Anti-corruption strategies in some South-Eastern European states.An empirical study on the impact of the government performance

Matei, Ani and Matei, Lucica

National School of Political Studies and Public Administration (NSPSPA)

20 August 2010

**Integrating anti-corruption strategies within the government reforms in some South-Eastern European states.
An empirical study on the impact of the government performance**

Prof. Dr. Ani Matei
Faculty of Public Administration
National School of Political Studies and Public Administration
Address: Str. Povernei no 6, sector 1, Bucharest, Romania
Phone: +40213180894, Fax: +40213146507
e-mail: amatei@snspa.ro

Prof. Dr. Lucica Matei
Faculty of Public Administration
National School of Political Studies and Public Administration
Address: Str. Povernei no 6, sector 1, Bucharest, Romania
Phone: +40213180894, Fax: +40213146507
e-mail: lmatei@snspa.ro

Abstract

The preoccupations about conceiving and promoting efficient anti-corruption strategies exist in most states, especially in the developing countries.

The opportunity of such strategies derives from the direct link, demonstrated theoretically and empirically, between the effects of the anti-corruption strategies and government performance, translated both in the economic and social results and living standard, welfare etc.

In the last decades, the transnational actors – UN, World Bank, OECD, EU etc. - have affirmed as promoters of own anti-corruption strategies, directing the states' efforts, conferring adequate levels of relevance, effectiveness, efficiency or sustainability.

The South-Eastern European states incorporate own anti-corruption strategies in the framework of general strategies, aiming the government reform in the context of the European integration process.

Strengthening the public integrity, reducing corruption, developing a genuine climate of economic freedom become important objectives concerning the impact on government performance.

The paper incorporates briefly the main characteristics of anti-corruption strategies, developed by transnational actors and it aims to shape theoretical and empirical frameworks for the impact of anti-corruption strategies.

The focus on some South-Eastern European states has a demonstrative character, as the presented analyses may be extended to various geo-political areas.

Key words: anti-corruption strategies, assessment, impact, government performance.

Introduction

Corruption, through extended and diversified forms of expression has become an object of study and analysis, both for experts, analysts and public authorities and institutions. The latter, concerned by the effects of corruption on the social and economic development have aimed and achieved a series of anti-corruption strategies, focused on combating and eliminating the causes of corruption, thus also their consequences. For the public organizations, found frequently in public administrations and generally in the public sector, theories have been formulated aimed at minimization of the corruption phenomena.

The governance processes and corruption phenomena are in a direct connection and benefit of profound analyses. Dealing corruption from the economic, cultural or political perspective, Rose-Ackerman (2005, 4-5) reveals four dimensions:

- The first one is carried out on the background of public organisations, state and society, where corruption could create inefficiency and inequity. The purpose of reforms is not to eliminate corruption but to improve state efficiency, fairness and legitimacy. In this context, it is worth to mention a fundamental idea for the anti- corruption strategies: "the total elimination of corruption will never be worthwhile, but steps can be taken to limit its reach and reduce the harms it causes"
- Corruption has different meanings in different societies. It is difficult to establish a clear border between legal and illegal, between merit and bribe.
- How the basic structures of the public and private sector can produce or repress corruption. The prospect of a reform will change both the constitutional structures and the fundamental relation between market and state.
- The difficulty of reform for public or governmental organisations and the role of the international community in reform. The internal reform policy is essential, and between various organisations valuable lessons can be transferred even if the conditions are not always similar.

Although the author asserts: "this book does not present a blueprint for reform", she suggests "a range of alternatives that reforms must tailor to the conditions in individual countries". However "reform should not be limited to the creation of integrity systems" and "the primary goal should be to reduce the underlying incentives to pay and receive bribes, not to tighten systems of ex post control".

Previously to Rose-Ackerman's assertions, Banfield (1975, 593) analyses the key features that a public organization should meet in order to minimize corruption. Briefly, they are:

- the executive agents are selected on the basis of probity and institutional loyalty;
- there is a complete set of positive motivations for the loyal public service (including a high salary);
- there is a complete set of negative motivations, applied compulsory when corrupt acts were already identified;
- the goals and missions for a job are formulated clearly and univoque by director;
- the agents hold the necessary discretion for executing the job tasks;
- no ambiguities in rules;
- the director monitors the agent's performance;
- if there is the smallest doubt about the agent's probity, he/she is dismissed.
- the director, on his/her turn is also monitored.

The preoccupations of international organisations may be added to the above contributions, substantiating anti-corruption strategies at the level of government or sectoral public organisations. In this respect, the World Bank has asserted as an important and competent actor in the analysis concerning

the causes and consequences of corruption. The control of corruption has become a core indicator of governance and the strategies grounded on this indicator represent pillars for national authorities.

The World Bank promotes good governance and anti-corruption actions as important pillars for reducing the poverty. The World Bank sustains the national or regional efforts for public integrity, minimization of corruption, as well as awarding assistance to countries in view of governance improvement and control of corruption, by means of the World Bank Institute (WBI).

The preoccupations about designing and promoting anti-corruption policies as well as evaluating the causes/consequences of the corruption phenomenon are also present in the European Union, OECD or other transnational bodies such as International Monetary Fund, USAID, Transparency International, Heritage Foundation etc.

I. Anti-corruption strategies of the transnational actors – guiding framework for the national anti-corruption strategies

I.1. World Bank: Designing Effective Anticorruption Strategies

The strategies (World Bank, 2000, 58-78) are based on the studies and field analyses carried out even by the World Bank or prestigious authors for the topic on combating corruption. The actual strategy offers "a framework for self-assessment of corruption within each country rather than a device for providing a fixed reform blueprint for each country in the region". At the same time, "a key argument embedded in the typology is that an anti-corruption strategy should be designed not only in response to the level of either state capture or administrative corruption alone in a given country, but to the interaction of these forms of corruption as well" (World Bank, 2000, 59).

The relation between "state capture" and "administrative corruption", in better words, its intensity, represents the basis of the conception for many anti-corruption strategies.

Defined by Hellman and Kaufmann (2001), with reverberations especially in transition economies, state capture refers to the actions of individuals, groups, or firms both in the public and private sectors to influence making of laws, regulations, decrees, and other government policies to their own advantage as a result of the illicit and non-transparent provision of private benefits to public officials.

Types of institutions subject to capture:
- the legislature,
- the executive,
- the judiciary, or
- regulatory agencies.

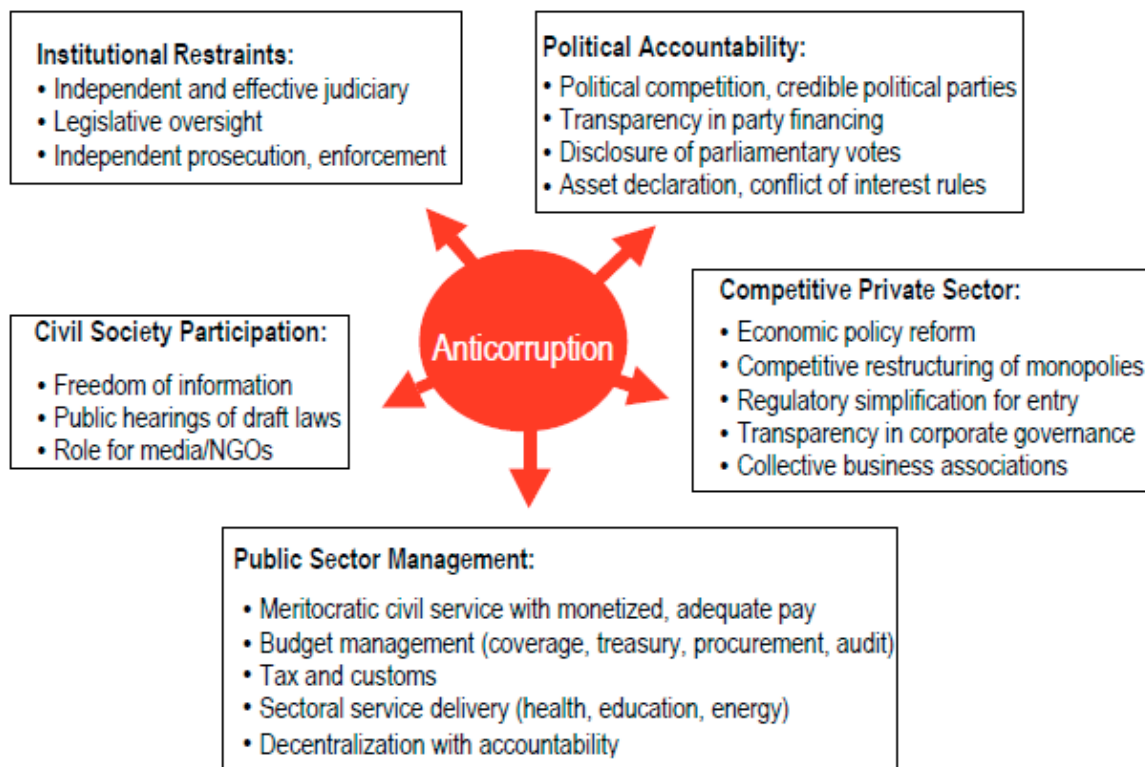Types of actors engaged in capturing:
- private firms,
- political leaders, or
- narrow interest groups.

Yet all forms of state capture are directed toward extracting rents from the state for a narrow range of individuals, firms, or sectors through distorting the basic legal and regulatory framework with potentially enormous losses for the society at large. They thrive where economic power is highly concentrated, countervailing social interests are weak, and the formal channels of political influence and interest intermediation are underdeveloped.

On the other hand, administrative corruption refers to the intentional imposition of distortions in the prescribed implementation of existing laws, rules, and regulations to provide advantages to either state or non-state actors as a result of the illicit and non-transparent provision of private gains to public officials. Examples of administrative corruption: bribes to a seemingly endless stream of official inspectors to overlook minor (or possibly major) offences of existing regulations; "grease payments" as bribes to gain licenses, to smooth customs procedures, to win public procurement

contracts, or to be given priority in the provision of a variety of other government services; state officials can simply misdirect public funds under their control for their own or their family's direct financial benefit. At the root of this form of corruption is discretion on the part of public officials to grant selective exemptions, to prioritize the delivery of public services, or to discriminate in the application of rules and regulations. (Figure 1.1)

Figure 1.1 Multi -pronged Strategy: Addressing *State Capture* and *Administrative Corruption* (Source: World Bank, 2000, 39)

Institutional Restraints:
• Independent and effective judiciary
• Legislative oversight
• Independent prosecution, enforcement

Political Accountability:
• Political competition, credible political parties
• Transparency in party financing
• Disclosure of parliamentary votes
• Asset declaration, conflict of interest rules

Anticorruption

Civil Society Participation:
• Freedom of information
• Public hearings of draft laws
• Role for media/NGOs

Competitive Private Sector:
• Economic policy reform
• Competitive restructuring of monopolies
• Regulatory simplification for entry
• Transparency in corporate governance
• Collective business associations

Public Sector Management:
• Meritocratic civil service with monetized, adequate pay
• Budget management (coverage, treasury, procurement, audit)
• Tax and customs
• Sectoral service delivery (health, education, energy)
• Decentralization with accountability

To be effective, a multi-pronged approach requires some guidelines for the selection and sequencing of reform priorities tailored to the particular contours of the corruption problem in each country.

The typology can be divided into four spheres determined by the relative levels of *state capture* and *administrative corruption*:

▪ Countries within the *medium-medium* category have been able to contain both types of corruption to more manageable levels, though serious challenges remain.
▪ In the *medium-high* category are countries where the problem of *administrative corruption* remains the central problem, while the state has been less subject to capture by the private sector than other transition countries.
▪ The *high-medium* category includes countries that have been able to contain the level of *administrative corruption* relative to other transition countries, but nevertheless have done so in a context of high *state capture*.
▪ In the *high-high* category, a serious problem of *administrative corruption*—and hence, weak state capacity—is nested in a state highly subject to capture.

In the context of the above documentary sources, Table 1.1. presents a synthesis of the key focus, challenges and priorities for each typology of the relation state capture-administrative corruption.

Table 1.1. Intensity of the relation state capture-administrative corruption and structure of anti-corruption strategies

State Capture / Administrative Corruption	Medium			High		
Medium	*Key Focus:* Capitalizing on favourable conditions for strengthening political accountability and transparency through further institutional reforms	*Challenges* • Risk of compliance and Back stepping • Close ties between economic interests and political institutions • Cronyism and conflict of interest in public sector appointments	*Priorities* • Promote further reforms in civil service, public finance, procurement, and judiciary • Introduce greater transparency into political financing • Develop strong partnerships with civil society	*Key Focus:* Enhancing political accountability and promoting new entry to take maximum advantage of a stronger legacy of state capacity	*Challenges* • High concentration of power by vested interests • Weak structures for monitoring and accountability • Powerful groups block further reforms to preserve their advantages	*Priorities* • Broaden formal channels of access to the state • Deconcentrate economic power through competition and entry • Enhance oversight through participatory structures

	Key Focus :	Challenges	Priorities	Key Focus:	Challenges	Priorities
High	Enhancing state capacity to improve the provision of basic public goods.	• Highly underdeveloped public administration • Lack of control and accountability within the state • Nascent civil society	• Build the capacity of public administration • Develop instruments for financial management • Encourage civil society development	Breaking the hold of vested interests on the process of policy and institutional reform	• Highly concentrated economic interests that can block reforms • Limited implementation capacity of Government • Poorly organized anti-corruption constituencies • Restricted channels of access for countervailing interests	• Deconcentrate economic interests through restructuring, competition and enhanced entry • Build accountability and oversight mechanisms • Promote collective action among countervailing interests • Stand-alone technocratic reforms will have limited impact

I.2 On fighting corruption in the European Union

As a safeguard instrument for ensuring a common area of freedom, security and justice, fighting corruption was seen among the priorities of the European Union, as early as the Treaty on European Union:

> "[…] the Union's objective shall be to provide citizens with a high level of safety within an area of freedom, security and justice by […] preventing and combating crime, organized or otherwise, in particular terrorism, trafficking in persons and offences against children, illicit drug trafficking and illicit arms trafficking, corruption and fraud, through:
> - closer cooperation between police forces, customs authorities and other competent authorities in the Member States, both directly and through the European Police Office (Europol), in accordance with the provisions of Articles 30 and 32;
> - closer cooperation between judicial and other competent authorities of the Member States including cooperation through the European Judicial Cooperation Unit ("Eurojust"), in accordance with the provisions of Articles 31 and 32;
> - approximation, where necessary, of rules on criminal matters in the Member States, in accordance with the provisions of Article 31(e)" (EC, 2002, OJ, C325).

Since, the European institutions regularly underlined the necessity for developing and enhancing prevention measures against corruption phenomenon. The Action plan to combat organized crime (EC, 1997, OJ, C251) offers in this regard an overall picture of the European Union's concrete plans and measures for fighting corruption. According to it for instance, the Member States, the Council and the Commission, should develop:

> "[…]a comprehensive policy to tackle corruption, including appropriate and efficient sanctions, but also tackling all aspects linked with the proper functioning of the internal market and other internal policies, as well as external assistance and cooperation (political guideline 13). […]This policy should primarily focus on elements of prevention, addressing such issues as the impact of defective legislation, public-private relationships, transparency of financial management, rules on participation in public procurement, and criteria for appointments to positions of public responsibility, etc. It should also cover the area of sanctions, be they of a penal, administrative or civil character, as well as the impact of the Union's policy on relations with third States."

In 2000 in fact, "The prevention and control of organized crime: A European Union Strategy for the beginning of the new millennium" (EC, 2000, OJ, C124) became a reality. It was there that the European Communities reiterated the need for instruments aimed at the approximation of national legislation and developing a more general (multi-disciplinary) EU policy towards corruption, taking into account as appropriate work being carried out in international organizations. Furthermore, the same document urged those Member States, which had not yet ratified the relevant EU and Council of Europe anti-corruption legal instruments to ensure speedy ratification within a clear timeframe.

Finally, in 2003, the Communication from the Commission to the Council, the European Parliament and the European and Social Committee on a Comprehensive EU policy against corruption (COM 2003, 317 final) reaffirmed that tackling corruption and fraud within the EU institutions and bodies had became an absolute priority for the EU in the last years. In addition, it stated that:

> "The crisis triggered by the Commission's resignation in March 1999 revealed the necessity to set up more effective measures for the protection of the integrity of the European Public Administration. In order to improve the legal framework in that field, the Commission had defined various initiatives in its overall strategy for the protection of the Community financial interests of

2000, its action plan 2001-2003, and more recently, its evaluation report on the OLAF activities" (chapter 5, p.13).

Among the actions to develop in order to better fight against corruption, the above Communication enumerated, *inter alia*: raising integrity in the public and private sectors, amending national legislation in order to exclude any tax deductibility of bribes, ensuring transparency and non-discriminatory access to procurement opportunities, organizing bodies of special nature in-between the public and the private sector for fighting corruption, encouraging anti-corruption policies in the acceding, candidate and other third countries on the basis of ten general principles.

1. To ensure credibility, a clear stance against corruption is essential from leaders and decision-makers. Bearing in mind that no universally applicable recipes exist, national anti-corruption strategies or programmes, covering both preventive and repressive measures, should be drawn up and implemented. These strategies should be subject to broad consultation at all levels.

2. Current and future EU Members shall fully align with the EU *acquis* and ratify and implement all main international anti-corruption instruments they are party to (UN, Council of Europe and OECD Conventions). Third countries should sign and ratify as well as implement relevant international anti-corruption instruments.

3. Anti-corruption laws are important, but more important is their implementation by competent and visible anti-corruption bodies (i.e. well trained and specialised services such as anti-corruption prosecutors). Targeted investigative techniques, statistics and indicators should be developed. The role of law enforcement bodies should be strengthened concerning not only corruption but also fraud, tax offences and money laundering.

4. Access to public office must be open to every citizen. Recruitment and promotion should be regulated by objective and merit-based criteria. Salaries and social rights must be adequate. Civil servants should be required to disclose their assets. Sensitive posts should be subject to rotation.

5. Integrity, accountability and transparency in public administration (judiciary, police, customs, tax administration, health sector, public procurement) should be raised through employing quality management tools and auditing and monitoring standards, such as the Common Assessment Framework of EU Heads of Public Administrations and the Strasbourg Resolution. Increased transparency is important in view of developing confidence between the citizens and public administration.

6. Codes of conduct in the public sector should be established and monitored.

7. Clear rules should be established in both the public and private sector on whistle blowing (given that corruption is an offence without direct victims who could witness and report it) and reporting.

8. Public intolerance of corruption should be increased, through awareness-raising campaigns in the media and training. The central message must be that corruption is not a tolerable phenomenon, but a criminal offence. Civil society has an important role to play in preventing and fighting the problem.

9. Clear and transparent rules on party financing, and external financial control of political parties, should be introduced to avoid covert links between politicians and (illicit) business interests. Political parties evidently have strong influence on decision-makers, but are often immune to anti-bribery laws.

10. Incentives should be developed for the private sector to refrain from corrupt practices such as codes of conduct or "white lists" for integer companies.

I.3. OECD - Policy Paper and Principles on Anticorruption

In 2007, continuing and enhancing its efforts in the fight against corruption, OECD designed and formulated a "programme of collective action", comprising the directions and principles in the fight against corruption (OECD, 2007).

This publication, which is based on proposals and broad guiding principles approved by the Development Assistance Committee (DAC), comprises a DAC Policy Paper on Anti-Corruption: *"Setting an Agenda for Collective Action"* and the DAC Principles for Donor Action in Anti-Corruption. It argues that political leadership and enhanced accountability can accelerate collective efforts in fighting corruption through better governance. It highlights a number of frontiers for collective action where coordinated political leadership is needed if the multiple risks associated with corruption are to be successfully managed.

I.3.1 Actions proposed by the DAC (OECD, 2007, 12-15)

To promote a concerted approach to anti-corruption work at country level …
• Facilitate joint assessments of corruption and the wider governance context in high-risk countries in close cooperation with other organisations, beginning with pilot exercises in selected countries which build on any existing work.
• Signal its support for anti-corruption benchmarks and targets that can be agreed jointly by donors and partners at country level and used to monitor progress.
• Endorse as good practice the close coordination of donor governance and anti-corruption work at country level.
• Develop a set of good-practice principles (a "voluntary code of conduct''), to be endorsed by ministers and rolled out at country level, on coordinated donor responses to deteriorating corruption contexts.

To tackle the global incentive environment for corruption …
• Encourage its members to advocate more concerted and systematic action within their own governments to implement and enforce international conventions to tackle the supply side of corruption (*e.g.* the offering of bribes by the private sector).
• Support UN-led processes and efforts to encourage members to ratify and implement UNCAC while also encouraging DAC members to combine and integrate their joint anti-corruption initiatives with other ongoing efforts to implement and monitor UNCAC on the ground.
• Emphasise the interest to the donor community of proposals at the UNCAC Conference of the States Parties in December 2006 for information-gathering with respect to compliance and related needs for technical assistance.
• Support international initiatives such as the proposed Global Integrity Alliance as a positive way forward in transforming the international incentive environment for integrity and good governance.

I.3.2 The Principles for Donor Actions in Anti-corruption (OECD, 2007, 41-47)

The Principles reflected best practice and that their widespread application would enhance donor effectiveness in combating corruption. The Principles were given final endorsement by the DAC at their 22 September 2006 meeting.
The Principles embrace the key areas and activities where donors should work together on anti-corruption. They emphasize the need to support and strengthen the capacity of civil society, and underline the need for OECD donors to undertake work in their own countries on areas such as repatriation of assets, money laundering, and the ratification and implementation of the United Nations Convention against Corruption (2003).

The Principles are:

1. **Collectively foster, follow and fit into the local vision**

At the country level, donors should:

Collectively:

• Promote with government the development of a shared government-donor vision/strategy and collaborative mechanism(s) for anti-corruption dialogue and action, ideally based on government commitment to implement the UNCAC (or other relevant instrument).

• Share diagnostics, knowledge and analysis through such mechanism(s), identifying gaps and reviewing progress.

• Engage with other key actors through such mechanism(s) (*e.g.* civil society, media and the private sector).

• Support and strengthen the capacity of civil society for strengthening the demand for reform, and promoting and monitoring transparency and accountability in the fight against corruption.

• Work, where government commitment is weak, with local and international civil society and private sector actors as the primary alternative, but recognizing that strengthening government commitment is the essential objective in the long term.

• Take time to understand local political, economic, social and historical contexts and challenges, and develop responses that are appropriate to them.

• Favour long-term responses over short-term, reaction-driven inputs, but without losing the capacity for responding quickly to support new initiatives and emerging reformers where these opportunities arise.

As individual donors:

Agree to present anti-corruption assistance explicitly as being contributions to the shared vision/strategy and the collective donor approach.

2. **Acknowledge and respond to the supply side of corruption**

Development agencies should:

• Foster stronger action by relevant domestic departments in their own countries against the supply-side of corruption in areas such as bribery by donor country companies, money laundering, repatriation of assets or the ratification and implementation of major international conventions such as the OECD Anti-Bribery Convention.

• Inform counterparts in other development agencies of this engagement.

• Engage proactively with the private sector in partner countries.

• Ensure that accountability and transparency measures are included in all areas of donor assistance.

• Contribute to strengthening inter-country cooperation (mutual legal assistance, mechanisms for asset recovery) both by strengthening capacity in developing countries for making requests for international legal cooperation and by collaborating with domestic departments where appropriate.

3. **Marshal knowledge and lessons systematically and measure progress**

At country level, donors should:

• Collectively foster knowledge gathering to inform policy and operational action, drawing, wherever possible, on local capacity.

• Encourage government to develop systems that better connect evidence with policy development.

• Foster the systemization and publication by government of the measurement and the reporting of progress on anti-corruption efforts.
At the global level, donors should:
• Develop a systematic approach to dividing up efforts for undertaking strategic research/knowledge gathering and synthesis and in sharing results.

I.4 Other important actors for the anti-corruption activities

I.4.1. USAID Anti-corruption Strategy

USAID is one of the leaders in the fight against corruption.
The agency's activity lowers the opportunities and incentives for corruption, supports the efforts for a more powerful and independent justice, promotes independence of media, civil society etc.
USAID directions of the strategy for anti-corruption efforts are focused on the following issues:
- confront the dual challenges of grand and administrative corruption;
- deploy Agency resources strategically to fight corruption;
- incorporate anti-corruption goals and activities across Agency work;
- build USAID's anti-corruption knowledge.

I.4.2. UNDP – Domestic Reform Strategies

UNDP (1997, 51-89) approaches distinctly the issue in the fight against corruption. The analysis uses both the conclusions and best practices from UNDP activity as well as relevant contributions of other authors or actors.
Within the general framework where the corruption acts are taking place, the incentives mentioned by UNDP (1997, 51) for corruption in a country are stated as follows:

- the level of benefits and costs under the control of officials;
- the formal law defining corruption, bribery and conflicts of interests and controlling campaign finance spending;
- the credibility of law enforcement in acting against both those who pay and those who accept bribes;
- the conditions of civil service employment;
- incentive systems in the civil service;
- the extent of auditing and monitoring within government;
- the ability of citizens to learn about government activities and file complaints;
- the level of press freedom and the freedom of individuals to form non-governmental organizations;
- the level of active political opposition.

UNDP strategy approaches the issue of reducing the discretionary power and monopoly of the power by the governmental officials, improvement of law enforcement, civil service reform, increase of transparency and improvement of citizen participation. One group of proposals refers to the reform of bureaucracy. A genuine reform of bureaucracy reduces the incentives and opportunities of corruption.

"Corruption is often embedded in the hierarchical structure of bureaucracy. Low-level officials collect bribes and pass a share on to higher-level officials, perhaps in the form of an up-front payment for the job itself". Conversely higher ups may organise and rationalise the corrupt system to avoid wasteful competition between low-level officials. The top officials may then share the gains of their organisational ability with subordinates, perhaps using them to run errands, transfer funds and do other risky jobs that expose them to arrest. Breaking such patterns may require a fundamental reorganisation" (UNDP, 1997, 57-58).

I.5. Basic approaches to anti-corruption

McCusker (2006) achieves a review of anti-corruption strategies.
Structured in several chapters, the most important ones for our study are as follows: assessment and design, implementation and impact assessment, specific methods and measures etc.
The above author draws attention to the fact that in designing an anti-corruption strategy, it is imperative to be aware of the fundamental characteristics and nature of corruption itself.
Three key schools of thought on corruption reduction and prevention are emphasised (McCusker, 2006, 8-9):

- *interventionism*, in which the relevant authorities wait for the corrupt action to occur and then intervene to capture and punish the offender. This school stimulates retribution, rehabilitation and deterrence but there remain a number of obstructive variables including:
    - the harm has already occurred and cannot be undone;
    - the majority of crimes remain unreported;
    - the demand on finite resources will inevitably be infinite given the degree of supervision necessary to ensure that the deterrence effect operates.

- *managerialism*, in which those individuals or agencies seeking to engage in corrupt behaviour can be discouraged or prevented from doing so by establishing appropriate systems, procedures and protocols. In essence, managerialism advocates the reduction or elimination of opportunities such that those who generally benefit from them cease to be able to do so. There are limitations with this school of thought also, key amongst which are the fact that individuals do not necessarily operate according to the predetermined principles of managerialism. Organisations contain three broad categories of people who will react differently to corrupt influences:
    - category I: people who want to do the right thing and require guidance on how to achieve this;
    - category II: people who are too timid to take the risk of operating outside set rules;
    - category III: people who are corrupt and will operate outside of the rules entirely.

- *organisational integrity* which involves the integration of an organisation's operational systems, corruption control strategies and ethical standards so that a norm of ethical behaviour is created. This school of thought presupposes that deviance stems from the organisation rather than the individuals of which it is comprised, as if the breach of ethics involved in corrupt practices occurs almost by osmosis from the malfeasant organisation to the innocent individual within it. Arguably, targeting individuals in anti-corruption efforts is likely to be less successful than targeting the organisational context in which individuals operate.

The same author highlights other two aspects that may substantiate the national anti-corruption strategies
- corruption as a system of interlocking vicious cycles (Figure 1.2);
- causes of public corruption and fraud have different importance related to the level of income in every country (Table 1.2).

Figure 1.2: Corruption as a system of interlocking vicious cycles
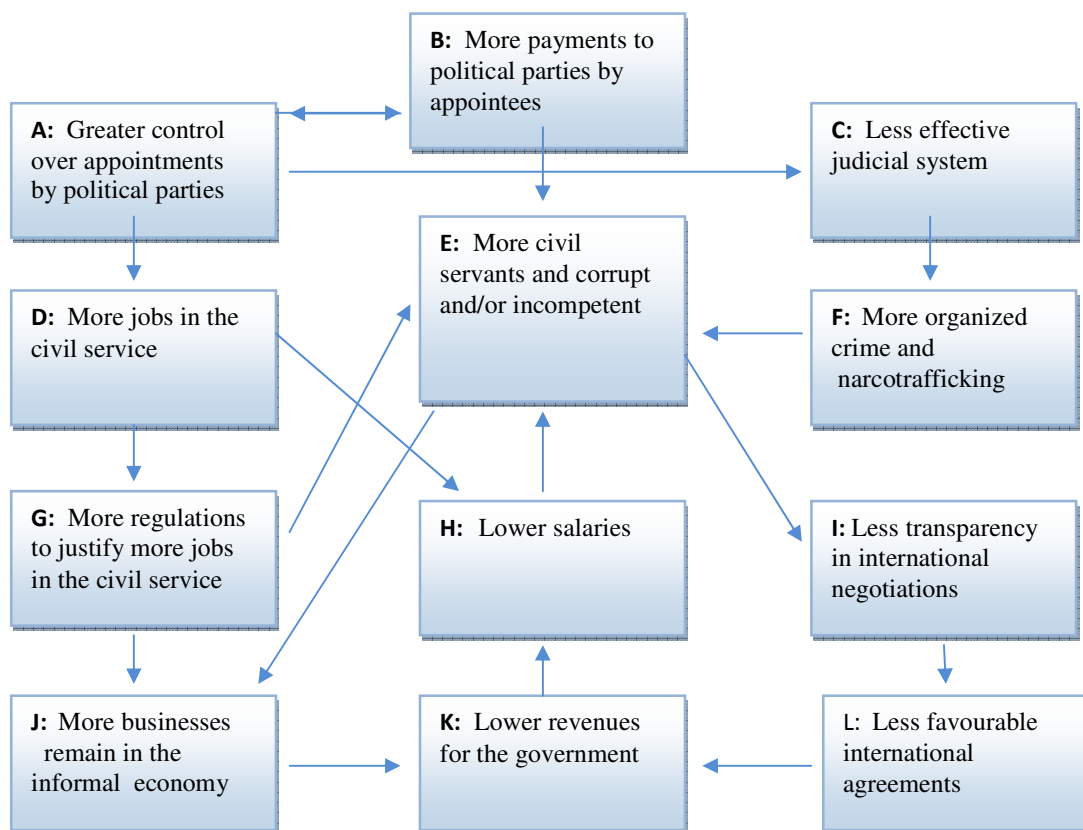
Source: Cobb & Gonzalez 2005:6
Undertaken after McCusker, 2006, 9

14

Table 1.2: Importance of causes of public corruption and fraud

| Factors | Important cause | | | |
| | Higher income country | | Lower income country | |
	%	rank	%	rank
Norms and values of politicians and public servants	88.4	1	98.4	1
Lack of control, supervision, auditing	87.2	2	93.3	2
Interrelationships – business, politics, state	86.6	3	92.9	3
Values and norms concerning government/state	84.6	4	79.7	11
Public sector culture (values/norms)	83.3	5	76.8	12
Lack of commitment of leadership	82.2	6	90.2	5
Misorganisation and mismanagement	80.7	7	91.9	4
Increasing strength of organised crime	79.3	8	90.0	7
Norms and values [in] private and public [life]	78.0	9	73.7	14
Increasing significance of lobbying	76.5	10	72.9	15
Interrelationships – politics and administration	67.0	11	86.4	9
Social inequality	66.7	12	90.2	6
Low salaries in the public sector	56.9	16	87.1	8
Economic problems (inflation/recession)	62.2	14	85.2	10
(n)	(190)		(67)	

Source: Huberts, 1998:7
Undertaken after McCusker, 2006, 9

Karklins (2005) proposes an own scenario for the game theory in view to substantiate the anti-corruption strategies.

Karklins's chart (2005, 150) assumes:

- a structure based on three pillars - corrupter, corruptee, third actor – placed in different hypostases of winner or loser;
- understanding the interactions between each actor within a succession of scenarios that will form the anti-corruption strategy.

Table 1.3: Corruption winners and losers

	Corrupter (A)	Corruptee (B)	Third Actor (C)
1	Win	Win	Win
2	Win	Win	Lose
3	Win	Lose	Win
4	Win	Lose	Lose
5	Lose	Win	Win (anti-corruption goal)
6	Lose	Lose	Win (anti-corruption goal)
7	Lose	Win	Lose
8	Lose	Lose	Lose

Source: Karklins, 2005: 150
Undertaken after McCusker, 2006, 16.

In Table 1.3., A and B can be either a citizen or an official. C can be another citizen, competitor, supervisor or the public at large.

II. Assessment frameworks of anti-corruption strategies

II.1 Documentary fundamental issues

Several papers approached the application of the mechanisms, especially the economic ones in evaluating the costs and benefits of corruption and combating corruption; even if they did not refer explicitly to the cost-benefit analysis, they revealed how fundamental notions and concepts could adapt to this topic. Thus, we mention Arrow (1963), Savedoff (2004), Getzen (1997), Mueller (1997), Persson and Tabellini (2002), Ades and Di Tella (1999), Huther and Shah (2000), Steves and Rousso (2003) etc.

Fundamental notions and concepts concerning the uncertainty of decisions, informational asymmetry, moral hazard or public choice gain in the above papers the appropriate significance in evaluating the measures and anti-corruption strategies. If we add "agent principal" theory or "state capture", we shape a fully framework for analysing the anti-corruption strategies. Rose-Ackerman (2005) concludes: "the empirical research in various states confirms the negative influence of corruption on the economic growth and productivity, but is not helpful in shaping the anti-corruption strategies. She states that corruption is harmful but she does not identify the mechanisms for influencing the economic performance (Rose-Ackerman, 2005, 3). The World Bank (2008) also identifies the main costs of corruption, namely poverty and inequality with consequences on fiscal stability, economic growth, investment growth, development assistance or environment. The direct effects consist in "administrative corruption" and the indirect effects on "state capture". In fact, Rose-Ackerman (2005), in the introductory part, approaches the costs of corruption and in Chapter 2, she isolates the most important situations where widespread corruption can determine who obtains the benefits and bears the costs of government action.

- The government may be charged with allocating scarce benefit to individuals and firms using legal criteria other than willingness to pay. *Bribes clear the market.*
- Officials in the public sector may have little incentive to do their jobs well, given official pay scales and the level of internal monitoring. They may impose delays and other roadblocks. *Bribes act as incentive bonuses.*
- Those engaged in legal pursuits seek to reduce the costs imposed on them by government in the form of taxes, customs duties, regulations. *Bribes lower costs.*
- Illegal businesses frequently purchase corrupt benefits from the state. In extreme cases illegal businesses and organized crime bosses dominate the police and other parts of the state through corruption and intimidation. *Bribes permit criminal activity.*

These categories are not mutually exclusive. A bribe that acts as an incentive payment, for example, might also allocate a scarce benefit or provide a tax exemption. Nevertheless, each raises enough distinctive issues so that it is worth considering each one separately (Rose-Ackerman, 2005, 9-10).

Schacter and Shah (2000) highlight three broad categories of corruption consistent with the definition provided by the World Bank:
- *Bureaucratic or "petty" corruption -* a great number of public officials are abusing public office in view to obtain small bribes or favours;

- *Grand corruption* – including abuse of high amount of public funds by a relatively small number of public officials;
- "*State capture*" or "*regulatory capture*" – which means collusion among public and private agents for private benefit (Huther and Shah, 2000, 1).

Concerning the impact of the anti-corruption strategies, the opinions of specialists, theoreticians and practitioners are divided. Tay and Seda (2003) speak about three types of attitudes, namely:
- many governments do not recognise corruption as a serious problem and therefore award small places on the national agenda;
- many times the anti-corruption strategies gain aspects of mono-therapy;
- many reforms that succeeded to be adopted have faced obstacles in implementation.

However, the range of potential actions in view of corruption reduction is very broad, so that it is necessary a framework in order to provide a guideline on "ordering potential actions".

The privatization of various actions depends both on the conceptual and empirical visions on what is functioning and what is not functioning in the special context of a country. Such a framework is imperative both for assessment on behalf of national authorities and transnational actors (Huther and Shah, 2000, 2).

II.2 Models of the assessment frameworks for the anti-corruption strategies

The models presented below aim the most relevant examples of assessment of the anti-corruption strategies, usually designed and promoted at the initiative of transnational actors such as World Bank or European Bank for Reconstruction and Development. Of course the models presented, belong to authors recognised for their contributions and expertise in the study on corruption and anti-corruption. McCusker (2006, 36-76) presents a comprehensive list of the most recognised contributions in the mentioned fields. For the needs of our study, we shall approach Huther and Shah (2000), Steves and Rousso (2003), Shleifer and Vishny (1993), Gamboa-Cavazos et al. (2006) as well as Matei (2006), Andrei, Matei and Rosca (2009, Ch. 6, 143-161) or Matei and Matei (2009).

II.2.1 Corruption market as support of the models for assessing the anti-corruption strategies

The "corruption market" is up to present an abstract model, difficult for operationalisation in empirical studies. However, it draws attention to the need to emphasise the possible actors and scenarios of corruption in view to be able to substantiate models of assessment of the anti-corruption strategies.

Regarding the relation between government performance and corruption, other papers also confirm the non-linear character of this relation and the fact that "at low or high levels of performance of a ruling party or politician, the corruption is more intense, while at intermediate levels, is weaker" (Gamboa-Cavazos et al., 2006).

Moreover, the study already mentioned discovers that the firms that accumulate more incomes from their industries are those willing to offer more bribery, fact also directly related to the political stability. The relation between the corrupt and the corruptor is bivalent in the sense that each of the two actors may be an active actor. As such, the reality confirms that for instance, in the case of the firms in economic decline, the public persons pretend higher payments for corruption. In a mutual way, the entrepreneurs have the impulse to bribe the officials with stable and long term political horizons. For those, the supply for corruption is increasing both in number and effective value.

Most of the times, in the relation established between the corrupt and the corruptor, negotiation and intermediation usually occur under the form of traffic of influence where public or private persons are involved.

As such, we can talk of a corruption market which may appear at the interface between the public and private. The dimensions of this market differ from one country to another and depend on different factors, amongst which we found the ones described in the previous sections.

The corruption market is based itself on several principles to which one can add or further detail (Matei, 2006, 8-9; Andrei, Matei and Rosca, 2009, 153-158):

- The existence of a demand and supply of corruption. Usually, goods that are offered or requested are public goods, public services, or different forms for facilitating access to the ownership of public goods or services (usually described by obtaining licenses, approvals, etc.). Even though they do not explicitly imply the existence of a market for corruption, Shleifer and Vishny (1993) analyze corruption in the context offered by the demand and supply of public goods. They suggest that there is a competition between a seller and a buyer which enables the extension of corruption.

- The mechanisms that regulate the functioning of the corruption market are not legal or visible and generally, refer to law imperfections, lack of control from legal instances and of course, favourable attitude to corrupt or being corrupted, adopted by public or private persons;

- In relation to the intensity of the ratio between the demand and supply of corruption, there is a price of corruption expressed, usually, by bribery. The appearance of such a price differs from the one to be found in economic theory and basis itself upon factors related to economic circumstances, opportunity of public interventions, etc., as well as power and political and administrative position of the one corrupted.

The above principles have been taken into account, even though, not explicitly, by other authors, as well. We refer here to Campante (2005) or Gamboa – Cavazos (2006).

As in any other market, the actors try to maximize their profits. As such, for the offer of corruption where the actor is a public person, politician, governmental official, etc., the evaluation tendency will increase, while for the demand, having as an actor a private

person, an entrepreneur, owner of private employee, the evaluation tendency of the opportunity of corruption will decrease.

Starting from a simple analysis of the demand and supply on the corruption market, Gamboa – Cavazos (2006, 9) assume linear relations between the two, using the price *c.* So, the mentioned authors consider:

- For the supply:

$$S(c) = \gamma + \delta c \tag{1}$$

- For the demand:

$$D(c) = \alpha - \beta c \tag{2}$$

where c is the price of corruption and γ δ, α, $\beta \rangle 0$ are parameters.

The interaction between the demand and supply determines the level of balance of corruption and their price (*c**), that is:

$$c^* = \frac{\alpha - \gamma}{\beta + \delta} \tag{3}$$

and

$$S(c^*) = \gamma + \delta[(\alpha - \gamma)/(\beta + \delta)] \tag{4}$$

$$D(c^*) = \alpha - \beta[(\alpha - \gamma)/(\beta + \delta)] \tag{5}$$

Of course, the model formulated by Gamboa – Cavazos is simple. However, it allows a certain connection with the political stability or permanence. Firstly, an observation should be made: from (4) and (5), parameters α and γ intervene and are connected to the structure of the market where the governmental agencies (Schleifer and Vishny, 1993; Fredriksson and Svensson, 2003; Campante, 2005), while the second set, β and δ, is connected just to the structure of the market where the firms operate (Ades and Di Tella, 1999; Laffont and N'Guessan, 1999). With these definitions in mind, we continue with an extension of the model of corruption market and determination of more complex balance conditions.

First, we suggest accepting the idea according to which the corruption market behaves as a system with self-regulation. The analyses made in the previous sections claim this very thing. In the same time, the same system represented by the corruption market or, better said, the corruption economy knows a very high pressure coming from the environment where it exists; a pressure that varies in degree in direct connection to the intensity of the anticorruption measures.

The economics of corruption represents, in the broad sense, a "relation state- society" and it conceives and describes the "deviations" from the ideal state that occur as effects of corruption (Karasulu, 2003, 61).

Matei (2006, 10-11) presents an extension of the model.

As such, we will presume the existence of more opportunities for corruption, **n**, for each of those being settled a price, respectively, $c_1, c_2, \ldots, c_n$.

The line of supply as the line of demand will have vectorial expressions, as those that follow:

$$\mathbf{S(c)} = \mathbf{\gamma} + \mathbf{\delta} \bullet \mathbf{c} \tag{6}$$

$$\mathbf{D(c)} = \mathbf{\alpha} - \mathbf{\beta} \bullet \mathbf{c} \tag{7}$$

where $\mathbf{\gamma} = (\gamma_1 > \gamma_2 \ldots \gamma_m)^t$, $\mathbf{\alpha} = (\alpha_1, \alpha_2, \ldots\ldots, \alpha_m)^t$,

$\mathbf{\delta} = (\delta_{ij})_{\substack{1 \le i \le m, \\ 1 \le j \le n}}$, $\mathbf{\beta} = (\beta_{ij})_{\substack{1 \le i \le m, \\ 1 \le j \le n}}$, $\delta_i \ge 0, \beta_{ij} \ge 0$ and $\mathbf{c} = (c_1, c_2, \ldots c_n)^t$

Following the procedure used in determining the balance expression (3), we will find a balance condition, of a matrix shape, as it appears below:

$$(\mathbf{\beta} + \mathbf{\delta}) \bullet \mathbf{c}^* = \mathbf{\alpha} - \mathbf{\gamma} \tag{8}$$

A qualitative analysis of the relation (8) and its interpretation in the light presented in this paper lead us to the following conclusions:

1) $\mathbf{\alpha} = \mathbf{\gamma}$ *m=n, d* $(\mathbf{\beta} + \mathbf{\delta}) \neq 0$ the balance price of corruption is zero and, practically, the corruption market does not exist.

2) $\mathbf{\alpha} \rangle \mathbf{\gamma}, m=n, d$ $(\mathbf{\beta} + \mathbf{\delta}) \neq 0$, there is a system of balance prices of the opportunities for corruption, given by the expression:

$$\mathbf{c}^* = (\mathbf{\beta} + \mathbf{\delta})^{-1} (\mathbf{\alpha} - \mathbf{\gamma}) \tag{9}$$

The supply of corruption will be:

$$\mathbf{S(c}^*) = \mathbf{\gamma} + \mathbf{\delta} \bullet (\mathbf{\beta} + \mathbf{\delta})^{-1} (\mathbf{\alpha} - \mathbf{\gamma}) \tag{10}$$

and the demand of corruption becomes:

$$\mathbf{D(c}^*) = \mathbf{\alpha} - \mathbf{\beta} \bullet (\mathbf{\beta} + \mathbf{\delta})^{-1} (\mathbf{\alpha} - \mathbf{\gamma}) \tag{11}$$

Similar to the interpretations presented in the paper by Gamboa – Cavazos (2006), the structure of the market where public agents operate will be determined by vectorial parameters: α and γ, while the structure of the market where the firms operate will be connected to the matrix shaped parameters β and δ.

$$3) \quad \alpha \rangle \gamma, \quad m \langle n, \quad rank\left(\beta+\delta\right)=m$$

In these conditions, the balance price is not unique and, in certain conditions it may raise the problem of determining an optimum for the corruption market.

$$4) \quad \alpha \rangle \gamma, \quad m \rangle n, \quad rank\left(\beta+\delta\right)=n$$ may appear in non-balance situations, when there is not a balance price or a unique one. The variety of situations that may be taken into account may fundament other types of relations possible to influence the corruption market balance.

II.2.2 Models for assessing the anti-corruption strategies developed by the World Bank

II.2.2.1 A Simple Evaluation Framework – Huther-Shah Model

The model described below is broadly presented in Huther and Shah (2000, 2-8).
The economic support of the proposed assessment framework consists in an adapted version of the cost-benefit analysis. We also find additional considerations on the use of the cost-benefit analysis in view of assessing the anti-corruption strategies in Matei and Matei (2009).
Coming back to Huther and Shah (2000) paper, the core ideas will be synthesised below.
Focusing their entire approach on the corruption aspects in the development programmes achieved with World Bank assistance, the authors propose an assessment framework based on "the incentives for opportunistic behaviour by public officials" (Huther and Shah, 2000, 2).

In order to make distinction between grand corruption and societies without corruption, to a large extent, the authors take into consideration the conditions where the officials search or accept corruption:
- the expected gains exceed the estimated costs for achieving a corruption act;
- little weight is placed on the costs that corruption imposes on others.

Those two conclusions have the characteristics of hypotheses, substantiating the cost-benefit analysis, referring to:
- public officials' self-interest to participate in a corruption act only when they expect a positive net benefit for the transaction assumed by the corruption act;
- the implementation of anti-corruption strategies will reduce the expected gains and will increase the sanctions for corrupt behaviour.

Therefore, the authors conclude: "anti- corruption programs must change the cost-benefit calculations of public officials who believe that the expected net benefits of corruption are positive" (Huther and Shah, 2000, 2-3).

The above statements may be formalised in the relation:

$$E(B) = n \times E(G) - prob\ [P] \times [P] > 0 \tag{12}$$

where: E is the expectations operator;
           n is number of corrupt transactions;
           G is the gain from the corrupt transaction;
           Prob [P] is the probability of paying a penalty;
           P is the penalty for the corrupt activity.

The relation (12) becomes essential for the assessment of anti-corruption strategies, determining the mechanisms that influence the corruption level:
- reducing the number of transactions involving public officials;
- reducing the possibilities of gains for each transaction;
- increasing the probability to pay penalties/sanctions for corrupt behaviour.

The factors influencing each element of the cost-benefit analysis are listed in Table 2.1.

Table 2.1 The influence of anti-corruption programs on officials' cost-benefit analysis

Number of Corrupt Transactions	Gross Gains from Corruption	Probability of Paying Penalty	Magnitude of Penalty	Actions Not Influencing Cost Benefit Analysis
Bureaucratic Culture – Streamlining Services	Economic Reform – Improving Competitive Environment	Anti-Corruption Agencies	Rationalization of laws	Raising Awareness of Public through Seminars
Creating or Raising Public Service Standards	Scaling Down Individual Public Projects	Parliamentary Oversight		Public Opinion Surveys
Reducing Public Employment	Bureaucratic Culture	Ombudsman		Raising Public Sector Wages
Reducing Public Sector Size	Referenda on Large Public Projects	Financial Accountability		Reducing Wage Compression
Financial Liberalization		Media Independence		
Increasing Transparency		Judicial Independence		
Decentralization of Public Services		Citizen Participation		
Economic Reform – Privatization		Rule of Law		
		Ethics Office		

Source: Huther and Shah (2000, 5)

In view of assessing the anti-corruption strategies, the multiple objectives and actions enumerated in Table 2.1, Huther and Shah (2000, 6) formulate two questions:

- how to establish the priorities of anti-corruption campaign;
- which actions should be used to meet those targets.

The answer may be substantiated differently.

From economic point of view, the priority actions should combat the reduction of welfare caused by corruption.

The authors state that operationalisation of such criteria of prioritization is difficult due to the fact that often the quantification of losses due to corruption is impossible and large losses are the result of multiple causes, including governance failure.

Therefore, prioritization of anti-corruption activities should rely on analysis of economic, political and bureaucratic conditions of every state.

Among the reasons for prioritization of the above-mentioned anti-corruption activities, Huther and Shah (2000, 7) present a quite diverse list:

- using the public opinion survey;
- reducing the size of public sector;
- increasing financial accountability;
- bureaucratic culture;
- decentralization;
- media independence;
- judicial independence;
- citizen participation.

II.2.2.2 OED methodology adapted in view to assess the anti-corruption strategies

The same authors, Huther and Shah (2000, 8-12) present a new instrument for assessing the anti-corruption strategies, based on the methodology for assessing the development of states, achieved by Operations Evaluation Department (OED) and described by World Bank (2000).

The methodology is based on the use of four key criteria: relevance, efficacy, efficiency and sustainability. Tavistock Institute (2003) uses similar criteria and we find their application for assessing the local development in Matei, Matei and Savulescu (2010, 25-58).

In a brief description, in general terms, the mentioned criteria comprise:

- *relevance* – it establishes a connection in a certain strategy and explicit objectives of a policy adopted by public decision. The evaluation of relevance is qualitative to a great extent.
- *efficacy* may incorporate both qualitative and quantitative evaluations when analysing if the objectives stated in a development policy were achieved, the adequacy of the chosen solutions as well as the influence of external factors.
- *efficiency,* usually, takes into consideration an economic evaluation, taking into consideration the costs associated, reported to the outcomes.
- *sustainability* also uses qualitative evaluations, establishing the extent to which the impact of a policy meets the overall needs, the social, economic, political needs of community and/or state.

Referring to the anti-corruption strategies, Schacter and Shah (2000) sustain that the analysis on their relevance combines two factors: technical relevance and welfare relevance. "Technical relevance refers to the impact of specific activities on the incidence of corruption and the welfare relevance relates to the relative importance, for growth and poverty reduction of a particular type of corruption" (Huther and Shah, 2000, 8).

Taking into consideration the governance quality, (Huther and Shah, 1998; Kaufmann, Kraay and Zoido-Loboton, 1999), quantified by "weak", "fair", "good", Table 2.2. presents an assessment of the relevance of various anti-corruption programs.

Table 2.2: Ratings on Relevance of a Menu of Anti-corruption Programs

Program	Country's Quality of Governance			Comments
	Weak	Fair	Good	
Raising public awareness of corruption through seminars	Not relevant	Low	Medium	In countries with weak governance, corrupt practices and agents are generally well known.
Raising awareness of public officials through seminars	Not relevant	Low	Medium	Public officials may be aware of corruption but unwilling and/or unable to take action due to incentive problems in countries with weak governance.
Anti-corruption agencies / Ombudsman	Not relevant	Low	Medium	With endemic corruption, anti-corruption agencies or ombudsman may actually extort rents. Positive influence if preconditions for good governance exist.
Ethics office	Not relevant	Low	Medium	Positive influence may be limited to societies with good governance.
Raising Public Sector wages	Negligible	Low	Medium	May have positive impact on petty corruption but little impact on grand corruption. Negative impact if part of problem is excessive public employment.
Reducing Wage Compression	Negligible	Negl.	Negligible	More relevant as an incentive mechanism for career development. May increase corruption if the public sector viewed as lucrative career option by greedy elements of society.
Merit based civil service	Low	Medium	High	May be derailed by bureaucratic processes in highly corrupt societies.
Public Opinion Surveys	Low	Medium	Medium	Public opinion surveys have served as a useful tool in articulating citizens' concerns (e.g. Bangalore scorecard).
Financial accountability	Low	Low	Medium	Medium appropriate when democratic accountability and a substantial accounting/bookkeeping infrastructure with some integrity are in place.
Parliamentary oversight	Low	Medium	Medium	Parliamentary oversight can be helpful but parliamentary micro-management not an effective form of governance.
Reducing Public Employment	Medium	Low	Low	May reduce opportunities for corruption .
Decentralization	Medium	Low	Low	May improve accountability and may increase sense of social purpose for public officials.
Client-based civil service / Bureaucratic culture	Medium	Medium	Low	Success depends upon service delivery orientation of public service, reinforced by accountability for results.

Economic policy reform	High	Medium	Low	Reduces potential corruption by shifting decision-making to the private sector.
Media and judicial independence, citizen participation	High	Medium	Low	Allows for detection, followed by accountability.
Reducing Public Sector Size	High	Medium	Low	By reducing the number of government activities, officials can focus on primary objectives of the state.
Rule of law	High	Medium	Low	Essential for any progress.

Source: Huther and Shah (2000, 9-10)

In view of assessing the anti-corruption strategies, efficacy will require a measurement of the effect of a certain set of anti-corruption activities on the level of corruption or corrupted activity.

On the other hand, an anti-corruption strategy will be considered efficient when it generates maximum reduction in the corruption incidence (good targeting), associated with welfare gains obtained with reduced costs.

Concerning sustainability, the anti-corruption activities are sustainable if they produce changes in the expectations on public officials' responsibilities.

Table 2.3 presents a relevant synthesis on the significance of the four criteria for assessing the anti-corruption strategies.

Table 2.3: Summary of Proposed Rating Factors for Anti-Corruption Programs

Relevance	✓ Program objectives consistent with country's development priorities, with Bank strategy ✓ Program design underpinned by analytical work that recognizes country specific public sector mission and values, opportunities and constraints and an informed view of potential impacts of alternative actions ✓ Judgments as to (a) the degree to which the anti-corruption programs were targeted to corruption drivers; (b) the relationship between those drivers, corruption and welfare outcomes.
Efficacy	➢ The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance in curtailing corruption. ➢ Judgments to be made about the degree to which Bank supported interventions have (i) reduced , (ii) had no impact, or (iii) led to an increase in, levels of various forms of corruption in the country. As a proxy focus on the relationship between Bank supported interventions and changes in key corruption drivers.
Efficiency	• generates most reductions in corruption and associated welfare gains for the least cost • targets corruption that has large costs
Sustainability	▪ the resilience to risk of net benefit flows over time based upon an assessment of political, economic, financial , social and external influences

Source: Huther and Shah (2000, 11)

The two instruments proposed by the World Bank for assessing the anti-corruption strategies should be accompanied, each time, by better knowledge about the realities in every state. In view of integrating those anti-corruption strategies in the strategies aimed at improving the governance quality, preliminary conclusions are configured and presented synthetically by the same authors in Table 2.4.

Table 2.4: Effective Anti-Corruption Programs Based on Governance Quality

Incidence of Corruption	Governance Quality	Priorities of Anti-Corruption Efforts (Based on Drivers of corruption)
High	Poor	Establish rule of law, strengthen institutions of participation and accountability; limit government interventions to focus on core mandate
Medium	Fair	Decentralization and economic policy reforms; results-oriented management and evaluation; introduction of incentives for competitive public service delivery
Low	Good	Explicit anti-corruption programs such as anti-corruption agencies; strengthen financial management; raising public and officials awareness; no bribery pledges, fry big fish, etc.

Source: Huther and Shah (2000, 12)

II.2.3 Models developed by the European Bank for Reconstruction and Development (BERD) – Steves – Rousso Model

Steves and Rousso (2003, 4-7) present the methodology for assessing the anti-corruption strategies, developed by EBRD. In view to respond to concrete needs for assessing the anti-corruption strategies in former European communist states, the above authors' approach is correlated with other EBRD initiatives; EBRD together with World Bank achieved several rounds of Business Environment and Enterprise Performance Surveys (BEEPS). If we add the periodical evaluations, usually annual ones, on the level of corruption, achieved by World Bank, Transparency International or other transnational actors, we have a complex set of instruments, providing the possibility to assess the impact of anti-corruption strategies.

The below presentation follows closely the study of Steves – Rousso (2003); based on the main conclusions from the first and second BEEPS rounds, they have conceptualised and coded "a matrix of anti-corruption activities" (Steves and Rousso, 2003, 5).
Those activities are divided in three general categories, as follows:
- omnibus reform programmes;
- new legislation targeted at anti-corruption;
- accession to international covenants and membership in international anti-corruption coalitions.

The above authors have developed, for each category, a grading system, representing the basis of calculation for an index specific for each category: Omnibus Index (OI), Legal Index (LI) and Conventions Index (CI).
Thus an *anti-corruption matrix* is obtained. Table 2.5 presents its variables and weights.

Table 2.5: Anti-corruption matrix variables and weighting

	Percentage of Intensity Index
Intensity Index { IIA-C}	100.0
of which:	
Omnibus Index { OI}	33.3
National anti-corruption strategy [OI1]	11.1
Adopted [OI1.1]	5.56
Involved NGOS [OI1.2]	2.78
Multi-branch [OI1.3]	2.78
Anti-corruption action plan [OI2]	11.1
Adopted [OI2.1]	5.56
Involved NGOS [OI2.2]	2.78
Multi-branch [OI2.3]	2.78
Anti-corruption commission or ombudsmen [OI3]	11.1
Established [OI3.1]	5.56
Involved NGOS [OI3.2]	1.11
Multi-branch [OI3.3]	1.11
Independent [OI3.4]	3.33
Legal Index {LI}	33.3
Civil Service Law [LI.1]	5.56
Financial Disclosure Law [LI.2]	5.56
Public Procurement Law [LI.3]	5.56
Freedom of Information Law [LI.4]	5.56
Party Finance Law [LI.5]	5.56
Anti-Money Laundering Law [LI.6]	5.56
Conventions Index* {CI}	33.3
Stability Pact anti-Corruption Initiative [CI.1]	5.56

OECD Anti-Bribery Convention [CI.2]	5.56
COE GRECO [CI.3]	5.56
COE Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime [CI.4]	5.56
COE Criminal Law Convention on Corruption [CI.5]	5.56
COE Civil Law Convention on Corruption [CI.6]	5.56
*In the non-Stability Pact countries, the other five indicators in this Index represent 6.67 per cent of the Intensity Index.	

Source: Steves and Rousso (2003, 6).

At the same time, each category was divided in several specific criteria, based on specific activities in every country.

Consequently, for the activities specific to OI, an assessment is proposed.
OI.1   the design and publication of an anti-corruption strategy;
OI.2   the development of an implementing anti-corruption action plan;
OI.3   the establishment of a national anti-corruption commission, ombudsman or similar authority, aimed to coordinate and to monitor the achievement of objectives and activities from the national anti-corruption strategy.

For each criterion in the matrix, "1" was coded if the respective anti-corruption measures were introduced and "0" was coded if contrary.

As remarked in Table 2.5, these three major components of the OI are weighted equally.

The authors considered not only a formal consignment of the activities mentioned but also some aspects concerning their design, content and operationalization.
Thus, for each criterion there are sub criteria, as also remarked in Table 2.5. They refer mainly to:
- involving the non governmental organizations in developing the anti-corruption activities;
- complex structure of the strategy comprising several governmental branches or ministries such as that of justice, administration and home affairs etc.
- formal independence of anti-corruption commission/authority before the government.

Their weights were designed differently, as results from Table 2.5.

For the activities specific to LI, concerning a new anti-corruption legislation, six criteria were developed on achieving, implementing or amending six laws, chosen on the basis of a careful observation of the specificity of the regulatory framework in the states mentioned.

That specificity refers concretely to the lack of efficiency of some laws, even if they were achieved during the first half of the 1990s. The laws refer to:

LI.1   civil service law;
LI.2   financial disclosure law
LI.3   public procurement law;
LI.4   freedom of information law;
LI.5   political party financing law;
LI.6   anti-money laundering law.

"These key legislative reforms have thus consistently been highlighted by bodies such as the OECD, international financial institutions, and domestic and international non-governmental organisations as the areas most likely to reduce the incentives and opportunities for both administrative corruption and state capture" (Steves and Rousso, 2003, 7).
Each of these criteria are weighted equally.

Concerning CI, it evaluates the commitment of the states analysed to ratify and respect international conventions and standards, as well as their participation in international bodies and coalitions.

CI.1.   the Stability Pact Anti-Corruption Initiative (SPAI);
CI.2.   the OECD Anti-Bribery Convention;
CI.3.   COE's Group of States against Corruption (GRECO);
CI.4.   the COE's Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime;
CI.5.   the Council of Europe's (COE) Criminal Convention on Corruption.
CI.6.   COE Civil Law Convention on Corruption.

To refine this index, 1/3 was given for signing the instrument, 2/3 for signing and ratifying, and "1" if the document has been signed, ratified and has entered into force.

By aggregating these three indicators, an overall index will be obtained (Intensity Index for anti-corruption, IIA-C), in view to evaluate the impact of the anti-corruption strategies in each state as well as to make comparisons and correlations with adjacent processes and phenomena, specific for the states analysed.

III. An example of empirical study on assessing the national anti-corruption strategies and government performance

III.1. Assessing the anti-corruption strategies

III.1.1. Dynamic matrix of anti-corruption activities

In sub chapter II.2.3., we presented the Steves-Rousso model for assessing the anti-corruption strategies, model based on anti-corruption matrix.

The analysis presented by Steves and Rousso (2003) referred to former communist states in transition and it covered the time horizon: 1999-2002. The quantification of activities in matrix had a single value for the whole period of time, determining us to consider this method as a static one.

In our view, the anti-corruption strategies and the whole ensemble accompanying them, represent the basis of a developing process in close accordance with the other processes characterising the reforms of societies in transition.

Therefore, the dynamic matrix that we propose, will have variable annual quantifications, as follows:

- a series of criteria – OI.1.1, OI.2.1, OI.3.1, OI.3.4 – as well as CI1-6 are quasi constant during the period analysed; they may vary only when the activities quantified are amended, modified or replaced with new ones. In this situation, it is valid the principle of overlapping the effects.
- the other criteria vary annually in a linear way, since the year when they were adopted or integrated in the national legislative and institutional framework. Their values are cumulative and take into consideration eventual amendments, changes or replacements; it is also valid the principle of overlapping the effects.
- the dynamic matrix will have the same structure as the matrix proposed by Steves and Rousso and the weights of each criterion are maintained.

III.1.2. Empirical analysis of the national anti-corruption strategies in some South-Eastern European states

The analysis presented below will have illustrative character in view of using the dynamic anti-corruption matrix.

The sample of analysed states comprises three EU Member States (Bulgaria, Romania and Slovenia), an acceding state (Croatia) and other two South-Eastern European states (Moldova and Serbia). The sample also covers the Western Balkans as well as the former Soviet Union, respectively Yugoslavia Federation.

The period analysed is 1999-2008.

Annex 1 presents the documentary database and the sources used and Annex 2 comprises synthetically the activities for achieving the dynamic anti-corruption matrix in the above-mentioned states.

Annex 3 presents the effective calculation of IIA-C as well as of primary indices – OI, LI and CI.

The overall remark is that the statistic variables associated both to primary indices and composite index IIA-C have increasing values, fact which highlights the developing character of processes characterising the anti-corruption activities.

The rhythms for the achievement and implementation of anti-corruption strategies are different. The calculation of statistic correlations reveals very high coefficients of correlation (between 0.939 (SI/HR) and 0.993 (MD/BG)); this fact is natural, taking into consideration the objectives of European integration of the respective states and compliance with the transnational anti-corruption frameworks, promoted by World Bank, OECD and of course EU.

We also remark the effects of enforcing the anti-corruption strategies in their correlation with the index of control of corruption (KKM), developed by the World Bank.

Table 3.1: Correlations II-AC/KKM

		BG_KKM	HR_KKM	MD_KKM	RO_KKM	SE_KKM	SI_KKM
BG_II_AC	Pearson Correlation	.306	.562	-.308	.863(**)	.929(**)	.201
	Sig. (2-tailed)	.390	.091	.387	.001	.000	.577
	N	10	10	10	10	10	10
HR_II_AC	Pearson Correlation	.385	.663(*)	-.420	.804(**)	.892(**)	.093
	Sig. (2-tailed)	.272	.036	.227	.005	.001	.798
	N	10	10	10	10	10	10
MD_II_AC	Pearson Correlation	.341	.586	-.339	.862(**)	.906(**)	.204
	Sig. (2-tailed)	.335	.075	.338	.001	.000	.571
	N	10	10	10	10	10	10
RO_II_AC	Pearson Correlation	.348	.602	-.356	.801(**)	.901(**)	.146
	Sig. (2-tailed)	.325	.065	.313	.005	.000	.688
	N	10	10	10	10	10	10
SE_II_AC	Pearson Correlation	.363	.617	-.376	.829(**)	.890(**)	.120
	Sig. (2-tailed)	.302	.057	.284	.003	.001	.742
	N	10	10	10	10	10	10
SI_II_AC	Pearson Correlation	.340	.487	-.251	.848(**)	.921(**)	.375
	Sig. (2-tailed)	.336	.154	.485	.002	.000	.286
	N	10	10	10	10	10	10

** Correlation is significant at the 0.01 level (2-tailed).

The statistic correlations, described in Table 3.1 for 1999-2008 are relevant and demonstrate inverse negative correlations (MD, -0.339) or small positive correlations (BG, 0.306; SI, 0.375) or high correlations (HR, 0.663; RO, 0.801; SE, 0.890).

The conclusions of such findings are more profound and may lead to inadequacy of the anti-corruption strategies in some states, revealing an inappropriate perception of corruption as well as to inadequacy of the instrument of analysis. In fact, concerning this last conclusion, an explanation may be the difficulty of collecting data and information that reflect the actual reality in the states analysed.

III.2. The impact of corruption on government performance

The analyses presented are relevant for our study and they are described in Matei and Matei (2009, 23-25). We present them in the current paper in view to highlight and support the objective of our paper.

For the mentioned period, the analysis uses indices of perception of corruption (TI) calculated by Transparency International, Global Integrity (GI), the index of control of corruption (KKM) calculated by World Bank, the index of economic freedom (IEF) calculated by Heritage Foundation as well as the Gross Domestic Product (GDP).

The sample comprises the states: Bulgaria (BG), Croatia (HR), Czech Republic (CZ), Greece (GR), Hungary (HU), Moldova (MD), Romania (RO), Slovakia (SK), Slovenia (SI), Turkey (TR) and Ukraine (UA).

The analyses reveal that the single interesting regressions in view of the current study are those using TI or GI (or KKM) as dependent variables and IEF and GDP as independent variables. In order to emphasise statistically the influence of the European integration process on public integrity, we introduced an independent variable "dummy", called EU, awarding the following values for each state during the analysed period:

$$EU = \begin{cases} 1, & \text{if the respective state is EU Member State} \\ 0, & \text{in the opposite case} \end{cases}$$

EU variable introduced in the above regressions will underline quantitatively the influence of the integration process on the indices of public integrity.

For TI, we obtain:

$$TI = -2.944 + 0.759 \, IEF + 0.606 \, Log \, GDP + \varepsilon_1 \tag{13}$$
$$\quad\quad (0.219) \quad (0.371) \quad\quad (0,699)$$
or

$$TI = -1.122 + 0.654 \, IEF + 0.287 \, Log \, GDP + 0.276 \, UE + \varepsilon_3 \tag{14}$$
$$\quad\quad (0.832) \quad (0.485) \quad\quad (0,877) \quad\quad\quad (0.701)$$

In both situations, the significance levels of the coefficients are in parentheses.

Unfortunately, lacking comprehensive series of data, for the other regression, the significance levels of the coefficients are null.

Both expressions (13) and (14) help us to determine, approximately, possible influences of the governance indices on public integrity, expressed by means of TI.

As an example, for Romania, the increase by 0.5 of IEF index will lead to an increase by 0.33 of the index concerning perception of corruption, taking into consideration the influence of the European integration process, thus it results an increase by 0.4.

In 2007, the year of Romania's accession to the EU, the increase by 0.6 of the index concerning perception of corruption is due especially to the mentioned event (0.56), according to (14).

GDP growth influences significantly TI index only if it exceeds the annual mean of GDP evolution. Thus, for Romania, an increase by 1500$ of GDP will lead to an increase by 0.0125 of TI index. Consequently, the index of economic freedom will have the most significant influence and EU index will have the most significant influence at the moment of accession of a state to the EU.

References

Ades, A., Di Tella, Rafael, (1999), „Rents, Competition and Corruption", American Economic Review, 89 (4), pp. 982 – 993.

Andrei, T., Matei, A., Rosca, I., (2009), "The Corruption – An Economic and Social Analysis", Economica Publishing House, Bucharest

Arrow, J.K., (1963), "Uncertainty and the Welfare Economics of Medical Case", American Economic Review

Banfield, E.C., (1975), "Corruption as a feature of governmental organisation", The Journal of Law and Economics, vol XVIII(3), December

Campante, F.R., Chor, D., Do, Q-A, (2005), „Instability and the Incentives for Corruption", Harvard University mimeo.

Cobb, L., Gonzalez, M., (2005), "Corruption as a system of interlocking cycles: Lessons from Nation Lab", Louisville CO, Aetheling Consultants

COM (2003), 317 final, 28 May 2003

European Commission, (1997), Official Journal C 251, 15 August 1997

European Commission, (2000), Official Journal C 124, 3 May 2000

European Commission, (2002), Official Journal C 325, 24 December 2002

Fredriksson, P.G., Svensson, J., (2003), „Political Instability, Corruption and Policy Formation: The Case of Environmental Policy", Journal of Public Economics, 87 (7 – 8), pp. 1383 – 1405.

Gamboa – Cavazos, M., Garza – Cantu, V., Salinas, E., (2006), „The Organization of Corruption. Political Horizons and Industrial Interests", Harvard University mimeo.

Getzen, T., (1997), "Health Economics: Fundamentals and Flow of Fund", New York: Wiley

Hellman, J., Kaufmann, D., (2001), "Confronting the challenge of state capture in transition economies", Finance and Development, Vol 38, No 3, September, IMF

Huberts, LWJC, (1998), "What can be done against public corruption and fraud: expert views on strategies to protect public integrity", Crime, law & social change 29, pp 209 – 224

Huther, J., Shah, A., (1998), "A Simple Measure of Good Governance and its Application to the Debate on the Appropriate Level of Fiscal Decentralization", World Bank Working Paper Series, No. 1894, Washington DC

Huther, J., Shah, A., (2000), "Anti-corruption Policies and Programs: A Framework for Evaluation", World Bank Policy Research Working Paper, No. 2501, Available at SSRN: http://ssrn.com/abstract=632571

Karasulu, A., (2003), "The Economics of Corruption: Causes, Consequences and Extent", Journal of Historical Studies, No. 1 (2003)

Karklins, R., (2005), "The system made me to do it: corruption in post – communist societies", Armonk NY, ME Sharpe

Kaufmann, D., Kraay, A., Mastruzzi, M., (2004), „Governance Matters: Governance Indicators for 1996 – 2002", World Bank Policy Research Working Paper 3106.

Kaufmann, D., Kraay, A., Zoido – Lobaton, P., (1999), "Governance Matters", World Bank Working Paper Series, No. 2196, Washington DC

Laffont, J-J., N'Guessan, (1999), „Competition and Corruption in an Agency Relationship", Journal of Development Economics, 60(2), pp. 271 – 295.

Matei, A., (2006), "A Model of Social and Economic Analysis of Corruption", Theoretical and Applied Economics, Vol. 8, No. 6 (501), pp 39 – 46, Available at SSRN: http://ssrn.com/abstract=1327768

Matei, A., Matei, L., (2009), "Public Integrity and Performance of Governance. A Comparative Study for South – Eastern Europe", Theoretical and Applied Economics, No. 7 (536), pp 3 – 28, Available at SSRN: http://ssrn.com/abstract=1405185

Matei, A., Matei, L., Savulescu, C., (2010), "Local Development, Theoretical and Empirical Models", L.A.P. – Lambert Academic Publishing, Saarbrücken, Germany

Matei, L., Matei, A., (2009), "Corruption in the Public Organization Towards a Model of Cost – Benefit Analysis for the Anti – corruption Strategies", Transylvanian Review of Administrative Sciences, No. 27 E/October, pp 145 – 171, Available at SSRN: http://ssrn.com/abstract=1405209

McCusker, R., (2006), "Review of Anti–corruption Strategies", Technical and Background Paper, No. 23, Australian Institute of Criminology, Canberra, Australia

Mueller, D.C., (ed), (1997), "Perspectives on Public Choice", Cambridge University Press, Cambridge

Persson, T., Tabellini, G., (2002), "Political Economy: Explaining Economic Policy", MA: MIT Press, Cambridge

Prohnitchi, V., (2003), "Contextul economic si institutional al coruptiei", RA/1, Editura TISH, Chisinau, Moldova

Rose-Ackerman, S., (2005), „Corruption and Government Causes, Consequences, and Reform", Cambridge University Press.

Savedoff, D.W., (2004), „'40th Anniversary: Kenneth Arrow and the Birth of Health Economics", Bulletin of the World Health Organization 82(2), February

Schacter, M., Shah, A., (2000), "Anti – corruption Programs: Look Before You Leap", International Conference on Corruption, Seoul, South Korea

Shleifer, A., Vishny, R., (1993), „Corruption", The Quarterly Journal of Economics, vol. 8, no.3, pp. 599-617.

Steves, Fr., Rousso, A., (2003), "Anti–corruption programmes in post – communist transition countries and changes in the business environment, 1999 – 2002", WP 85, European Bank for Reconstruction and Development (EBRD)

Tavistock Institute, GHK, IRS, (2003), "The Evaluation of Socio-Economic Development", http://www.evalsed.info

Tay, S., Seda, M., (eds), (2003), "The enemy within: combating corruption in Asia", Singapore: Eastern Universities Press

UNDP, (1997), "Corruption and Good Governance", New York

USAID, (2005), "Anti-corruption Strategy", Washington DC

World Bank, (2000), "OED Methodology Syndicate – Evaluation Criteria Review", Operations Evaluation Department (OED)

Annex 1: Documentary database and sources used for anti-corruption matrix

State	Anti-Corruption Institutions			
	Prevention	Law Enforcement	Audit	Others
Bulgaria	*Parliament, Anti-Corruption Committee* - develops a legislative program; - monitors a number of agencies with high corruption risk. *Parliament, Anti-Corruption Committee, Consultative Civil Council* - coordinates the interactions between the Committee and Civil Society structures. *Commission for Prevention and Countering of Corruption* - has significant policy making, implementation and control functions.	*National Police Service* and *National Service of Security (NSS)* and the *National Service on Combating Organized Crime (NSCOC)* - play the most central role in the fight against corruption. *Commission for Coordinating the Activity for Combating Corruption* **–** fights against internal corruption in the judiciary.	*National Audit Office (NAO)*	*Ombudsman (law of ombudsman 2003)* *Unified Information System against Crime* On June 9, 2006 three anti-corruption committees, of the National Assembly, the Cabinet and the Supreme Judicial Council signed an agreement to coordinate their efforts especially in sharing information on corruption signals of national importance and detecting the lapses in the legislation allowing corruption opportunities.
Croatia		*Office for the Prevention of Corruption and Organized Crime (USKOK)* established in 2001; - USKOK is an autonomous prosecution service attached to the *State's Attorney Office* with its central office in Zagreb ; - amendments to the 2001 *Act on the Office for Suppression of Corruption and Organized Crime* were adopted in 2004 and entered into force in March 2005.	*State Audit Office* **-** regulates the audit of public expenditures, the audit of financial statements and financial transactions of government units and local and regional self-government units; -directly responsible to the Croatian Parliament	*Ombudsman* - has no direct competence in relation to the prevention and detection of corruption, but is entrusted with the protection of citizens' rights in cases of maladministration of acts taken by State administration or other bodies vested with public authority
Moldova	*Coordination Council in the Issues of Corruption Combat* (2001) - co-ordinates activities of public authorities concerning corruption combat, national security, public interest as well as citizens rights and freedoms.	*General Prosecutor's Office* *Ministry of the Interior* *Center for Combating Economic Crimes and Corruption (2002)* - a specialised law-enforcement body designed to prevent, detect, investigate and suppress financial, economic and tax crimes; - counteracts corruption and nepotism; - investigates money laundering.	*Center for Combating Economic Crimes and Corruption, Department for Combating and Preventing Money Laundering (SPCSB)* a financial intelligence unit. *Ministry of Local Public Administration* - responsible for the administrative supervision of local authorities including public procurement contracts, public services, grants of permits and licences and letting out property. *Court of Auditors* *Central Monitoring Committee* - receives asset declarations from high-ranking public officials.	*Centre for Human Rights* - ombudsman institution. *National Bank* - provides details on all bank accounts for investigations. *Centre for Human Trafficking*

Romania	*National Committee for the Crime Prevention (NCCP)* Set up by the government in July 2001 as an inter-ministerial organism comprising ministers and senior officials under the authority of the Prime – Minister. This institution implements the National Plan for Prevention of Corruption and the National Action Plan against corruption. *The Ministry of Justice*	*National Anti-corruption Directorate (NAD)* is a structure with legal personality functioning within the Prosecutors' Office attached to the High Court of Cassation and Justice specialized in investigating and prosecuting serious corruption offences. It was set up by the reorganization in 2005 of the Former National Anti-Corruption Prosecutors' Office which was established in 2002. *Anti-Corruption General Directorate (DGA), Ministry of Interior and Administrative Reform* is the only police structure with the competence to investigate cases of corruption *committed by the personnel of the Ministry.*	The *Court of Audit* exercises control on the formation, administration and use of the financial resources of the state and the public sector.	*National Control Authority* **-** coordinates the activities of all control bodies inside ministries and central public authorities, exercise internal administrative control within ministries and specialized administrative bodies. *The Prime Minister Chancellery* People's Advocate According to the *Ombudsman Act* (March 1997) *The National Office on the Prevention and Fight of Money Laundering*
Serbia	*Anti-Corruption Council* **-** established in 2001 *The Sector for Normative Affairs and Internatio-nal Cooperation (Ministry of Justice)* *The Anti-corruption Agency will be established on 1October 2007.*	*Public Prosecutor's Office* **-** an autonomous state authority that shall prosecute perpetrators of criminal and other punishable offences, and shall, through instrumentalities created by law, protect constitutionality and legality and shall undertake other actions as empowered by law.	*The Sector for Budget Inspection and Internal Audit (Ministry of Finance)* -tasked to report its findings on inspections conducted and makes recommendations to the Minister of Finance.	*Public Procurement Office* - established under Article 18 of the Public Procurement Law (Official Gazette 39/2002) as an independent governmental organization accountable directly to the Prime Minister. *Republic Board for Resolving Conflict of Interest*
Slovenia	*Commission for Prevention of Corruption (2004.)* The Commission became fully operational on 1 October 2004. *The National Bureau of Investigation* became operational on 1 January 2010. The Bureau is a specialised criminal investigation unit at the national level for the detection and investigation of serious criminal offences, especially economic and financial crime and corruption and in certain cases organised crime, cybercrime and more difficult forms of conventional crime.	*Office of the Public Prosecutor* *Group of Public Prosecutors for Special Tasks* *Ministry of Interior, Criminal Police Directorate, Anti-Corruption Division*	*Court of Audit* *Ministry of Finance, Office for Money Laundering Prevention* - a constitutive body of the, which started operating on 1 January 1995.	*Office for Money Laundering Prevention of the Republic of Slovenia (1995)*

State	Anti-Corruption Strategy
Bulgaria	The *National Anticorruption Strategy* adopted by Decision No. 671/2001 of the Council of Ministers, and the Governmental Action Plan for its Implementation adopted on 11.02.2002 by Decision No.77 of the Council of Ministers. The Action Plan for the Implementation of the National Strategy covers the period 2002-2003. The update the Action Plan was effected in Sept. 2003, for period 2004-2005. The **new** *Strategy for Governance, Prevention and Counteraction of Corruption 2006-2008* was adopted (12 January 2006). Bulgaria is as a founding member of the Group of European States of Fight against Corruption, GRECO (1may 1999).
Croatia	The *National Programme For Fight against Corruption with an Action Plan covering the period 2003-2007*(April 2002). A new *National Anti-Corruption Programme 2006-2008*. Croatia joined GRECO in 2000.

Moldova	*National Strategy for Corruption Prevention and Fighting* and the *Action Plan* (16th December 2004).
	Central Public Administration Reform Strategy was adopted by the Government in December 2005.
	The new *Action Plan* for 2006 was adopted 29dec 2005.
	Moldova joined GRECO on 28 June 2001
Romania	The *National Anticorruption Strategy 2001-2004*.
	The new *National Anticorruption Strategy* 2005 -2007 (April 2005)
	Romania is as a founding member of the GRECO (1may 1999).
Serbia	The State Union of Serbia and Montenegro joined GRECO in 2003.
	The Serbian Anti-Corruption Strategy approved in may 2005 and entered into force on dec.2005.
	The *National Judicial Strategy* was adopted may 2006 and entered into force on June 2006.
	Serbia joined GRECO on 1 April 2003.
Slovenia	*National Anti-Corruption Strategy* (adopted by the Parliament in 2004).
	Resolution for Prevention of Corruption was adopted in 2004.
	Slovenia joined GRECO in 1999.

State	Anti-Corruption Legal Framework
Bulgaria	Radical reform is undergoing since 2005:
	Judicial enforcement proceedings;
	Adoption of **new** *Civil Procedure Code;*
	Law on the Commercial Register (entered into force on July 2007, amended 2008);
	*Law on Political Parties(*2001, amendments 2009);
	New Criminal Procedure Code (2006);
	*Access to Public Information Act (*2000, amendments 2002, 2005, 2006) ;
	Criminal Code (1968, amendments2002);
	Law on the Forfeiture to the State of Property Acquired through Criminal Activity: the anti-corruption effect of this law is seen in eradicating the economic causes of crime, including corruption;
	*Measures Against Money Laundering Act (*June 1996, amendments on nov.2007);
	Law for the Civil Servant (1999, amendments 2001);
	Code of Ethics for Public Officials (2007);
	Bulgaria deposited its instrument of ratification on 22 December 1998. The OECD Convention on Combating Bribery entered into force on 15 February 1999. The text of the Convention (Bulgarian translation) was promulgated in "State Gazette" No 61 of 6 July 1999;
	The Law on Administrative Offences and Sanctions (amendments2 1sept.2005);
	The Law on the Forfeiture to the State of Proceeds of Crime (2005);
	*A **new** Law on Public Procurement* (adopted 24 march 2004 entered into force on 1 October 2004, amendments 2006);
	Public Sector Internal Audit Standards (adopted 2006).
	New Administrative Procedure Code (entered into force on July 2006);
	Bulgaria ratified:
	the Council of Europe Civil Law Convention on Corruption, on 8 June 2000;
	the *Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime*, on 2 June 1993;
	the *United Nations Convention against Corruption*, on 3 August 2006;
	the *United Nations Convention against Transnational Organized Crime*, on 12 April 2001;
	EU Convention on the Protection of the European Communities' Financial Interests and the Protocols thereto, on 24 January 2007;
	EU Convention on the fight against corruption involving officials of the European Communities or officials of the EU Member States, on 14 February 2007;
	the *Criminal Law Convention on Corruption (ETS173)* on 7 nov.2001;
	the *Additional Protocol to the Criminal Law Convention on Corruption (ETS191)* on 4 February 2004.

Croatia	The amendments to the *Penal Code* adopted in 2004 are bringing the substantive criminal law in line with international standards; *Criminal Code* (entered into force on 1 January 1998 and legal amendments of 2000, 2004, 2006); *Criminal Procedure Code* (1998); Amendments to the *Act on Prevention of Conflict of Interest in the Exercise of Public **Office*** and to the *Act on Financing Presidential Electoral Campaigns*, in both cases aimed at improving transparency, entered into force in July and august 2005 respectively; A *Witness Protection Act* was adopted in 2003; **A** *Law on the Conflict of Interest in Performance of Public Duties* was adopted in 2003; A new *Law on the Access to Information* was adopted in 2003; *Public Procurement Act* was adopted in 2003; Law on Implementation of the Act on Prevention of *Money Laundering* was adopted in 2003 (amendments 2008); *Civil Servant Act* (2005); The *Law on Political Parties* only partially regulates the funding of political parties. Croatia ratified the *Criminal Law Convention on Corruption* (*ETS173*) on 8 Nov.2000 and entered into force on 1 July 2002. The *Additional Protocol to the Criminal Law Convention on Corruption* (ETS191) was ratified by Croatia on 10 may 2005 and entered into force on 1 sept.2005.
Moldova	*Criminal Code* **(**entered into force on 2003 has been subject of successive amendments); *Criminal Procedure Code* **(**entered into force 2003 has been subject of successive amendments*);* *Act on Preventing and Combating Money Laundering and the Funding of Terrorism* was adopted in 2001 (amendments 2007); *Law on Civil Service* (1995 with amended)**,** see article 4 on the fundamental principles of public authorities; The *Law on Political Parties* was adopted in 1991(amendments 1993, 1998); *Law of Public Procurement* was adopted in 1997; The *Law on free access to information of public interest* was adopted in 2000; *Administrative Proceedings Act, Labour Code* article 355 and *Petitions Act* provide legal basis for complaints about the decisions of public authorities; Article 16 of the *Act on Access to Information* stipulates that everyone has the right to request from public authorities any information at their disposal; *Code of Administrative Offences;* *Act on Corruption and Nepotism.* Moldova ratified the *Criminal Law Convention on Corruption (ETS173*) on 14 January 2004.
Romania	*Law no. 244/2005***-** abolishes the practice of redistribution or exception of payment of debts to the state budget; *Law no.241/2005***-** criminal sanctions for tax dodging; *Law no.247/2005***-** increases prosecutors' independence, diminishing the attributions of the heads of courts and prosecutors offices etc..; *Law no.90/2005***-** repealed the immunity and increased the degree of responsibility to former ministers for facts and acts carried out while in office; *Law no.383/2005* organization and functions of the General Anti-Corruption Office; *Government Emergency Decree no. 124/2005-* this decree amends Law no. 76/2000 on Preventing, Identifying and Sanctioning Corruption-Related Offences; The *Law on Preventing, Discovering and Sanctioning of Corruption Acts;* The *Law on decisional transparency in Public Administration* (February 2003); The *Law on the Statute of Civil Servants* (December 1999); The *Law on free access to information of public interest* (October 2001); The law on *Public Internal Audit* ; The *Law on Prevention and Punishment of Money Laundering* was adopted on January 1999 (amendments 2002, 2005, 2006); The *Law on Witness Protection* (November 2003); *The Romanian Criminal Code* (1969); *Criminal Procedure Code* (1969); *Law no.78/2000 on preventing, discovering and sanctioning of corruption acts* (into force 1dec.2006); *Law on parties financing and electoral campaigns* was adopted in 1996 (amendments2003). *National Program on the Corruption Prevention and the National Action Plan against Corruption 2001;* *Law No. 161/2003, a legislative package on transparency in performing public dignity, public office and in the business environment, preventing and sanctioning corruption.* Romania ratified the *Criminal Law Convention on Corruption (ETS173)* on 30january 2002 and entered into force on 1july 2002. Romania signed *the Additional Protocol to the Criminal Law Convention on Corruption (ETS191), 9 October 2003*.

Serbia	The *Law on Financing Political Parties* was adopted 2003;
	The *Law on Prevention of Conflict of Interest in Discharge of Public Office*;
	The *Law on Free Access to Information of Public Importance* (Nov 2004 was implemented in July 2005*);*
	The *Public Procurement Law (2002);*
	The *Draft Law on the Anti-Corruption Agency (AC Law) of the Republic of Serbia* was approved by the Government of Serbia on 19 October 2006*;*
	The *Law on the State Audit Institution (SAI)* was adopted by Serbia in November 2005;
	The Law on the *Prevention of Money Laundering(*2005);
	The Law of Civil Servants (2005);
	The new *Code of Criminal Procedure* was adopted in may 2006 and entered into force on 1 June 2007.
	Law on the ombudsperson entered into force on 24 Sept. 2005. *Law on the ombudsperson* (for local level) adopted 14sept.2005.
	The Federal Republic of Yugoslavia ratified the *Criminal Law Convention on Corruption (ETS173)* on 18dec.2002 and entered into force on 1april 2003.
	The new *Criminal Code* entered into force on 1 January 2006.
	Serbia is party to the *Convention on Laundering, search, Seizure and Confiscation of the proceeds from Crime* and to the *UN Convention Against Transnational Organized Crime*.
	Serbia is party to the *European Convention on mutual legal assistance in criminal matters*, ratified in 2001.
	Serbia ratified the *UN Convention Against Corruption* in oct.2005.
Slovenia	*Law on Prevention of Corruption* from 2004 (entered into force 30 February 2004);
	Law on Prevention of Money Laundering (2007);
	Criminal Code (2005, amendments 2008);
	Criminal Procedure Code (1994, amendments 1999, 2004 and 2009);
	Civil servants Act (2002);
	Public Procurement Act (2006);
	*Act on the Access to Information on Public Characte*r was adopted on march 2003 (amendments 2005);
	The Law on the Ratification of the OECD Anti-Bribery Convention entered into force on 5 November 2001;
	The Law on the Liability of Legal Persons for Criminal Offences (1999, amendments 2004);
	Law on Incompatibility of Public Function with Profit-Making Activities (February 2006);
	Law on the Prevention of Money Laundering and Terrorism Financing of 2007;
	*Integrity and Prevention of Corruption Act(*adopted by the Government of the Republic of Slovenia on 25 February 2010).
	Slovenia ratified the *Criminal Law Convention on Corruption* (ETS173) on 12may 2000 and entered into force on 1 July 2002.
	The *Additional Protocol to the Criminal Law Convention on Corruption* (ETS191) was ratified by Slovenia on 11 October 2004 and entered into force on 1 February 2005.
	Slovenia as a founding member of the Group of European States of Fight against Corruption, GRECO (1may 1999).

State	International Legal Instruments UNCAC (United Nations Convention against Corruption)		
	Signature	Ratification	Entry Into Force
Bulgarian	10 December 2003	20 September 2006	Yes
Croatia	10 December 2003	24 April 2005	Yes
Moldova	28 September 2004	-	No
Romania	09 December 2003	02 November 2004	Yes
Serbia	11 December 2003	20 December 2005	Yes
Slovenia	-	-	No

Sources :

„Steps taken to implement and enforce the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions - implementation „of the OECD Anti-Bribery Convention in Bulgaria sept.2008"
„Steps taken to implement and enforce the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions- implementation of the OECD Anti-Bribery Convention in Slovenia feb.2010 "
"Third Evaluation Round: Evaluation Report on Croatia on Incriminations (ETS 173 and 191, GPC2)", GRECO, Council of Europe, Strasbourg 2009, Greco Eval III Rep (2009) 1E, Theme I.
"Third Evaluation Round: Evaluation Report on Slovenia on Incriminations (ETS173 and 191, GPC2)", Greco Eval III Rep (2007) 1E, Theme I, GRECO, Council of Europe, Strasbourg, 2007.
GRECO Evaluation Report, October 2006
"Joint first and second evaluation round. Evaluation Report on Republic of Serbia", Greco Eval I-II Rep (2005), 1E Revised, GRECO, Council of Europe, Strasbourg, 2006
GRECO Second Round Evaluation Report
The Fight Against Corruption in Serbia: An Institutional Overview (UNDP Serbia)
SPAI General Assessment Report, April 2002
SPAI Report on Anti-Corruption Efforts, 2004
SPAI Progress Report
http://europeandcis.undp.org/
www.oecd.org
www.coe.int
www.coe.org
http://km.undp.sk/
http://www.lexadin.nl/wlg/

Annex 2: Synthesis of criteria of the anti-corruption matrix

State	Year	Omnibus Index OI1			Omnibus Index OI2			Omnibus Index OI3				Legal Index LI						Conventions Index CI					
		OI 1.1	OI 1.2	OI 1.3	OI 2.1	OI 2.2	OI 2.3	OI 3.1	OI 3.2	OI 3.3	OI 3.4	LI 1	LI 2	LI 3	LI 4	LI 5	LI 6	CI 1	CI 2	CI 3	CI 4	CI 5	CI 6
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Bg	1999											X					X	X	X	X			
Bg	2000														X						X	X	X
Bg	2001	X	X	X								X*	X	X		X							
Bg	2002				X	X	X	X	X	X	X				X*								
Bg	2003																						
Bg	2004				X*	X*	X*																
Bg	2005							X*	X*	X*	X*				X*	X*							
Bg	2006	X*	X*	X*											X*								
Bg	2007											X*					X*						
Bg	2008																						
Hr	1999																	X					
Hr	2000											X								X	X	X	X
Hr	2001							X	X	X	X			X	X								
Hr	2002	X	X	X	X	X	X																
Hr	2003													X*	X*		X						
Hr	2004																						
Hr	2005	X*	X*	X*	X*	X*	X*																
Hr	2006											X*											

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Hr	2007																						
Hr	2008																	X*						
Md	1999												X		X		X		X		X			
Md	2000													X		X							X	X	X
Md	2001								X	X	X	X						X						
Md	2002																							
Md	2003																							
Md	2004	X	X	X	X	X	X																	
Md	2005																							
Md	2006				X*	X*	X*																	
Md	2007																	X*						
Md	2008																							
Ro	1999												X		X		X	X			X			
Ro	2000																		X		X			
Ro	2001	X	X	X	X	X	X	X	X	X					X							X	X	
Ro	2002							X*	X*	X*								X*						
Ro	2003																X*							
Ro	2004																							
Ro	2005	X*	X*	X*	X*	X*	X*	X*	X*	X*								X*						
Ro	2006											X*		X*				X*						
Ro	2007																							
Ro	2008																							
Se	1999																							
Se	2000																	X		X	X	X		

43

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Se	2001	X	X	X	X	X	X	X	X	X	X												
Se	2002													X									
Se	2003															X				X			
Se	2004														X								
Se	2005	X*	X*	X*	X*	X*	X*					X					X						
Se	2006																						
Se	2007																						
Se	2008																						
Si	1999																			X			
Si	2000																						
Si	2001														X		X			X		X	X	X
Si	2002											X	X		X								
Si	2003																						
Si	2004	X	X	X	X	X	X	X	X	X	X												
Si	2005														X*								
Si	2006													X*									
Si	2007																X						
Si	2008																						

Legend: new attribute, modified or amended X*

Source: the authors

Annex 3: Numerical quantification of the anti-corruption matrix

State	Year	Omnibus Index OI											Legal Index LI							Conventions Index CI							∑
		OI 1.1	OI 1.2	OI 1.3	OI 2.1	OI 2.2	OI 2.3	OI 3.1	OI 3.2	OI 3.3	OI 3.4	∑OI	LI 1	LI 2	LI 3	LI 4	LI 5	LI 6	∑LI	CI 1	CI 2	CI 3	CI 4	CI 5	CI 6	∑CI	
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Bg	1999	-	-	-	-	-	-	-	-	-	-	-	0.18	-	-	-	-	0.28	0.46	5.56	5.56	5.56	-	-	-	16.68	17.14
Bg	2000	-	-	-	-	-	-	-	-	-	-	-	0.36	-	-	0.14	-	0.56	1.06	5.56	5.56	5.56	5.56	5.56	5.56	33.36	34.42
Bg	2001	2.78	0.14	0.14	-	-	-	-	-	-	-	3.06	0.72	0.56	0.56	0.28	0.28	0.84	3.24	5.56	5.56	5.56	5.56	5.56	5.56	33.36	39.66
Bg	2002	2.78	0.28	0.28	2.78	0.14	0.14	2.78	0.06	0.06	1.66	10.96	1.08	1.11	1.11	0.56	0.56	1.12	5.54	5.56	5.56	5.56	5.56	5.56	5.56	33.36	49.86
Bg	2003	2.78	0.42	0.42	2.78	0.28	0.28	2.78	0.11	0.11	1.66	11.62	1.44	1.67	1.67	0.84	0.84	1.4	7.86	5.56	5.56	5.56	5.56	5.56	5.56	33.36	52.84
Bg	2004	2.78	0.56	0.56	5.56	0.56	0.56	2.78	0.17	0.17	1.66	15.36	1.80	2.22	2.22	1.12	1.12	1.68	10.16	5.56	5.56	5.56	5.56	5.56	5.56	33.36	58.88
Bg	2005	2.78	0.70	0.70	5.56	0.84	0.84	5.56	0.28	0.28	3.33	20.87	2.16	2.78	2.78	1.54	1.40	1.96	12.62	5.56	5.56	5.56	5.56	5.56	5.56	33.36	66.85
Bg	2006	5.56	0.98	0.98	5.56	1.12	1.12	5.56	0.39	0.39	3.33	24.99	2.52	3.34	3.34	2.10	1.96	2.24	15.50	5.56	5.56	5.56	5.56	5.56	5.56	33.36	73.85
Bg	2007	5.56	1.24	1.24	5.56	1.40	1.40	5.56	0.50	0.50	3.33	26.29	3.06	3.89	3.89	2.66	2.52	2.52	18.54	5.56	5.56	5.56	5.56	5.56	5.56	33.36	78.14
Bg	2008	5.56	1.54	1.54	5.56	1.68	1.68	5.56	0.61	0.61	3.33	27.67	3.6	4.45	4.45	3.22	3.08	3.08	21.88	5.56	5.56	5.56	5.56	5.56	5.56	33.36	82.91
Hr	1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.56	-	-	-	-	-	5.56	5.56
Hr	2000	-	-	-	-	-	-	-	-	-	-	-	0.28	-	0.28	0.28	0.56	-	1.40	5.56	-	5.56	5.56	5.56	5.56	27.80	29.20
Hr	2001	-	-	-	-	-	-	5.56	0.11	0.11	3.33	9.11	0.56	-	0.56	0.56	1.12	-	2.80	5.56	-	5.56	5.56	5.56	5.56	27.80	39.71
Hr	2002	2.78	0.14	0.14	2.78	0.14	0.14	5.56	0.22	0.22	3.33	15.45	0.84	-	0.84	0.84	1.68	-	4.2	5.56	-	5.56	5.56	5.56	5.56	27.80	47.45
Hr	2003	2.78	0.28	0.28	2.78	0.28	0.28	5.56	0.33	0.33	3.33	16.23	1.12	-	1.40	1.40	2.24	0.28	6.44	5.56	-	5.56	5.56	5.56	5.56	27.80	50.47
Hr	2004	2.78	0.42	0.42	2.78	0.42	0.42	5.56	0.44	0.44	3.33	17.01	1.40	-	1.96	1.96	2.80	0.56	8.68	5.56	-	5.56	5.56	5.56	5.56	27.80	53.49
Hr	2005	5.56	0.70	0.70	5.56	0.70	0.70	5.56	0.55	0.55	3.33	23.91	1.68	-	2.52	2.52	3.36	0.84	10.92	5.56	-	5.56	5.56	5.56	5.56	27.80	62.63
Hr	2006	5.56	0.98	0.98	5.56	0.98	0.98	5.56	0.66	0.66	3.33	25.25	1.96	-	3.08	3.08	3.92	1.12	13.16	5.56	-	5.56	5.56	5.56	5.56	27.80	66.21

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Hr	2007	5.56	1.26	1.26	5.56	1.26	1.26	5.56	0.77	0.77	3.33	26.59	2.52	-	3.64	3.64	4.48	1.40	15.68	5.56	-	5.56	5.56	5.56	5.56	27.80	70.07
Hr	2008	5.56	1.54	1.54	5.56	1.54	1.54	5.56	0.88	0.88	3.33	27.93	3.08	-	4.20	4.20	5.04	1.96	18.48	5.56	-	5.56	5.56	5.56	5.56	27.80	74.21
Md	1999	-	-	-	-	-	-	-	-	-	-	-	0.56	-	0.56	-	0.56	-	1.68	5.56	-	5.56	-	-	-	11.12	12.80
Md	2000	-	-	-	-	-	-	-	-	-	-	-	1.12	0.56	1.12	0.56	1.12	-	4.48	5.56	-	5.56	5.56	5.56	5.56	27.80	32.28
Md	2001	-	-	-	-	-	-	5.56	0.11	0.11	3.33	9.11	1.68	1.12	1.68	1.12	1.68	0.28	7.56	5.56	-	5.56	5.56	5.56	5.56	27.80	44.47
Md	2002	-	-	-	-	-	-	5.56	0.22	0.22	3.33	9.33	2.24	1.68	2.24	1.68	2.24	0.56	10.64	5.56	-	5.56	5.56	5.56	5.56	27.80	47.77
Md	2003	-	-	-	-	-	-	5.56	0.33	0.33	3.33	9.55	2.80	2.24	2.80	2.24	2.80	0.84	13.72	5.56	-	5.56	5.56	5.56	5.56	27.80	51.07
Md	2004	5.56	0.28	0.28	2.78	0.14	0.14	5.56	0.44	0.44	3.33	18.95	3.36	2.80	3.36	2.80	3.36	1.12	16.80	5.56	-	5.56	5.56	5.56	5.56	27.80	63.55
Md	2005	5.56	0.56	0.56	2.78	0.28	0.28	5.56	0.55	0.55	3.33	20.01	3.92	3.36	3.92	3.36	3.92	1.40	19.88	5.56	-	5.56	5.56	5.56	5.56	27.80	67.69
Md	2006	5.56	0.84	0.84	5.56	0.42	0.42	5.56	0.66	0.66	3.33	23.85	4.48	3.92	4.48	3.92	4.48	1.68	22.96	5.56	-	5.56	5.56	5.56	5.56	27.80	74.61
Md	2007	5.56	1.12	1.12	5.56	0.70	0.70	5.56	0.77	0.77	3.33	25.14	5.04	4.48	5.04	4.48	5.04	2.24	26.32	5.56	-	5.56	5.56	5.56	5.56	27.80	79.31
Md	2008	5.56	1.40	1.40	5.56	0.98	0.98	5.56	0.88	0.88	3.33	26.53	5.56	5.04	5.56	5.04	5.56	2.80	29.56	5.56	-	5.56	5.56	5.56	5.56	27.80	83.89
Ro	1999	-	-	-	-	-	-	-	-	-	-	-	0.28	-	0.28	-	0.28	0.14	0.98	-	-	5.56	-	-	-	5.56	6.54
Ro	2000	-	-	-	-	-	-	-	-	-	-	-	0.56	-	0.56	-	0.56	0.28	1.96	5.56	-	5.56	5.56	-	-	16.68	18.64
Ro	2001	2.78	0.14	0.14	2.78	0.14	0.14	1.85	0.04	0.04	1.11	9.16	0.84	-	0.84	0.56	0.84	0.42	3.50	5.56	-	5.56	5.56	5.56	5.56	27.80	40.46
Ro	2002	2.78	0.28	0.28	2.78	0.28	0.28	3.70	0.08	0.08	2.22	12.76	1.12	-	1.12	1.12	1.12	0.70	5.18	5.56	-	5.56	5.56	5.56	5.56	27.80	45.68
Ro	2003	2.78	0.42	0.42	2.78	0.42	0.42	3.70	0.16	0.16	2.22	13.48	1.4	-	1.4	1.68	1.68	0.98	7.14	5.56	-	5.56	5.56	5.56	5.56	27.80	48.42
Ro	2004	2.78	0.56	0.56	2.78	0.56	0.56	3.70	0.24	0.24	2.22	14.20	1.68	-	1.68	2.24	2.24	1.26	9.1	5.56	-	5.56	5.56	5.56	5.56	27.80	51.10
Ro	2005	5.56	0.70	0.70	5.56	0.70	0.70	5.56	0.32	0.32	3.33	23.45	1.96	-	1.96	2.80	2.80	1.54	11.06	5.56	-	5.56	5.56	5.56	5.56	27.80	62.91
Ro	2006	5.56	0.98	0.98	5.56	0.98	0.98	5.56	0.43	0.43	3.33	24.79	2.52	-	2.52	3.36	3.36	1.96	13.72	5.56	-	5.56	5.56	5.56	5.56	27.80	66.31
Ro	2007	5.56	1.26	1.26	5.56	1.26	1.26	5.56	0.54	0.54	3.33	26.13	3.08	-	3.08	3.92	3.92	2.52	16.52	5.56	-	5.56	5.56	5.56	5.56	27.80	70.45

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Ro	2008	5.56	1.54	1.54	5.56	1.54	1.54	5.56	0.65	0.65	3.33	27.47	3.64	-	3.64	4.48	4.48	3.08	19.32	5.56	-	5.56	5.56	5.56	5.56	27.80	74.59
Se	1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Se	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.56	-	-	5.56	5.56	5.56	22.24	22.24
Se	2001	2.78	0.14	0.14	2.78	0.14	0.14	5.56	0.11	0.11	3.33	15.23	-	-		-		-		5.56	-	-	5.56	5.56	5.56	22.24	37.47
Se	2002	2.78	0.28	0.28	2.78	0.28	0.28	5.56	0.22	0.22	3.33	16.01	-	-	0.56	-	-	-	0.56	5.56	-	-	5.56	5.56	5.56	22.24	38.81
Se	2003	2.78	0.42	0.42	2.78	0.42	0.42	5.56	0.33	0.33	3.33	16.79	-	-	1.12	-	0.56	-	1.68	5.56	-	5.56	5.56	5.56	5.56	27.80	46.27
Se	2004	2.78	0.56	0.56	2.78	0.56	0.56	5.56	0.44	0.44	3.33	17.57	-	-	1.68	0.56	1.12	-	3.36	5.56	-	5.56	5.56	5.56	5.56	27.80	48.73
Se	2005	5.56	0.84	0.84	5.56	0.84	0.84	5.56	0.55	0.55	3.33	24.47	0.56	-	2.24	1.12	1.68	0.56	6.16	5.56	-	5.56	5.56	5.56	5.56	27.80	58.43
Se	2006	5.56	1.12	1.12	5.56	1.12	1.12	5.56	0.66	0.66	3.33	25.81	1.12	-	2.80	1.68	2.24	1.12	8.96	5.56	-	5.56	5.56	5.56	5.56	27.80	65.57
Se	2007	5.56	1.40	1.40	5.56	1.40	1.40	5.56	0.77	0.77	3.33	27.11	1.68	-	3.36	2.24	2.80	1.68	11.76	5.56	-	5.56	5.56	5.56	5.56	27.80	66.67
Se	2008	5.56	1.68	1.68	5.56	1.68	1.68	5.56	0.88	0.88	3.33	28.49	2.24	-	3.92	2.80	3.36	2.24	14.56	5.56	-	5.56	5.56	5.56	5.56	27.80	70.85
Si	1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.56	-	5.56	-	-	-	11.12	11.12
Si	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.56	-	5.56	-	-	-	11.12	11.12
Si	2001	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	-	0.56	-	0.84	5.56	5.56	5.56	5.56	5.56	5.56	33.36	35.04
Si	2002	-	-	-	-	-	-	-	-	-	-	-	0.56	0.56	0.56	0.28	1.12	-	3.08	5.56	5.56	5.56	5.56	5.56	5.56	33.36	36.44
Si	2003	-	-	-	-	-	-	-	-	-	-	-	1.12	1.12	0.84	0.56	1.68	-	5.32	5.56	5.56	5.56	5.56	5.56	5.56	33.36	38.68
Si	2004	5.56	0.28	0.28	5.56	0.28	0.28	5.56	0.11	0.11	3.33	21.35	1.68	1.68	1.12	0.84	2.24	-	7.56	5.56	5.56	5.56	5.56	5.56	5.56	33.36	62.27
Si	2005	5.56	0.56	0.56	5.56	0.56	0.56	5.56	0.22	0.22	3.33	22.69	2.24	2.24	1.40	1.12	2.80	-	9.80	5.56	5.56	5.56	5.56	5.56	5.56	33.36	65.85
Si	2006	5.56	0.84	0.84	5.56	0.84	0.84	5.56	0.33	0.33	3.33	24.03	2.80	2.80	1.68	1.68	3.36	-	12.32	5.56	5.56	5.56	5.56	5.56	5.56	33.36	69.71
Si	2007	5.56	1.12	1.12	5.56	1.12	1.12	5.56	0.44	0.44	3.33	25.37	3.36	3.36	2.24	2.24	3.92	0.56	15.68	5.56	5.56	5.56	5.56	5.56	5.56	33.36	74.41
Si	2008	5.56	1.40	1.40	5.56	1.40	1.40	5.56	0.55	0.55	3.33	26.71	3.92	3.92	2.80	2.80	4.48	1.12	19.04	5.56	5.56	5.56	5.56	5.56	5.56	33.36	79.11

Source: the authors