the city residence of Maramureș County) broke and 100,000 m3 of cyanide contaminated water spilled into the local hydrological system, then in Someș, Tisa and Danube rivers, and finally into Black Sea, killing large quantities of fish. Five weeks later, in Baia Borșa, the wall of a tailing dam failed because of heavy raining and significant amounts of copper, lead and zinc contaminated water entered into the local rivers.

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Supplement 1 - List with people interviewed

	Borșa	**Abbreviation, gender, age**
1.	Former director of REMIN Baia Mare between 1999-2000 and former director of Cavnic Mining Company	V.C., male, 60s
2.	Former employee of Baia Borșa Local Office of Agency for Mining Areas	O.P., female, 30s
3.	Former employee of Baia Borșa Mining Company for 12 years. He was responsible for implementing the redundancy policy of the miners in Baia Borșa. He was a county councilor and local councilor, and currently he owns a business.	G.T., male, 50s
4.	Current employee of Baia Borșa Work Point, REMIN Mining Company – responsible with guarding the tailing ponds	V.Ș., male, 40s
5.	Chief of Baia Borșa Work Point, REMIN Mining Company	R.V., male, 40s
6.	Retired miner who worked in the underground at Baia Borșa Work Point for 10 years	M1, male, 50s
7.	Former truck driver who transported ore at Baia Borșa Work Point for 32 years	M2, male, 60s
8.	Retired miner who worked as sub-engineer at Baia Borșa Work Point for 27 years	M3, male, 60s
9.	Retired miner who worked in the underground at Baia Borșa Work Point for 24 years	M4, male, 60s
10.	Retiree who worked as cooker and waiter at the mining company canteen for 26 years, leaves in Baia Borșa	M5, female, 50s
11.	Retiree who worked as janitor at the mining company for 29 years, leaves in Baia Borșa	M6, female, 60s
12.	Former employee of mining company who worked as bus driver, transporting workers who commuted every day to Baia Borșa mine; lives in Moisei (a commune nearby to City of Borșa)	M7, male, 60s
13.	Former employee of mining company who worked as electro-mechanic engineer, leaves in Moisei	G.C., male, 50s
14.	Former employee of mining company who worked as accountant at Baia Borșa Work Point, leaves in Moisei	N.V., female, 50s
15.	Employee of Borșa City Hall who worked in the human resource department of the Baia Borșa Work Point for 26 years	M8, female, 50s
16.	Employee of Borșa City Hall, Tourism Department	M9, male, 30s
17.	Employee of Borșa City Hall who worked on an European funds project for the retraining of unemployed people	A.C., female, 30s
18.	Owner of a business selling construction materials, Borșa	V.D., female, 50s
	Cavnic	**Abbreviation, gender, age**
1.	Former mayor of City of Cavnic between 1992-2008	N.B., male, 60s
2.	Former mayor of City of Cavnic between 2008-2016	A.D., male, 50s
3.	Former employee of Cavnic Mining Company who worked as mechanic for 31 years; He retired in 1998.	M8, male, 60s
4.	Former employee of Cavnic Mining Company who worked as electrician for 23 years; He retired in 2000.	M9, male, 60s
5.	Retired miner who worked in the underground at Cavnic mine for 10 years; He retired in 1998.	M10, male, 50s
6.	Retired miner who worked in the underground at Cavnic mine for 27 years; He started to work in the mine when he was 18 years old. His father was also a miner.	M11, male, 50s
7.	Retired miner who worked in the underground at Cavnic mine for 24 years; His father was also a miner.	M12, male 50s
8.	Retired miner who worked in the underground for 30 years;	M13, male, 60s
9.	Pupil, 12th grade, 'Pintea Viteazul' High School Cavnic	P1, female, 18
10.	Pupil, 12th grade, 'Pintea Viteazul' High School Cavnic	P2, female, 18
11.	Pupil, 10th grade, 'Pintea Viteazul' High School Cavnic	P3, female, 16
12.	Business owner in tourism, Cavnic	D.P., male, 40s
13.	Professor, 'Pintea Viteazul' High School Cavnic, supporter of the informal group CAVNICarii which developed educational projects for youth	C.S., female, 40s

