
Some Considerations on Ending the Process of Economic Transition in Romania and Slovakia

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Abstract:

The collapse of the centrally planned economies in Eastern Europe has triggered complex economic reforms in all former communist countries, on their ways towards free-market economic systems. Their economies have become real, real-scale, and real-time research laboratories. The multifaceted and difficult processes of economic transition were scientifically examined as far as transition trail, duration, transition strategy.

Based on the matrix model of economic systems and economic transition, the paper is valuing the authors' previous research work in the area. The main objective is to answer to the question: when the economic transition ends (when the economic reform is completed). The authors propose several ways to determine the moment when the economic transition ends, and the duration of the process respectively. Several standpoints (political, economical, managerial) are presented.

The study was completed in Romania and Slovak Republic. The research results reveal similarities as well as differences; specific issues are discussed.

Assessing the end of economic transition is of top importance in the circumstances of the current global crisis. When the economic recession and transition are overlapping, then the "pendulum effect" might appear and the economic reform ends before reaching its objectives.

The models of analysis and research results are important for both academics and practitioners – strategists, policy makers, and managers – not only from Romania and Slovakia or other Eastern European countries but any transitional economy.

Keywords: *matrix model, economic transition, end of transition, duration of transition, Romania, Slovakia*

1. Introduction

There are two decades now since 1989, when the system of centrally planned economy has collapsed: it started in Poland, extended in former communist East European countries and demolished the Soviet Union itself. The scientists were not prepared for such an event: there was no valid theory of economic reform to rely on – as there was no such precedent. However, developing a model of such a complex process as economic transition is a substantial challenge.

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2. Brief literature review

Since early 90s, a considerable literature has been developed, screening the various aspects of the transition in Eastern Europe and former Soviet Union. “Four kinds of Western political science literature” were already identified (Tőkés, 2000):

- Synthetic overviews – which consider the collapse of communist regimes as part of the global democratization trend;
- Regional studies – emphasizing the fall of authoritarian regimes in a specific region (Latin America, Soviet Union, Southern Europe, Eastern Europe), eventually interlinked;
- Comparative studies – focused on communism analysis;
- Specific studies – based on authors’ on-site experience as well as academic background – making a distinction between general and distinctive factors that played a role in communism fall, in both pre- and post-communist situations.

Such a complex transition process was not possible without involving influential organizations as financial institutions and political bodies. Kolodko (2001) mentions the ten points of agreement following to the “1989 Washington Consensus” – which are still valid issues of the economic transition: *fiscal discipline (limited budget deficit); public expenditure priorities set; tax reform; financial liberalization; unified exchange rate set; trade liberalization; foreign direct investment; privatization; deregulation; property rights* (Kolodko, 2001: 50-51).

“The World Bank Development Report 1996: From Plan to Market” has clearly emphasized that initial conditions are critical and decisive actions should be taken: sustained reforms associated with social policies; creation of proper institutions in support of markets; investing in human resource (World Bank, 1996). However, the investment in people – in a broad sense – failed in many cases: the business culture has developed at a slower pace. The lack of business culture, and difficult understanding of the proper meaning and wording have created confusing situations: lots of people rejected planning (the very first attribute of the modern management) as being opposed to the market!

The first decade of transition is sharply analyzed (Blejer and Škreb, 2001; Linn, 2001; de Larosière, 2001; World Bank, 2002). In some countries, the transition has started even earlier – as in Poland (Dabrowski, 2001) or Bulgaria (Mihov, 2001). In the Eastern Germany, the economic transition was associated with the unification as well as “experiments and experiences” (von Hagen and Strauch, 2001). In some countries the reform was perceived as smoother – as in Slovenia (Bole, 2001), Czech Republic (Dlouhý, 2001) or even Hungary (Halpern and Neményi, 2001) – while in other countries the economic reform was born by “travails and pains” as in Romania (Dăianu, 2001) or associated with “problems” as in Ukraine (Åslund, 2001).

The economic transition has produced winners and losers from reform (World Bank, 2002). Analysis of the first ten years of reforms in Eastern Europe and the Former Soviet Union has shown that “At the beginning of the new millennium, a profound divide lies between Central and Southeastern Europe and the Baltics (CSB) and the Commonwealth of Independent States (CIS). In the CSB, officially measured gross domestic product (GDP) bounced back from a transition recession,

recovered to its 1990 level by 1998, and exceeded that level by 6 percent in 2000. However, in the CIS GDP in 2000 stood at only 63 percent of its 1990 level. While GDP in Poland, the most populous country in the CSB, increased by more than 40 percent between 1990 and 1999, it shrank by 40 percent during the same period in the Russian Federation, the most populous country in the CIS.” (World Bank, 2002: xiii). Although, the economic efficiency in Poland was the main research issue (Goncharuk, 2006).

A number of publications opened their columns to publish studies and results of the real-time research focused on the economic reforms and transition processes which were developed in former communist countries: *Post-Communist Economies* (formerly *Communist Economies and Economic Transformation*, Routledge), *Managing Global Transitions* (Inderscience), *Economics of Transition* (Wiley), *Problems of Economic Transition* (a journal of translations from Russian), and others. *Beyond Transition* is a notable research newsletter about the reforming economies, published by The World Bank Group [available online at: <http://www.worldbank.org/html/prddr/trans/archives.htm>]. The prestigious journal *Post-Communist Economies* has published, systematically, well-documented articles on various economic sectors, in different transition countries as: Azerbaijan (Sabi, 1997), Bulgaria (Mihaylova and Howe, 1998), Croatia (Cengic, 1996), (East) Germany (Hölscher, 1997), Hungary (Mihalyi, 1996), Poland (Kaminski, 1998), Romania (Hunya, 1998), Russia (Magomedov, 1998), Kazakhstan and Uzbekistan (Abazov, 1997), Ukraine (Ishaq, 1997; von Hirschhausen, 1998). The critical issue of economic development is important for each individual country as well as for an entire region – it could be either Central Asia or Eastern Europe (Brzeski and Colombatto, 1999).

Considering its complexity, the development of an “easy-to-understand” but working model of economic transition was a challenge for many researchers. Using a political economy approach, Marangos (2005) has identified and developed five alternative models of transition: Shock Therapy, the Neoclassical Gradualist model, the Post-Keynesian model of transition, the Pluralistic Market Socialist, and the Non-Pluralistic Market Socialist model of transition (the Chinese model). Confusingly, this complex typology presents definition elements of both economic transition (as shock therapy) and economic system (others).

The purpose of this paper is to present a comprehensive model of economic systems, able to be used as background while studying the economic transition process. Known as “Matrix Model”, it was developed and used to analyze the Romanian and other centralized economies in transition for almost two decades (Ardelea and Scarlat, 1991; Scarlat, 1994, 2001, 2003, 2005; Scarlat and Richevaux, 2006; Scarlat and Scarlat, 2007). The Matrix Model can be used for analyzing the economic transition (duration, trajectory, end of the transition process). The results are confirmed by parallel research: an innovative approach, based on the chaos theory, is proposed by Scarlat and Scarlat (2008) to assess the degree of centralization that characterizes the management of any economic system. This

paper extensively uses results previously presented by Scarlat, Tatic and Scarlat (2007), Scarlat (2009).

3. The Matrix Model

Any economic system is described by a certain number of features; more features, more information and – finally – better described economic system. However, the issue is to investigate the possibility to characterize (any) economic system by a *minimum* number of parameters, in order to simplify the analysis as much as we can (but they still describe the system completely). The basic assumption is that any economic system can be characterized by two major elements, considered as determining features:

- *The type of ownership* that could be, basically, state ownership or private ownership (the intermediate or mixed ownership is accepted);
- *The type of management* adopted by businesses/organizations active within the economic system.

It is agreed to define the management type as centralized if all the vital decisions are made at the macroeconomic level (government), and the decentralized management, where decisions are made at the microeconomic (organization) level (intermediate forms of management are also accepted). The centralization/decentralization degree can be measured by the level at which the vital economic decisions are made: higher the level, higher the centralization. Such vital decisions – considered at the company level – are considered: company mission and strategy, budget, company suppliers and clients, pricing policy, personnel policy (number, structure, salaries, hiring and firing), investments, acquisitions and mergers, insolvency and bankruptcy (Scarlat and Scarlat, 2007).

The result of these assumptions is a two-by-two matrix model, which defines four basic economy types (Figure 1):

- I. Free-market economy (defined by private ownership and decentralized management).
- II. Economy of monopoly (private ownership and centralized management).
- III. Economy of command (centrally planned: state ownership and centralized management).
- IV. “Social market” economy (state ownership and decentralized management).

FIGURE 1: The matrix model of economic systems (Scarlat, 1994)

TYPE OF:		ORGANIZATION MANAGEMENT	
		<i>Centralised</i>	<i>Decentralised</i>
OWNERSHIP	Private	I ECONOMY OF MONOPOLY	II FREE-MARKET ECONOMY
	State	III ECONOMY OF COMMAND	IV “SOCIAL MARKET” ECONOMY

	State	ECONOMY OF COMMAND III	“SOCIAL- MARKET” ECONOMY IV
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From the management standpoint, the description of the proposed model starts from two basic prerequisites:

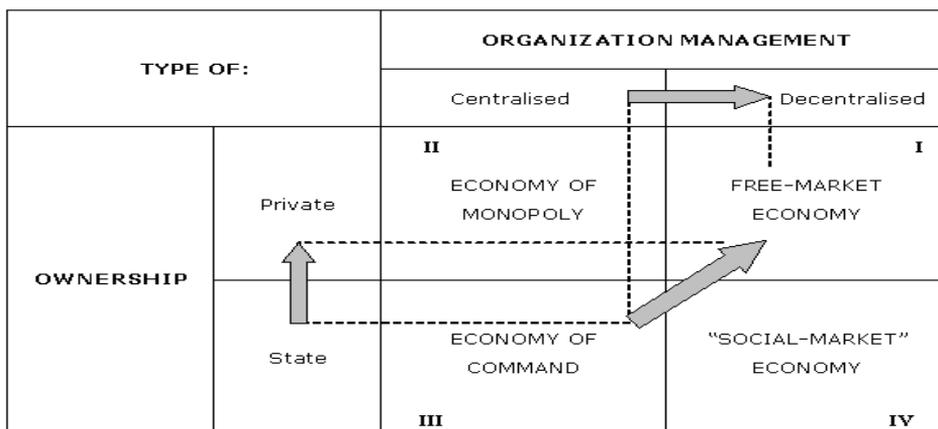
- Private ownership, opposed to the public one, generates motivation;
- Decentralization determines the flexibility of management systems and processes.

The economic systems based on private ownership lead to increased motivation while using the resources; and systems managed in a decentralized manner are more flexible than the centralized ones. Overall, the economic system based on free market competition appears more efficient than the economy of command. The economic history of the twentieth century is an overwhelming confirmation. As shown by Bitzenis (2007), a successful transition process from communism to democracy and market economy may be a tool for the economic development of a country.

The basic principle of management states that *the owner makes the decisions (regardless who are the owners – individuals, companies or the government)*. This situation is met in quarters I and III, which corresponds to relatively stable systems. To notice that the failure of centrally planned economies (quarter III) is not because of management conflicts but mostly because of its rigidity, poor motivation, and low efficiency. Any other situation than those described by quadrants I and III means conflicts or potential conflicts between owner and decision maker (quarters II and IV). It explains the relatively short life of economic (and political) systems corresponding to the quarters II and IV. These types of systems might have a reason to exist when stronger criteria than economic efficiency act. Such arguments can be: national security (cases of war or international conflicts), human life and civilization are in danger (case of natural catastrophes).

The “Scarlat model” can be used to analyze the economic transition as well. The transition process – from centrally planned economy (economy of command) to the free-market economy – means simultaneous privatization and decentralization of the business management (Figure 2).

FIGURE 2: The Matrix Model: transition from economy of command to free-market economy



The fundamental problem is choosing and justifying the optimal transition management and strategy, defined by:

- Duration and pace of transition (“shock” or “gradual” transition)
- Transition path (trajectory)
- Privatization techniques – as an essential component of the transition and economic reform.

The proposed model allows analyzing all these aspects.

The duration/pace of the transition is a critical issue, an essential part of any transition strategy. Either “shock therapy” or “gradual transition”, there are arguments in favour each of them. However, twenty years of transition offer enough hard evidences – as some countries have opted for “shock” while most of them have decided to follow the “gradual” path (Giannaros, 2000). It was demonstrated that economic efficiency depends on the transition duration (Goncharuk, 2006: 130): “while in countries implementing radical market reforms (Poland, Slovenia, Hungary etc) this [efficiency] decline was uncontinuous (2-3 years) and then came hasty and persistent growth, there were fluctuations of labour productivity dynamics in countries with gradual reform (Bulgaria, Romania) or continued decline in countries with inconsistent reform (Russia, Ukraine etc).”

One of the key research areas of transatology is the “periodization” – i.e. identification of sub-periods with common characteristics. According to Gungor and Yamak (2002), cited by Gubler et al. (2008: 25), the economic transition has generally three steps: (1) political and civic reform, (2) reform of legal system, and (3) economic liberalization. Šonje and Vujčić (2001) have identified two stages during the first decade of transition in Croatia. Scarlat and Scarlat (2007, 2008) have applied the concepts of econophysics (fractal structure applied to the exchange rate analysis) in case of Romania and detected three phases: 1990-1997 (passive

transition), 1998-2002 (active transition – initial), and 2003-2007 (active transition – final).

As far as transition strategic paths to follow, the Matrix Model is a useful analysis tool. There are three basic strategies: direct transition - which assumes simultaneous privatization and decentralization (directly from III to I); privatization followed by decentralization (from III to II followed by II to I); privatization following the decentralization (III to IV and then IV to I). In theory, each one has its own pros and cons; practically, each country, at a specific moment in time, is more suitable for one strategy rather than other, depending on a multitude of factors. However, overall, the last path is a potential generator of unemployment while the second path is favouring higher inflation.

Another strategic issue is privatization vs. restructuring – which comes first? Privatization was expected to have a significant impact on restructuring of the former state-owned sector in Eastern Europe after 1989. However, empirical studies show mixed results as far as impact of privatization on the restructuring of large companies. The evidence from Romania (Trif, 2008) suggests that privatization does not necessarily lead to a deeper restructuring and business profitability. Analysis of the privatization process in different countries from Central and Eastern Europe (Iatridis, 1998) has shown different perspectives and approaches. The “optimal” answer to the questions regarding the sequence of reforms and their speed is “to convert these countries to laissez-faire capitalism, with all its attendant institutions ... the greater the structural imbalances, the greater the intensity of the necessary shock” (Iatridis, 1998: 34-35). In the Preface to the volume presenting the results of the research project undertaken by the US National Bureau of Economic Research on the transition in Eastern Europe, the design of privatization process is presented as part of restructuring: the editors underline “the problems of restructuring – from fiscal reform, to labour market structure, to the design of privatisation and bankruptcy mechanisms, to the role of foreign direct investment” (Blanchard, Froot, and Sachs, 1994: ix). The privatization and private sector development in Albania, Azerbaijan, Kyrgyz Republic, and Moldova are described by the World Bank experts as parts of the structural adjustment in transition (Siegelbaum et al., 2002). There is no “viable universal recipe” for the privatization processes, but some mechanisms are known along with their implementation methods. “Privatization” means equally all schemes of private sector development: Transfer of property from state to private firms or individuals, new small business start-up and development, foreign direct investment. The problem is not the incomplete knowledge or unsuitable selection of privatization schemes, methods or/and their application methodology, but the particular sequence in which these mechanisms are being enforced. One of the indexes used to measure the privatization success in countries accessing to a market economy is that, in the end, one could reach that level able to create, on the basis of privatization, a viable capital market. *As enforcing methodology and implementing mechanism are concerned, the approach is identical for both privatization and capital market implementation processes* (Anghel and

Scarlat, 2008). The decision makers and political leaders in countries with transitional economies have the duty to reflect to, decide upon and enforce the most appropriate solutions for their countries.

4. The end of transition

As the EU accession is a transition process itself, the accessing Central and Eastern European countries have been “in transition process” twice. The studies carried out (Fuerea et al., 2004) confirmed that Romania – like other EU candidate countries in economic transition – was aiming a “moving target”: harmonization of the Romanian legislation with the *acquis communautaire* (Community legislation). This has created the perception of *endless transition*.

The difficulty of assessing the end of transition process is increased because each country follows its own transition way. In addition, different experts have different opinions. János Kornai is one of the six worldwide famous economists who have offered their answers during the 1997-1998 academic year, while visiting Western Michigan University. Based on three clear criteria (the communist party’s power monopoly terminated; privatization completed; market-driven economic activities), the answer was positive for most of the transition countries (Kornai, 1999). Oppositely, starting from fairly similar criteria, a negative answer was offered by Gelb (1999). Moreover, the comprehensive picture of the complex transition process is completed by moving beyond transition and discussing what it is considered to be “the post-transition policy” (Kornai, 1999). Normally, the transformation has its end when the market mechanism functions “normally”, when the deformations of the former economic system are eliminated and when the economy can generate sustainable economic growth (Morvay, 2005: 6).

However, formally, there are several standpoints on deciding when the transition process is completed:

- Politically: assessment by the EU (in Country Report) as “functional market economy” (this is applicable only to the EU accessing countries);
- Economically: when the country gross domestic product (GDP) reaches the pre-transition level;
- Strategically: when target/strategic objectives are reached (management standpoint) – based on the Matrix Model.

As all the above may present cross influences, a correlated approach is recommended. In case of Romania, the different approaches converge to indicate that economic transition got to its end by 2002-2003 (Scarlat and Scarlat, 2007). There are also more sophisticated analysis tools – as the analysis of time series and applying the theory of chaotic dynamics to economic transition (Scarlat and Scarlat, 2007, 2008). Considering the main events that occurred in the Romanian political and economical environment over a period of 16 years (1990-2005), evidences of chaotic dynamics were found; the time series analysis indicates the end of 2001 as the end of the transition process – which confirms the conclusion reached by matrix

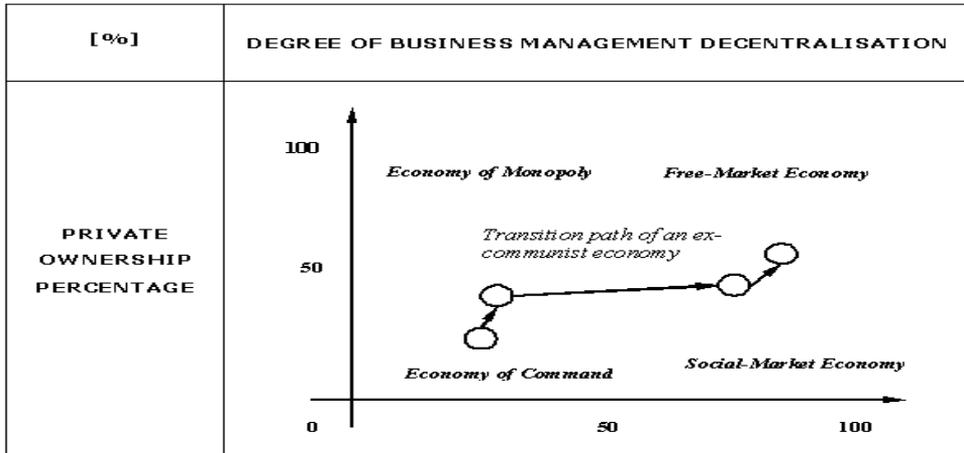
model: 2002-2003 (Scarlat and Scarlat, 2007). Other countries have completed their transitions at different moments, sooner or later.

The economic standpoint has the advantage of objective assessment. According to the officially measured GDP, the countries from Central and Southeastern Europe and the Baltics bounced back from a transition recession in 1998; Poland was above the average: its GDP increased by more than 40 percent between 1990 and 1999 (World Bank, 2002).

The role of international bodies is important: the economic transition is officially over when the international key-organizations declare it! Considering the Copenhagen criteria for EU accession (political democracy, adoption of the *acquis communautaire*, and the *capacity to withstand normal market competition* within the EU), the year of EU accession can be considered the official date of ending the transition (May 1, 2004 for Slovak Republic and January 1, 2007 for Romania). However, polemics can arise on this issue.

For the case of Slovakia two moments are important: (i) The year 2000 - when OECD has declared Slovakia as the 30th most developed country in the world (OECD, 2000); (ii) The year 2008 - when The World Bank has declared that Slovakia has graduated from the World Bank financing, i.e. Slovakia is no more a transitive country (Part 2) but a country with developed economy (Part 1) (SITA, 2008; Ministerstvo financií SR, 2008).

The Matrix Model is able to offer a reliable answer to the sensitive question “when the transition process ends” – as it is based on clear and objective data. In theory, by the time when the private ownership is prevailing (more than 50% private sector) and the business management is dominantly decentralized, then, the free-market economy system is in place. Reaching the first quarter means that, in principle, the process of *economic transition towards the free-market economy* is considered completed (Figure 1). In practice, during the transition process, it is necessary to measure both the private ownership percentage and degree of business management decentralization and thus the path of economic transition is designed. Figure 3 depicts a quantitative model of the transition path, based on the Matrix Model. The applicability of this model only depends on the available data about privatization and decentralization – considered as independent processes. There are situation in which a certain privatization act may come with decentralization effects; in this case privatization and decentralization cannot be considered independent processes.

FIGURE 3: The quantitative model of the transition path

Another major difficulty appears while calculating the privatization and decentralization percentages. If privatization data are relatively accessible, the percentage of decentralization is rather difficult to estimate; it largely depends not only on the year when the respective decentralization legal act was issued but on the time by when it effectively works in practice – which needs supplementary research. This supplementary research makes the difference between the theoretical and practical values of the results. The centralization/decentralization degree can be measured by the level at which the vital economic decisions are made: higher the decision level, stronger the centralization; lower the level, larger the decentralization. In any case, a coherent set of criteria for assessing the degree of decentralisation has to be developed. In the following chapter, an alternate method to assess the decentralization level as well as the corresponding transition paths in several countries is presented.

The functional market economy means not only reaching the quadrant I, but also being able to steadily perform, maintain the performance, and progress in that quadrant (stability). Here the role of government has to be emphasized – by promoting essential acts as Fair Competition Act, Consumer Protection Act, etc. The role of the government is vital in “protecting the borders” as well: Anti-trust legislation is securing the border against “Economy of Monopoly” (quarter II) while the Property acts are essential for keeping the border against “Social Market Economy” (quarter IV).

5. End of transition in Romania and Slovak Republic by Matrix Model

When calculating the degree of decentralization, in the context of the Matrix Model, it is worthy to explore the possibility to use alternative indicators for assessing the level of decentralisation. As the government has to be the referee in the

free-market economy game, not one of the players, its role and implication are sometimes rather difficult to assess, mainly in transition economies. Too much involvement of the government in the economy means less economic freedom. The use of the Index of Economic Freedom as degree of decentralization – in conjunction with the Matrix Model – has led to positive results (Scarlat, Tatic, and Scarlat, 2007). The Heritage Foundation and Dow Jones & Company, Inc. are annually publishing for 15 years – since 1995 – the world ranking of economic freedom, according to the “Index of Economic Freedom” (IEF). The benefit of easy access to existing reliable data prevails on disadvantages: supplementary data processing – in order to obtain more accurate data, suitable for matrix model (to assess the degree of decentralization). In addition to this, the supplementary processing of data does not offer too much difference compared to IEF values; for example, in case of Romania (2007), the degree of decentralization (supplementary data processing) is 63.5 compared to 61.3 (IEF value). Therefore, *the values of IEF can be considered – with reasonable accuracy – as degree of decentralization*. It is interesting to note that:

- Economic freedom is strongly related to good economic performance. Top seven countries (Hong Kong, Singapore, Australia, Ireland, New Zealand, USA, and Canada) – those scoring between 80-100 points are all considered as “free economies”.
- Only Estonia (on the 13th place) and Lithuania (30th), among ex-communist countries, are ranked in the second group of economies, considered as “mostly free” (70.0-79.9 points).
- Majority of ex-communist countries belong to the third (“moderately free”) and fourth (“mostly unfree”) groups (60.0-69.9 and 50.0-59.9 points, respectively). The exceptions are China, and most of the countries from former Yugoslavian Federation and Soviet Union.

Table 1 depicts the evolution of IEF for Romania and Slovak Republic over a period of 15 years. The methodology for IEF calculation is described by Beach and Kane (2007), updated (Miller et al., 2009). It is important to note that all IEF factors are calculated – according to the methodology – over a period of one year; for example, the IEF values for 2009 are calculated for a period of twelve months (last six months of 2007 and first six months of 2008), with a few exceptions (inflation rate is assessed over a period of three years). Thus, the period presented in Table 1 (1995-2009) are based on data from 1994-2008.

TABLE 1: IEF dynamics in Romania and Slovakia (1995-2009)

Years	Romania	Slovakia
1994	42.9	60.4
1995	46.2	57.6
1996	50.8	55.5
1997	54.4	57.5
1998	50.1	54.2
1999	52.1	53.8
2000	50.0	58.5
2001	48.7	59.8
2002	50.6	59.0
2003	50.0	64.6
2004	52.1	66.8
2005	58.2	69.8
2006	61.1	69.6
2007	61.7	70.0
2008	63.2	69.4

Source: Miller et al., 2009: pp. 335-336, 361-362

Evidently, there were similarities, but each country has followed its own transition path, under its particular circumstances. If comparing the two countries, it is noticeable that:

- Overall, both countries reported significant increase of freedom, from centralized economy to predominantly decentralized systems (60-70%).
- Slovakian economy is currently more decentralized than Romanian economic system.
- Depending on local conditions but also EU and global economic environment, all countries reported ups and downs; however, the general trend was neatly positive.
- Romania was slower Slovakia reaching its break of 50% decentralization.
- Slovak Republic has reported a certain regress as far as decentralization during late 90s; it came back after 2003.
- For Romania, 2001-2004 was a period of relative fair regress (degree of decentralization around 50%), as compared to more dynamic periods (1995-1998 and 2005-2009); in addition to this, it is detectable how the election years (1996, 2000, 2004) – associated with governments of opposite orientation each time – have impacted the economic freedom.
- The change in the IEF methodology (2006-2007) did not influence significantly the results.

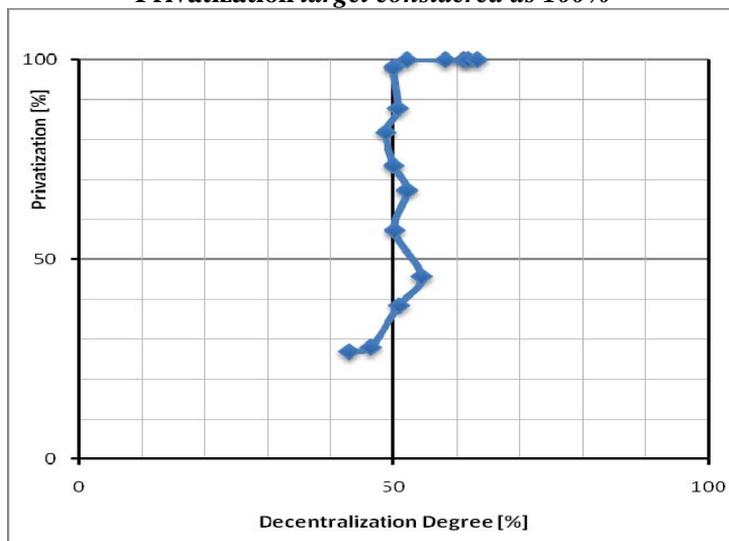
The most recent tops reported by Slovakia (around 70%) might be symptoms of “pendulum effect”: their economic systems will probably stabilize around those figures.

For Romania, at this point in time, it is rather difficult to foresee the equilibrium point in terms of decentralization level. It is likely that Romania will continue at a slower pace and stabilize later – at a pretty similar value (65-70%) – unless the global crisis will change the perspective in this respect. Actually, there are

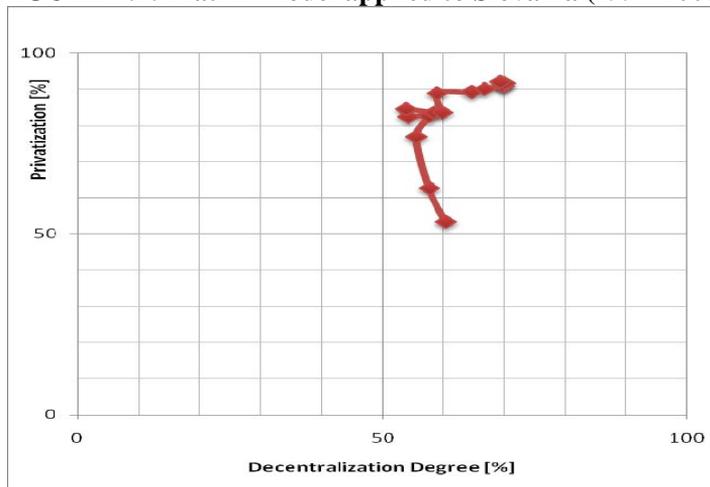
two issues of further research while studying the influence of the global crisis on decentralization: (i) how the global crisis impacts the decentralization level (seen as an optimal level or key-objective targeted by the government) and, consequently, (ii) how the crisis influences the decentralization as a process. If the decentralization pace is too slow, the crisis might disrupt the process.

In order to display the path followed by the two countries in their economic transition to free-market economy, then the private ownership percentage should be represented on the vertical axis while the degree of decentralization is pointed on the horizontal axis (as in Figure 3). The number of points in the diagram equals the number of sets of available data (number of years). The transition path corresponds to the connecting line – as displayed in Figure 4.1 (Romania) and Figure 4.2 (Slovak Republic) – for a period of 15 years (1994-2008). The period is restricted because of the data availability (IEF is calculated starting with 1995). The Romanian transition path is represented considering the privatization target as 100% (in relative figures, regardless the absolute value of the private sector in economy).

FIGURE 4.1: Matrix Model applied to Romania (1994-2008)
Privatization target considered as 100%



Source: Own research and Miller et al., 2009: 335-336

FIGURE 4.2: Matrix Model applied to Slovakia (1994-2008)

Source: Own research and Miller et al., 2009: 361-362

6. Discussion

Some observations and comments should be made related to the diagrams:

- The transition in Romania was longer and in Slovakia more turbulent (in terms of variations of the level of decentralization).
- By 1994 (the year when our analysis starts), Slovak Republic was having already a market economic system and economic transition completed; its transition was shorter (reforms started earlier) and the economic system looks stabilized.
- Romanian transition did not end in 1996 (first time when both privatization and decentralization were above 50%) because uncertain period followed (decentralization level around 50%); it was just after 2003 when the IEF has indicated decisive trajectory toward quarter IV.
- The decentralization process was slower in Romania than in Slovakia.
- The privatization process in Slovakia was faster than in Romania: it started earlier – as visible changes were reported in private ownership from 17.5% in 1989 to 20.0% in 1990 – and the process was accelerated (53.3% in 1994 already; 82.6% in 1997).

The Matrix Model allows identifying, describing, and analyzing the *reverse transition path*: the tendency of the reverse transition from the excessive freedom of market economy towards state control (“nationalization”) under the pressure of the current financial crisis. The post-transition economic phenomena, in the context of the current global financial crisis, unveiled a new trend: de-

privatisation (nationalization) of the large financial and non-financial institutions¹. This procedure is not new: the U.S. government has nationalized the railroads in World War I; the U.K. government nationalized the British railroad system a few times...

In cases like Romania and Slovak Republic, the new nationalization would be a second one in history – which suggests a cyclic transition or “pendulum effect”:

- First nationalization – transition from free-market economy to centrally planned economy (Romania, 1948: Nationalization Act)
- Transition from communist economy of command to the free-market economy (Romanian transition: 1989-2002)
- Second nationalization (?)

The Matrix Model allows analyzing the path of this cyclic transition in a specific country as well as cross-country comparative studies.

7. Limitations and further research

As mentioned, the split between private/state or centralized/decentralized is pretty rigid. The Matrix Model can be improved, considering both ownership and decentralization as having continuous variation: ownership percentage and degree of decentralization. The quantitative version of the proposed model allows investigating the real transition path followed by any country.

The transition model has unlimited potential as long as data are available – in order to calculate the privatization and decentralization percentages. Privatization data should be relatively accessible but the percentage of decentralization is rather difficult to estimate. It largely depends not only on the year when a specific regulatory act was issued in that specific country but on the moment by when it effectively works in practice – which needs additional research. For this reason, the Index of Economic Freedom may be used as decentralization degree.

The Matrix Model can be further developed by adding a third dimension – linked to the size of the economy (GDP, population).

The centralization/decentralization degree can be measured by the level at which the vital economic decisions are made. It is room for further research on a coherent set of criteria for assessing the degree of decentralisation as well as the correlation between the degree of decentralization calculated as such and the IEF.

¹ According to the news agencies, Saudi Arabia has nationalized its oil industry (Business Week, July 28, 2008:78); the U.S. government currently buys equity stakes in U.S. banking system, which becomes more “state owned”, following to the hundreds of billions of dollars committed by the government (Pete Engardio: *Forget Adam Smith. Whatever Works*, Business Week, October 27, 2008: 22-24). On Monday June 1, the Associated Press has announced “the temporary nationalization” of the US 100-year-old company General Motors Corp. On April 15, the press agencies spread the rumour that Romanian government might take over the petrochemical unit of the largest Romanian private company, Petrom.

Each IEF group of factors has different impact as far as assessing the decentralization level. The accuracy of measurement will increase if only groups of factors with higher influence will be selected. The further analysis might be deepened in this respect.

There are lots of particular aspects of the transition process in each specific country – regarding methods and results of privatization, market institutions, etc – which may be subjects for further research work.

The transition paths can be further analyzed using more sophisticated mathematical tools as theory of deterministic chaos and fractal analysis.

Post-transition economic phenomena, in the context of the current global financial crisis, unveiled a new area of research.

8. Conclusions

The Matrix Model is fully applicable to all Eastern European countries or any other transitional economy. Its applicability only depends on available data about privatization and decentralization. The Matrix Model is a reliable research tool to investigate the economic transition process – its trajectory, strategy as well as its completion. The Index of Economic Freedom is a good estimator for the decentralization level; consequently, it can be used in conjunction with the Matrix Model.

The analysis of different transition paths permits comparative studies – regardless the transition sense (direct or reverse transition).

The use of the Matrix Model reveals similarities among the transition countries (as Romania and Slovak Republic) but noticeable differences (as delays) are also identified. The results are encouraging to deepen the research, and extend the use of the Matrix Model to other transition economies and eventually to develop recommended patterns for successful transition strategies.

The end of the transition processes can be estimated based on the Matrix Model as well: the process is completed when private ownership and decentralization prevail.

The Matrix Model allows identifying, describing, and analyzing the tendency of the reverse-transition from the excessive freedom of market economy towards state control (de-privatisation or nationalization) under the pressure of the current financial crisis. In cases like Romania or Slovakia, the new nationalization would be a second one in history – which suggests a cyclic transition or “pendulum effect”. The decentralization figures reported by Slovakia in recent years might be symptoms of “the pendulum effect”: its economic system will probably stabilize around those figures.

References:

1. Abazov, R., (1997), “Formation of the Non-state Sector and Privatisation in Kazakhstan and Uzbekistan”, *Post-Communist Economies* 9(4), 431-448.

2. Anghel, D. and C. Scarlat, (2008), "Model for Successful Privatisation and Implementation of a Viable Capital Market. Romanian Experience", *Current Issues of Business and Law* 1(1), 7-16.
3. Ardelea, D. and C. Scarlat, (1991), "De la economia de comandă la economia de piață", *Sisteme logistice* 1(July), 33-35.
4. Åslund, A., (2001), "Problems with Economic Transformation in Ukraine" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 371-400.
5. Beach, W.W. and T. Kane, (2007), "Methodology: Measuring the 10 Economic Freedoms" (in: T. Kane, K.R. Holmes and M.A. O'Grady - editors, *2007 Index of Economic Freedom*), *The Heritage Foundation and Dow Jones & Company, Inc.*, Washington, D.C., 37-55.
6. Bitzenis, A., 2007, "Political and economic alternatives for the Central and East European Region and China", *Global Business and Economics Review* 9(1), 101-122.
7. Blanchard, O.J., K.A. Froot, and J.D. Sachs, 1994, "Preface" (in: O.J. Blanchard, K.A. Froot and J.D. Sachs - editors, *The Transition in Eastern Europe. Volume 2: Restructuring*), University of Chicago Press, Chicago, London, ix.
8. Blejer, M.I. and M. Škreb, 2001, "A Decade of Transition in a Variety of Settings: A Comparison of Country Experiences" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 3-14.
9. Bole, V., 2001, "Fiscal Impulse of Transition: The Case of Slovenia" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 259-292.
10. Brzeski, A., E. Colombatto, 1999, "Can Eastern-Europe Catch-Up?", *Post-Communist Economies* 11(1), 5-25.
11. Cengic, D., 1996, "Privatisation and Management Buy-out: The Example of Croatia", *Post-Communist Economies* 8(4), 549-564.
12. Dabrowski, M., 2001, "Ten Years of Polish Economic Transition, 1989-1999" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 121-152.
13. Dăianu, D., 2001, "Strain and Economic Adjustment: Romania's Travails and Pains", (in: M.I. Blejer and M. Škreb - editors., *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 441-476.
14. de Larosière, J., 2001, "Transition Economies" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 476-486.
15. Dlouhý, V., 2001, "The Czech Republic: Ten Years of Transition" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology*, Cambridge, 175-192.

16. Fuerea, A., S. Sandu, C. Scarlat, G. Hurduzeu, C. Păun, R.M. Popescu, 2004, "Evaluarea gradului de concordanță a legislației române cu acquis-ul comunitar, pe capitole de negociere / A chapter-by-chapter assessment of the conformity of the Romanian legislation with the acquis communautaire, at the level of the year 2002", Bilingual edition (Romanian, English), European Institute of Romania, Bucharest.
17. Gelb, A., 1999, "The End of Transition?" (in: A.N. Brown - editor, *When is Transition Over?*) W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, 39-50.
18. Giannaros, D., 2000, "Did the 'shock therapy' approach work in the economic restructuring of Eastern Europe? Some evidence from Poland and Russia", *Global Business and Economics Review* 2(1), 53-66.
19. Goncharuk, A.G., 2006, "Economic Efficiency in Transition: The Case of Ukraine", *Managing Global Transitions* 4(2/Summer 2006), 129-143.
20. Gubler, W.K.T., M.W. McCarter, K.K.W. Seawright, Y. Zhang, 2008, "Service Recovery in Transition Economies: Russia and China". *Managing Global Transitions* 6(1/Spring 2008), 23-51.
21. Gungor, B., R. Yamak, 2002, "Growth and inflation effects of economic and political reforms in transition economies", *Russian and East European Finance and Trade* 38(1), 102-114.
22. Halpern, L. and J. Neményi, 2001, "Fiscal Foundations of Convergence to the European Union: The Hungarian Economy toward EU Accession" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), Massachusetts Institute of Technology, Cambridge, 153-174.
23. Iatridis, D.S., 1998, "A Global Approach to Privatisation" (in: D.S. Iatridis and J.G. Hopps - editors, *Privatisation in Central and Eastern. Perspectives and Approaches*), Praeger, Westport, Connecticut; London, 3-25.
24. Ishaq, M., 1997, "The Ukrainian Economy and the Process of Reform", *Post-Communist Economies* 9(4), 501-518.
25. Hölscher, J., 1997, "Economic Dynamism in Transition Economies: Lessons for Germany", *Post-Communist Economies* 9(2), 173-182.
26. Hunya, G., 1998, "Romania 1990-2002: Stop-go Transformation", *Post-Communist Economies* 10(2), 241-258.
27. Kaminski, B., 1998, "Poland's Transition from the Perspective of Performance in EU Markets", *Post-Communist Economies* 10(2), 217-240.
28. Kolodko, G.W., 2001, "Postcommunist Transition and Post-Washington Consensus" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), Massachusetts Institute of Technology, Cambridge, 45-84.
29. Kornai, J., 1999, "Reforming the Welfare State in Postsocialist Economies" (in: A.N. Brown – editor, *When is Transition Over?*) W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, 99-114.
30. Linn, J.F., 2001, "Ten Years of Transition in Central Europe and the Former Soviet Union: The Good News and the Not-So-Good News" (in: M.I. Blejer

- and M. Škreb - editors, *Transition: The first Decade*, Massachusetts Institute of Technology, Cambridge, 15-44.
31. Magomedov, A., 1998, "Krasnodar-krai: A 'Growth Pole' in the Transitional Economy of Russia?", *Post-Communist Economies* 10(3), 363-374.
 32. Marangos, J., 2005, "Alternative models of transition and institutional development", *Global Business & Economics Review* 7(4), 390-408.
 33. Mihalyi, P., 1996, "Privatisation in Hungary: Now Comes the 'Hard Core'.", *Post-Communist Economies* 8(2), 205-216.
 34. Mihaylova, M. and K.S. Howe, 1998, "An Analysis of Milk Processing in Bulgaria", *Post-Communist Economies* 10(4), 539-556.
 35. Mihov, I., 2001, "The Economic Transition in Bulgaria, 1989-1999" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*, Massachusetts Institute of Technology, Cambridge, 401-440).
 36. Miller, T. and K.R. Holmes with A.B. Kim, D. Markheim, J.M. Roberts, and C. Walsh, 2009, "2009 Index of Economic Freedom", The Heritage Foundation, Washington. D.C.; The Wall Street Journal, Dow Jones & Company, Inc., New York.
 37. Ministerstvo financií SR, 2008, "Návrh na graduáciu SR z operácií Svetovej banky", 28.2.2008, Bratislava.
 38. Morvay, K., 2005, "Stratégia a priebeh ekonomickej transformácie na Slovensku", *Ekonomický časopis*, 53/2005, Bratislava: 5-32.
 39. OECD, 2000, "Slovakia joins OECD", *OECD Observer* No. 223, October 2000.
 40. Sabi, M., 1997, "Banking in Transition: Development and Current Problems in Azerbaijan", *Post-Communist Economies* 9(4), 491-500.
 41. Scarlat, C., 1994, "Strategic model on the transition process to the free-market economy" (in: E. Radaceanu - editor, *Proceedings of the International Simulation and Gaming Association - ISAGA'93 Conference*), IROMA, Bucharest, Romania, 43-46.
 42. Scarlat, C., 2001, "Inițierea, dezvoltarea și managementul afacerilor mici și mijlocii", *Conphys*, Rm. Vâlcea.
 43. Scarlat, C., 2003, "Antreprenariat și managementul întreprinderilor mici și mijlocii", *Printech*, Bucuresti.
 44. Scarlat, C., 2005, "Aspects of the Romanian Transition", *Proceedings of the 6th International Conference Managing the Process of Globalisation in New and Upcoming EU Members*, 24-26 November 2005, Portoroz, Slovenia, 225-234.
 45. Scarlat, C., 2009, "Models to analyze the economic transition process in East European countries", *Knowledge Hub* 5(1), in press.
 46. Scarlat, C., M. Richevaux, 2006, "Aspects de la transition roumaine", *Humanisme & Entreprise* 275(Fevrier 2006), 73-86.

47. Scarlat, C., E.I. Scarlat, 2007, "Theoretical Aspects of the Economic Transition", *Managing Global Transitions* 5(4), 307-331.
48. Scarlat, C., E.I. Scarlat, 2008, "Chaotic Approach for Assessing the Management Decentralization. The Case of Romanian Market", *Intercultural Dialogue and Management - Proceedings of the 9th Management International Conference MIC 2008, 26-29 November 2008, Barcelona, Spain*, 2179-2193.
49. Scarlat, C., K. Tatic, E.I. Scarlat, 2007, "On Emerging Economies in Transition from Eastern Europe: Comparing the Economic Transitions in Romania and Bosnia-Herzegovina", *Managing Global Transitions: Globalisation, Localisation, Regionalisation - Proceedings of the 8th Management International Conference MIC 2007, 20-24 November 2007, Portoroz, Slovenia*, 1315-1324.
50. Siegelbaum, P.J., K. Sherif, M. Borish, G. Clarke, 2002, "Structural Adjustment in the Transition. Case Studies from Albania, Azerbaijan, Kyrgyz Republic, and Moldova", *World Bank Discussion Paper No. 429. The World Bank, Washington, D.C.*
51. SITA, 2008, "Svetová banka: Slovensko je už vyspelý štát", 11.3.2008, Bratislava.
52. Šonje, V. and B. Vujčić, 2001, "Croatia in the Second Stage of Transition, 1994-1999" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology, Cambridge*, 193-258.
53. Tókéš, R.L., 2000, "'Transitology': Global Dreams and Post-Communist Realities" *Central Europe Review* 2(10).
54. <http://www.ce-review.org/00/10/tokes10.html> [Accessed 15.09.2009]
55. Trif, A., 2008, "The impact of privatisation on the restructuring of large companies: evidence from Romania", *International Journal of Entrepreneurship and Innovation Management* 8(5), 565-580.
56. von Hagen, J. and R.R. Strauch, 2001, "East Germany: Transition with Unification, Experiments, and Experiences" (in: M.I. Blejer and M. Škreb - editors, *Transition: The first Decade*), *Massachusetts Institute of Technology, Cambridge*, 87-120.
57. von Hirschhausen, C., 1998, "Industrial Restructuring in Ukraine Seven Years After Independence: From Socialism to Planning Economy?", *Post-Communist Economies* 10(4), 451-466.
58. World Bank, 1996, "World Bank Development Report 1996: From Plan to Market", *The International Bank for Reconstruction and Development / The World Bank, Washington, D.C.*
59. World Bank, 2002, "Transition: The First Ten Years. Analysis and Lessons for Eastern Europe and the Former Soviet Union", *The International Bank for Reconstruction and Development / The World Bank, Washington, D.C.*