

**INVESTING IN RENEWABLE ENERGY SOURCES:
AN ASSESSMENT OF NON-TECHNOLOGICAL ISSUES
IN CENTRAL AND EASTERN EUROPE**

Chapter one

Introduction

1.1. *Scope and structure of the paper*

On 1 May 2004, the European Union had seen the most ambitious enlargement in its history in terms of scale of expansion, political and economic challenges. The Lisbon strategic goal¹ to transform the European economy into one of the most competitive and dynamic economy remains unchanged for the enlarged Union and as such, a number of market issues like privatisation, administered prices and factors that affect sectoral decomposition of the economy and a number of challenges related to knowledge-based economy and innovation performance need to be further addressed². As market reform does not happen naturally, much of its success depends on good governance and mechanisms to enforce it. The energy sector in particular requires a great deal of attention. The energy sector has been (and continues to be) a controversial sector due to its significance to national economies and finding a common ground among all stakeholders in and among the EU Member States often proves to be a daunting task. And a common ground is precisely what is needed to complete one of the most ambitious goals of the EU: an internal energy market. Mounting concerns over the potentially high market power of electric utilities, tight oil and gas supplies (and consequently high and volatile prices), and the determination of the international community to tackle environmental protection issues, particularly climate change, triggered the necessity to reshape the European energy landscape. The new paradigm requires a shift from a national focus to a more integrated European energy system

¹ To read more on the Lisbon strategy, see http://europa.eu.int/comm/lisbon_strategy/intro_en.html.

² For more details see “*Key structural challenges in acceding countries: the integration of the acceding countries into the Community’s economic policy co-ordination process*”, European Commission, www.europa.eu.int.

where energy supply and demand as well as environmental protection needs to be addressed in a concerted manner by all Member States alike. Deploying on a large scale new renewable technologies in a context where Europe is still to find its political identity - especially after the enlargement - and where energy services are becoming just as important as the number of kWh sold to the end consumer, is a complex decision and it requires as much technical innovation and consumer awareness as it requires political will and sound business opportunities.

In 2001, the European Union adopted the Directive for promotion of electricity from renewable energy sources (RES-E), known as the RES-E Directive³. The main idea behind the RES-E Directive is to promote a substitution of fossil fuels for electricity production with more sustainable sources of energy. In other words, policies targeting the promotion of renewable energy sources should have a very specific goal: to induce investments in sustainable generation capacity. Therefore, when analysing the potential for increasing the share of renewable energy sources, it is important that attention is paid not only to the RES-E policy development itself but also to the overall context in which investments are to be made if significant progress in advancing the market penetration for these technologies is to be achieved. This is particularly relevant for the new Member States (NMS) because the task to increase the uptake of renewable energy sources for electricity production in the energy mix comes in addition to many other obligations they have to abide by as a result of enlargement. This is the reason why the author believed it was important and timely to assess the obstacles and the opportunities for renewable energy sources in these countries given the existing, complex economic, political and social context. Considering the risks (real or perceived) associated with RES-E technologies on one hand, the current diverse European policy framework to support their large scale deployment and the general lack of awareness about the potential benefits these technologies can have on the other, financing such projects remains very much central to the discussion. Hence the author believed it was important to identify potential challenges investors are likely to face when making investment decisions in RES-E in the new Member States.

³ Directive 2001/77/EC of the European Parliament and of the Council , 27 September 2001, on the promotion of electricity produced from renewable energy sources in the internal electricity market, OJ L283/33,27.10.2001

In brief, the paper addresses the following questions: What is the context within which renewable energy sources are to be deployed in Central and Eastern European (CEE) region in short to medium term? What combinations of policies are likely to emerge in the region and under which conditions NMS will be able to meet the RES-E target by 2010? What RES-E technologies are most likely to emerge within this period of time? What are the specific risk factors for different types of investors in RES-E technologies and how they can be mitigated and what can be done to accelerate the RES-E development in the region? In addition, the paper provides examples of possible good practices and suggests a potentially viable financial solution to speed-up the RES-E deployment process in the region using Structural Funds.

The analysis includes also a discussion on one of the accession countries, Romania, for two reasons. On one hand, Romania is a functional market economy that strives for further development. In the same time, as an accession country scheduled to join the European Union in 2007, Romania has to remain committed to fulfil its commitments under the Acquis Communautaire and actively participate in EU regional activities such as the South East Europe Energy Regulatory Process⁴. Concerning the energy sector, Romania has a rather particular situation being one of the very few European countries with its own gas and oil resources. In addition, Romania has abundant water resources and a nuclear program that appears to comply with Western safety standards and forecasted to expand in medium to long term. In the long run however, given the pace of economic growth as well as the fast depleting oil and gas domestic resources, Romania, like all other European Member States, needs to diversify its energy supply and renewable energy is a good candidate. In overall, Romania presents an interesting case study on how to balance out short/medium term and long term sustainable energy objectives given on one hand the existing capacity available in the country and the compliance with the European internal energy market rules on the other.

Throughout the paper, the author's aim is to keep a balance between economic analysis and a review of some issues related to the context on

⁴ As a result of the Energy Community Treaty signed on 25 October 2005, the Internal Energy Market is to be extended to the Balkan Peninsula as a whole. The process was launched as a result of the Athens Memorandum concluded on 15 November 2002. For more details on the process please see http://europa.eu.int/comm/energy/electricity/south_east/index_en.htm.

the ground because, ultimately, the real world is where investment and policy decisions are made.

The economic analysis in this paper is based on a simulation model ADMIRE-REBUS. The model was selected to support the analysis in this paper because it can simulate intermediate market circumstances resulting from a changing RES-E policy environment, taking into account in the same time the perspective of an investor. As such, the model is well-suited for a market analysis that could provide a good assessment of development opportunities for RES-E in Central and Eastern Europe.

The paper is divided in five Chapters. The *first Chapter* provides a brief discussion on the transition process and some contentious effects highlighting a few of the risks pertaining to theoretical abstraction in assessing the economic development in the CEE region. *Chapter two* analyses the European RES-E policy landscape emphasising the differences (and similarities) between the previous European Member States⁵ (named hereafter EU-15) and the new Member States⁶ (named hereafter EU-10 or NMS). As renewable technologies need to be integrated into an existing conventional energy system, *Chapter three* provides a brief analysis of the main characteristics of the energy systems in the NMS, underlining opportunities and challenges for renewable energy sources in these specific circumstances. In *Chapter four*, the author looks at the investment climate in the NMS, starting from the macroeconomic outlook to the details at local level. As risk factors are central to any discussion on financing RES-E, few sections in this chapter are dedicated to discussions on risks associated with RES-E technologies and explanations on how these risks have been factored into the model. *Chapter five* provides a detailed description of the model, the scenarios and case studies developed for the purpose of this analysis, including the main results from the modelling exercise. Conclusions and specific recommendations are provided at the end of each chapter as well as within each of the four case studies.

⁵ Austria, Belgium, Denmark, France, Finland, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom

⁶ Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia

1.2. The new Member States and more than a decade of transition

Back in the early 1990s, the new Member States embarked on a long and difficult transition process. The transformation encompassed three transitions rolled into one process:

- *Political transition* – the shift from a highly centralised political system towards a decentralised, more democratic system resulted often in conflicts and political disintegration but also in a higher degree of autonomy for local authorities;
- *Institutional transition* – defined for the purpose of this analysis as a shift towards structures that support market economies or transformation of old structures;
- *Economic transition* – disintegration of former highly integrated economic zone resulted in disruptions in trade, financial flows and labour market interactions.

Learning from the EU-15 - which have their own past legacy and experience with dramatic swings in economic performance as they struggled to adjust to a new economic order (e.g. the aftermath of the WWII, the oil crisis)⁷- it is to be expected that in short to medium term, further adjustments in the economic, social and political performance of the new Member States will happen as they strive to fully integrate into a wider, more competitive European market and to pursue long-term sustainable development. Now that many steps have already been taken to integrate these markets, the challenge seems to lie in the quality of the legislative framework and its enforcement, the adequate assessment of the effects of market openness and good governance. The difficulty in assessing progress however, lies in the fact that none of these factors is easily observable or quantifiable, all the more because the effects of the transition process may not have been fully fathomed nor they have been thoroughly captured by the mainstream economic theory.

⁷ See also R.E.Hall, “Inflation-Causes and effects“, London, 1982

1.2.1. The transition process and some of its contentious effects

In this section, the author discusses some of the challenges posed by the transition process and highlights some of the misgivings with theoretical abstractions in the context of transition economies.

Institutional transformation

One way economic transformations are being reflected in the mainstream economics is to analyse the impact of institutions on the economic performance. However, more often than not, mainstream economics tends to consider the institutional factor as a fixed input. Others, such as Shaffer⁸ for instance, define institutions as “[...] *formal and informal rules which govern or at least influence the behaviour of participants of a society as they interact in political and economic activities*”⁹ and argues that the process of institutional obsolescence and innovation is inevitable in any society in transformation. This is clearly true for the NMS where institutions can be regarded as changing environments on their own right which makes rather difficult to assess their impact on the country’s economic performance. In these countries institutions are being fundamentally changed or created from scratch to provide an adequate framework for a functional market economy (e.g. enforcement of the contract law, adequate dispute settlements, bankruptcy procedures, maintain competition and instate corporate governance, ensure adequate finance for development, etc). The financial sector is a prime example for such an institutional transformation. Up to relatively recent times, the banking sector in the NMS was operating in a different way than the banking sector in EU-15. State owned banks were responding to the State’s financing needs and loans were granted, more often than not, regardless of the company’s performance. The situation has changed dramatically over the last decade. Currently, more than 70% of the banking sector in the NMS is in foreign ownership¹⁰. This development seems to have resulted in positive changes within the sector in terms of improved governance and services. Together with the benefits, there are however certain risks that

⁸ J. Schaffer, “*Institutions, behaviour and economic performance: comments on institutional analysis*”.

⁹ Shaffer argues that each participant faces and responds to a changing opportunity set with institutions having an important role in structuring the opportunity set.

¹⁰ European Central Bank (ECB), „*The banking structure in the new member states*”, pg.18, January 2005, www.ecb.org

need to be acknowledged. One of the potential risks associated with foreign ownership stems from the fact that foreign owned banks could be more sensitive to their shareholders and parent bank than to the economic needs of the host country¹¹. Foreign banks subsidiaries are strongly influenced by the capital allocation and credit steering mechanisms of the parent bank. Some banks for instance, started to use in recent times a semi-active economic capital models and charge subsidiaries for the use of economic capital. By doing so, parent banks could effectively introduce a constraint at individual loan level. In this way, credit growth of the subsidiaries may critically depend on the financial position of the parent bank¹². Another potential risk factor (that has already surfaced in some NMS) lies in the structure shift of foreign interbank financing towards shorter maturities making banks' financing more sensitive to shocks¹³. For the NMS, these developments are of particular relevance because all these countries rely heavily on bank financing (including for energy infrastructure projects) rather than on direct market financing as it is the case in the EU-15. This is the reason why the author believes that, in order to mitigate this risk, developing local capital markets should be part of the strategy in the NMS. For a more detailed discussion on the issue see also the discussion in *Chapter four*.

Economic growth and sustainable development

Economic growth is an important part of the transition puzzle as the NMS catch-up with their Western counterparts. But economic growth is not an axiomatic concept and different definitions are applied to support a particular point of view or to describe a particular context. One of the most used definition is an increase in GDP¹⁴ (or in GDP per capita) but an outward shift of the production possibility frontier, higher purchasing power, a sustained rate of innovation or capital accumulation as well as a higher share of employment, are also mentioned to reflect a similar idea. Some of the definitions are found purely within the realms of economics, others have a political dimension. Among the latter there are often interrelated aspects, such as income distribution, access to public services and equality both within and between nations. Only recently,

¹¹ There have been also cases of foreign banks pulling out from the NMS, mainly due to failing bank's expansion strategies and problems in the home country. Ibid 10, pg. 27.

¹² For details see R.de Haas, I. Naaborg, „*Internal capital markets in multinational banks: implications for European transition countries*“, DNB Working paper 051/08.2005, www.dnb.nl.

¹³ *Supra* Note 10, pg. 27.

¹⁴ Gross Domestic Product

areas such as property rights, the rule of law, institutions and corruption have been included, building on concepts borrowed from political economy. Olson¹⁵ rightfully points out that all earlier economic models incorrectly assume that countries (and policymakers) are using resources and technology in the most efficient way. The theory of interest groups¹⁶ is one possible explanation why this may not happen while waste of resources may be another. Olson further argues that waste of resources tends to be greatest where institutional basis for enforcement of property rights and rule of law is least developed or poorly observed in practice. A negative correlation between economic growth and corruption can only be the next logical step. In sum, the mainstream economics focuses on setting policy targets within a defined economic order. In the case of transition economies however, we face a different process: the transition from centrally planned economies to market economies. It is therefore imperative to seek further understanding of those factors that significantly affect economic and policy development in transition countries.

As already mentioned, one of the most known, used and readily available economic indicators is the GDP and GDP growth has been widely used as an essential policy tool. A recent World Bank study¹⁷ suggests for example, that for the EU-8¹⁸ to reach the Millennium Development Goals (MDGs)¹⁹ - namely to reduce poverty by half by 2015 taking as a benchmark the lowest line in the EU-15 – there will be a need for a long-term GDP growth of 6.6%. However, the average GDP growth in the region was only about 4% in recent years and, given current economic outlook, it is, in the author's opinion, unlikely that a higher rate can be sustained over long period of time (*see also discussion in Chapter four*). Another recent example is the proposal that Vattenfall, the Swedish energy company, presented during the World Economic Forum in Davos in 2006, for a new GHG emissions trading scheme. The model is based on the assumption that an overwhelming majority of all countries commit to participate but restrictions will be

¹⁵ M. Olson, “*Big bills left on the sidewalk: Why some nations are rich and others are poor*”

¹⁶ Central to the interest groups theory is that some groups are perfectly capable of looking after their interests while others are not. The size of the group is crucial in determining the degree of success in pursuing own interests. This concept is particularly relevant for renewable energy sources where the lobby of incumbent integrated companies seemed to have overwhelmed the RES proponents so far.

¹⁷ World Bank, “*Growth, poverty and inequality – Eastern Europe and the Former Soviet Union*”, 2005, www.worldbank.org.

¹⁸ EU-10 minus Cyprus and Malta which were not included in the study.

¹⁹ For details see <http://www.un.org/millenniumgoals/>.

placed only on countries considered “wealthy enough” in relative terms. The “wealth” threshold is calculated as 50% of the average GDP/per capita in Annex I countries in 2002²⁰. Given its importance in establishing policy goals, it is essential therefore to understand what GDP really measures. See *Box 1.1* below for details²¹. From *Box 1.1* below, it is becoming evident that for emerging economies, GDP is less than a perfect measure for a country’s wealth and even more so for sustainable development as it misses-out important aspects related to changes in the society as a result of economic reforms as well as the consequences of natural resources’ mismanagement. And it is precisely these changes in the social fabric and the availability of natural resources that constitute important factors in tackling long-term sustainable development and poverty reduction.

Box 1.1 The relationship between economic growth and GDP

GDP is one of the best known and widely used (and readily available) economic indicators. GDP measures goods and services produced by the residents of a country or region in a specified period of time, usually one year. Because GDP measures only those goods and services that have a market value, this economic indicator captures only those transactions that have a monetary value. Therefore some of the shortcomings of GDP as an economic indicator for the well-being of a society include:

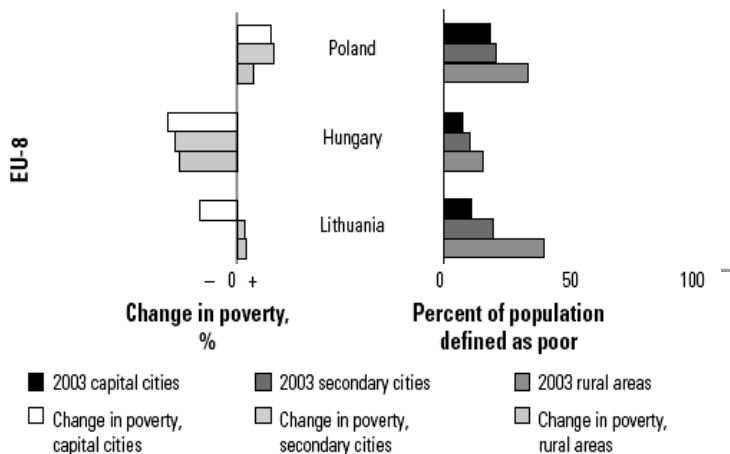
- GDP is a production concept while measuring a society’s well being is more related to disposable income and consumption;
- GDP makes no allowance for the consumption of non-renewable resources, over-consumption of which could severely affect future generations;
- GDP does not take into account income distribution effects;
- The treatment of vital services provided by governments (or their failure to do so for that matter) is rather superficial. Because governmental services do not have a readily obtainable market value, these services are usually accounted for in GDP calculation by considering input values (e.g. salaries paid to public servants, etc);

In the case of the NMS, it is important to observe that in recent years, despite a relatively high GDP growth (compared to the levels in Western Europe), poverty reduction, in particular in rural areas and small cities, remains an issue of significant concern (*see Figure 1.1 following page*).

²⁰ Countries with lower levels of GDP/capita than the threshold will receive higher emissions allocations. For details see “*Curbing climate change, an outline of a framework leading to a low carbon emitting society*“, Vattenfall, January 2006, www.vattenfall.com.

²¹ The discussion includes findings from a new OECD publication, “*Going for growth, 2006*”, pg.131-144.

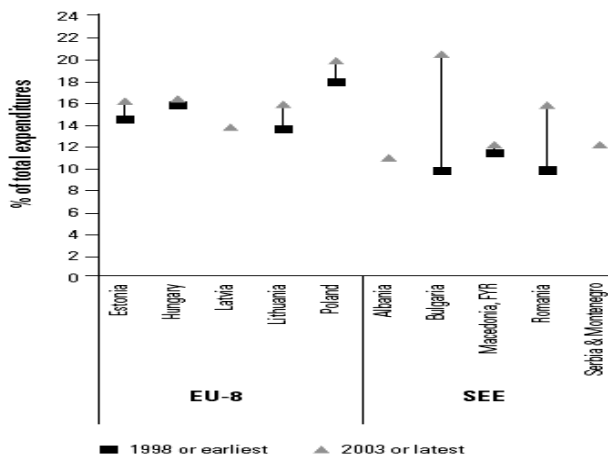
Figure 1.1 Poverty reduction efforts in selected EU-8 Member States



Source: World Bank (2005)

As a result of economic reforms, utility bills are also on the rise in transition countries (see Figure 1.2 below).

Figure 1.2 Household expenditures for utility services: electricity, heating, water and sewage



Source: World Bank (2005)

It is interesting to observe that the biggest increases in the utility bill among the selected EU-8 countries seem to have taken place in Poland and Lithuania, which also appear to have difficulties in reducing poverty (see *Figure 1.1. above*). The highest increase among the selected transition countries took place however in accession countries Bulgaria and Romania. In the same time, the level of income in these countries remains significantly lower than the EU-10 average. For instance, in 2003, the GDP per capita (with GDP in ppp) in Romania was 68.2% of the average level in the twelve transition countries (EU-10 plus Romania and Bulgaria)²². The EU-10 on the other hand, have a GDP per capita (in ppp) of only 25% of the level currently enjoyed by the EU-15²³.

In the electricity sector, important reforms have already been undertaken by the NMS (see *more details in Chapter three*). As a result, the structure of the energy markets has changed, particularly in countries where the size of the market allowed for greater competition such as Hungary, Czech Republic and Poland, and prices rose significantly as a consequence. More recently, carbon costs may have also fed into the wholesale electricity prices and may have been passed, at least in part, to the end consumer²⁴. For small consumers, retail electricity prices remain somewhat below the levels in some Western European countries but close to the level in UK and Nordic countries (see *Figure 1.3 following page*) while for the large consumers, the price already converged to the levels currently existing in the EU-15 (see *Figure 1.4 following page*).

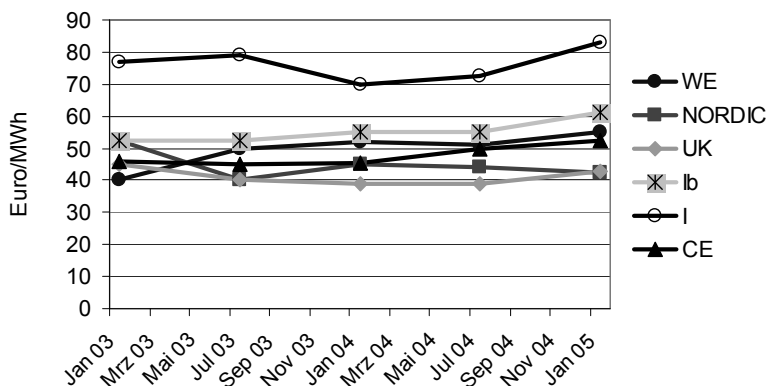
²² EC report “*Agricultural situation in the candidate countries – country report on Romania*”, DG for Agriculture, pg. 5, www.europa.eu.int.

²³ EC report on “*The impact of enlargement on employment and wages in the EU Member States*”, pg.16, www.europa.eu.int.

²⁴ In short-term, the extent to which the carbon costs can be passed on to the end consumer depends on a series of factors including the price-setting mechanisms, the level of competitive pressure in a certain market and GHG emissions allowances allocation methods. See for instance J.Reinaud, “*Emission trading and its possible impact on investment decisions in the power sector*”, IEA informational paper, www.iea.org. For a more extensive discussion on the topic in this paper see also *Chapter five*.

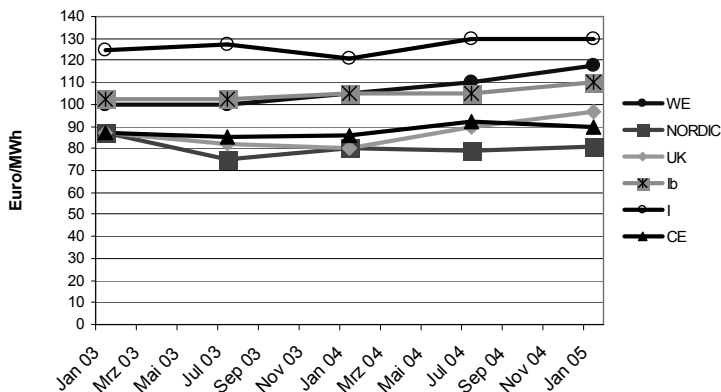
Figure 1.3 Evolution of retail electricity prices for small users in selected European countries (January 2003-January 2005)

WE= Western European countries (BE, NL, FR, DE, AT, SI); CE=CENTREL (PL,CZ,SL,HU), NORDIC = (DNK, FIN, SWE) ;Ib=Iberian (S,P)



Source: EC (2005)²⁵

Figure 1.4 Evolution of retail electricity prices for large users in selected European countries (January 2003-January 2005)

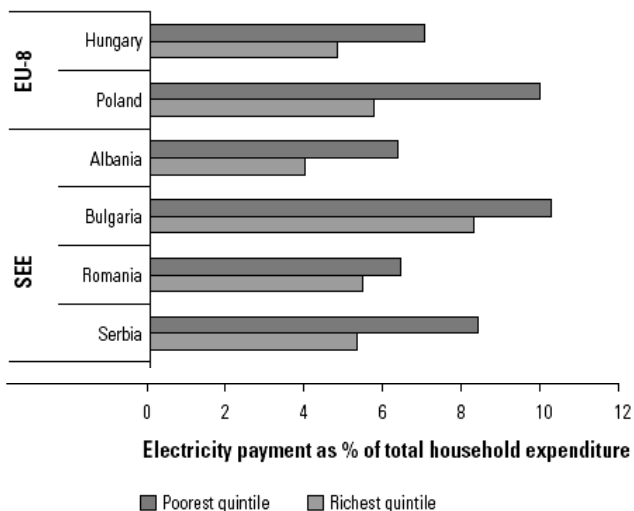


Source: EC (2005)

²⁵ European Commission, DG Energy and Transport, *Quarterly Review of European Electricity and Gas Prices*, Issue 4, 2005, www.europa.eu.int

The electricity bill represents a significant share of the total utility bill but it is important to recognise that the burden is likely to be heftier for the poor households as shown in *Figure 1.5 below*.

Figure 1.5 Electricity payments for poor and rich households in selected CEE countries



Source: World Bank (2005)²⁶

Privatisation

Blanchard²⁷ demonstrates that the core process of actual change in transition economies will require reallocation of resources from old to new activities (via closures and bankruptcies in parallel with the establishment of new enterprises) and restructuring within the surviving enterprises (via labour rationalisation, product line change and new investment). At the beginning of the transition process, privatisation was believed by many in the region as a panacea for removing economic inefficiency. But in reality the outcomes of the privatisation process

²⁶ It is not clear for the author whether the data reflects more recent oil and gas price spikes. In reality, the share of the electricity bill in the overall budget could be higher.

²⁷ O. Blanchard, "*The economics of transition in Eastern Europe*", 1997.

turned out less than perfect. While changing ownership was indeed a chance for these countries to create relatively fast an alternative economic system, it also led to significant asset stripping and job losses. This unintended outcome can be explained partly by the privatisation method employed²⁸, partly by its speed²⁹ and partly by the fact that privatisation, unlike Greenfield investments, tends to result in job destruction rather than job creation³⁰. In addition, privatisation and restructuring of old, state-owned enterprises should have been accompanied by programs designed to absorb some of the resulting unemployment and to provide the necessary framework for skill adjustment. These programmes however, have not always been put in place or have been sufficiently thought through when implemented.

Data inadequacy

Statistical economic data series and methodologies have also been affected by the transition process. Havrylyshyn, Izvorski and Rooden (2001)³¹ argue that at conceptual levels, the prices at which output was valued before the transition process began were inaccurate while the calculation of output volume changes suffers from the use of often arbitrary comparative prices. Further on, they suggest that at measurement levels, coverage is rather poor as previous statistical systems were designed to collect information only from the state-owned

²⁸ The method chosen to implement the privatisation policy varied greatly across the region. Each of these countries used a combination of a mass privatisation (through vouchers), direct sales (including foreigners), management-employee buy-outs and through investment funds. These choices had different impacts on the company's governance, ownership structure and restructuring process of the privatised companies. In some instances the management used inside knowledge to acquire valuable assets for a very low or no value and use them to obtain personal gains. In absence of strong corporate governance and institutions to enforce it and with the banking sector largely influenced by governmental decisions, the outcome of privatisation process was not always a significant increase in economic efficiency. For more details on the methods of privatisation in transition economies and their impact on economic growth see N.M.Castader, "*Privatisation as a means to societal transformation: an empirical study of privatisation in Central and Eastern Europe and the Former Soviet Union*", FEEM Working paper no. 76, available on www.feem.it.

²⁹ In their paper, Godoy and Stiglitz argue that the speed of privatisation may have had a negative impact on growth, making the case for a more gradual approach to privatisation. See S.Godoy and J.Stiglitz, "*Growth, initial conditions, law and speed of privatisation in transition countries: 11 years later*", pg. 13, available on <http://www2.gsb.columbia.edu>.

³⁰ European Bank for Reconstruction and Development (EBRD), [Transition report: business in transition](#), 2005

³¹ O.Havrylyshyn, I.Izvorski and R. van Rooden, "*Recovery and growth in transition economies 1990-1997: a stylised regression analysis*" in H.Hoen (Ed.), [Good governance in Central and Eastern Europe: The puzzle of capitalism by design](#)", pg. 26-53, 2001.

enterprises and, as a consequence, they are bound to miss out a large part of the emerging sector of small and medium sized enterprises. In addition to that, state-owned enterprises had incentives to over-report their productivity while the new private entities have all incentives to under-report their output to avoid high taxation or changing regulations.³²

1.2.2. The role of the initial condition

At the beginning of the transition process, countries in Central and Eastern Europe embarked on a cumbersome reform process hoping that, some years down the road, their living standards would converge with those enjoyed by their Western counterparts. More than a decade afterwards, the results are mixed. There might be different factors contributing to this rather blurred picture but one of them could be the fact that these countries started the transition process from a different initial condition.

According to Jeffries³³, a country's economic and political starting circumstances greatly affect the range of reform policies and outcomes open to it. The difference in political legacy and the absence of historical precedents may explain, at least partly, the diversity in economic strategies and the pace of social and political transformations that took place in the NMS.

Godoy and Stiglitz³⁴ as well seem to suggest that the initial condition may have a role to play but assessing its effect is a complex process. The analysis might include in-depth investigations about a variety of factors including:

- *Location*. The authors seem to suggest that those countries that are nearer Western European countries might not only have greater access to Western European markets but could have been also influenced by Western European ideas.
- *Over-industrialisation*. To study the effects of over-industrialisation, the authors use a variable (*Indst*) to describe

³² For insights on the impact of informal economy, see also D. Farrell, “*The hidden dangers of informal economy*”, www.mckenseyquarterly.com

³³ I. Jeffries, “*Good governance and the first decade of transition: an overview*” in H.Hoen (Ed.), *Good governance in Central and Eastern Europe: The puzzle of capitalism by design*, pg. 13-25, 2001.

³⁴ *Supra Note 29*.

the industrialisation process in late 1980s as a sum of the absolute value of deviation of the share in GDP of each of the three sectors (e.g. industry, agriculture and service), from the “normal” level. The “normal” level is defined as the average for the group of market economies with comparable GDP per capita (with GDP measured in ppp) at the level of year 1990³⁵.

- *Trade dependencies*. In their paper, the authors use a variable (*Trdist*) to describe the trade effects. The variable is constructed by taking the 1980s sum of three distortion measures, namely: trade openness (calculated as the “normal” share of external trade in GDP – with “normal” defined as for *Indst* variable (see above) – minus the actual share) and the external trade within FSU countries as share of GDP and external trade with socialist countries as share of GDP, all measured at 1990 levels³⁶.

Other areas that could be further explored to enhance the understanding of the effects of the initial condition could include economic growth patterns previous to the start of transition, availability of natural resources, urbanisation and exchange rate movements among others.

It is becoming obvious that an in-depth investigation concerning the effects of the initial condition on the economic development in the NMS is a laborious work which would go well beyond the scope of this paper. A brief discussion on this topic was however necessary to explain why the Central and Eastern European region today is rather heterogeneous and, most likely, will continue to remain so in short to medium term. The author believes however that in long-term, other factors will grow in significance. These factors may include, the degree to which countries succeed to maintain a stable political and social climate, the breadth of the economic adjustment needed to respond to new global challenges and the consistency and the determination with which NMS pursue their sustainable development goals.

³⁵ *Supra Note 29*. See details in Table 1, Panel3: Instruments, pg. 9.

³⁶ *Supra Note 29*. See details in Table 1, Panel3: Instruments, pg. 9.

1.3. Conclusions

In a nutshell, learning from the experience of the NMS with the transition process, it seems rather difficult to translate straightforwardly mainstream economic concepts into policy decisions in transition economies due to a number of factors that include changing institutional infrastructure, social acceptability of market reforms³⁷ and countries' abilities to adequately govern a complex economic and social transformation. These factors are neither easily quantifiable nor readily observable but have a significant impact on the economic strategy and the pace of reform NMS are likely to choose at least in short to medium term.

Hoen³⁸, starting from the idea that there are arguments to consider market reform as a public good³⁹ raises the question of free riding. If no-one wants to pay for the market reform, the transformation may never happen. So market reform needs also to be adequately governed. As it was explained earlier in the previous sections, the transition process is a very complex and challenging process and the necessary frameworks to govern it (e.g. political, institutional, legal, etc) are still to be fine tuned in the NMS especially because the role of the State as well as the role of the local government is being completely redefined.

The establishment of new, small and medium sized enterprises should be encouraged in the NMS to absorb part of the unemployment resulted from earlier privatisation and restructuring programmes and to fill in gaps

³⁷ The most successful reforms appear to have taken place where the initial condition both in terms of required scale of restructuring and institutional capacity to handle it was more favourable to a rapid transition, in other words where governments were able to implement the reforms and the electorate was willing and able to accept the change.

³⁸ H.W. Hoen, „*Taking stock on Transformation: market reform and democratisation in Central and Eastern Europe*“ in *Good Governance in Central and Eastern Europe*, 2001, USA.

³⁹ In his view a market economy provides freedom of contract, guarantees competition and facilitates legal opportunities to enforce obedience to the rules. A market economy is available to all (therefore fulfils the condition of non-exclusivity of the public good theory) and benefits are not diminishing as more users are entering the market (thus the non-depletion condition is met). Baumol and Blinder define the public good as “[...] a commodity or service whose benefits are not depleted by an additional user and for which it is generally difficult or impossible to exclude people from its benefits, even if they are not willing to pay for them.”; see W. Baumol and A. Blinder, “*Economics: principles and policy*”, pg. 617

in the economy. In Estonia for example, the SME sector contributed to 71% of the total employment⁴⁰.

The enterprise of promoting renewable energy sources in the NMS is going to take place, at least in the short to medium term, in a fast evolving environment, where macroeconomic stabilisation is yet to be achieved and where energy markets face rapid regulatory changes. Current price developments in the electricity markets coupled with wider considerations for sustainable development create favourable conditions for these technologies to penetrate the market. However, the rising wholesale electricity price on its own will not make up entirely for the additional investment needed to develop at large scale renewable energy sources in the NMS. Other conditions need to be satisfied for this to happen, even more so before the year 2010. These conditions include an adequate policy framework based on a good understanding of the energy market structure in each of the NMS but also of the specific economic and social context, a good investment environment and higher consumer awareness on the benefits such a significant transformation would entail. For these conditions to be satisfied simultaneously, it is crucial that an integrated approach is adopted and renewable objectives are being considered within a wider strategy geared toward long-term sustainable development. From this perspective, when assessing the overall investment context, it might be desirable to use a wider range of economic indicators⁴¹ but given the data problems, some of the needed indicators may not be readily available and/or of adequate quality. This is why the author believes, it is necessary that attention is paid equally to the conditions on the ground.

⁴⁰ L. Klappen, V. Sarria-Allende and V. Sulla, "Small and medium size enterprises financing in Eastern Europe", World Bank working paper 2933, December 2002, www.worldbank.org. For more details on the SME sector in NMS in this paper see also *Chapter four*.

⁴¹ For instance, one of the indicators could be GDP corrected for income distribution effects. See *Supra Note 21*, in particular pg. 135-136. See also the complete list of Sustainable Development Indicators developed recently by Eurostat and available at http://epp.eurostat.cec.eu.int/portal/page?_pageid=1090,1&_dad=portal&_schema=PORTAL.

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The complete list of Sustainable Development Indicators developed recently by Eurostat and available at http://epp.eurostat.cec.eu.int/portal/page?_pageid=1090,1&_dad=portal&_schema=PORTAL