MINERAL EXTRACTION, ECONOMY AND THE URBAN ENVIRONMENT: THE ROLE OF FOREIGN DIRECT INVESTMENT IN ECONOMIES IN TRANSITION AND DEVELOPING COUNTRIES

Diana Urge-Vorsatz

Department of Environmental Sciences and Policy, Central European University, Budapest, Hungary

Maia An

Civil Society Development Foundation, Budapest, Hungary

Keywords: foreign direct investment, urban environment, mining settlement, multinational corporations.

Contents

- 1. Introduction
- 2. Mineral Extraction, FDI and Urbanization
- 3. Possible Destabilization of Urban Development due to FDI in the CEE Region
- 4. Benefits of FDI for Host Countries
- 5. Environmental and Social Consequences Related to FDI in Mineral Extraction
- 6. Negative FDI Implication for the Local Environment. Case studies: Kyrgyzstan,
- Romania Cyanide and Heavy Metal Spills
- 6.1 Cyanide Spill Accident in Kyrgyzstan
- 6.2 Cyanide and Heavy Metal Spill in Romania
- 7. Conclusion

Glossary

Bibliography

Biographical Sketches

Summary

Many countries of the Central and Eastern Europe (CEE) region, including newly independent states (NIS), are mainly concerned with the issues of economic growth and development. If the countries are rich in mineral resource deposits they can benefit from their existence since they provide constant foreign direct investment (FDI) inflows. In these countries the multinational corporations (MNCs) are believed to be a vehicle of positive economic, social and environmental changes. Although MNCs play an important role in the development of the world economy, they are still considered as one of the largest contributors to deterioration of the countries' environment by exploiting their mineral resources. Furthermore, excessive FDI growth affects the main cities in the CEE region and accelerates the speed of the urban infrastructure development. Such cities as Budapest, Prague, and Warsaw are in need of bigger quantities of natural resources to sustain their populations, which are constantly growing due to internal migration. It is inevitable that, because of such huge "appetite", the cities in the CEE region will face major environmental challenges, such as air pollution, wastes, and deterioration of health and housing conditions. The purpose of this paper is

to analyze the correlation between urban development and FDI in the CEE and NIS. In addition, the role of FDI in the mining industry as one of the most attractive industries for international institutions is studied. The paper also scrutinizes two recent gold-mining related, environmental accidents, one in Kyrgyzstan and the other in Romania, to exemplify the negative implications of FDI presence in these countries.

1. Introduction

Capital-short economies in transition, similarly to developing countries, often view foreign investment as the key to economic growth, modernization and restructuring. Countries with a relatively stable political and economic system, such as the Central European countries, have seen high inflows of foreign capital since the fall of communism in 1990. Economically more troubled regions, however, have fewer opportunities to attract the highly desired dollars, pounds or marks. When a country is blessed with mineral resource deposits, these can turn the taps of foreign investment flows, bringing jobs, state revenues, infrastructure and other vehicles for development.

There have been significant amounts of foreign direct investment in mineral extraction in transition economies and developing countries in the past few decades resulting in growth and urban development. Since the corporate practices of multinational and other investors in these countries may significantly differ from those in their home countries, the overall economic, social and environmental impacts of FDI are controversial, especially when serious recent mining-related accidents caused by such companies are considered.

FDI also has impact on the sustainable urban development. Thus most of the cities in the CEE region are currently experiencing excessive FDI expansion in terms of the development of new manufacturing infrastructure. As a result of this economic boom, these cities are currently facing environmental challenges, such as air pollution, increase in quantities of wastes, and groundwater pollution. There is a high rate of population migration from rural areas to the big cities that also undermine health quality and living conditions in the modern cities.

The goal of this paper is to discuss the environmental impacts of the mineral extraction industries financed through FDI in transition economies, and the role FDI plays in these impacts. The paper examines two recent case studies of gold-mining related, major environmental accidents, one in Kyrgyzstan, and the other in Romania.

2. Mineral Extraction, FDI and Urbanization

The mining industry has stimulated population migration and thus promoted development. Historically, mining extraction activities have originated settlements in countries abundant with natural resources, such as gold, silver, coal and other minerals. Accessibility of the raw materials variously determined the pattern of residence, distribution of goods and types of settlements. Usually, human settlements were created and maintained by groups of miners occupying simultaneously a given territory and sharing a limited stock of resources. Nowadays, the relationship between the development of the mining industry and urban growth is much more profound,

particularly in developing countries and in countries in transition due to the presence of FDI. In fact, FDI is considered a tool to reach basic economic goals: stability, growth and knowledge transfer. By means of multinational corporations, which create new jobs and promote population migration, FDI leads to an increase in the population of certain urban settlements.

Overall, the internationalization of capital markets, the internationalization of production processes by means of FDI, and the increasingly important role of multinational corporations may lead to positive consequences for the environment of a particular human settlement, mainly because of using less environmentally damaging technologies. By launching community support programs, MNCs could help local communities to develop local infrastructure. Furthermore, the development of new mine sites promotes internal population migration from different regions and the development of new agglomerations around mines. However, such large territorial concentrations of urban settlements causing the formation of agglomerate forms of settings, in turn, lead to very active zones of interaction between such settlements and the environment. As these new zones are in need of larger amounts of land, the activities associated with mineral extraction produce enormous waste. Moreover, mines themselves affect humans through discharge of gases and solids, and through possible contamination of drinking water and of crops, farm animals, or food obtained in wild areas, such as fish or game.

3. Possible Destabilization of Urban Development due to FDI in the CEE Region

In the CEE region the globalization of world economy has a tremendous impact on the urban development, especially in such countries as Hungary, Poland, and Czech Republic. Moreover, recent political changes made these countries more attractive to foreign investors. Possession of a well-educated workforce, particularly at the basic and technical levels, and the existence of a large potential sub-market, are two of the major factors in the decision-making process of foreign investors in favor of the CEE region. In 1999, FDI inflows into the CEE region amounted to 18.4 billion USD. Two thirds of these inflows came from EU. For instance, Poland, Czech Republic and Hungary received high levels of FDI from European firms from the beginning of the 1990s. As a result such cities as Prague, Warsaw, Budapest and other major regional cities are experiencing an unprecedented level of urban reconstruction.

Many western countries, including countries of the CEE region, have experienced a global economic shift from primarily industrial economies to primarily informational economies. This particular trend played an essential role in shaping modern cities. Nowadays many cities do not depend on gold, coal or iron deposits any more. Because of this liberation, cities can transform themselves. According to Hall (1993) cities can advertise themselves like automobiles or clothing. They are changing their images by exploiting the remains of the industrial era and through advertising and public relations. There has been an open competition among such cities as Budapest, Warsaw, and Prague for foreign investment, headquarters, international institutions, tourism, and conventions.

The rapid growth of cities causes many ecological and environmental consequences. As income increases, urban households and cities as a whole consume more resources, such

as energy, water, and construction materials. There is a strong correlation between wealth growth in the cities and the level of environmental degradation. New airports, motorways and high-speed railways need huge new territories; for that reason investors start exploiting large amounts of virgin land in environmentally sensitive areas and agglomerations. Such activities are often considered main contributors to air pollution and noise intrusion in the cities. Urban population growth plays its own role in the deterioration of the urban environment, especially due to the increase in quantities of generated wastes. Thus most of the cities in Central and Eastern Europe are currently experiencing difficulties with wastes utilization. In addition, these cities still practice the collection of wastewater together with rainwater and discharge it to water bodies without treatment, in turn causing eutrophication.

In spite of progress in some environmental areas, the large cities of the CEE region will continue to face major environmental challenges due to the ongoing FDI growth. It will also result in the increase of their ecological footprints. Cities will have to expend their ecological productive areas to support their populations with renewable and non-renewable resources. Moreover cities will have to deal with growing quantities of wastes and emissions due to the rapid urban growth.

4. Benefits of FDI for Host Countries

Foreign direct investment plays an essential role in improving the national economies of developing countries and countries in transition and can be determined as a vehicle for attracting additional private investment. On the other hand, there is debate among policy makers and environmental activists concerning the implications of this trend for the environment and the social conditions of local populations.

FDI may encourage environmental protection activities within human settlements. It may help to enhance awareness about environmental factors, increase efficiency of resource use, and provide new resources to cope with existing environmental problems. According to Zarsky (1999) MNCs which have superior technology and management systems can promote better environmental performance in FDI host countries. This can be explained by the fact that Organizations for Economic Co-operation and Development (OECD) usually have up-to-date cleaner technology and better environmental management systems, often due to their higher regulatory requirements. Indeed, world-wide sales of pollution-abatement equipment and related services are estimated at a total sum of US\$ 200 billion with 90% of total output being accounted for by OECD countries. Moreover, in their home countries MNCs perceive pressure from "green consumers" to introduce environmentally sound management practices.

Besides the advantages in technology and management, the fact that foreign companies are quite large means they have important financial opportunities to invest in research and development of environmental management systems. Also, domestic firms can develop national environmental policy by learning from foreign companies how to perform in an environmentally friendly way. By employing staff that previously worked for the MNCs, domestic firms can have access to expertise which may not be available locally, particularly if the MNCs have effective training programs for their staff. However, this is not the case in developing countries or in transition economies, where the states' revenues depend upon FDI contributions to economic development by means of MNCs. Moreover, in these countries environmental legislation and institutional performance are far from strong enough to compel MNCs to introduce environmentally friendly technologies.

-

- -
- -

TO ACCESS ALL THE **13 PAGES** OF THIS CHAPTER, Visit: http://www.eolss.net/Eolss-sampleAllChapter.aspx

Bibliography

Gentry, B. (1998). *Private capital flows and the environment: lessons from Latin America*. Cheltenham, UK: Edward Elgar Press. [This paper examines the relationship between the rate of private capital flows and environment status in Latin America.]

Goldenman, G. (1999). *The environmental implications of foreign direct investment: Policy and institutional issue*. Paper presented at an OECD Conference on Foreign Direct Investment and the Environment, 28-29 January, The Hague, Netherlands: OECD. [This paper considers some of the policy and institutional issues that arise in the effort to protect the environment from adverse impacts related to FDI.]

Matthews, E., Christof, A., Bringezu, S, et al. (2000). *The weight of nations: material outflows from industrial economies*. World Resources Institute, Washington, DC

Shihata F. I. Ibrahim. (2000). *The World Bank: Inspection Panel: in practice*. Oxford: Oxford University Press.

Suliman, M. (1999). *Ecology, politics, and violent conflict*. London: Zed Books Ltd.: 211-227. [This book gives considerable attention to the social impact of negative changes in the natural environment. In addition, it discusses the relationship between economic issues and political decisions and its role in social violence].

Torgoev, I., Aleshin, U., Moldobaev, B. (1999). *Geoecologicheskaya bezopasnost i risk prirodnotechnogenykh katastroph na territorii Kyrgyz Respublici*, Bishkek: JEKA, Ltd. [Assessment of manmade disasters risks on the territory of Kyrgyz Republic. Methods and ways of risk reduction.].

Biographical Sketches

Diana Urge-Vorsatz is an Associate Professor and the PhD Program Director, Department of Environmental Sciences and Policy, Central European University (CEU), Budapest. She holds a Ph.D. in Environmental Science and Engineering (University of California, Berkeley and UCLA), has been a Fulbright Scholar, 1993-96 University of California, Berkeley, and has a M.Sc. in Physics from ELTE, Budapest. She has been a Research Assistant at several institutions including UCLA and Lawrence Berkeley National Laboratory; Guest lecturer at UC Berkeley as well as Stanford University, San Francisco State University, CEU, World Affairs Council; Working on and coordinating international research projects related to energy conservation, greenhouse gas mitigation and risk management sponsored by organizations including the European Union, the European Parliament, the Global Environment Facility (GEF), UNEP, and the World Bank.

Maia An is an International Fellow of the American Association of University Women. She studies social implications of technology transfer in countries in transition at Drexel University. Her research

focuses on the role of women in technology advancement. She worked as a program coordinator at the Civil Society Development Foundation in Budapest, Hungary. She completed her MSc in environmental sciences and policy at the Central European University and holds a BA in Agricultural Management from the Agrarian Academy in Kyrgyz Republic. Her graduation thesis analyzed the impact of foreign direct investment (FDI) on environments of countries in transition. She has also published a paper on FDI in the mining industry in cooperation with the CEE Bankwatch. Her interests include economics of development, environmental policy, strategic environmental impact assessment, and public policy.