

The Victory of the Exception

*“The behavioral double standard,
of immoral deeds and moral discourse,
misled the world on the path to success.”*

... Ideologies do not solve the economic crisis. *This assertion is categorical.* Nor does Economics solve the crisis. *This assertion is bewildering.* The crisis will pass by itself. *This assertion is antihuman...* here are a few snippets of sentences from the debates started by the novelty of the economic crisis.

The first assertion points to the unsustainability of behavioral extremes, the second one indicates a malfunction of the capacity to understand and explain, while the third one gives the measure of the degrading cynicism. Somewhat exemplary, what we see here is a stair of human counter-performance, from the cheap solution offered to the easy-going thinking in its political guises, going through the abandonment of the genus proximum embedded within reason and ending with failure in the tentacles of the annihilating fatality.

It's obvious that the steps do not lead to redemption. The direction is of descent into inferno, with no way of reaching – be it through enlightenment – a place of savior-inversion.

The way they are described by the facts of the moment these stairs do not signify the transition between worlds or between its – worse or better – states, but represent the final road, between world and non-world.

The expectation that this stair would be a possibility among others is no longer soothing for the great spirits either. And this not because they would have extended their skepticism to the maximum, but because they find themselves ever harder in the configuration of the present world. We cannot otherwise explain the deficit of theoretical solutions, accompanied by the irrational measures against the problems of the crisis, advanced by the economic management. Symptomatic is the fact that some of them show up in a

mixture by recipes specific to obscurantist practices spilling over into social engineering.

The impasse of Reason in dealing with its own errors rekindles the alternative of faith; of the most eroding faith, that things will work out by themselves.

This is the cause for the delay of breakthroughs in the field of economic thinking!

But, we have to say this, it is about the forceful blocking of Reason and not due to causes intrinsic to it. The failure of the without-alternative economic model – nonetheless, a product of reason – has injected scientific thinking with an extremely powerful tranquilizer. There is no doubt it also suited Economics to abandon itself to the comfort promised by the perfect and unique model, a model itself comfortable (in a perverse way) with the obsession of unification, first of the theory and later of the action, as an answer to the challenge represented by the organic integrality of Nature.

The evolutionary path of the present economic model is one marked by appearances. Started under the auspices of the unification of the cardinal values generated by the ideal of freedom, it then amazingly fast reached uniqueness through homogenization. No chance for either freedom or equality of chances. Freedom is judged in conditions of counter-selection on the principle of “we say one thing and do another”. It is about freedom as allowed by interest, which expels supreme values to the ideal and purifies reality according to the shape and form of the force which confiscates power. In its turn, the equality of chances becomes a romantic lesson, a story about faces and places which only exist for oneiric heroes.

The group equality of power is the mechanism through which inequality is implacably centrifuged as poverty of the large numbers. The average income is no longer surrounded by its own population; it at most hides the comfort of the one percent among us and offers the *fata morgana* image of Edenic life for three quarters of us. Economic quantifying is, thus, twice inadequate: once because it considers our lives by the kilogram and secondly because we do not recognize within the indicators the picture of our pantries.

The present economic model is an exclusivist innovation, a luxury good accessible only to a minority molded out of cynicism, pack instincts and siren songs. The behavioral double standard, of immoral deeds and moral discourse, misled the world on the path to success. The institutional weave of the net thrown over consciousnesses is tight. The goal is for nothing to escape, as the model must be unique.

The effect of scale of the model shows its performances in – alongside the political machinery of control – the condition of the means of access to wealth.

In a brutal way the model manifests as a support for too few and too small wages, especially in the area of effective production. And this not only as an answer to the performances of technique and technology, but especially as an expression of the preference for the favoring of capital. This very preference seems to be the ingredient which has generated the critical mass for the collapse started in 2007.

The theory of the corporatist capitalist model, the inspiration of populism as an ideology of façade (because it made efficient the means for transmitting the message expected by the auditorium, in order to obscure the truth about the purpose) has displaced the alternatives. Success seems electorally consolidated in countries where the political culture had structured for decades on the unique model. The failure at the polling booth registered in the country of origin, the USA, is for now unclear. The reactions of ideological idiosyncrasy – identical to the avatars of class struggle – to the alternatives of corporatist capitalism delay the escape from the alternative. Within these guidelines the social components of the model are being sacrificed, components which, otherwise, are derisory for it.

In the corporatist capitalist economic model the population is the electorate to whom illusions or false targets are administered; the illusion of the generalized Agora, of the freedom of being, alongside the false target of the distribution of wealth as an obstacle on the path of the freedom of having. The social lift is more and more cramped and functions ever more rarely. The floor on which it gets stuck is that of wealth-based power.

The economic model has thus configured society, but does society conform to the new political economy?

Marin Dinu

Contents

The Tandem Culture – Organizational Bureaucracy in Public Sector Ion Gh. Roșca, George Moldoveanu	7
Localization Factors and Inward Foreign Direct Investment in Greece Nuno Carlos Leitão	17
Knowledge Management – the Key Resource in the Knowledge Economy George Ciprian Giju, Leonard Badea, Víctor Raúl López Ruiz, Domingo Nevado Peña	27
Accounting System in Croatian Public Healthcare Organizations: an Empirical Analysis Davor, Vašiček, Gorana, Roje.....	37
Keynesian Substantiation of the Marketing Policies in Local Development Lucica Matei, Stoica Anghelescu	59
Marketing Research on Tourist Consumer Opinions and Behavior in the Center Development Region Erika Kulcsár	75
Transformational and Transactional Leadership Styles as a Predictor of Individual Outcomes Azman Ismail, Mohd Hamran Mohamad, Hassan Al-Banna Mohamed, Nurhana Mohamad Rafiuddin, Karen Woon Pei Zhen	89
Study on the Local Financial Self-government in Romania Eugen Dogariu	105

Note: The authors are responsible for the content of their articles and for obtaining necessary permissions.

Text revision:

Gabriela Ochiană

Computerized drawing up:

Nicoleta Bobocea

Cover:

Alexandru Ion

Subscriptions distribution:

Mircea Dinu

Tel./Fax: 021/210.73.10; 021/210.63.07

021/210.63.08

Data base indexation:

Research Papers in Economics (RePEc)

<http://www.ideas.repec.org>

Directory of Open Access Journals (DOAJ)

<http://www.doaj.org>

EBSCO Publishing

<http://www.ebscohost.com>

CNCSIS B+

www.econometeoreticasiaplicata.ro; www.ectap.ro

Reception of texts: economia.ta@edeconomica.com

The Tandem Culture – Organizational Bureaucracy in Public Sector

Ion Gh. ROȘCA

Bucharest Academy of Economic Studies

Ion.Rosca@ase.ro

George MOLDOVEANU

Bucharest Academy of Economic Studies

George.Moldoveanu@man.ase.ro

Abstract. *The article discusses the background of the organizational processes of public administration, which is organizational culture and bureaucracy, elements that tend to an entity. Supporting strategies and policies of organizations can be achieved through a strong organizational culture, by the extension of subcultures in the private sector. Also, there are measures proposed for the bureaucratic system mitigation, by extending the firm model towards a bureau model, practicing of flat structures, updating the administrative/managerial tools, etc.*

Practical development of the two components, faces of the same entity, means a real reengineering of the public organizations, a domain in which there is not enough expertise.

Keywords: Organizational culture; organizational bureaucracy; excessive bureaucracy; bureaucratic process graph; firm model; bureau model; reengineering.

JEL Codes: D02, D20, D23, D73, D74, H40.

REL Codes: 13C, 13J.

1. The organizational culture

The organizational culture background is the catalyst of the actions' development or, instead, the lock of them. The administrative science and the attempt to implement it are not sufficient, out of a strong organizational culture, with a network of rules, standards, values, events, preconditions, regarding the way in which activities are carried out and people are treated.

Organizational cultures' testify is done in organizations, by surface and depth mechanisms, between which there are organic links that in practice are often ignored.

1.1. Current status: the dominant culture and subcultures

The dominant culture in the public sector is the role type one (temple type), typical for most organizations of central or local administration (government), if we use the structure proposed by Handy, or the procedures' one for classification proposed by Deal and Kennedy.

These types of culture which define an identical status result from:

- i) Activities' low feedback and
- ii) Activities' reduced risk, resulting from the rules' system, norms that are institutionalized.

The culture, defined by the two dimensions, is impersonal; with a communication between roles, not between people, and the organization represent a set of interconnected rules, so that the bureaucracy machine in Weber's conception should work.

The management/administration is comprehensive, and leadership is limited, although, in the public sector, we consider that the last concept is more comprehensive and more useful than the first ones.

But everything can operate on the basis of this culture, if the organizational environment is stable (limited changeability and predictability) and employees value the professionalism, seriousness, conditions that may not be encountered in all cases in public sector.

Investigations within the organizational spectrum led us to identify some subcultures, especially the "spider web" type (see political organizations, unions, pressure groups with single orientation, etc.) as well as the "person" type (the lawyers' offices, architects' associations, consultancy companies, university departments, medical clinics, etc.) (Moldoveanu, 2005).

Management/administration is difficult referring to these cultures, the goals are partially achieved. Although citizens are stakeholders, these subcultures first follow the managers-administrators interests, unfair and

undesired status, and many members of the organization are guided by their own values.

The negative character of these subcultures is also given by the organizational iceberg (Figure 1), that in the public sector does not realize a powerful articulation of the two types of formal and informal behaviors.

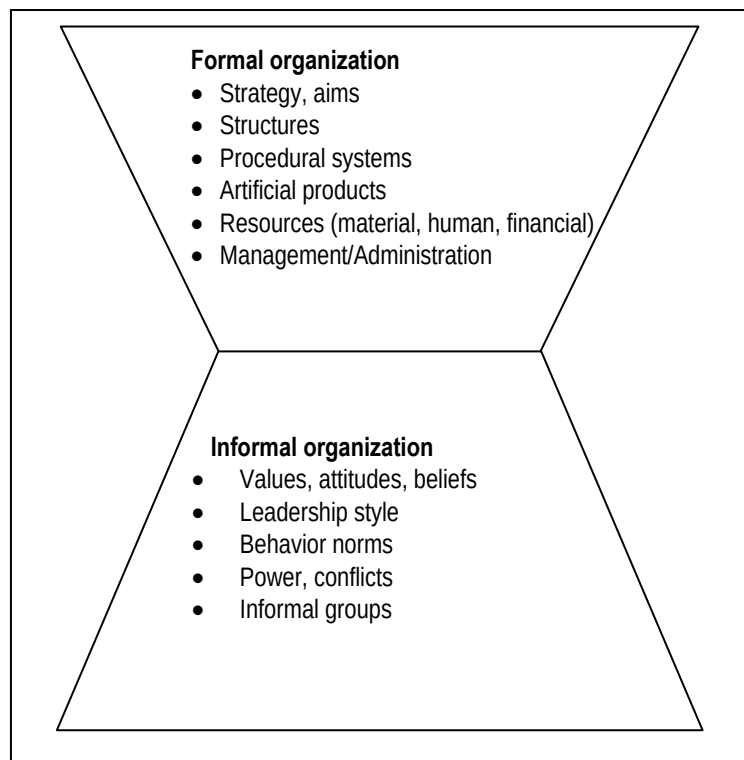


Figure 1. *Organizational iceberg*

1.2. The improved state

i) First improvement can be achieved by emphasizing links between the culture components, creating a network between them, without skipping the role or procedures' type culture. This notion, that we sustain, can eliminate the divided perceptions of the public organizations' practices, supporting the distribution of values within the organization, but linked into a network.

This first step of improvements which focuses on the phrase "organizational culture" is continued by "organizational excellence" (Peters, Waterman, 1982), but not automatically, but through building and development of strategies in according with the values supported by organization members and stakeholders, including citizens.

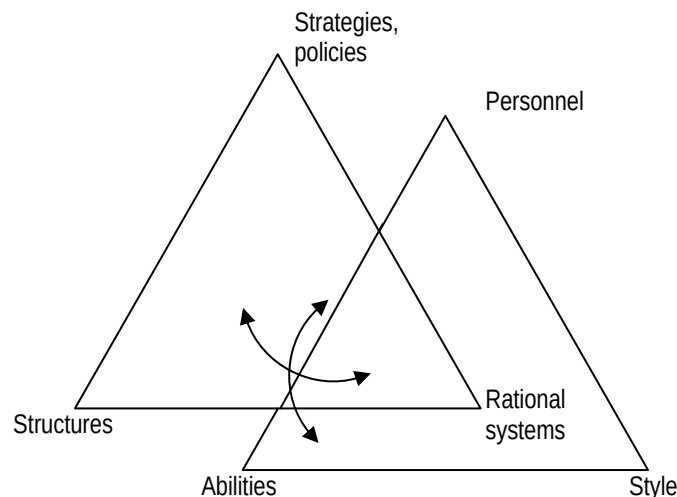
If we consider „n“ the number of components within a network of organizational culture, the links that provide the network value are the type n^2-n , or $n(n-1)$.

This first step of improvements that are comprised in the expression „organizational culture“ is continued with organizational excellence, but not automatically, but by creating and development of several strategies that are compatible with the values accepted by the organization' members and its stakeholders, including the citizens.

Some organizations in the public administration can be no more than the level of a strong culture and searching of the “organizational excellence” where must be imposed a close relation with the consumers/citizens, competitive spirit, administrative productivity, the “front office” employees' involvement, structures' simplification and flexibility and a real process of strategic vision and not strategic planning.

The culture is institutionalized only after achieving organizational performance, and not vice versa.

In addition, in public organizations, in the vast majority of them, among “hard” and “soft” variables there is a considerable discrepancy. Thus, from studies of Lucio Fabriciani (2003), that first includes the strategy, structure and systems, and secondly, the staff, skills and personnel's working style, we make the “force triangles” in public administration (Figure 2).



Source: Lucio Fabriciani – Partecipazione Umana e Competitiva Aziendale, Ed. Sperling&Kapfer, Editori Italia 2003.

Figure 2. Correlation between “soft” and “hard” variables in public organizations' processes

The two “force triangles” generate a spatial and temporal discrepancy that should be reduced. We believe that the Japanese organizational elements are of a real benefit for us, in the tendency to overlap hard with soft. This concept is related to the biological rational organizational model that we sustain (Moldoveanu et al., 2007).

So it is identified a harmony between organizational components (*we and not me*), based on the activities in all directions in the network: top-down, bottom-up, horizontals, oblique, etc. and the end is collective, as a result of the *just culture*.

Public organization is, in the first place, humanist, the economy is available to human and not vice versa. The model used is the socio-economic one and not economic one (Roșca, Moldoveanu, 2008a, Roșca, Moldoveanu, 2008b).

ii) At the subcultures level we express our opinion about the transfer of subcultures from the private field towards the public one, the last one being expanding over many procedures in public administration.

So, the first subculture, which can be successfully taken for, is the network type – oriented towards professional task, organizational project, elements encountered in local and central administration practices. But network leaders, among it nodes, had to be identified with state integrity and intelligence that can not be generalized in public administration.

It there can also be build a Hofstede type subculture, in which a controlled individualism is accepted (the individuals’ welfare and not the society’s one). In the same context, excessive voluntarism and clan dependence are limited (Roșca, Moldoveanu, 2008b).

The power actions’ field should also be reduced in public administration; otherwise inefficacy and inefficiency appear, generating difficulties in this activity area.

Masculinity is also increasing in the public area (for example extension of the incentives’ system), otherwise we assist to the loss of authentic human values within the system.

iii) Finally we propose a better correlation between political culture and the public administration one (hiatus between the two of them is a dream) by improving dimensions resulted from the hierarchy-equality, freedom-coercion, loyalty - commitment, trust - distrust etc. (Moldoveanu, 2005).

* *

*

The suggested changes, with great effects over the organizational processes within public administration, can be realized only in case of using the directing or expert type strategies and not negotiating or participation type strategies. Referring to the Romanian organizations, the last two strategies are equivalent – in public administration area – with the loss of strategic direction and high period of achievement in the process of organizational changes, states that the current transfer towards market institutionalized mechanisms no longer accept, in terms of effectiveness and efficiency.

2. Organizational bureaucracy

The nowadays world is characterized by bureaucratic behavior in the vast majority of activity domains. This behavior has different intensities in private and in public field. Although grouping of organizations in private and public ones has a relatively low rationality, the bureaucracy reaches the maximum level in the public structures. Based on analysis, in this area we identified a system organization relying on strict rules, following the norm to the standard letter, excessive formalizing, reduced innovation and relative change, all these aiming an exact achievement of objectives (Moldoveanu, Pleter, 2007).

2.1. Current status: excessive bureaucracy

Based on the practical states, specific literature from Weber to Mintzberg and following the personnel enquiring within 50 public organizations, we conceptualized bureaucracy. The employees from the middle management and the first line management levels were asked to classify bureaucracy from step 1 to step 5 (step 1 meaning the excessive bureaucracy and step five meaning the non-bureaucracy).

So, the first axis means the activity based on formal rules and, at the opposite poll, is the one based on informal rules. The second axis has on an extreme part the excessive formalization, and, at the other part, reduced formalization. The third axis has as a starting point the reduced innovation, and, as a final point, the permanent (excessive) innovation. The fourth axis starts with multi-level (tall) organizational structures and ends with the organic (flat) one. The fifth axis, the organizational communication one, starts from the unidirectional type one and ends with the multidimensional one.

The full bureaucracy and the reduced/non-bureaucracy are described in Figure 3.

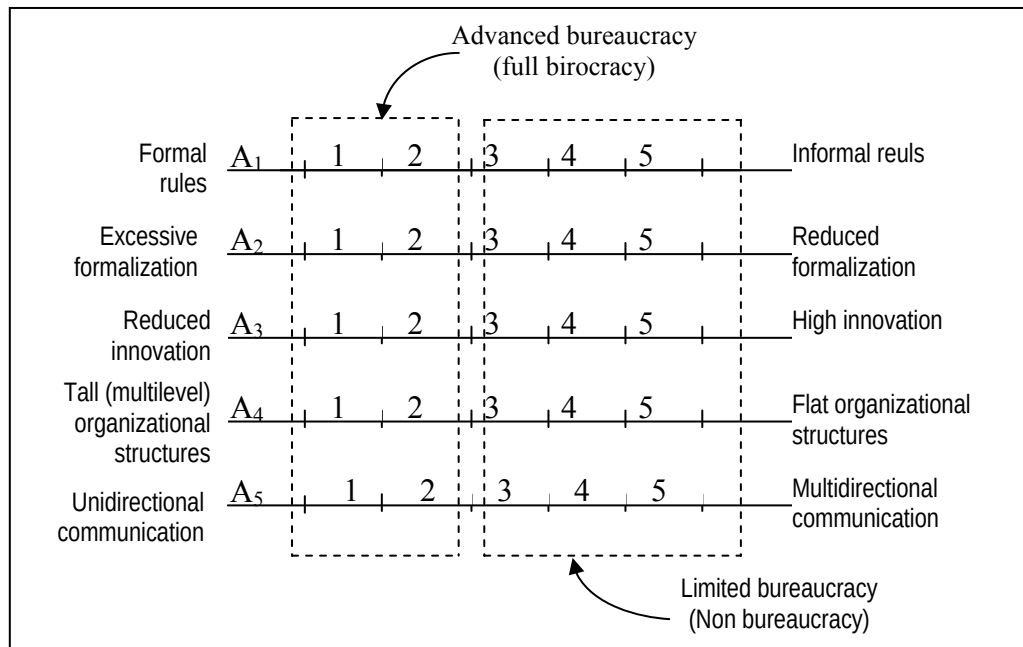


Figure 3. Bureaucracy inquiring

The excessive bureaucracy system has not an a priori conception, but it comes from the confluence of several essential states⁽¹⁾.

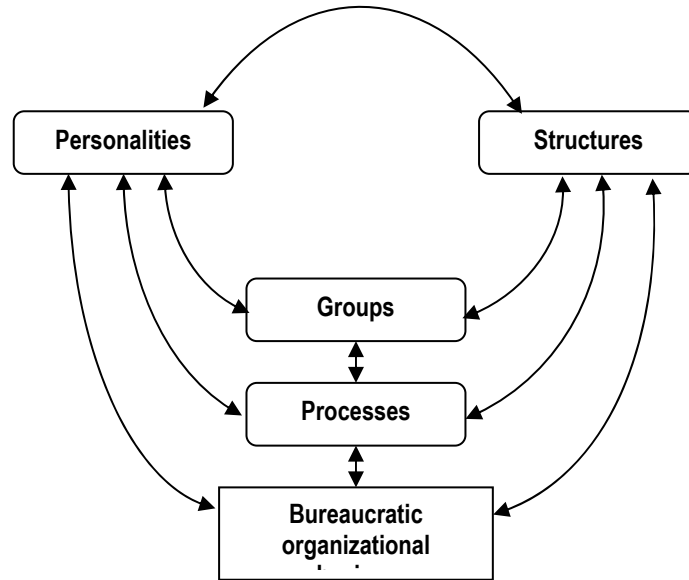
i) The behavior of public personalities and that of the direct subordinates, the technocrat type adhering to the oligarchy system, the essential values such as politics, hierarchy, excessive formalism, monopoly etc. Motivation is rather inhibited and some confusing and even wrong perceptions and attitudes may be found.

ii) The group behavior of public servants is described as meticulous but limited to an “educated incapacity”, intimidated and dominated by law; the leadership is stimulated as a trust force of the organizational development.

iii) Organizational structures are often mechanical, tall, multilevel, “reversed hierarchy pyramids”; job and work specifications run short of clear definitions.

iv) The organizational processes in the public sector rely on strict procedures, as a chain of highly specialized functional departments; the decision-making process uses a limited range of instruments, with particularly defined issues and invented solutions to match the interests of involved parties, based on negotiation and compromise.

The result is organizational behavior that is dominated by impersonal rational rules. The work specialization gets priority over value added goods, with a goal to implement legislation politics bottom lines, to increase the state power and interventionism etc. (Figure 4).



Source: Moldoveanu, G., *Economie teoretică și aplicată*, nr. 7/2007.

Figure 4. Bureaucratic process graphic

2.2. Proposed status

Based on the issues presented above, we create the concept of red tape bureaucracy limiting, smoothing it and not eliminating it. For this purpose we have elaborated a list of proposals:

1. Expanding the “business/firm model” over the “bureau model” in compliance with the particularities of the latter. The two models have a fundamental logic, namely equality between the demand and supply level. In bureaucratic processes, the cost of output is more than effective, that sentence is claimed by:

i) minimum marginal cost of output within the “*bureaucratic model*” $\left(\frac{\Delta c}{\Delta q}\right)$ is greater than the sponsored marginal value $\left(\frac{\Delta v}{\Delta c}\right)$ or put in a mathematical form: $\frac{\Delta c}{\Delta q} > \frac{\Delta v}{\Delta q}$.

ii) Also, marginal cost of the public goods/services is higher than the marginal profit resulted from the office activity $\left(\frac{\Delta \pi}{\Delta q}\right)$ or put in a mathematical form:

$$\frac{\Delta c}{\Delta q} > \frac{\Delta \pi}{\Delta q}.$$

2. “The Profit” (social expectations), as a general notion with a wider, represents the difference between allotted budget and the marginal costs of the public goods/services. Financially, the marginal profit achievement or overtaking demands new lines of action, which are being simulated in the bureaucratic process, such as:

- The introduction of a competitive system in any activity, together with a strong stimulation of the employees;
- Fundamental decisions taken according to the market demands, as the public sector in the broader sphere of all human activities;
- Modernization of the Strategic process, allowing for quality goods and services at prices/tariffs accepted by consumers, by identifying ways to relative reduce the costs.

3. The first way assumed for the benefit of consumers requires changing the organizational structures through the practice of organic flat structures, imposing for this purpose a permanent control of the bureaucratic system between the continuing increase of the number of managers/directors and the number of employees or of the second category and number of hierarchical levels, of course the issue is relative and not absolute; otherwise, the hierarchical pyramids are “eversed”

4. We also believe that in the same direction acts the use of specific business management tools, real delegation and empowerment – ways of limiting the bureaucracy that we have argued and described in the specific literature.

* *

*

The separate approach of the two dimensions that form the «active background» of the organizational processes, an issue not accepted by many public sector workers, but with major effects, may be replaced with a configuration type one, eliminating the concept of contingency-type, that was dumped more and more out of the current research.

We express our opinion that the two issues are mutually supportive, organizational culture tends to become organizational bureaucracy and vice versa.

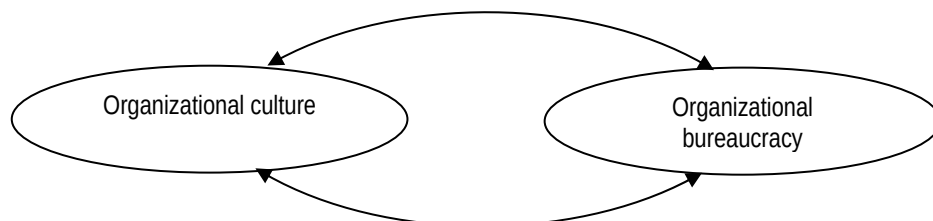


Figure 5. *The unity culture - organizational bureaucracy*

Culture and organizational bureaucracy form "the duplex" of all processes in public administration, in line with organizational structures and organizational behavior. In fact, the two form an entity, but analysts perceive them as separate dimensions.

Conclusions

A culture with a strong trend towards organizational excellence and a reduced bureaucracy are two basic ways to improve the performance of public organizations (Dawson, 1992).

Implementation of the two ways, so debated in the literature, can be achieved only in the context of organizational "reengineering", the step by step type one, which is difficult and lacking of experience in the public sector, for reasons such as the difficulty of measuring performance, rigidity of interdepartmental barriers, many administrators with a training policy but no one in public management, lack of strong competition, generalized, etc.

Once triggered, the reengineering will not be stopped, being the only way to a benefic state in the entire public sector.

Note

- ⁽¹⁾ See Moldoveanu, G., Pleter, O. (2007). *Atenuarea birocrăției/Shrinking bureaucracy*, Theoretical and Applied Economics nr. 7/2007, București, Editura Economică

References

- Dawson, S. (1992). *Analyzing Organizations*, Second Edition, Macmillian Press Ltd.
- Fabriciani, L. (2003). *Partecipazione Umana e Competitivita Aziendale*, Ed. Sperling & Kapfer Editori Italia
- Moldoveanu, G. (2005). *Analiză și comportament organizațional*, Editura Economică, București
- Moldoveanu, G., Pleter, O., „Atenuarea birocrăției/Shrinking bureaucracy”, *Theoretical and Applied Economics*, nr. 7/2007
- Moldoveanu, G., Roșca, I.Gh., Pleter, O., „Improving organizations by Replacing the “Mechanical” Model with the “Organic one”, *Informatică Economică*, nr. 2, 2007
- Roșca, I.Gh., Moldoveanu, G., „Measuring the Management Potential”, *Amfiteatru Economic*, nr. 26, 2008a
- Roșca, I.Gh., Moldoveanu, G., „The University – a Rational-Biologic Model”, *Theoretical and Applied Economics*, nr. 5, 2008b

Localization Factors and Inward Foreign Direct Investment in Greece

Nuno Carlos LEITÃO

Polytechnic Institute of Santarém, Portugal
nunocarlosleitao@gmail.com

Abstract. *This study examines the foreign direct investment (FDI) attractiveness for Greece as a host country in the period 1998-2007. The purpose of this paper is to analyze the impact of variables, such as market size, labour costs, trade openness, taxes, inflation and economic stability. The manuscript applies a panel data approach (Fixed Effects estimator and GMM system estimator). In contrast to previous studies, this paper used a dynamic panel data to solve the problems of serial correlation and endogeneity. The empirical results indicate that the market size, trade openness, and labour costs are significant factors to explain inward FDI to Greece. These results indicate that the FDI attracting will be influenced by market size. Our results also show that Greece has some problems of macroeconomic stability, which discourages the investors.*

Keywords: foreign direct investment; panel data; Greece.

JEL Codes: F21, F41.

REL Codes: 3D, 10F.

Introduction

The regional trade agreements (RTA) has contributed to an increasing globalization of world economy. To add to this, sum the process of internationalization and relocation of multinational enterprises into new markets. The World Bank (2002) refers three waves of globalization. The first came between 1870 -1915. The second wave occurred between 1945 -1980. The current wave began in the 1980s. Foreign direct investment (FDI) is having a crucial role in the global economy. According to UNCTAD (2006), FDI has increased in recent years to overcome the role of international trade.

These new changes in the global economy helped to reduce transaction costs and transportation. The liberalization of trade policies and the removal of some barriers led to the growth of FDI. Foreign direct investment (FDI) refers to a movement of capital that involves ownership and control.

As Rugman and Verbeke (2008) show, FDI is one channel for the globalization of word economy. Foreign direct investment is usually discussed in the context of multinational enterprise (MNE). The multinational enterprises pretend to acquire news markets, because these firms have specific advantages, or they want to acquire localization advantages (OLI paradigm – O: ownership, L: localization, I: internalization) (Dunning, 1992, Dunning, Lundan, 2008).

It should be noted that there are host countries that are more attractive to investors than others. In this context we can mention some disadvantages inherent in the operations of MNE such as transaction costs and transportation, macroeconomic problems (high taxation, high inflation). The political and social instability as bureaucracy and corruption discourage foreign investors.

This paper analyses the determinants of inward FDI in Greece for the period.

Literature review and empirical studies

In order to proceed a discussion on the determinants of FDI to a particular country, and analyze the barriers to FDI inflows in this section we present a survey of empirical studies.

According to the literature (Bitzenis et al., 2007, Louri et al., 2000), the FDI began in early 1950s. With the European Monetary Union (EMU) and the accession of Greece on January 1 2001 several structural reforms have occurred. Moreover, the Greek Government produces a number of reforms, including the telecommunications market, and the energy market.

Several empirical studies (Apergis, Katrakylidis, 1998, Filippaios, Kottardi, 2004, Psycharis Kokkinou, 2004, Pantelidis, Nikolopoulos, 2008) show that Greece has poor conditions of attractiveness for foreign investment. These studies show that high taxation and weak macroeconomic stability are the factors that prevent the establishment of investors.

The study of Bitzenis et al. (2007) applies a questionnaire to multinational companies that have invested in Greece during the period 1995-2003. The study demonstrates that investors chose Greece, because they considered that the conditions were met in terms of market (size), efficiency and resources.

The literature on FDI began in 1960s and 1970s with Hymer (1960), Kindleberger (1969), and Caves (1971). Dunning (1981) with the eclectic theory of FDI, suggested that internalization could explain the movements of MNEs. The author introduced the eclectic paradigm in 1992.

The OLI paradigm explains why the investors invest in host country. Ownership advantages could explain a free access to technology, new products. Firms have ownership characteristics (inputs) as in patents, brand, human resources, and financial assets.

Localization advantages are explained by the motivation of FDI. In this topic, we need to think about efficiency, that J. Dunning calls movement of production where there are lower inputs costs (outsourcing of production). The author also analyses the foreign market proximity (strategic asset-seeking). In this case Dunning explains the relationships between foreign market proximity and exports, or foreign market proximity and new production (i.e, if it is better to move production).

The economic factors, such as market size, its growth rate, labour costs, labour skills, per capita income, have been considered as explanatory variables in the econometric models.

Dunning (1993) shows three as the most common investment motivations (resource- seeking, market seeking, and efficiency-seeking).

The availability of natural resources (minerals) and the production costs cheaper are the main determinants of a host country.

Market-seeking investment is stimulated by factors such as income per capita, economic growth and economies of scale of the host countries.

The efficiency-seeking is explained by credible government policy to promote the attraction of FDI. Systems and political regimes, the cultural aspects are some of the factors that characterize it.

Recently the researchers of international foreign investment as in Pantelidis and Nikolopoulos (2008), Jeon and Rhee (2008), Maniam (2007), Skabic and Orlic (2007), and Rodriguez and Pallas (2008) explained the determinants of FDI by market size, labour costs, labour skills, openness risk, macroeconomic and political stability and other factors. Other variables such as Knowledge capital (Markusen, 2001), human capital (Sun et al., 2002), similar language and cultural levels (Dunning, 1981).

Pantelidis and Nikolopoulos (2008) investigate the FDI attractiveness for Greece as host country during the period 1976-2004. The study comes to

interesting conclusions. The proxies used for market size, technological capacity, human capital and labour costs are in line with theoretical predictions. However the study refers some barriers to investment attraction as inability governance, high taxes, problems in terms of infrastructure and macroeconomic instability. According to the authors it is necessary to reduce bureaucracy and corruption.

Jeon and Rhee (2008) analysed the determinants of Korea's FDI from US between the periods 1980-2001. The authors concluded that Korea's FDI inflows from the United States have a significant association with real exchanges rates, relative wages costs, and interest rate differentials using a pooled OLS estimation.

Maniam (2007) used an OLS estimator to analyse the determinants of FDI in Latin America for the period 1975-2003. The author concluded that FDI has increased rapidly in Latin America. According to Maniam (2007, p. 13) there are relationships between the economics variables and investors expectations, the latter on the host countries need to develop better their strategies.

Skabic and Orlic (2007) applied the fixed effects estimator from the period 1993 to 2005 for Central and Eastern European countries and Western Balkan counties. The work of Skabic and Orlic (2007, p. 348) demonstrates that Western Balkan countries should make additional efforts in order to cut corruption in their economies in order to become attractive to FDI.

Rodríguez and Pallas (2008) utilized a panel data to examine the determinants of FDI in Spain during the period 1993-2002. Rodríguez and Pallas (2008) consider that human capital and the export potential of the sector are the most important determinants.

The recent literature as in Naudé and Krugell (2007), and Alguacil, Cuadros, and Orts (2008) consider that foreign direct investment is a dynamic phenomenon.

Nudé and Krugell (2007) specify a dynamic panel data (GMM-DIF) proposed by Arellano and Bond (1991). The study of Naudé and Krugell (2007) demonstrates that African policy makers have been intensifying their attempts to attract FDI, researching into the determinants of FDI in Africa.

Econometric model

The dependent variable is Greek inward FDI. The explanatory variables are country-specific characteristics. The data for explanatory are sourced from Work Bank (2009), World Development Indicators. The source used for dependent variable, is inward FDI from OECD International Direct Investment Database.

Static and dynamic panel data models

The static panel data models were estimated with pooled ordinary least squares (OLS), fixed effects (FE) and random effects (RE) estimators. The F statistics tests the null hypothesis of same specific effects for all countries. If we

accept the null hypothesis, we could use the OLS estimator. The Hausman test can decide which model is better: random effects (RE) versus fixed effects (FE). For purposes of comparison with dynamic model, the FE model was selected because it avoids the inconsistency due to correlation between the explanatory variables and the country-specific effects. In the FE model, all explanatory variables are potentially correlated with the effects.

This manuscript estimates the dynamic panel data model using GMM-System estimator. The system GMM estimator (GMM-SYS) was proposed by Arellano and Bond (1995) and Blundell and Bond (1998, 2000), and Windmeijer (2005) to a small sample correction to have corrected standard errors of Blundell and Bond (1998, 2000) but correction the estimated standard errors using the Windmeijer correction. The GMM estimator permits efficient estimates to be obtained.

Explanatory variables

The paper uses the following explanatory variables in logs:

- *Market size*, LogGDP is the logarithm of the absolute value of Greek in GDP per capita (PP, in current international dollars). According to the literature (Pantelidis, Nikolopoulos, 2008, Naudé, Krugell, 2007, Maniam, 2007) we expected a positive sign.
- *Openness trade*, LogTRADE it is a proxy for trade openness. It is the logarithm of exports/GDP ratio. Pantelidis and Kyrkilis (1997), Skabic, Orlic (2007) found a positive sign.
- *Taxes*, LogTAXEs, is the logarithm of Greek taxes levels. The taxes levels of the host country manipulate the decision of foreign investors. According to the literature we expected a negative sign. The studies of Psycharis and Kokkinou (2004) and Pantelidis and Nikolopoulos (2008) reported that the Greek case has a high taxation.
- *Inflation*, LogINF, is the logarithm of Greek inflation rate. The inflation rate is used to measure the level of economic stability. The theoretical predictions give it a negative sign (Naudé, Krugell, 2007). However, previous studies (Apergis, Katrakylidis, 1998, Filippaios, Kottaridi, 2004) show that Greece has some problems of macroeconomic stability, which discourages the investors.
- *Real wages*, LogW, is the logarithm of Greek real wages. Countries with lower wages would attract more FDI. Pantelidis and Nikolopoulos (2008), Pantelidis and Kyrkilis (1997) found a negative correlation between labour costs and FDI.

Model specification

$$FDI_{it} = \beta_0 + \beta_1 \times X_{it} + \delta t + \eta_i + \varepsilon_{it} \quad (1)$$

Where FDI_{it} is the Greek foreign direct investment flows, X is a set of explanatory variables. All variables are in the logarithm form; η_i is the unobserved time-invariant specific effects; δt captures a common deterministic trend; ε_{it} is a random disturbance assumed to be normal, and identical distributed (IID) with $E(\varepsilon_{it})=0$; $Var(\varepsilon_{it})=\sigma^2 > 0$.

The model can be rewritten in the following dynamic representation:

$$FDI_{it} = \rho \times FDI_{it-1} + \beta_1 \times X_{it} - \rho \times \beta_1 \times X_{it-1} + \delta t + \eta_i + \varepsilon_{it} \quad (2)$$

Estimation results

In Table 1, we see the results with the fixed effects estimator. The explanatory power is very high (Adjusted $R^2=0.815$). All explanatory variables are significant with the exception of LogTAXES.

As expected the lagged dependent variable presents a positive sign, confirming the importance of FDI for the Greek economy.

Table 1

The determinants of foreign direct investment (FDI): Fixed Effects

Variables	Coefficient	Expected Sign
LogFDI _{t-1}	0.925 (3.476)***	(+)
LogGDP	6.269 (2.278)**	(+)
LogTRADE	11.206 (2.141)**	(+)
LogTAXES	-0.095 (-0.582)	(-)
LogINF	1.851 (1.716)*	(-)
LogW	-1.505 (-1.976)**	(-)
Adj. R ²	0.815	
Observations	210	

T-statistics (heteroskedasticity corrected) are in round brackets.

***/**/* - Statistically significant, respectively at the 1%, 5 and 10% levels.

The coefficient for market size (GDP) is positive and significant at the 5 per cent level. Pantelidis and Nikolopoulos (2008), Fotopoulos and Louri (2004) found a positive sign. This result shows that the FDI attracting will be influenced by market size.

The variable LogTRADE (trade openness) has a significant and positive effect on inward FDI. This result is according to the literature (Pantelidis, Kyrkilis,

1997, Louri et al., 2000). This result demonstrates that the trade partners and the openness of economy are an important vehicle to expand FDI. For the variable LogINF (inflation) that is used to evaluate the economic stability. The theoretical predictions give it a negative sign (Naudé, Krugell, 2007). However, previous studies (Apergis, Katrakyidis, 1998, Filippaios, Kottardi, 2004) show that Greece has some problems of macroeconomic stability, which discourages the investors. Our result is according with these previous studies.

The lower wages in Greece are an important factor to attracting FDI. As in Fotopoulos and Louri (2004), and Louri et al. (2000), we found a negative sign.

Table 2 presents the estimation using the GMM-system (GMM-SYS) estimator. The model presents consistent estimates, with no serial correlation (m1, m2 statistics). The specification Sargan test show that there are no problems with the validity of instruments used. The equation presents five significant variables (LogFDI_{t-1}, LGDP, LogTRADE, LogINF and LogW).

The GMM system estimator is consistent if there is no second-order serial correlation in the residuals (m2 statistics). The dynamic panel data are valid. We used the criterion of Windmeijer (2005) to small sample correction. The instruments in levels used are LogFDI(2,7), LogGDP (2,7), LogTRADE(2,7) for first differences. For levels equations, the instruments are used first differences all variables t-1. As expected, the lagged dependent variable is positive.

The variable, LogGDP (income per capita), used also by Pantelidis and Nikolopoulos (2008), has a significant and predicted positive effect on FDI.

Table 2

The determinants of foreign direct investment (FDI): GMM-SYS estimator

Variables	Coefficient	Expected Signs
LogFDI _{t-1}	0.709 (10.4)***	(+)
LogGDP	16.943 (1.70)*	(+)
LogTRADE	18.775 (1.95)*	(+)
LogTAXES	-0.065 (-0.526)	(-)
LogINF	3.362 (2.01)**	(-)
LogW	-2.637 (-1.99)**	(-)
C	0.188 (1.23)	
M1	-0.5514 [0.581]	
M2	0.1955 [0.845]	
Sargan	17.40 [1.000]	
Observations	168	

T-statistics (heteroskedasticity corrected) are in round brackets. The null hypothesis that each coefficient is equal to zero is tested using second -step robust standard error. T-statistics (heteroskedasticity corrected) are in round brackets. **, and * indicates statistically significance, respectively at the 5%,

and 10% level. P-values are in square brackets. Year dummies are included in all specifications (this is equivalent to transforming the variables into deviations from time means, i.e. the mean across the fourteen countries for each period). M1 and M2 are tests for first-order and second-order serial correlation in the first-differenced residuals, asymptotically distributed as $N(0, 1)$ under the null hypothesis of no serial correlation (based on the efficient two-step GMM estimator). Sargan is a test of the over-identifying restrictions, asymptotically distributed as χ^2 , under the null of instruments' validity (with two-step estimator). ***/** - statistically significant, at the 1% – 5% levels, respectively.

A study of Fotopoulos and Louri (2004) analyse the case of Greece also found a positive sign. The variable trade openness (LogTRADE) presents a positive effect on inward FDI. Pantelidis and Kyrkilis (1997), Louri et al. (2000) found a positive sign.

The variable, real wages in log (LogW) presents a negative sign, confirming the theoretical forecast proposed by the literature. Fotopoulos and Louri (2004) found a negative correlation between labour costs and FDI.

Conclusions

In recent years, there has been significance growth of FDI literature. The academics have been to explain the FDI inflows in context of host countries.

The objective of this study was to analyze some of the determinants of inward FDI in Greece. Comparing our findings with other empirical studies, we obtained similar results. Econometrics estimations support the hypothesis formulated. Our results are robust with Fixed Effects and GMM- system.

As our result show the FDI has a dynamic nature. In relationship to understand this phenomenon we applied a dynamic panel data and we compared the results with a static panel data. The lagged inward FDI variable presents an expected positive sign.

In view of the results, it would seem evident that economic policy in Greece orientated towards attracting FDI is an important factor.

The market size (LogGDP) has been statistically significant. This results is in line with those obtained by Fotopoulos and Louri (2004), Pantelidis and Nikolopoulos (2008).

The relative costs (real wages), which is a fundamental element of increased per-worker labour productivity, is also a significant determinant of inward FDI in Greece.

In addition to productivity, a further indicator of competitiveness is the openness trade, which reveals a positive impact on inward FDI.

The macroeconomic factors used that measure the situation of Greece (inflation) have been statistically significant and positive sign with different estimators (Fixed Effects, and GMM-SYS). This result indicates that Greece should reduce inflation as a way to attract more FDI. Our results validate the study of Pantelidis and Nikolopoulos (2008).

This study has however some limitations. In further research we need to include industry characteristics into the analysis in order to investigate the impact of industry – specific factors on inward FDI, and other control variables: language and cultural similarity, innovation and technology, and human capital.

In terms of economic policy recommendations, the government should control corruption as possible and reducing bureaucracy. These two factors are seen as barriers to investment. This recommendation has been reported in several studies (Pantelidis, Nikolopoulos, 2008, Aristidis et al., 2007).

References

- Alguacil, M., Cuadros, A., Orts, V., „EU Enlargement and Inward FDI”, *Review of Development Economics*, Vol. 12, 2008, pp. 594-604
- Arellano, M., Bond, S., „Some Test of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations”, *Review of Economic Studies*, Vol. 58, 1991, pp. 277-297
- Arellano, M., Bover, O., „Another Look at Instrumental Variable Estimation of Error-Components Models”, *Journal of Econometrics*, Vol. 68, 1995, pp. 29-51
- Apergis, N., Katrakylidis, C., „Does Inflation Uncertainty Matter in Foreign Direct Investment Decision? An Empirical Investigation for Greece, Spain, and Portugal”, *International Review of Economics and Business*, Vol. 45, 1998, pp. 729-744
- Bitzenis, A., Tsitouras, A., Vasileios, „Motives for FDI in Small EMU Member State: The case of Greece”, Vol. X, 2007, pp. 11-42
- Blundell, R., Bond, S., „Initial Conditions and Moment Restrictions in Dynamic Panel Data Models”, *Journal of Econometrics Review*, Vol. 87, 1998, pp. 115-143
- Blundell, R., Bond, S., „GMM Estimation with Persistent Panel Data: An Application to Production Functions”, *Econometrics Review*, Vol.19, 2000, pp. 321-340
- Caves, R., „The Industrial Economics of Foreign Investment”, *Economics*, Vol. 18, 1971, pp. 1-27
- Dunning, J., „Explaining the International Direct Investment Position of Countries: Towards a Dynamic Development Approach”, *Weltwirtschaftliches Archiv*, Vol. 119, 1981, pp. 30-64
- Dunning, J. (1992). *Trade, Localization and Economic Activity and the Multinational Enterprise: A Search for an Eclectic Approach*, in Dunning, J. (ed.) *The United Nations library on transnational corporations- the theory of transnational corporation*,1, New York: Routledge, pp. 183-218
- Dunning, J. (1993). *Multinational Enterprises and Global Economy*, Workingham: Addison- Wesley

- Dunning, J., Fortanier, F., „Multinational Enterprise and the New Development Paradigm: Consequences for Host Country Development”, *Multinational Business Review*, Vol.15, 2007, pp. 25-45
- Dunning, J., Lundan, M., „Institutions and the OLI paradigm of the multinational enterprise”, *Asia Pacific Journal of Management*, Vol. 25, 2008, pp.573-593
- Filippaios, F., Kottaridi, C., „Investments Patterns and the Competitiveness of Greek Regions”, *Review of Urban and Regional Development Studies*, Vol. 16, 2004, pp.93-112
- Fotopoulos, G., Louri, H., „Firm Growth and FDI: Are Multinationals Stimulating Local Industrial Development?”, *Journal of Industry, Competition and Trade*, Vol. 4, 2004, pp. 163-189
- Hymer, S. (1960). *The International Operations of National Firms: A Study of Direct Foreign Investment*, MIT Press, Cambridge, MA
- Kindleberger, C. P. (1969). *American Business abroad Six Lectures on Direct Investment*, New Haven: Yale University Press
- Jeon, B., Rhee, S., „The Determinants of Korea’s Foreign Direct Investment from the United States, 1980-2001: An Empirical Investigation of Firm-Level Data”, *Contemporary Economic Policy*, Vol. 26, 2008, pp. 118-131
- Louri, H., Papanastassiou, M., Lantouris, J., „FDI in EU Periphery: A Multinomial Logit Analysis of Greek Firms Strategies”, *Regional Studies*, Vol. 34, 2000, pp. 419-427
- MarKusen, J., „Contracts, intellectual property rights, and multinational investment in developing countries”, *Journal of International Economics*, Vol. 53, 2001, pp. 189-204
- Maniam, B., „An Empirical Investigation of US. FDI in Latin America”, *Journal of International Business Research*, Vol. 6, 2007, pp. 1-15
- Naudé, W., Krugell, W., „Investigation as Determinants of Foreign Direct Investment in Africa using Panel Data”, *Applied Economics*, Vol. 39, 2007, pp. 1223-1233
- Pantelidis, P., Nikopoulos, E., „FDI attractiveness in Greece”, *International Advances Economic Research*, Vol. 14, 2008, pp. 90-100
- Psycharis, Y., Kokkinou, A., „Foreign Direct Investment Regional Incentives and Regional A attractiveness in Greece”, *44th Congress of the European Regional Science Association*, 2004, Portugal: University of Porto
- Rodríguez, X., Pallas, J., „Determinants of Foreign Direct Investment in Spain”, *Applied Economics*, Vol. 40, 2008, pp. 2443-2450
- Rugman, A. (1980). *Multinationals in Canada: Theory, Performance and Economic Impact*, Nijhohff Publishing: Boston
- Rugman, A., Verbeke, A., „A New Perspective and the Regional and Global Strategies of Multinational Services Firms”, *Management International Review*, Vol. 48, 2008, pp. 397-411
- Skabic, I., Orlic, E., „Determinants of FDI in CEE and Western Balkman Countries (Is Accession to the EU important for Attracting FDI?)”, *Economic and Business Review*, Vol. 9, 2007, pp. 333-350
- UNCTAD (2006) *World Investment Report*
- Windmeiger, F., „A finite sample correction for the variance of linear efficient two-step GMM estimators”, *Journal of Econometrics*, Vol. 26, 2005, pp. 25-51
- World Bank (2002). *World Economic Report*

Knowledge Management – the Key Resource in the Knowledge Economy

George Ciprian GIJU

Valahia University of Targoviste
ciprian_giju@yahoo.com

Leonardo BADEA

Valahia University of Targoviste

Víctor Raúl LÓPEZ RUIZ

University of Castilla La Mancha

Domingo NEVADO PEÑA

University of Castilla La Mancha

Abstract. *The influence of global information and communication technology changes and globalization have transformed our society by favoring the economy and innovation as key driver of global competition. Creation and exploitation of knowledge has become key resource in the new economy. All advanced economies are technologically knowledge-based economy. Many of today's managers and their employees, still guided by the definition given by Francis Bacon (1597) “Knowledge is power” instead of “sharing and managing knowledge is power”. Knowing taken alone may not bring value if not shared before and then managed in an efficient manner. This article seeks to demonstrate what knowledge, what the knowledge management is and what are its main implications in the new economy, a knowledge-based economy.*

Keywords: knowledge; knowledge management; knowledge worker age; knowledge economy; MERITUM project.

JEL Codes: M12, M54.

REL Codes: 12C, 18D.

1. Introduction

The appearance of the new economy has been observed since 1969 when Peter Drucker has provided arrival “knowledge worker age” (1969, p. 264) in his book “The Age of Discontinuity”. He had to wait another 30 years until the new economy for the term to be recognized. Expressions as knowledge, knowledge society, new economy or knowledge economy show that the importance of knowledge gained in our time are the main propellant of competitiveness and creating wealth in the company. The evolution from the agricultural age to the industrial one is now very easy to understand. Instead, what is now happening in the new economy has an incredible impact in the process of evolution. New economy – the knowledge economy – changes everything.

In the new economic context, knowledge management is a new discipline but that is the key resource for competitive devein. There is no clear consensus on how this discipline can be defined, but generally can be understood as responsible for designing and implementing a system that aims to identify, capture and share knowledge in a systematic way within an enterprise as that it can be converted into value for it. Broadly speaking, knowledge becomes an enterprise value when it contributes positively to the objectives pursued by the company itself.

It is not hard to see that knowledge management presents special importance in business. Since the nineties, a significant number of businesses throughout the world, especially multinationals, have been involved in this field considering knowledge management as a measure to improve performance.

2. Knowledge

Knowledge was originally recognized in the sixteenth century by the philosopher Francis Bacon (1597), who said “knowledge is power”. Today there are being rewriting the rules of business is forcing a reorganization of corporate models of value. It became a very important factor in current economic life, an essential asset that adds value in the future through good management and cannot be left aside.

The first concept is necessary to clarify what is meant by knowledge. Notwithstanding the philosophical depths, which would give rise to yet another article, knowledge in an organization occurs when a person makes use of what he knows and the information it has available to solve a problem or to develop a project. Knowledge is all that people know and can exist also in organizational processes, products, services, facilities and systems but can only obtain value

through people. Most important property of knowledge is one that is renewable - not deplete the use and value along with results from transmission and management.

A traditional point of view is the knowledge power in a hierarchical structure: data, information, knowledge and wisdom.

Data represents the first form of information and have no significance. It may exist in any form and may be useful or not. Data could be converted into information using five main processes (Davenport et al., 1998):

- Condensation – items of data are summarized into a more concise form and unnecessary depth is eliminated;
- Contextualization – the purpose or reason for collecting the data in the first place is known or understood;
- Calculation – data is processed and aggregated in order to provide useful information;
- Categorization – a process for assigning a type or category to data;
- Correction – a process for removal of errors.

The information represents grouped data, sorted and classified which were given a meaning through relational connections. This significance may be useful or not. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport et al., 1998).

Information becomes individual knowledge when it is accepted and detained as a closed compression to the truth and a valid interpretation of reality. Organization knowledge or social knowledge exists when it is accepted by consensus of a group of people. Common knowledge should not necessarily be shared by all members to there being sufficient acceptance among a group of people informed.

If we use this knowledge in the most optimal manner, we will find the wisdom (science).

For Nonaka (Nonaka et al., 2000, p. 12), knowledge creation is related to the use of language and communication. Thus, under this, there are two types of knowledge: tacit knowledge and explicit knowledge. Explicit knowledge is objective and relational knowledge that can be expressed through a formal and systematic language with words, numbers, formulas, etc. Tacit knowledge is personal and difficult to formalize and refers to knowledge that an individual, community, organization or country has incorporated it in his mind, in culture and is very difficult to explain.

SECI Process

	Tacit	to	Explicit
Tacit	Socialization		Externalization
to			
Explicit	Internalization		Combination/mixing

Source: Nonaka, 2000, p.12

SECI process, as named by Nonaka, is composed of four modes of knowledge conversion: socialization, externalization, combination and internalization.

Socialization is the process shares experiences and creating thus tacit knowledge (knowledge of individuals consisting of discernment, belief, understanding and intuition, implicit knowledge, deeply personalized and diffused present in the organizational context). An individual may acquire tacit knowledge of another individual without using language. Imitation is the means of socialization training.

Externalization is the process of converting tacit knowledge into explicit knowledge (formal knowledge, accessible, relatively easily transmitted between individuals and groups) by using metaphors, analogies and models. Externalization of tacit knowledge is the most important activity related to the creation of knowledge, but also the most difficult.

Combination/mixing is the process of creating explicit knowledge by merging knowledge from different sources. Thus, individuals change and combine their explicit knowledge by converting telephone meetings. Information which exists in the databases can be processed to produce new explicit knowledge.

Internalization is the process of inclusion of the explicit knowledge in tacit knowledge. This is facilitated if individuals can re-experience the experience of others, indirectly.

In the knowledge creation company, these four models of knowledge conversion work in a dynamic interaction, in a species of knowledge spiral.

3. Knowledge management

Knowledge has always been managed, but not how it is done today, and probably its management will improve in the near future but should not be made at the individual but at the corporate level. Neither knowledge nor management are new concepts, but this joining “knowledge management” (Barreiro, et al., 2000, p. 617) or as Barreiro said “Corporate knowledge

management” may be considered a new concept. Adding the term “corporate” is, in Barreiro’s views, fundamental – it is personal knowledge management, but it tends to turn into collective knowledge.

To be effective, businesses need to effectively manage the knowledge that can be found in “workers and its management, in its suppliers, relations with other companies in the sector, in its own information systems, the customers, etc.” (Sánchez et al., 1999, p.188).

Even if there have been made many studies concerning knowledge management, until now there is no definition generally accepted. Knowledge management “is not something else than the information fluxes management, bringing the correct information to the persons that need it” (Gates, 2000) or it can be seen as “the art to create value from intangible assets” (Sveiby, 1996).

Knowledge management can be defined as an approach, targeted strategic, of motivation and facilitation of the employment of members in the development and using their cognitive capacities, through valorization, subordinated to its overall objectives, sources of information, experience and abilities of each of them (Uit, 1999, p. 94).

Knowledge management as sub-discipline of the new concept of knowledge economy is a method, a new concept of management that seeks transformation of the intellectual qualities of the staff of an organization with competitive power and new value (Shanhong, 2000, p. 1). Concentrating on the use of professional intellect in activities which use individual and external knowledge, knowledge management provides value to organizations, and customize them.

Going beyond simple assembly and manipulation of data to obtain information, process knowledge management refers to the acquisition, creation, preservation and application or reuse of knowledge, its primary objective is harnessing the resources of knowledge and understanding the capacity of the organization to give it the opportunities to learn and adapt to its changing environment (Auster, 1999, p. 75).

4. Methods for measuring knowledge

In the management literature there have been proposed and used many methods to identify structure and measure knowledge. In the management literature there have been proposed and used many methods to identify, structure and measure knowledge, but most important to remember the classification of the assessment methods proposed by Sveiby (2001):

1. *Methods of exchange capitalization (Market Capitalization Methods – MCM)* are those methods that calculate the difference between the stock

exchange capitalization of the company and the book value of equity as the value of intangible assets of the firm.

2. *Assessment methods based on the profitability of assets (Return on Assets Methods - ROA)* are those that determine the value of the intangible assets on the basis of average profitability of the feature. Thus, the average profit of the company before tax is related to the value of the tangible assets, determining the ROA (assets profitability) which is compared to the average of the sector. The profit of the company obtained from intangible assets possession is estimated by multiplying the difference between the two rates with average value of the tangible assets of the enterprise. The present value of all future profits represents the intangible assets value held by it.

3. *Methods for estimating Scorecard (SC) and direct methods to estimate the intellectual capital (Direct Intellectual Capital Methods - DIC)*. Given that both groups of methods are involving the evaluation of the intangible assets by identifying each component, making a classification of them, we will deal with them at the same time because several times the limits between the two are not clearly defined. First are most often used to identify the qualitative performance factors and the calculation of its indicators. These indicators are more used in order to manage on medium and long-term not for estimating intangible assets value owned by it. Direct methods assess directly intangible assets, individually or as an aggregated coefficient. Among them we remember: Balanced ScoreCard (Kaplan and Norton), Skandia Navigator (Edvinsson), Intellect (Euroforum), Intangible Assets Monitor (Sveiby), Technology Broker (Brooking), Meritum Project. In the following we will make a brief description of the model Meritum Project and its objectives.

MERITUM Project

Meritum project (Measuring Intangibles to Understand and Improve Innovation Management) is the result of a research project funded by the EU under the “Targeted Socio-Economic Research (TSER)” and has the objective of enhancing skills for political decisions in EU European field of science, technology and innovation constitute a substantial basis for reliable. The project objectives were (Meritum, 2002):

- Development of a classification of intangible assets;
- Identify and analyze patterns in European firms applied for measuring intangible assets;
- Analysis the effect of not used – intangible assets to determine the market value of firms and potential benefits of information on intangible assets.

Develop general guidance for the measurement of intangible assets and presentation of information about them;

- Contrast of the validity of such general guidance to those who develop and make use of this information;
- Make conclusions and suggestions for developing accounting policies.

The model propose classification of intellectual capital in:

- Human Capital, which is that part of intangible assets departing at the end of working day from the organization.
- Structural capital means that part of intangible assets remaining after the workers leave after a working day.
- Relational capital, which is the value of the relationship between business and various economic and social agents with which it is interacting.

The information provided by this model can be used both internally and externally. Publication of information on intellectual capital is, in this case, the result of intellectual capital management which consists of three defined phases:

- Intangible assets identification;
- Measurement;
- Monitoring and control.

The first phase is to identify intangible assets to achieve strategic objectives of the enterprise.

In the second phase, once identified critical assets and fixed assets and causal relations between them, it is passed to each intangible asset measurement by means of specific indicators to be relevant, reliable and comparable.

In monitoring and control phase it is being evaluating the intangible assets state, the intellectual capital management system is being consolidated and integrated into the overall business management.

In January 2002 it was published the final document entitled “Guidelines for Managing and Reporting On Intangibles (Intellectual Capital Report)” which contains the main conclusions after three years of research.

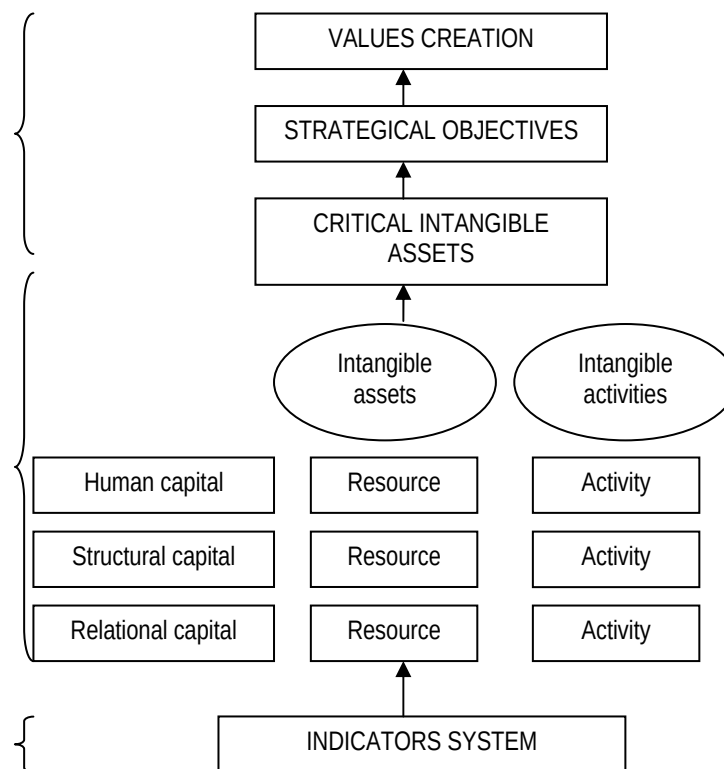
The project proposes a Knowledge Resources Report through which are published company relevant information on its intangible assets. The general scheme for this presentation is shown in the following figure.

The scheme includes the three parts that the report must include:

- Company’s vision: there are presented the main objectives and strategies and also the critical intangible assets which must be made, developed or maintained in order to accomplished the proposed objectives.

- A resume of intangible resources and activities: there are described the intangible resources of the company and the different finalized activities and also the ones that will be finalized in the future in order to rise the value of the resources.

A system of indicators of intangible resources and activities to enable providers of goods, services, capital of the company to develop a firm estimate of future benefits and possible risks.



Source: Viedma, 2003, p. 122.

Figure 1. The scheme presentation of Knowledge resources report

Although it is a statement on intellectual capital in an organization, it is often used the term of knowledge resources, the concept of intellectual capital and intangible resources appearing very rarely in all document content. These knowledge resources are classified into four categories:

- Employees - this component includes the skills of employees, their experience, their motivation, commitment to the company, willingness to adapt.

- Customers - this component refers to relationships that an organization is developing with users and customers, satisfaction and loyalty, recommendations they make about the organization, ability to understand their needs and the level of cooperation between organization and client in order to develop products and processes.
- Processes - refers to knowledge that is explicit in the form of organizational procedures and routines.
- Technology - refers to technology support to other elements. Usually involve IT systems (software and hardware) and intranet, the degree of IT complexity, IT skills and utilization grade.

The report on the resources of knowledge proposed by Meritum refers to the same period as the current financial statements and may be presented together at the same time with them.

Conclusions

The new economy – knowledge economy – requires new forms of measuring a company's assets, taking into account that future benefits will be derived primarily from capitalization of intangible assets such as knowledge, and not the tangible ones. Knowledge management was always an important part of management in general, although he has not been taken into account under this name. In fact, knowledge management is a very difficult area to study. There is no consensus and even less certain generally accepted standards.

The creators of Meritum method have realized that the importance of knowledge management is very high and that there is no accepted method to measure these assets. The method focuses its development in getting answers to business issues to achieve its strategic objectives, and through them to create value for shareholders in the company.

Knowledge management is, ultimately, management of intangible assets that generate value for the organization. Most of these intangible assets are related to a form of abstraction, structure and knowledge transfer. Organizational learning is the main instrument of knowledge management. Organizational learning, knowledge management and intellectual capital measurement are related and complementary concepts. In short, organizational learning is the base of knowledge management and knowledge management is the basis which generate intellectual capital.

Recommendations

- Introduction of a generally accepted model for measuring and managing knowledge resources in the world and create the necessary accounting frame in order to make comparisons.
- Promote the development of new complementary information systems for knowledge management – alternative accounting.

References

- Bacon, F. (1597). *Religious Meditations, Of Heresies*
- Barreiro, F., Díez de Castro, J., Redondo Lopez, Carmen, Lopez Cabarcos, Maria (2000). *Administración de empresas. Dirigir en la sociedad de conocimiento*, Ediciones Pirámide, Madrid
- Gates, B. (2000). *Business @ the Speed of Thought: Succeeding in the Digital Economy*
- Bontis, N. „Assessing Knowledge Assets: A review of the models used to measure Intellectual Capital”, 2000, in:
http://business.queensu.ca/knowledge/frameworkpapers/framework/fp_00-01.pdf,
 [consultat in data de 15.01.2010]
- Davenport, Th.H., Prusak, P., „Working Knowledge: How Organizations Manage What They Know”, *Harvard Business School Press*, Boston, 1998
- Drucker, P. (1969). *The Age of Discontinuity*
- Ethel, A., Chun Wei Choo (1995). *Managing Information for the Competitive Edge*, New York, Neal Schuman. Apud Seonghee Kim, „The roles of knowledge professionals for knowledge management”, *65th IFLA Council and General Conference*, Bangkok, 1999
- Giju, G.C., „The new values of the knowledge economy”, *The annals of Valahia University of Targoviste*, 2009
- Kaplan, R.S., Norton, D.P. „El cuadro de mando integral - The Balanced Scorecard”, *Gestión 2000*, Barcelona, 1997
- Nonaka, I., Toyama, R., Noboru, K. (2000). *SECI, Ba and Leadership: a United Model of Dynamic Knowledge Creation*
- Shanhong, T., „Knowledge Management in Libraries in the 21st Century”, *66th IFLA Council and General Conference*, Jerusalem, 2000
- Sánchez, M. Paloma, Chaminade, Cristina, Escobar, Carmen, Gloria „Looking for a Theory on measurement and management on intangibles: a methodological approach”, 1999
- Sveiby, K.E. (1996). *What is Knowledge Management*
- The MERITUM PROJECT în: www.meritum.es/Investigacion/Proyectos.html, consultat in data de 15.01.2010
- Uit Beijerse, R.P., „Questions in knowledge management: defining and conceptualising a phenomenon”, *Journal of Knowledge Management*, 1999
- Viedma, J.M., *Revista Economía y Empresa*, nr. 48, 2003

Accounting System in Croatian Public Healthcare Organizations: an Empirical Analysis^(*)

Davor VAŠIČEK

University of Rijeka, Croatia

dvasicek@efri.hr

Gorana ROJE

The Institute of Economics, Zagreb, Croatia

groje@eizg.hr

Abstract. *In considering the adequacy of adopting accruals and IPSASs, this paper tests the appropriateness of existing modified accrual accounting and financial reporting system in Croatian public healthcare sector. The paper indicates that accounting information system contains discrepancies and constraints in assuring true and fair view of organization's financial position and performance. Our statistics confirms low level of cost and managerial accounting methods development, and external and internal financial reporting convergence.*

Having in mind its specificities, we argue that Croatian public healthcare sector represents a segmental accounting subsystem within the integral public sector accounting framework, where accruals implementation might prove justifiable.

Keywords: public healthcare; government accounting; financial reporting; empirical analysis: Croatia.

JEL Codes: H83, I18.

REL Code: 14I.

* This paper is the result of the research funded by the Ministry of Science, Education and Sports, Croatia, as a part of two scientific projects: (1) No. 081-0811272-1274, titled *Koncepti i metode financijskog računovodstva u javnom sektoru Republike Hrvatske* (engl. *The concepts and methods for public sector financial reporting in Croatia*), (2) No. 067-0811272-1074, titled *Perspektive primjene upravljačkog računovodstva u javnom sektoru Republike Hrvatske* (engl. *The perspectives of the managerial accounting implementation in Croatian public sector*). The first draft of this paper was presented at the 12th Biennial CIGAR (Comparative International Governmental Accounting Research) Conference, Modena, Italy, May 2009, and has not been published.

1. Introduction

Since the 1980s there has been a radical wave of organisational, managerial and accounting reform in the public sector of many countries and jurisdictions (Barton, 2004). The New Public Management has played a dominant role in this reform (Hood, 1995). It has implied managing based on using economic regularities and market efficiency principles, and has been expected to increase accountability and to improve management tools (Azuma, 2003, Azuma, 2005). Since information is the most important resource needed in the managing process, a development of a comprehensive accounting information system, fostered by the accruals introduction, is regarded as crucial for successful public management performance (IFAC, 2003, Vašiček, 2004).

The circumstances such as an insufficient amount of budgetary resources for financing increasing public needs as well as greater readiness and promptness of the State regarding cooperation with private entrepreneurs as subcontractors with an aim to learn from their experience have influenced the start of the process of implementing economic legalities and good manner practice into the public sector where market criteria of doing business and measuring performance have not been implemented so far (Roje, 2007, Roje, 2008, Premchand, 1993). As a part of the NPM drive the implementation of market efficiency principles, good governance practice and business-style (accrual) accounting and reporting practices for governments has been aimed at achieving greater budgeting transparency. It has been argued that accruals would match the real economic costs with outputs achieved, allowing for a better evaluation of performance (Evans, 1995). Following the principle that “you can only manage what you can measure”, the whole of the assets and liabilities would start being measured and disclosed. Thus, they would become more manageable (Slamet, 1998).

As referred in IFAC Study 12, “the value of the resources used or sacrificed in relation to any particular cost objective is usually derived from the financial accounting system for two basic reasons: the greater understanding of cost data which is consistent with financial accounting data, and the cost efficiency of generating the cost data based on or integrated with an existing system of accounting” (IFAC, 2000, p. 23). We deem the implementation of cost and managerial accounting necessary, regardless of having the budget passed on accrual or cash basis. In case the budget is passed on accrual basis, the information on costs serves for comparing planned and actual amounts, while in case the budget is passed on cash basis, having information on costs means assuring certain additional information regarding the budgetary funds’ allocation, budgetary funds’ control, and funds’ increase or decrease. The fact is

that the information regarding costs has not been used sufficiently in Croatian government accounting system (Vašiček, 2006). This is due to the fact that governmental accounting information system has been greatly regarded as administrative – oriented and its managerial impact has been disregarded. The reason for this we find in that the governmental accounting information system's structure and contents has been viewed more in function of State's budget goal achievements and not in function of achieving greater management efficiencies and hence better outcomes (Roje et al., 2008). Consequently, the instructions for budget planning do not present, nor demand costs' models, in terms of mandatory procedures development. Referred to this, using costs is partial and more on a voluntary basis.

Introducing accruals in governmental financial reporting in addition enhances the development of cost accounting and managerial accounting instruments within the public sector. A large portion of existing literature has been devoted to the managerial impact of public sector accrual accounting (PSAA) implementation, stating that PSAA would improve managerial decision making by giving managers a new set of information which was not previously available to them under cash-based accounting (Christensen, 2007, Vašiček, 2004, Vašiček, 2000).

Despite the lack of the economic initiative, in terms that the State does not expect the return of the allocated funds to conduct different programs, the program outcomes measurement is deemed inevitable in order to have efficient budget planning and control over the costs. Therefore, implementing cost information when evaluating the program would enable public management to decide upon authorization of the program, the potential extension of the program, chances for upgrading it or to decide not to continue with that program. Evaluating the program means evaluating the activities of government entities that run the program and that are accordingly accountable for efficient use of resources and for achieving satisfactory results. Insufficient use of cost and managerial accounting information would therefore decrease the quality of such decisions, and public administration (public management) would have to bear the economic and financial consequences of such decision. Evaluation would therefore consist of gathering input costs and outcomes measurement in terms of measuring the quality of the service provided and whether the consumers/citizens are satisfied with the service provided or not. Combined with continuous reporting and additional commentary on output and performance indicators, this could increase parliamentary scrutiny (Likierman, 2000).

Eager to predict how the NPM reforms and more precisely the governmental financial accounting reforms may evolve, the academia has questioned whether the accrual accounting can contribute to modernising and

efficiently managing the government (Burns, Scapens, 2000, Christensen, 2007, Monsen, Nasi, 2000, Premchand, 1994). For the last decade accrual accounting has been presented as the reform for public sector accounting and the basis for the wider New Public Management reforms, and, according to some authors, as the basis for public sector marketisation (Barton, 2005, Wynne, 2007, etc.). In fact, the adoption of accrual accounting and budgeting systems has been central to the program of Commonwealth Public Sector reforms over the past 20 years (Guthrie, Parker, 1998, Wanna et al., 2000). The first stage of accruals introduction in the UK that lasted till mid 1990s referred to introducing accruals accounting in local government, central/regional government agencies and National Health Service. While Luder and Jones (2003) argue that the trend towards introducing accrual accounting in general government sector is likely to continue over the next years, Christiaens and Rommel (2008) argue that accrual accounting will only succeed in the coming years in businesslike (parts of) government.

The purpose of this research is to discuss the accruals implementation as a part of the public sector accounting reform in Croatia. In our opinion, taking into account the necessity of gradualism and cost and benefits assessment from introducing accruals into government accounting on national level, segmental approach might be the optimal choice. As in many countries, public healthcare sector represents a very important *segment* of Croatian general government sector. As prominent rise of the costs in the healthcare sector evoked a need to find ways to produce services more effectively and at lower costs, an array of literature on pricing and cost control, and accounting in general, in the public health care sector emerged (Finkler, 1994, Finkler, 2001, Hankins, Baker, 2004, Hyvonen, Jarvinen, 2006, Young, 2003). In fact, having in mind the specificities of Croatian public healthcare sector (its' financing model, service complexity and asset structure) we argue that Croatian public healthcare sector might represent a segmental accounting subsystem where accruals implementation could prove justifiable.

Following the introduction, this paper proceeds with some reflections on the development and specificities of Croatian public healthcare sector and its accounting/financial reporting system. The third part of the paper lays out research questions and research design. It also presents the results of testing the adequacy of the existing public healthcare sector accounting system. We examine the quality of the existing financial reporting practise as well as the results of examining the accountants' and financial managers' perceptions regarding the importance of cost and managerial accounting methods' implementation in assuring better decision making. Lastly, the concluding remarks summarise the main findings and lay out our further intentions regarding research on this paper's topic.

2. The development and specificities of croatian public healthcare sector accounting system

Ever since 1991, when Croatia gained independence, much effort has been placed towards establishing a public expenditures' financing model and towards changing the accounting and financial reporting systems. Since the year of 1993, the Croatian governmental accounting system has progressed from pure cash accounting practice period, that was soon after replaced with modified cash basis (that manifested in longer fiscal year period), towards the implementation of modified accrual basis in financial reporting that started in the year of 2002 (that manifested in accounting for bigger array of transactions on accrual basis), as a part of the accounting system reform. The choice and obligatory aspects of cash basis appliance was based upon the fact that all information contained in the financial statements should serve primarily as a qualitative basis for the budget execution and liquidity control. Such a system was perceived as an integral system of the State Treasury, as an administrative organisation in the Ministry of Finance, for the purpose of managing public expenses.⁽¹⁾

Prior to implementing modified cash basis accounting, fund accounting that served the nonprofit organizations was implemented in the public healthcare sector too, with a prior purpose to show through the financial statements how the public money had been spent. The use of fund accounting has often been a topic of debate in the accounting profession which has questioned its usefulness, particularly in the standard-setting process. In Croatia, fund accounting system in Croatian public healthcare sector was abolished after just one year of having been implemented in practice, due to the fact that it had not been systematically and expertly founded and conducted. Nevertheless, costs and damages of its implementation were never estimated. Implementing modified cash accounting represented the next development phase and it referred to the following:

- Revenues were generally recognized when the criteria of revenues being realizable (availability criterion) and appreciable are satisfied. The availability criterion refers to revenues being recognized when it is likely that they will be collected (recovered) within 20 days after the reporting period.
- Regular expenditures were recognized in the period they were incurred, under the condition that they were settled within 20 days after the reporting period, the latest.

The need for considering such a system as a part of an integral modern governmental accounting information system emerged. Consequently, on the

path of acknowledging the modern international trends of public expenditures' comparability and transparency, which started in recent decades worldwide, new governmental accounting system based on modified accruals was established in Croatia in the year of 2002. According to Vašiček, V. (2004), the new system implies the following:

- All general government entities (central and local government and their component entities) are obligated by the law to apply governmental accounting and financial reporting model.⁽²⁾ The fact that all entities within general government are obligated to do so assures complete accounting and reporting on general government activities.
- Unified chart of accounts and consistent appliance of rules for recording cash transactions and economic events are regulated by the law as well. This assures standardized information base for conducting additional data analysis when needed.
- As regards information on budget (budget planning and budget execution), accounting and financial reporting, the appliance of organizational, economic, functional, location and program classifications of the budget is obligatory.
- Entities that apply government accounting are obligated to make periodical and annual financial reports.
- There is the obligation for consolidated semi-annual and annual settlement of budget accounts of the Republic of Croatia.

In addition to the above-mentioned, the public healthcare sector finance reform commenced, in a way that the Croatian institute for health insurance began to be financed from the Central budget. Thus, it was not treated as the extra budgetary fund anymore. This change in financing implicated that all public healthcare institutions, financed through Croatian institute for health insurance as their agency got the general government entity (unit) status (Maletić, Jakir Bajo, 2006). However, even though organizational, economic, functional, location and program classifications have been applied in Croatian government accounting system, public healthcare institutions have not been financed according to particular expenditures classes of the adopted financial plan (Zovko, Čulig, 2004). What makes them in fact specific is that public healthcare institutions get financed on a basis of a service provided, within the boundaries of their contract with the Croatian institute for health insurance. The reform resulted with Croatian public healthcare sector accounting system being based on modified accrual accounting basis. The distinguished features of the existing accounting model are as following:⁽³⁾

- Expenses regarding the fixed assets supply are not capitalized but rather treated as expenditure in full when obtained. This further implies that assets are not being depreciated annually, based on the estimated assets usage period.
- Regular expenditures and liabilities are recognized on accrual basis.
- Revenues are generally recognized when cash/cash equivalents are received.
- Revenues and expenditures that result from the change in non-financial asset and liabilities value are not recognized.
- Capital support (subsidies) revenues (those of the central or local State) for financing investment activities are not reported as public capital nor are they deferred in time. They are, however, recognized as revenues in a period when they were realized/ earned.

As for the financial reports, public healthcare institutions have been obligated to make balance sheets, reports on revenues, expenses, cash receipts and expenditures, reports on changes in assets' and liabilities' volume, and notes as the supplement records which follow up the financial statements.

Overall, the result of the process of moving from fund accounting towards the modified accrual accounting was a set up of a unified and standardized general government accounting system, that has shown in practice not to represent the best accounting solution for all public sector segments, just as the move to full accrual accounting in Croatian general government sector is more than just a matter of time. Accountants and financial managers within public healthcare sector have been expressing their discontent regarding the complex external financial reporting system ever since it has been implemented, addressing in particular the difficulties in capturing all the economic and financial categories that consequently diminish the verity and impartiality of financial reports.

3. Testing the adequacy of the existing public healthcare sector accounting system

3.1. Research design

In the course of considering the possibilities of adopting the International Public Sector Accounting Standards (IPSASs) in national government accounting system, we examine the accountants' perceptions of the adequacy and appropriateness of existing modified accrual based accounting and financial reporting system for Croatian public healthcare sector. Having in mind the sector's specificities discussed in chapter 2, we argue that such a system has shown discontinuity, and we discuss whether precisely Croatian public

healthcare sector, which represents a very important *segment* of the general government sector, might represent a segmental accounting subsystem where accruals implementation could prove justifiable.

We deem our survey of the accountants' and financial managers' perception of the existing financial reporting system quality and of the level of cost and managerial accounting methods' development, as an outset in justifying the need for improving and developing the existing government accounting model, in public healthcare sector in particular.

3.1.1. Sample selection

Data were collected by means of a self-administrated questionnaire. Respondents to our survey are broadly representative of 36 Croatian hospitals that represent the most complex and the most important segment of the public healthcare sector. Precisely, this study sought the views of people involved in preparing the financial reports (e.g. accountants, financial managers). The first mailing of the questionnaire encompassed 67 Croatian hospitals, and it resulted in our receiving 27 completed surveys. Later, we mailed the survey again to all non-respondents. Our total sample of 36 respondents represents 53.73% of all targeted respondents.

Since Croatian hospitals represent the most complex and the most important segment of public healthcare sector and since they form a homogenous set regarding the way of conducting their operations and their information needs, we use the targeted questionnaire to allow for the objective result analysis. We did not use the random sample method for it would decrease the representatives of the sample, because certain more simplified systems face less information constraints of the accounting system. In addition, from the public healthcare financial management macro point of view, hospitals' expenditures represent the most complex and the most expensive public healthcare segment. Thus, the effectiveness and the economy of Croatian hospitals reflect the quality of the whole public healthcare system. The majority of the respondents have accountancy and finance qualifications as well as several years of accounting or financial expertise, in the public healthcare sector. Thus, the perceptions of the respondents should have credibility.

3.1.2. Survey instrument

The questionnaire consisted of 58 questions and was divided into two main parts. The first part referred to the financial accounting and reporting system, containing 32 questions, while the second part referred to the cost and managerial accounting methods' development and their implementation in public healthcare organizations, containing 26 questions. Further, the first part

of our survey consisted of two parts – financial accounting and financial reports. Therefore, 18 out of 32 questions were used to examine the appropriateness of financial accounting to the healthcare organizations' needs, while an additional 14 questions surveyed the preparers' perceptions of the financial reports' quality. The questions from the first part of the questionnaire either asked the respondents to select one response or to rank specified items on a scale of 1 to 5.

The second part of the questionnaire aimed at seeking the accountants' and financial managers' views regarding the use of cost and managerial accounting methods in terms of better and targeted accounting information use.

3.2. Research questions, hypotheses and results

As discussed above, this paper lays out two broadly-stated research questions:

RQ1: Is the existing modified accrual based accounting and financial reporting system adequate and appropriate for Croatian public healthcare sector?

RQ2: Is the use of cost and managerial accounting methods in assuring better decision making on a satisfying level?

RQ1 has been broken down into two areas: (rq1a) testing if the accounting information system assures true and fair view of public healthcare organization's financial position and performance, and (rq1b) examining the preparers' perceptions of the financial reports' quality. Results of RQ2 have been broken down into three parts with the aim to provide some evidence on: (rq2a) respondents' views regarding planning, accounting and controlling for costs, (rq2b) determining the price of the service provided, and (rq2c) the outcomes and performance management.

3.2.1. Survey on the adequacy of the accounting system

This part of the research addresses the issue of the adequacy and the appropriateness of existing modified accrual accounting and financial reporting system for Croatian public healthcare sector. Therefore, the following hypothesis was made:

Hypothesis 1: The existing government accounting information system is not appropriate for satisfying the needs of objective accounting for public healthcare organizations' operations and performance.

We find several specific questions in the questionnaire important for confirming the first hypothesis and these will be discussed hereafter.

Regarding the question that asked the respondents if the government accounting model which was introduced in 2002 has brought advantages that would satisfy their reporting needs, 22 of them (61%) have not found that the government accounting model, introduced in 2002, has brought advantages that would satisfy their reporting needs. Such result can be explained by the fact that the accounting model based on modified cash accounting, which had been used prior to developing the existing accounting model, had not allowed the negative financial score. Thus, despite that the positive financial score had not been regarded as being the objective one, the top level management judgements concerning the performance achieved had been more favourable. The poor results, however, had remained hidden under the non-settled liabilities that, according to the cash accounting principles, had not been recognized as expenses.

Question which asked the preparers whether they found the existing accounting system adjusted towards gathering the financial reports for the external users was answered negatively by 67% of the respondents. This might be due to the main disadvantage of the existing accounting model in that it does not enable linking the revenues and expenses of the same period since the revenues are not recognized when earned but when cash/cash equivalents are received. Such explanation is supported with the respondents' answers to the following question:

- “Public healthcare organizations’ revenues are recognized on cash basis. Such approach:
 - 1) truly reflects the total revenues formation
 - 2) underestimates the truly earned revenues in comparison to the revenues recognized
 - 3) no point of view. “

The majority of the respondents (94%) have agreed that the existing accounting model underestimates truly earned revenues in comparison to the revenues recognized.

We also find the following two questions highly relevant in testing the first hypothesis:

- “Do you find that it would be better for the purpose of disclosing true and fair operations’ results that the expenses regarding the fixed assets supply are not treated as expenditure in full when obtained but rather capitalized, and that the assets’ depreciated amounts based on the estimated assets usage period are recognized annually?”

- “The net fixed assets value in your organizations’ balance sheet is:
 - 1) underestimated
 - 2) overestimated
 - 3) true/real”.

The fact that 58% of the respondents reported that it would be better for the purpose of disclosing true and fair operations’ results that the expenses regarding the fixed assets supply are not treated as expenditure in full when obtained but rather capitalized, and that the assets’ depreciated amounts based on the estimated assets usage period are recognized annually, as well as the fact that 69% of the respondents found the net fixed assets value to be underestimated under the existing accounting model, support the first hypothesis. Referred to the all above mentioned questions, we conclude that the first hypothesis has been confirmed. Other respondents’ views regarding the questions asked either support or they do not dispute the first hypothesis and therefore are not deemed crucial to be discussed.

3.2.2. Survey of the perception of the quality of financial reporting

This part of the research addresses two hypotheses made.

Hypothesis 2: The basic financial statements disclose certain discrepancies and contain constraints in assuring true and fair view of public healthcare organization’s financial position and performance.

Hypothesis 3: Preparing financial reports serves primarily for fulfilling legal reporting obligations and for monitoring financial constraints set by the financial plans, and secondarily for efficient management policy control and for making the comparison with other similar organizations.

We find several specific questions in the questionnaire important for confirming the abovementioned hypotheses and these will be discussed hereafter. For the purpose of testing the second hypothesis three questions are emphasised, as follows:

- “Do the basic financial statements prepared in your organization disclose true and fair view of organization’s financial position and performance?
 - (1) Yes, (2) No, (3) Mostly yes, (4) Mostly no”.
- “Do you find the information presented in financial statements sufficient for evaluating the management performance in your organization?
 - (1) Yes, (2) No, (3) Mostly yes, (4) Mostly no”.

- “The contents, structure and dynamics of financial reports for external users have been regulated by The Policy of financial reporting in the budgetary system. Do you find such contents and structure appropriate for the public healthcare organizations’ needs?
(1) Yes, (2) No, (3) Mostly yes, (4) Mostly no”.

When considering respondents’ views on whether the basic financial statements prepared disclose true and fair view of organization’s financial position and performance, 19% of the respondents thought that the financial reports enabled true and fair view of organization’s financial position and performance; 25% of all respondents answered that financial reports mostly enabled true and fair view of organization’s financial position and performance; 33% did not think that financial reports enabled true and fair view of organization’s financial position and performance, and 22% mostly disagreed that financial reports enabled true and fair view of organization’s financial position and performance.

Since we regarded this question as a highly important one, we approached the statistics testing regarding the main sample proportion. This meant that we conducted the analysis by forming two groups of answers, equalising the yes and mostly yes answers and no and mostly no answers. Our statistics confirmed the second hypothesis that the basic financial statements disclose certain discrepancies and contain constraints in assuring true and fair view of public healthcare organization’s financial position and performance. This conclusion was based on the fact that the proportion of the organizations in main sample with respondents’ answers yes or mostly yes, was smaller then the proportion of the organizations with respondents’ answers no or mostly no, as shown hereafter.

$$H_0 \dots p = 0,61$$

$$H_1 \dots p \neq 0,61$$

Test and CI for One Proportion

Test of $p = 0.61$ vs $p \text{ not} = 0.61$

Sample	X	N	Sample p	95% CI	Z-Value	P-Value
1	16	36	0.444444	(0.282, 0.606)	-2.04	0.042

$$H_0 \dots p = 0,71$$

$$H_1 \dots p \neq 0,71$$

Test and CI for One Proportion

Test of $p = 0.71$ vs $p \text{ not} = 0.71$

Sample	X	N	Sample p	95% CI	Z-Value	P-Value
1	20	36	0.555556	(0.393, 0.717)	-2.04	0.041

Results of the other two aforementioned questions referring to testing the second hypothesis were rather similar to the first one. Precisely, 58% of the respondents did not find the information presented in financial statements as being sufficient for evaluating the management performance in your organization, while only 8% of all respondents deemed the financial reports' contents and structure has been appropriate for the public healthcare organizations' needs.

In order to test the third hypothesis we sought the respondents' perception of the purpose for preparing financial reports. Namely the following question was addressed to them:

- "According to your knowledge based on your management requests, what is the reason that your management deems the regulated financial reporting system to be important?"

The respondents had to scale all four answer choices on a scale of 1 to 5, and the results are shown in table 1.

Table 1

"According to your knowledge based on your management requests, what is the reason that your management deems the regulated financial reporting system to be important?"

Various answer choices provided by the authors	Number of the respondents' answers				
	1	2	3	4	5
a) For efficient management policy control	3	6	16	7	4
b) For monitoring the financial plan realization	0	3	5	10	17
c) For comparison with other similar organizations	4	16	7	8	1
d) For satisfying the legal reporting obligation	0	1	4	9	22

Having conducted the Sign test we determined that 50% of all respondents consider that preparing the regulated financial reports is medium important or important for efficient management policy control.

$$H_0 \dots \eta = 3$$

$$H_1 \dots \eta \neq 3$$

Sign Test for Median: « efficient management policy control »

Sign test of median = 3.000 versus not = 3.000

N	Below	Equal	Above	P	Median
36	9	16	11	0.8238	3.000

We conducted the same test for the purpose of being able to examine the importance of other answer choices that we wanted the respondents to scale from 1 to 5. Tests have shown that satisfying legal reporting obligation was regarded as the most important reason for preparing financial statements. Further more, financial plan realization monitoring turned out to be highly

important reason too, while conducting comparisons against other similar organizations as the reason for regarding the financial reporting system to be important, was deemed as marginal. We therefore confirm our third hypothesis that preparing financial reports serves primarily for fulfilling legal reporting obligations and for monitoring financial constraints set by the financial plans, and secondarily for running the management policy and for making the comparison with other similar organizations. The statistics supporting our discussion is as follows:

$$H_0 \dots \eta \leq 4$$

$$H_1 \dots \eta > 4$$

Sign Test for Median: « monitoring the financial plan realization »

Sign test of median = 4.000 versus > 4.000

N	Below	Equal	Above	P	Median
35	8		10	17	0.0539 4.000

$$H_0 \dots \eta \geq 3$$

$$H_1 \dots \eta < 3$$

Sign Test for Median: « comparison with other similar organizations »

Sign test of median = 3.000 versus < 3.000

N	Below	Equal	Above	P	Median
36	20		7	9	0.0307 2.000

$$H_0 \dots \eta = 5$$

$$H_1 \dots \eta \neq 5$$

Sign Test for Median: « satisfying the legal reporting obligation »

Sign test of median = 5.000 versus not = 5.000

N	Below	Equal	Above	P	Median
36	14		22	0	0.0001 5.000

In addition, this study also sought the views of accountants and financial managers regarding the quality of information in financial statements, based on four criteria: reliability, relevance, validity and comparability. Several questions asked the respondents to rank specified items on a scale of 1 to 5. These are shown in the following four tables - tables 2 to 5.

Table 2

“Information presented in financial statements are *reliable* in that they enable that your financial position and results are understandable:”

Various answer choices provided by the authors	Number of the respondents' answers				
	1	2	3	4	5
a) For the Management	1	1	19	10	5
b) For external users	5	8	14	6	2

Table 3

“Information presented in financial statements are relevant for they enable taking into account the important passed, current and future events:”

Various answer choices provided by the authors	Number of the respondents' answers				
	1	2	3	4	5
a) For the Management	0	3	18	9	6
b) For external users	3	7	19	6	1

Table 4

“Information presented in financial statements are *valid* in that they do not capture any relevant mistakes and preconditions, but they are fairly presented, neutral and complete:”

Scale	1	2	3	4	5
Number of the respondents' answers	0	4	14	16	2

Table 5

“Information presented in financial statements are *comparable* in that they enable comparisons with other entities in your industry and the comparisons in time series:”

Scale	1	2	3	4	5
Number of the respondents' answers	0	1	19	14	2

Referred to answers provided in tables, we can conclude the following:

- The majority of the respondents deems information presented in financial statements as *reliable*, meaning that the information enables the management to understand the organizations' financial position and results, but are not reliable as for the external users are concerned.
- The majority of the respondents regard information presented in financial statements as not being *relevant* for the majority of managements in the analysis and for the external users, for considering the important passed, current and future events.
- The majority of the respondents deem information presented in financial statements as valid in that the information do not capture any relevant mistakes and preconditions, but they are fairly presented, neutral complete:
- The majority of the respondents regard information presented in financial statements as *comparable* in that the information enable comparisons with other entities in the industry and the comparisons in time series.

3.2.3. Testing the level of cost and managerial accounting information use

As aforementioned the second part of the questionnaire aimed at seeking the accountants' and financial managers' views regarding the use of cost and

managerial accounting methods in terms of better and targeted accounting information use. We aimed to provide some evidence on: respondents' views regarding planning, accounting and controlling for costs, determining the cost of the service provided, and the outcomes and performance management. The following hypothesis is also the last hypothesis tested in our study.

Hypothesis 4: The level of cost and managerial accounting methods development in public healthcare organizations is rather low.

In order to test the forth hypothesis we sought the respondents' perception of cost and managerial accounting methods implemented and applied in practice for internal accounting and reports' needs. The question that was addressed to them and their answers based on ranking the items on a scale of 1 to 5 are shown in Table 6.

Table 6

“To what extent has your organization applied some of the following cost and managerial accounting instruments for the internal accounting and reports' needs?”

Various answer choices provided by the authors	Number of the respondents' answers				
	1	2	3	4	5
a) <i>Planning, accounting and controlling for costs</i>	1	1	6	13	15
b) <i>Determining the price of the service provided</i>	2	17	7	4	6
c) <i>Outcomes and performance measurement</i>	1	11	12	7	6

The results illustrated in Table 6 were tested using the Wilcoxon Signed Rank test. The statistics result is provided below.

$$H_0 \dots \eta \leq 3$$

$$H_1 \dots \eta > 3$$

Wilcoxon Signed Rank Test: *Planning, accounting and controlling for costs*

Test of median = 3.000 versus median > 3.000

N

for	Wilcoxon	Estimated
N	Test Statistic	P Median
35	29 406.5	0.000 4.000

$$H_0 \dots \eta = 3$$

$$H_1 \dots \eta \neq 3$$

Wilcoxon Signed Rank Test: *Determining the cost of the service provided*

Test of median = 3.000 versus median not = 3.000

N

for	Wilcoxon	Estimated
N	Test Statistic	P Median
36	29 197.0	0.665 3.000

$$H_0 \dots \eta = 3$$

$$H_1 \dots \eta \neq 3$$

Wilcoxon Signed Rank Test: *Outcomes and performance measurement*
 Test of median = 3.000 versus median not = 3.000

N				
for	Wilcoxon	Estimated		
N	Test	Statistic	P	Median
37	25	198.5	0.339	3.000

Based on our statistics, we lay out the following conclusions:

- The majority of the respondents states that planning, accounting and controlling for costs are very important or the most important item, and is used in their organizations.
- Views concerning the relevance and appliance of determining the cost of the service provided are split.
- Views concerning the practice of outcomes and performance measurement are split.

3.2.3.1. *Planning, accounting and controlling for costs*

However, for a more complete consideration of the respondents' perceptions of the cost and managerial accounting development, we need to discuss several other questions from a self-administrated questionnaire. The following question showed interesting results.

- "For the purpose of planning, accounting and controlling for cost, the cost in your organization are disclosed:
 1. according to the organizations' Chart of accounts
 2. according to organizational units or other cost locations
 3. according to cost drivers".

Namely, 42% of the respondents chose item number 1, 58% chose item number 2, and not even one respondent chose item number 3, which means that the practice of planning, accounting and controlling for costs according to the cost drivers has not been implemented. Having in mind that 80% of the respondents stated that salaries take from 50% up to 80% of the total costs, we can conclude that at least 50% and up to 80% of the total costs are not allocated to cost drivers but only to cost location (e.g. departmental unit). Material costs, on the other hand, form around 50% of the total costs, and the majority of the respondents' (above 50%) replied that cost in their organizations are disclosed according to the cost location, while 39% of the respondents replied that their

organizations disclose costs according to both, the cost location and cost drivers (e.g. service type). When discussing the allocation of the indirect costs, our statistics shows that 47% of the respondents have used direct method, 38% have combined the direct and indirect method, while 14% of them have used the indirect method only.

3.2.3.2. Determining the price of the service provided

This part of our research encompasses seven questions within the questionnaire. Among other things, we asked the respondents about their revenues structure, about the way the cost/price of the service provided is calculated and whether the price of the service covers the generated costs. We find that public healthcare organizations are dominantly financed based on the contract they have with the Croatian institute for health insurance. According to the majority of the respondents it is the Croatian institute for health insurance which sets the price of the service. Perhaps, the most interested question referring to this part of the research would be the following:

- “Does the price of the service cover the costs generated when providing the service, when fixed asset depreciation amount is included?”

Not to our surprise, 78% of the respondents answered “no”, the others answered either yes or they did not analyse the price/costs ratio.

3.2.3.3. Outcomes and performance measurement

This part of our research encompasses eight questions within the questionnaire. The majority (94%) of the organizations included in the analysis confirmed to have conducted the outcomes measurement. Both, outcomes and performance measurement related to the services provided are conducted within 17 out of 36 organizations in the analysis, while 24 out of 36 organizations conduct outcomes and performance measurement related to the finance resources. However, these just mentioned indicators have to be regarded as rather relative prior being taken into account the criteria used when performing the outcomes and performance measurement. Precisely, 67% of the respondents state that they conduct the measurement based on gathered knowledge and experience, 1% based either on the intuition or based on some quantitative methods. Cost accounting in measuring the performance regarding the services provided is used in only 12% of institutions captured in our analysis.

4. Concluding remarks

A belief that public and private sectors did not have to be managed in fundamentally different ways fostered the already started harmonization of national and international public sector accounting systems and their convergence towards the private sector financial reporting standards. The status and development of governmental accounting at the international level has strongly encouraged the accruals implementation, which has been followed by the movement of complying with IPSASs. We start from the concept that preparing and presenting information about the general government sector entities should be transparent and internationally comparable. Thus in the course of considering the adequacy and possibilities of accruals and IPSASs adoption in national government accounting system, we test the appropriateness of existing modified accrual based accounting and financial reporting system for Croatian public healthcare sector.

The prime purpose of our study is to investigate the quality of the existing financial reporting system in public healthcare organizations. We used a self-administrated questionnaire to seek the views of accountants and financial managers in hospitals that represent the most complex and the most important segment of Croatian public healthcare sector. The results referring to respondents' perception of the adequacy of financial accounting and the quality of external financial reports indicate that accounting information system contains constraints in assuring true and fair view of organization's financial position and performance. According to the questionnaire results, legal reporting obligation and financial plan realization monitoring turned out to be the most important reasons for using the financial reporting system, followed by the weak use of accounting information for successful managing of the activities, while conducting comparisons against other similar organizations were deemed as marginal.

In addition, we surveyed the level of cost and managerial accounting information use. The statistics regarding perceptions of the respondents concerning the level of cost and managerial accounting methods' development, confirms the unjustifiably low level of cost and managerial accounting methods development. While the majority of the respondents perceive cost planning and cost control to be important, they do not place much concern on instruments (e.g. examining the price-costs ratio and output based performance measurement). It is our opinion that the constraints found in assuring true and fair view of organization's financial position and performance can be removed/improved by using the information that results from developing and implementing cost and managerial accounting methods. Therefore, improving

the level of external and internal reporting convergence is deemed necessary.

The results of this study have relevance to all users of financial statements and in particular to accounting professions engaged in public sector accounting information system set of reforms, in their effort to upgrade and advance the existing financial reporting system by implementing accruals in selective accounting/financial reporting subsystems within the integral public sector accounting framework. Such a system should assure the integral information base that would enable efficient use of public goods and the existence of accountable financial management.

In our opinion, a unified and standardized general government accounting system based on modified accruals does not represent the best accounting solution for all public sector segments. Also, the transition to full accrual accounting in Croatian general government sector is complex and more than just a matter of time, and is not probable to be adopted by all general government entities at once. In fact, taking into account the necessity of gradualism in introducing accruals into government accounting on national level, we opt for a segmental approach as the optimal choice.

Having in mind the specificities of Croatian public healthcare sector, we argue that Croatian public healthcare institutions might represent a segmental accounting subsystem where accruals implementation could prove justifiable. Our survey of the perception of accountants and financial managers in public healthcare organizations about the quality and appropriateness of the existing financial reporting system represents a step further in examining and justifying the need and possibilities for accruals implementation in public healthcare accounting system. Testing the accrual based accounting model, its quantitative and qualitative advantages when compared to the existing modified accrual based financial reporting system in public healthcare organizations, as well as the possibility of its direct and objective influence on enhancing a transparent and efficient public management, will be the subject of our future research.

Notes

- (1) Accounting and financial reporting for Croatian general government sector is enacted by Uredba o računovodstvu proračuna (Narodne novine br. 94/04, 108/96) /engl. Decree on government accounting (Croatian national gazette, No. 94/04, 108/96).
- (2) The term „component entities“ refers to departments, boards, agencies, commissions etc.
- (3) Adopted and adapted from Vašiček D. (2007), *Državno računovodstvo u funkciji odlučivanja javnog menadžmenta*, doktorska disertacija, Ekonomski fakultet u Rijeci.

References

- Azuma, N., „The Role of the Supreme Audit Institution in NPM: International Trend”, *Government Auditing Review*, Vol. 10, March 2003, pp. 85-106
- Azuma, N., „The Role of the Supreme Audit Institution in NPM: The Trend of Continental Countries”, *Government Auditing Review*, Vol. 12, March 2005, pp. 69-84
- Barton, A., „How to Profit from Defence: A Study in the Misapplication of Business Accounting to the Public Sector in Australia”, *Financial accountability and Management*, Vol. 10, No 3, 2004, pp.174 – 193
- Barton, A., „Issues in Accounting and Budgeting by Government”, *Agenda*, Vol. 12, No. 2, 2005, pp. 211-226
- Burns, J., Scapens, W., „Conceptualizing Management Accounting Change: an Institutional Framework”, *Management Accounting Research*, Vol.11, No. 1, 2000, pp. 3-25
- Christiaens, J., Rommel, J., „Accrual accounting reforms: only for businesslike (parts of) governments”, *Financial Accountability and Management*, Vol.24, No. 1, 2008, pp. 59-75
- Christensen, M. (2007), „From cash to accrual: an organizational learning perspective on its managerial impact”, *11th CIGAR Biennial Conference*, Coimbra: 14-15 June 2007, Portugal
- Evans, M., „A Change for the Better?”, *Accountancy*, Vol.115., 1995, pp. 92-95
- Finkler, S.A. (1994). *Issues in cost accounting for health care organisations*, 2nd.ed. Maryland, USA: An Aspen Publication
- Finkler, S.A. (2001). *Financial management for public, health and not-for-profit organisations*, 2nd.ed. New Jersey, USA: Prentice-Hall Inc.
- Guthrie, J, Parker (1998). *Managerialism in the Marketisation in Financial Management Change in Australia*, In: Olson, O., Guthrie, J., Humphrey, C. (eds.) *Global Warning! Debating International Developments in New Public Management*, Cappelen Akademisk, Forag, Bergen, Norway
- Hankins, R.W., Baker, J.J. (2004). *Management Accounting for Health Care Organizations – Tools and Techniques for Decision Support*, Boston: Jones and Bartlett publishers
- Hood, C., „Emerging Issues in Public Administration”, *Public Administration*, Vol. 73, 1995, pp.165-183
- Hyvonen, T., Jarvinen, J., „Contract - based budgeting in health care – a study of the institutional processes of the accounting change, *European Accounting Review*, Vol. 15, No. 1, 2006, pp. 3-36
- IFAC-PSC. (2000). *Study 12 – Perspectives on Cost Accounting for Governments*, New York: IFAC
- IFAC-PSC. (2001). *Study 13 – Governance in the Public Sector*, New York: IFAC
- IFAC-PSC. (2003). *Study 14 – Transition to the Accrual Basis of Accounting*, New York
- Likierman, A., „Changes to Managerial Decision - Taking in the U.K. Central Government”, *Management Accounting Research*, Vol. 11, No. 2, 2000, pp. 253-261
- Lüder, K., Jones, R (eds.) (2003). *Reforming Governmental Accounting in Europe*, Frankfurt am Main: Fachverlag Moderne Wirtschaft
- Maletić, I., Jakir Bajo I., „Posebnosti poslovanja u djelatnosti zdravstva”, *Riznica*, Br. 6, 2006, HZRIFD
- Premchand, A. (1993). *Public Expenditure Management*, Washington: IMF

- Premchand, A. (1994). *Toward Effective Government Accounting*, Washington: IMF
- Roje, G., The Role of Accrual Financial Reporting and Budgeting Basis in Public Sector Financial Management Reforms: Croatian Experience and International Trends, In: *Proceedings of the 8th International Conference "Improving business reporting: new rules, new opportunities, new trends"*, 24-25 November, 2006, Novara, Milan: GIUFFRÉ EDITORE, pp. 489-516
- Roje, G., „Novi javni menadžment: koncept suvremenog upravljanja u javnom sektoru”, *Riznica*, br. 12, 2008, str. 53-61, HZRI F Zagreb, Croatia
- Roje, G., Vašiček, V., Vašiček, D., „Development of Governmental Accounting”, *Proceedings of the 12th World Congress of Accounting Historians – Accounting History and Culture: From the Past to the Present*, 21-24 July, Istanbul, 2008, Istanbul: Association of Accounting Historians and Finance Academicians (AAFA), pp. 2253-2570
- Slamet, D., „Looking the Best Practise: Taking a Broad View”, *Australian CPA*, 1998, pp. 60-62
- Uredba o računovodstvu proračuna (Narodne novine br. 94/04, 108/96)
- Vašiček, D., „Učinci izbora računovodstvenog koncepta na kvalitetu financijskih izvještaja proračuna, magistarski rad”, 2004, Ekonomski fakultet Rijeka
- Vašiček, D., „Državno računovodstvo u funkciji odlučivanja javnog menadžmenta, doktorska disertacija”, 2007, Ekonomski fakultet u Rijeci
- Vašiček V., „Perspektive primjene načela nastanka događaja u proračunskom računovodstvu”, 2000, U: *Zbornik referata XXXV. Simpozija Hrvatske zajednice računovođa i financijskih djelatnika* (Croatian Association of Accountants and Financial Experts) Zagreb, Croatia
- Vašiček, V., „Stanje i pravci razvoja računovodstva proračuna, U: *Zbornik radova 39. simpozija Hrvatske zajednice računovođa i financijskih djelatnika: Financijski i računovodstveni aspekti korporativnog upravljanja u profitnim i neprofitnim subjektima*, 20-22 svibanj, 2004, Pula, Zagreb: HZRF D
- Vašiček V., „Stanje i pravci primjene računovodstva troškova u javnom sektoru”, *Riznica*, No. 4, 2006, HZRI F, Zagreb, Croatia
- Wanna, J., Kelley, J., Forster, J. (2000). *Managing Public Expenditure in Australia*, Allen & Unwin, Sydney
- Wynne, A., „Is the Move to Accrual Based Accounting a Real priority for Public Sector Accounting? ”, *Public Fund Digest* (I), Vol. VI, No 1., September 2007
- Young, W. D. (2003). *Management Accounting in Health Care Organizations*, San Francisco: Jossey-Bass
- Zovko, V., Čulig, J., „Utjecaj modela financiranja u zdravstvu na upravljanje troškovima zdravstvenih ustanova”, U: *Zbornik radova 39. simpozija, Hrvatske zajednice računovođa i financijskih djelatnika: Financijski i računovodstveni aspekti korporativnog upravljanja u profitnim i neprofitnim subjektima*, 20-22 svibanj, 2004, Pula, Zagreb: HZRF D

Keynesian Substantiation of the Marketing Policies in Local Development

Lucica MATEI

National School of Political Studies and Public Administration

lmatei@snsps.ro

Stoica ANGHELESCU

National School of Political Studies and Public Administration

anghelescustoica@primariabr.ro

Abstract. *The local development means the existence of several goods and services and their performance, expressed through adequate marketing policies, thus determining the overall development performance.*

The paper approaches the economic fundamental issues of local development and in this context it determines the basic components of public service marketing, relevant for local development: price, multiplier of revenues/expenditures, respectively the export multiplier.

Those elements will express the ratios between resources and outcomes and their balance is based on a Keynesian model in an open economy.

Keywords: local development; public marketing; Keynesian approach.

JEL Code: H71.

REL Codes: 13C, 14G, 14K.

Introduction

The Keynesian approach, at the level of a local economy, „is identical to the simplest version of the Keynesian model within an open economy, the only difference being that all variables refer to the local economy, instead of the national one” (Constantin, 2004, p. 85).

The field literature comprises general approaches on modelling the local development (Matei, Anghelescu, 2010, Klein, Welfe, Welfe, 2003), systemic approaches (Matei, 2008) or statistic modelling (Matei, Anghelescu, 2010).

In that sense, this study is focused on the cumulative effects of stimulating the demand and the public investments, by combining the following elements:

- *subsidizing* the least competitive sectors, in order to ensure an acceptable local level of revenues and of the demand;
- *direct productive investments* in the creation of state enterprises or in the participation of the state to the social capital of private companies;
- *public investments in infrastructure*, in view of attracting potential investors, often from outside the borders of the respective territorial-administrative unit.

The approach to this type of development highlights, on the one hand, the fact that *industrial enterprises are the axis of local development*, and, on the other hand, the fact that success can be rarely reached by only one isolated company.

The capacity of modern firms arises from competitive grouping or co-operation, a phenomenon which favours the reaching of higher levels of efficiency and flexibility, otherwise rarely accessible to isolated producers.

1. The keynesian model of local development

1.1. Building and defining the model

The Keynesian model of a local economy is represented by the relations of causality among variables which are influencing one another in ensuring the economic equilibrium on the market of goods or services.

By economic equilibrium we understand the moment when the real demand for goods or services (D) equals the offer of goods or services (Y), an expression which may be written as:

$$Y=D \text{ (the equilibrium condition on the market of goods or services) (1.1)}$$

In the structure of the Keynesian model (Gilbert, 1998, p. 334) the demand (D) is defined as a sum of demands for consumer goods and services (C), divided into the demand for goods and services for investments (I), and the real demand for goods and services for export (X). Therefore, by replacing the components of the demand (D) in the relation (1.1), the economic equilibrium is maintained, and the relation obtained has the form:

$$Y = C + I + X \quad (1.2)$$

Schematically, the equilibrium between the demand and real offer of goods and services is presented in Figure 1.

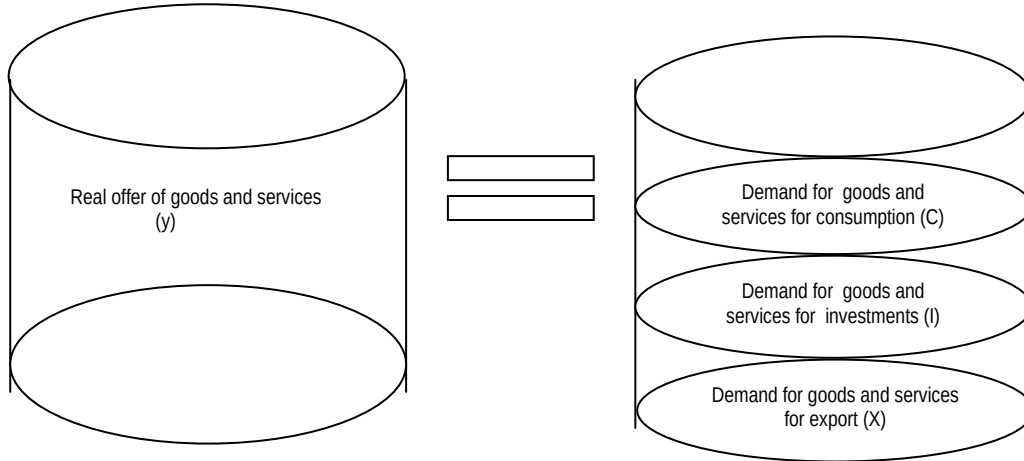


Figure 1. *Equilibrium between the offer and real demand for goods and services*

Considering the open character of the economy to the autochthonous consumption of goods and services, the consumption of import goods and services (M) must also be added. Imports within a local economy refer to those goods and services purchased from other territorial-administrative units belonging to the same county or region, or even from other countries. Identically, the consumption of import goods or services must be added to the consumption of autochthonous investment goods. Thus, by adding the imports (M) to the relation 1.2, we get the equation:

$$Y = C + I + X - M \quad (1.3)$$

Considering the fact that the state or the territorial-administrative units may intervene in a local economy in view of sustaining certain expenditures in the form of transfers or subsidies, we are going to put these actions down as (G) and to include them in the relation (1.3), thus obtaining:

$$Y = C + I + G + X - M \quad (1.4)$$

The expression (1.4) actually defines *the Keynesian model of a local economy*, which may be applied both to a product, in which case the expression can be quantitative, and to the economic and social aggregate defining the local development, a situation in which every term is the result of the sum at local level, in valued expression, of each destination.

1.2. The local multiplier of revenues/expenditures and the multiplication effect

The determination of the local multiplier of revenues/expenditures is based on the structure of the Keynesian model of local development as previously defined.

By associating the revenues (Y) with the imports (M) in the expression (1.4), we naturally obtain equilibrium between the total resources (Y+M) and the total destinations (C+I+G+X), an expression which may be written as:

$$Y + M = C + I + G + X \quad (1.5)$$

The equation (1.5) expresses the reality according to which in any local development process it is only possible to consume, invest and export as much as it is created from the autochthonous production and the resources attracted by imports.

Since local development implies the existence of several goods and services, each term of the Keynesian model of a local economy may be regarded, on the one hand, as a sum of the product between the quantity and the average price of each product, or as the sum between the quantity and the average tariff for the services provided in the domestic production, and, on the other hand, as a sum of the autochthonous components plus the import component (by import we understand those goods or services purchased by a territorial-administrative unit from another territorial-administrative unit or from another country).

Thus we may write:

$$C = \sum C_{int} x p(t)_{int} + \sum C_m x p_{ext} \quad (1.6)$$

$$I = \sum I_{int} x p(t)_{int} + \sum I_m x p_{ext} \quad (1.7)$$

where:

$p(t)_{int}$ = price or tariff used on the domestic market;

p_{ext} = price or tariff on the external market;

C_m = import of goods and services for industrial and household consumption;

I_m = imports for investments.

Considering that investments, governmental expenditures and exports are determined, then:

$$I = I_0; \quad G = G_0 \text{ and } X = X_0; \quad (1.8)$$

The local consumption as well as the other components of revenue, such as export or necessary import, is expressed by linear equations under the form:

▪ *for total consumption (C):*

$$C = C_0 + cDY; \text{ where } C_0 > 0, \text{ and } 0 < c < 1 \quad (1.9)$$

and,

▪ *for import, (M):*

$$M = M_o + mDy \quad \text{where } M_o > 0, \text{ and } 0 < m < 1 \quad (1.10)$$

In the equations (1.9) and (1.10) the significance of the terms is as follows:

$C_o \Rightarrow$ *autonomous consumption*;

$c \Rightarrow$ *the marginal propensity to consume*, which in fact represents the increase in consumption when the production of goods or services expands with one unit.

$M_o \Rightarrow$ *autonomous import*, which in fact represents the import to be made in any circumstances, in order to balance the demand for goods or services, since the local economy either does not possess sufficient resources, or they are not produced in competitive terms;

$m \Rightarrow$ *the marginal propensity to import goods or services*, which expresses the increase of imports, necessary for ensuring the expansion with one unit of the production of goods and services;

$DY \Rightarrow$ *available revenues*, determined by relation:

$$DY = Y - tY = Y(1-t) \quad (1.11)$$

where (t) represents the rate of the taxes and charges paid by local companies to state or territorial – administrative units.

Replacing the relations (1.8), (1.9), (1.10) and (1.11) in (1.4), we obtain the relation:

$$Y = C_o + c(1-t)Y + I_o + G_o + X_o - M_o - m(1-t)Y \quad (1.12)$$

or,

$$Y = C_o + Y_o + G_o + X_o - M_o + [c(1-t) - m(1-t)]Y \quad (1.13)$$

Separating the resources (Y) from destinations, from equation (1.13), we obtain the expression:

$$Y[1 - (1-t)(c-m)] = C_o + Y_o + G_o + X_o - M_o \quad (1.14)$$

Or:

$$Y = \frac{1}{1 - (1-t)(c-m)} (C_o + I_o + G_o + X - M_o) \quad (1.15)$$

Substituting the expression $\frac{1}{1 - (1-t)(c-m)} = k$, in (1.13), we obtain:

$$Y = k(C_o + Y_o + G_o + X_o - M_o) \quad (1.16)$$

where k represents *the local multiplier of an injection of expenditures*.

The multiplier reflects and expresses the direct link between the inputs into the economic system – materialised in investments – and the outputs thereof, in the form of revenues of the participants to the economic activity (Ciucur, Gavrilă, Popescu,

2001, p. 540). This circulation at local level may be encountered within a local development process.

The local development process, accepted as a process of change (Matei, 2005, p. 158), generates the multiplication effect of the expansion of revenues, consumptions and savings.

The essential variable in the Keynesian formula of the local multiplier, $k=1/[1-(1-t)(c-m)]$, is represented by the marginal propensity to consume goods and services on a local level (c-m) (Constantin, 2004, p. 86). The value of the local multiplier rises as the marginal propensity to consume rises, and decreases in proportion with the increase of (t).

Within the local multiplier, the (c-m) variable has the decisive effect, for which reason it is necessary to study the factors affecting the marginal propensity to consume goods and services produced on a local level.

It has been demonstrated both by practice and by the specialised literature that the (c-m) variable depends on the size of the territorial-administrative unit, in the sense that, in small localities, the marginal propensity to import is higher, which leads to the decrease of (c-m) and implicitly of the value of k.

The same situation is encountered also in strongly industrialised localities, with a sufficiently diversified structure, since the goods produced by those industrial structures are based on their trade links with companies outside the territorial-administrative units in which they are running their operations. The marginal propensity to consume goods and services may also be affected by the position of the territorial-administrative unit. Thus, commuters from some areas neighbouring large cities generally tend to spend their salary revenues in the localities where they reside, rather than in those where they work, a phenomenon which leads to the increase of the marginal propensity to import, to the decrease of the (c-m) variable, and eventually of k.

Consequently, the local multiplier is not a fixed coefficient, but it varies depending on the characteristic features of every locality.

Therefore, the local administration must know all those features, so as to be able to maximize the effects on the level of revenues and employment.

Those features having been identified by the local authorities, the large urban settlements were able to apply to and benefit from PHARE and ISPA funds, a phenomenon which has positively influenced the economy of those localities, on the one hand, through the salaries paid to the new employees, and, on the other hand, through the additional procurement of goods and services by the units involved in the creation of the additional production, in compliance with the approved programmes.

In that context, special emphasis should be laid on the reduction of imports, an aspect which directly contributes to the increase of the value of the local multiplier.

Following the effects of the multiplier, the local authorities are to take into account a number of factors, so that the direct beneficiaries of those effects should be the population of the area/locality. Here are some of those factors:

- the participation with financial or other type of capital to the setting up of new companies;

- the decrease of the royalty for the land/buildings granted in concession, a phenomenon conditioned by the involvement of the local labour force in the economic process within the new investment objectives;
- bearing the costs of the expansion of utilities in the areas where the new investment objectives are to be implemented;
- other forms of support granted to possible investors by the local authorities;

Finally, the main feature to be considered by the local authorities is *the co-ordination of local development policies*, in order to turn to account the benefits of that policy and to mitigate the phenomenon of the under-funding of the development of the respective locality or area.

2. The use of the keynesian model in the local development

The Keynesian model applied to the local development of the Municipality of Braila is based on the provision of public utility services: water-waste water/sewerage, thermic energy, local public passengers transport and waste management.

The engine of the Keynesian model is the feedback represented by the input-output links between the companies providing public utility services, i.e. commercial companies, autonomous administrations and households. Thus, the firms providing public utility services are interconnected through the goods and services they are buying and selling to one another, and the households are supplying the labour force necessary to the providers of public utility services. The respective links are established both within the same locality and among different localities.

The connection of those relations is based on the consideration of the components of the demand for public utility services, i.e. the link between the revenues and expenditures generated by the provision of that type of services.

Knowing the structure of the entities providing public utility services, we proceeded to the collection of the data necessary for the implementation of the Keynesian model. The data was taken both from the Statistical Bulletins of the Braila Regional Directorate for Statistics, and from the annual financial statements of economic agents, submitted to the Braila General Directorate of Public Finance.

During the analysed period, the economic agents providing public utility services within the Braila Municipality scored a good economic performance.

R.A.APA-BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	10668338	8206046	6835652	3834849	118673
2001	10855321	8922683	4732098	591271	200592
2002	12540120	10077960	2830805	6185113	366848
2003	13821040	10753333	2574131	1541497	586159
2004	15733981	12844224	7804624	7116330	555493
2005	16933225	14285832	19911329	8403644	478874

S.C.CET-S.A.BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	6145601	6436001	150683	2339490	
2001	12469661	12003946	74556	4554892	
2002	23737373	24460762	1912477	1995327	
2003	38079317	37705905	556974		
2004	45253170	47859459	792671		
2005	47596140	54779342	3429658		

S.C.BRAICAR-S.A.BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	5264387	5593225	985171		160300
2001	7755044	10006052			190800
2002	9120840	10509797			202500
2003	11511636	12824840			240900
2004	13805306	15026970	5427444		286600
2005	17582372	17109890	449743		305500

S.C.ECO-S.A.BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	1922009	1796263			
2001	2596370	2625066			
2002	3784934	5620765			
2003	4771940	4122961			
2004	3314504	4678944			
2005	3206611	3860984,0			

S.C.RER ECOLOGIC S.R.L.BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	1746496	1625526	13630		
2001	2442688	2436747	37482		
2002	689967	1073063	27871		
2003	880613	1012609			
2004	1459190	1304751	14620		
2005	2551606	2085986	462325		

S.C.BRAI CATA S.R.L.BRĂILA					
Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000					
2001	554	35779			
2002	38656934	3537714	1209906		88900
2003	3278697	3440728			66200
2004	3167530	3188598			65614
2005	4909611	3940246			83500

Making the total of the respective indicators for the whole period 2001-2005, we obtain:

Table 1

Empirical data of the Keynesian model

Period	Revenues (Y)	Expenditures (C)	Investments (I)	Imports (M)	Exports (X)
2000	25746831	23657061	7985136	6174339	278973
2001	36119638	36030273	4844136	5146163	391392
2002	53738928	55280061	5981059	8180440	658248
2003	72343243	69860376	3131105	1541497	893259
2004	82733682	84902946	4039359	7116330	907707
2005	92779565	96062280	4253055	8403644	867874

The main local indicators, considered for analysis in this study, concern the revenues obtained from the provision of public utility services, the expenses incurred for that purpose, the investments made in the sphere of public utility services, the imports of public utility services which filled the demand gap, or in other words, the analysis regards the economy of public utility services in the Braila Municipality. The public utility services, imported at the level of Braila Municipality, were those for water and thermic energy, and the exports of such type of services are located in the sphere of local public passenger transport and the suppliers of drinking water in the localities and areas neighbouring the Braila Municipality.

In that sense, in order to be able to apply the equations (1.4) and (1.5) to the economy of public utility services at the level of Braila Municipality, and to determine the coefficients of the equations (1.6) and (1.7), it was necessary for all the data used to be homogeneously expressed, i.e. in the same measure unit (lei).

The computer functions programmes were used in determining the correlation equations, resulting, for the equation of the correlation between consumption and revenue during the 2001 – 2005 period, the following data:

- for ascertaining the marginal propensity to consume (c), the ratio between the variation of expenditures (C-Co) and the variation of revenues (Y-Yo) was calculated, where (C) and (Y) belong to the year of reference, and (Co) and (Yo) to the previous year.

$$c = \frac{C - C_o}{Y - Y_o} \quad (1.17)$$

where:

$$C = C_o + cY, \quad (1.18)$$

Taking into consideration the data for expenditures and revenues in Table 1 and the relations presented in (1.17), we obtain the values for „c” and „Co” (Table 2):

Table 2

Values calculated for „c” and „Co”		
	c	Co
2001	1.192850884	-7055069.120
2002	1.092540505	-3431894.553
2003	0.783706092	13164535.757
2004	1.447731900	-34873244.673
2005	1.110836549	-7000651.771

The table reveals that „c” varies in the period analysed, between 0.783 and 1.447, and a favourable situation is encountered in 2003, when „c” complies with the conditions imposed by relation (1.9).

Replacing the values of „c” and „Co” from Table 2 in the relation (1.18), we obtain the functions of consumption for each period as follows:

$$C_{2001} = 1.19Y - 7055069.120$$

$$C_{2002} = 1.09Y - 3431894.553$$

$$C_{2003} = 0.78Y + 13164535.757$$

$$C_{2004} = 1.44Y - 34873244.673$$

$$C_{2005} = 1.11Y - 7000651.771$$

Considering the condition imposed by relation (1.9), we notice that a favourable situation is only found in the year 2003; as to the rest, the values of „c” are top-heavy, hence the result that the determined situation is expressing an obvious reality of all public utility services, in the sense that they consume more than they produce, even when some of them, such as the thermic energy supplied to the population and the local public transport of persons, are benefiting from subsidies according to the law.

Figure 2 presents the variation of „c” in the period analysed.

In order to obtain the equation of the correlation between *the import of public utility services and the income made*, we proceeded to determine the ratio between the variation of imports (M-Mo) and the variation of revenues (Y-Yo), where (M) and (Y) belong to the reference year, and (Mo) and (Yo) to the previous year.

$$m = \frac{M - M_o}{Y - Y_o} \quad (1.19)$$

where:

$$M = M_o + mY, \quad (1.20)$$

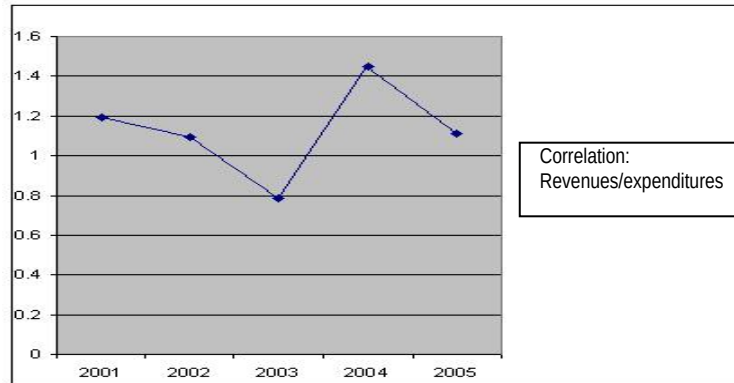


Figure 2. Variation of (c) during 2001 - 2005

The imports of public utility services during 2001– 2005 were variable, and Table 3 presents the values of this phenomenon:

Table 3

Imports of public utility services		
	m	Mo
2001	-0.099122253	8726422.897
2002	0.172213353	-1074120.952
2003	-0.356849634	27357156.792
2004	0.536534886	-37273176.606
2005	0.128143439	-3485448.570

The marginal propensity to import „m” can be seen to differ during the period under analysis, however, a favourable situation is found in the year 2001, when $m=0.12$, a value showing that the indicator is placed close to zero, i.e. a reduced dependence of public utility services on imports.

Figure 3 presents the variation of „m” during the period under analysis.

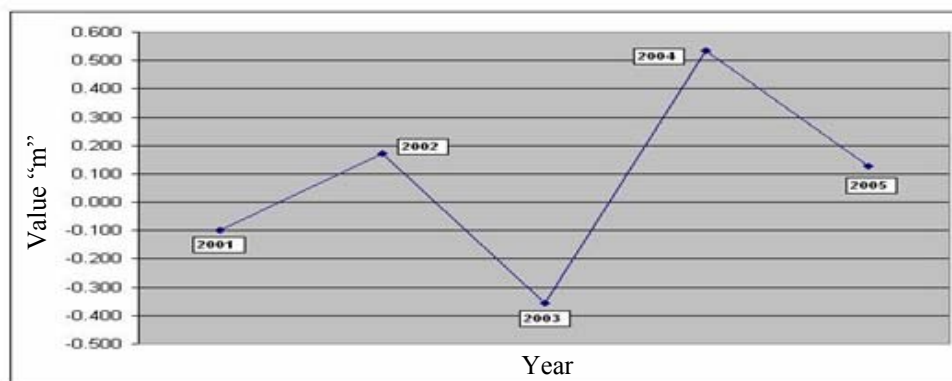


Figure 3. Variation of „m” during 2001 – 2005

Analysing the components of „k”, we find that besides „c” and „m”, already known from the previous relations, it is necessary to determine the ratio of taxes, achieved by the operators of public utility services, which is varying in time between 0.35 and 0.16.

Replacing the values of „c”, „m” and „t” in the expression of „k”, the values of the local multiplier of expenditures result explicitly (Table 4):

Table 4

Values of „k” during 2001-2005

Period	c-m	t	k
2001	1.291973137	0.35	6.241516963
2002	0.920327153	0.24	3.228361696
2003	1.140555726	0.24	6.916432625
2004	0.911197015	0.24	3.158537361
2005	0.982693109	0.16	3.802568107

The variation of the local multiplier of expenditures „k” in the period 2001 – 2005 is represented in Figure 4.

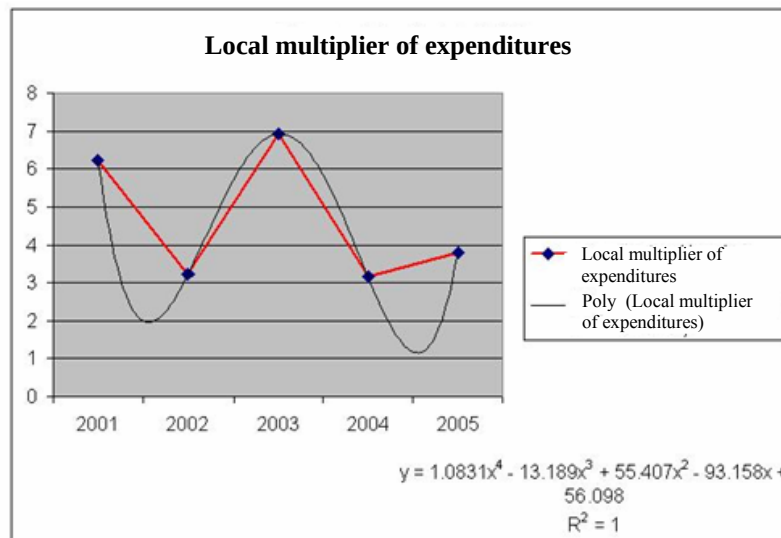


Figure 4. Evolution of the local multiplier of expenditures „k” during 2001 – 2005

The study presented and Table 4 have confirmed the theory according to which the value of the multiplier is that much higher as the marginal propensity to consume is higher, or as the marginal propensity to save is lower, however, as it has already been mentioned, it is (c-m) that has the decisive effect on “k”. Consequently, in that situation the coefficients of “c” and “m” must be analysed.

Thus, we find that all the coefficients of c are top-heavy, which proves the propensity to consume, with the exception of the year 2003, when the value of the coefficient was 0.78, therefore also with a tendency towards 1.

At the same time, the variation of “m” may be traced, and it registers values which, generally, tend more toward 0 than toward 1. Therefore, (c-m) tends toward the consumption of goods and services on a local level.

The high consumption coefficient is influenced by the thermic energy supply and distribution system, an influence generated by the location of the company, i.e. it is located about 10 km away from the Braila Municipality, and the losses resulting from the transportation of the thermic agent to the consumers exceeds by far the technically admitted norm, for which reason the situation of the operator was analysed at the level of the local authorities and proposed for technological upgrading under the 2006 – 2009 rehabilitation and modernisation programme.

Likewise, the APA Braila Autonomous Administration, the water-sewerage service provider, has also been introduced into a rehabilitation and modernisation programme, an action which has been on-going ever since the year 2003.

In order to highlight the effect of the capital injection, we consider it necessary to study the ratio between the increase in the income level and the increase in investments, ΔI .

In this context, for the increase in investments by ΔI , the income Y will increase by $k\Delta I$, respectively:

$$\Delta Y = k\Delta I \quad (1.21)$$

knowing that $k=1/s$, and replacing it in the relation (1.21), we obtain:

$$\Delta Y = \frac{\Delta I}{s} \quad (1.22)$$

The determination of the local multiplier of investments depends on the marginal quota toward consumption related to the marginal propensity toward consumption and the evolution of that variable can be traced in Table 5.

Table 5

Evolution of the local multiplier of investments

Period	$s=1-c$	$k=1/s$	$\Delta Y=\Delta I/s$
2001	-0.192850884	-5.185353466	-41405752.63
2002	-0.092540505	-10.80607888	-52346115.62
2003	0.216293908	4.623338718	27652461.65
2004	-0.447731900	-2.233479453	-6993258.68
2005	-0.110836549	-9.02229465	-36444287.09

Figure 5 presents the evolution of the local multiplier of investments in the period under analysis.

By analysing the evolution of the local multiplier of investments within the 2001-2005 period, we find a favourable situation in the year 2003, as to the rest, consumption remains the economic phenomenon which dominates the economy of public utility services at the level of Braila Municipality.

The Keynesian model, as applied to the economy of public utility services, also contains in its structure, apart from the previously analysed variables, other variables such as the export of public utility services (X).

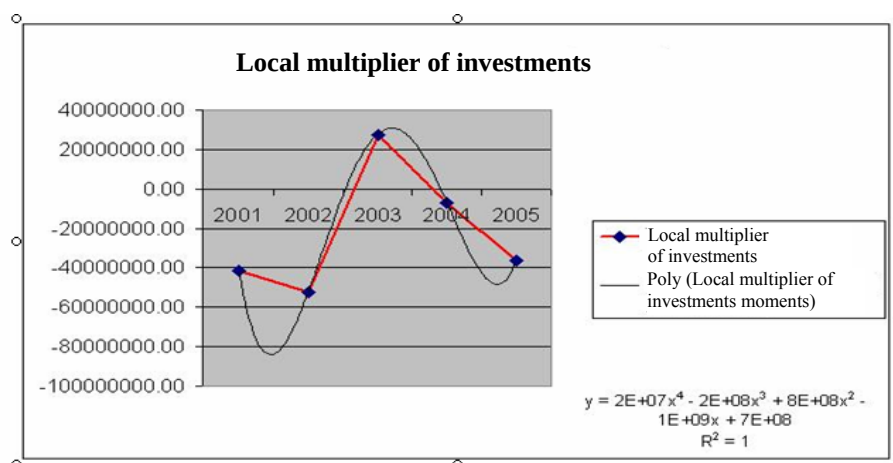


Figure 5. Evolution of the local multiplier of investments during 2001-2005

In order to determine the consequences of an increase of the export of services on the level of incomes (Y), we shall proceed to the calculation of the local multiplier of exports (d).

In that situation, taking into account the values of the coefficients „c” and „m” as previously determined, and which, being substituted in the relation $d=1/[1-(c-m)]$, are determining the local multiplier of the export of public utility services (Table 6).

Table 6

Variation of the local multiplier of exported services				
Period	c	m	c-m	d
2001	1.192850884	-0.099122253	1.291973137	-3.424972619
2002	1.092540505	0.172213353	0.920327153	12.55132752
2003	0.783706092	-0.356849634	1.140555726	-7.114615883
2004	1.447731900	0.536534886	0.911197015	11.26088271
2005	1.110836549	0.128143439	0.982693109	57.78045358

Analysing the values from Table 6 we remark a stimulation of the economic activity, so the effect of the local development in the years 2002, 2004 and 2005. The evolution of the local multiplier of public utility services in 2001-2005 period is presented in Figure 6.

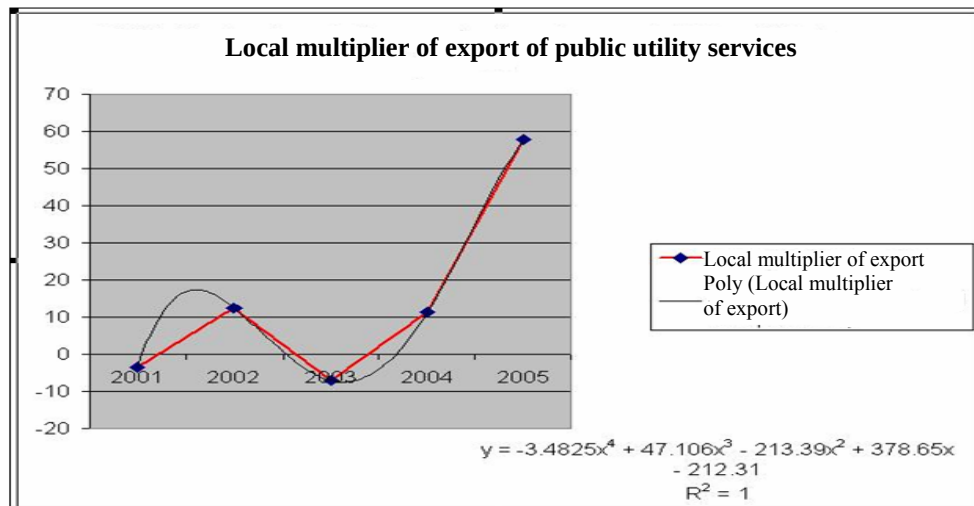


Figure 6. Evolution of the multiplier of export of public utility services in 2001-2005 period.

Therefore, the export of public utility services is a process which participates in the local development, being present in the field of the local public passenger transport, as well as in the field of drinking water supply. Exports in these fields were proved to have a beneficial effect, however they should not be too much expanded, since in certain situations that may lead to severe imbalances, and the local authority may have to increase subsidies to the respective services. At the same time, the effect in that situation would favour the population in other localities.

Conclusions

In conclusion, the analysis performed has proven the fact that the local authorities must set up and develop their own local units for monitoring the community services of public utilities.

The local units for monitoring the community services of public utilities have the following main responsibilities (G.D. 246/2006, Art. 6):

- to prepare local strategies for accelerating the development of the community public utilities services, in collaboration with the existing operators, and the presentation thereof to the local, municipal or county public administration authorities, for approval;
- to implement the local, municipal or county strategies for accelerating the development of the community public utilities services, and the monitoring of each operator's results;
- to ensure the compliance of the clauses attached to the contracts for delegating the management of community public utilities services with the provisions of the national Strategy;
- to prepare and submit the activity report to the monitoring offices at Prefecture level;

- e. to provide assistance to the operators of local, municipal or county interest, and to the Local, Municipal or County Councils in the process of accessing funds for investments;
- f. to present activity reports and submit them for approval to the Local, Municipal or County Council;
- g. to prepare adjustments to the local strategy and submit them for approval;
- h. to manage the relation with representatives of the EU, of International Financial Institutions, of banks and of the central public administration authorities.

References

- Ciucur, D., Gavrilă, I., Popescu, C. (2001). *Economie*, manual universitar, Ediția a II-a, Editura Economică, București, p. 540
- Constantin, D.L. (2004). *Elemente fundamentale de economie regională*, Editura ASE, București, p. 85
- Gilbert A., F. (1998). *Economia politică*, Editura Humanitas, București, p. 334
- Hotărârea Guvernului României nr. 246/2006, publicată în Monitorul Oficial, Nr. 295 din 3 aprilie, 2006
- Klein, R.L., Welfe, A., Welfe, W. (2003). *Principiile modelării macroeconomice*, Editura Economică, București
- Matei, A., „Systemic Models of Local Development”, *International Journal of Public Administration in Central and Eastern Europe*, No. 1, 2008, pp. 49-73, disponibilă pe SSRN: <http://ssrn.com/abstract=1311811>
- Matei, A., Anghelescu, St., „Models with Simultaneous Equations for Local Development”, *Theoretical and Applied Economics*, Vol. XVII, No. 1, pp. 27-48, disponibilă pe SSRN: <http://ssrn.com/abstract=1534764>
- Matei, L., (2005). *Dezvoltare economică locală*, Editura Economică, București
- Matei, L., Anghelescu, St. (2010). *Dezvoltarea locală. Concepte și mecanisme*, Editura Economică, București

Marketing Research on Tourist Consumer Opinions and Behavior in the Center Development Region

Erika KULCSÁR

“Babeş-Bolyai” University, Cluj-Napoca
elerhetetlen@yahoo.com

Abstract. *Logistic regression is a multivariate analysis method of marketing information becoming more and more used because the number of conditions that must be achieved are lower than, for example, in the case of discriminant analysis. The purpose of this paper is to obtain information using logistic regression with respect to the importance of variables in differentiating the classes. The variables included in logistic regression are: the dependent variable is the type of tourists (Romanian or foreign) and the independent variables are as follows: Is this the first time you came to this region? How many days do you plan to stay in this region? Which is the purpose of your staying? In the following year, do you plan to return to this region? This paper also includes a factorial analysis of correspondences, as well as the bivariate analysis using Kruskal-Wallis test in order to simultaneously test the difference between the age of the respondents and their assessment of the organization manner, variety and attractiveness of tours.*

Keywords: variable; Kruskal-Wallis test; logistic regression; Wald test; factorial analysis.

JEL Codes: M31, L83.

REL Codes: 5K, 14G.

1. Introduction

Marketing environment is very complex due to the fact that the very nature of human economic activity is highly complex. This complexity is also found at the level of every form of economic activity. Tourist consumer behavior is very dynamic and continuously changing and out of this consideration it requires constant research.

The bivariate analysis of marketing data can be carried based on contingency tables, which can give us an idea about the existence of differences between population groups, as well as based on statistical tests that allow decisions on the significance of such differences in the total population (Constantin, 2006, p. 135).

The statistical methods of multivariate analysis, according to the relationships that may occur between the dependent variable(s) and the independent variables, can be grouped into two broad categories: the dependencies analysis method (explanatory methods) and interdependence analysis methods (descriptive methods). Dependencies analysis method explains or provides for the development of one or more dependent variables based on three or more independent variables (Lefter, 2004, p. 353).

The multivariate analysis of marketing data was made based on primary data obtained through quantitative research. The quantitative research was conducted between 15.05.2009-17.10.2009. I distributed over 2,000 questionnaires. Questionnaires were distributed to hotels in Braşov, Predeal, Poiana Braşov, Sfântu Gheorghe, Covasna, Miercurea Ciuc, Gheorgheni, Tuşnad, Târgu-Mureş, Sighişoara, Sibiu, Alba Iulia and other localities that have linked this route.

2. Kruskal-Wallis test

Non-parametric tests are used for the case where the independent variables are not metrical (Malhotra, 2005, p. 558).

In the event that the comparison of three or more population groups is aimed at, where data are ordinally measured, then for the statistical significance of differences Kruskal-Wallis test is used (Lefter, 2004, p. 266).

Kruskal – Wallis test is the non-parametric counterpart of the one way ANOVA (Marques de Sá, 2007, p. 212).

In the table Ranks (Table 1) the rank means and number of subjects for each group are given (Labar, 2008, p.148).

It can be observed (Table 1) that the mean of ranks is the highest in case of respondents up to age 25 (210.50), followed by respondents over 65 years

(with a mean of ranks 206.75), then subjects between 26-35 years (190.19), followed by tourists who classify between 36-45 years old (173.85), then respondents aged 46-55 years (158.06) and finally respondents between 56-65 years (with a mean of ranks 206.75).

Table 1

Mean ranks for Kruskal-Wallis test – the organization manner

Ranks			
Age		N	Mean Rank
Organization manner	up to 25 years	24	210.50
	between 26-35 years	118	190.19
	between 36-45 years	88	173.85
	between 46-55 years	69	158.06
	between 56-65 years	46	154.93
	more than 65 years	8	206.75
	Total	353	

Table Statistical Test (Table 2) presents the Kruskal Wallis value (Chi-Square), the degrees of freedom (df) and the significance threshold (Asymp. Sig.) (Labar, 2008, p.148).

In this case $df = 5$ ($df = k-1$, where k is the number of groups). The critical value $\chi^2_{20,05;5} = 11,071$.

H value = χ^2_{calc} in the analysis table is equal to 10.673, hence null hypothesis H_0 is accepted.

Table 2

Values calculated with the Kruskal-Wallis test

Test Statistics ^{a,b}	
	Organization manner
Chi-Square	10.673
df	5
Asymp. Sig.	.058

a. Kruskal Wallis Test

b. Grouping Variable: Age

Table 3 contains the size of each group in the sample and the mean ranks corresponding to the groups.

Table 3

The mean ranks for Kruskal-Wallis test - the variety of tours

Ranks			
Age		N	Mean Rank
Variety of tours	up to 25 years	24	215.25
	between 26-35 years	118	182.47
	between 36-45 years	90	193.43
	between 46-55 years	69	151.04
	between 56-65 years	44	158.23
	more than 65 years	8	123.88
Total		353	

Table 4

**The calculated values
for Kruskal-Wallis test**

Test Statistics^{a,b}

	Variety of tours
Chi-Square	15.371
df	5
Asymp. Sig.	.009

a. Kruskal Wallis Test

b. Grouping Variable: Age

In this case $H = 15.371 > \chi^2_{20,05;5} = 11,071$ (Table 4), which means that the null hypothesis H_0 is rejected and the alternative hypothesis H_1 is accepted.

Analyzing the data in Table 5 it may be noted that the mean of the ranks is higher for the tourists up to 25 years, and the lowest for respondents over 65 (111.13).

Table 5

Ranks average for Kruskal-Wallis test - the attractiveness of tours

Ranks			
	Age	N	Mean Rank
Attractiveness of tours	up to 25 years	24	224.17
	between 26-35 years	118	185.25
	between 36-45 years	90	201.41
	between 46-55 years	69	146.83
	between 56-65 years	42	128.31
	more than 65 years	8	111.13
	Total	351	

From Table no. it can be seen that value $H = 34.952 > \chi^2_{20,05;5} = 11,071$ (table no). Conclusion: the alternative hypothesis H_1 is accepted.

Table 6

**Values calculated
wit Kruskal-Walis test**

Test Statistics^{a,b}	
	Attractiveness of tours
Chi-Square	34.952
df	5
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Age

3. Logistic regression

The logistic regression⁽¹⁾ models the relationship between a set of independent variables (categorical, continuous) and a Y dichotomous dependent variable (nominal, binary). Unlike classical regression, here one or more predictive/explanatory variables (independent variables) may be categorical, compulsorily the dependent variable, so with this new model it is about the non-numeric qualitative (categorical) nature of some of its variables⁽²⁾.

The logistic regression model shall estimate the proportion of subjects which will have the same interest characteristic for the statistical status, or equivalently, the probability that a person among the population have a certain characteristic.

The results obtained by using SPSS program are presented below. The first table provides general information: number of valid observations, number of non-valid observations and sample size (Table 7).

Table 7

General data regarding observations

Case Processing Summary

Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	410	100.0
	Missing Cases	0	.0
	Total	410	100.0
Unselected Cases		0	.0
Total		410	100.0

a. If weight is in effect, see classification table for the total number of cases.

For independent categorical variables⁽¹⁾ a recoding occurs by taking into account the reference class: this is recoded 0 (Table 8).

Table 8

Dependent variable recoding

Dependent Variable Encoding

Original Value	Internal Value
Romanian	0
foreign	1

The ninth table presents the frequencies related to the categorized dependent variable.

Table 9

Frequencies of the dependent variable

Categorical Variables Codings

		Frequency	Parameter coding
			(1)
Is this the first time when you come to this region?	No	222	1.000
	Yes	188	.000

The output differs ⁽¹⁾ in structure by the method of variables selection, but it contains a first block of information that relates to the simple model (only with the term constant). Note the structure: classification, variables in equation, candidate variables.

Block 0: Beginning Block

Table 10

Classification table

Observed			Predicted		
			T_tourist		Percentage Correct
			Romanian	foreign	
Step 0	T_tourist	Romanian	242	0	100.0
		foreign	168	0	.0
Overall Percentage					59.0

a. Constant is included in the model.

b. The cut value is .500

The Classification table ⁽¹⁾ is made by considering the classification probabilities predicted by the current model for each observation by the principle that the $OR > 1$ ranks the observation in the 1st codified group.

The first phase of the analysis indicates that 242 of the tourists belong to the first group, i.e. 59.5% of the sample, while of 168 the tourists belong to the 2nd group.

The percentage of tourists that belong to the first group is also important for the fact that if I was chosen randomly among interviewed tourists and I was to foresee that they belong to the first group, then I would have been right for 59.0% (Table 10).

Next the tables obtained before the analysis phase are presented which is why Table 11 contains only the constant.

In order to see whether the coefficients are significant or not, the Wald statistics is used for the estimation of the parameters, which is significant. (0.000).

Wald-test is the square of z (standard coefficient/error). For larger samples the p's for Wald and the z are equal.

Table 11

Parameter estimation						
Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-.365	.100	13.209	1	.000	.694

The table below Variables not in the Equation (Table 12), as the title suggests, shows that the independent variables have not yet been introduced in the analysis so the program shows no association between these independent variables, but it provides information on the effect of each independent variable separately. Thus, the 3rd variable (Is this the first time you came to this region?), variable 6 (How many days do you plan to stay in this region?) and variable 7 (Which is the purpose of your staying?) indicate a significant effect, while variable 32 (In the following year, do you plan to return to this region?) does not have a significant effect.

Table 12

The effect of independent variables					
Variables not in the Equation					
Step	Variables		Score	df	Sig.
0		var3(1)	11.691	1	.001
		var6	11.912	1	.001
		var7	7.177	1	.007
		var32	1.592	1	.207
Overall Statistics			34.597	4	.000

The second part of the analysis (Block 1: Method = Enter) shows final results.

The four independent variables were entered together in the analysis; this actually means the Enter process.

Based on the results obtained in Table 13, it can be ascertained that the model (following the introduction of the independent variables) is significant.

Table 13

Omnibus Test				
Omnibus Tests of Model Coefficients				
	Chi-square	df	Sig.	
Step 1 Step	37.632	4	.000	
Block	37.632	4	.000	
Model	37.632	4	.000	

The results of Table 14 - Summary Model indicates the percentage by which the variance of the dependent variable is explained by the combination of independent variables. In this respect the system provides two indicators: Cox & Snell R Square and Nagelkerke R Square.

According to the first indicator, the four independent variables explain with a 8.8% rate while the last 11.8% percentage, the variance of the dependent variable. (According to specialists the indicator Nagelkerke R Square should be considered as the Cox & Snell R Square indicator underestimate the true value).

Table 14

Model results

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	517.319 ^a	.088	.118

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

According to the results in Table 15, 81.0% is the proportion of those subjects who were Romanian tourists and they have been correctly categorized by the model, on the other 40.5% is the proportion of those correctly categorized in the case of foreign tourists.

This means that eventually a percentage of 64.4% of cases was correctly classified by comparing it with the expected success of categorization (59.5%) (Table 4), it can be ascertained that the independent variables contributed with a 4.9% percentage to the correct categorization of the dependency.

Table 15

Classification table

Observed		Predicted		
		T tourist		Percentage Correct
		Romanian	foreign	
Step 1	T_tourist	196	46	81.0
		100	68	40.5
Overall Percentage				64.4

a. The cut value is .500

The last table in Block 1: Method = Enter as compared to table in Block 0: Beginning block includes the combined effect of all independent variables (Table 16).

In the table referring to the variables in the model it is reported:

- the B coefficients,
- Exp (B) with the interpretation, given theoretically, that it is the change of OR (chances rapport) of the dependent variable to the modification with a unit of the independent variable, so $\text{Exp } B \approx 1$ for insignificant variables.
- Information associated to the Wald significance test of each coefficient ⁽¹⁾.

Table 16

The combined effect of independent variables

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	5.0% C.I. for EXP(B)	
								Lower	Upper
Step a 1	var3(1)	-.671	.215	9.766	1	.002	.511	.336	.779
	var6	-.112	.029	15.229	1	.000	.894	.845	.946
	var7	-.168	.057	8.650	1	.003	.845	.755	.945
	var32	-.329	.208	2.509	1	.113	.719	.479	1.081
	Constant	1.521	.396	14.725	1	.000	4.575		

a. Variable(s) entered on step 1: var3, var6, var7, var32.

It may be noted that Var3 (Is this the first time that you come to this region?) Var6 (How many days do you plan to stay in this region?) Var7 (Which is the purpose of the staying?) still have a significant effect.

4. Factor analysis of correspondences

The factor analysis of correspondences aims at describing the relationships between two nominal variables. Although it is not a multivariate analysis method, but a bivariate one, the relationships between variables modalities can be described through the factorial analysis, which can not be surprised by the test.

The primary objective of the analysis of correspondence is the simultaneous study of the rows and columns of a contingency table in order to highlight the links and correspondences between the two assemblies (Lefter, 2004, p. 421).

A first set of results is shown in the table of correspondences between the two variables: In what country do you live? and Would you recommend the hotel where you stayed to your friends and acquaintances? The contingency table, showing the distribution of Romanian and foreign respondents according to the two variables, is as follows (Table 17).

Table 17

Correspondence table				
In what country do you live?	Would you recommend the hotel where you stayed to your friends and acquaintances?			
	no	yes	I do not know	Active Margin
Romania	16	169	57	242
SUA	0	20	2	22
Great Britain	0	20	0	20
Germany	0	30	2	32
France	0	8	0	8
Holland	0	0	2	2
Spain	0	8	2	10
Australia	0	2	0	2
Switzerland	2	8	2	12
Italy	0	4	0	4
Israel	0	2	0	2
India	0	4	0	4
Austria	0	2	0	2
Hungary	0	40	6	46
China	0	2	0	2
Active Margin	18	319	73	410

In the correspondence table, the totals corresponding to the rows and columns are called Active Margin (Constantin, 2006, p. 261).

From the crossed analysis of frequencies corresponding to the categories of the two variables some differences can be noticed between the frequencies corresponding to the categories of responses, in that their distributions are not uniform. But their interpretation is quite difficult.

The sample includes 410 tourists. I wanted to analyze the relationship between the data in the table above in order to identify correspondences between them.

Using SPSS software I obtained the following results:

Table 18

Statistics on factorial axes and their importance

Summary								
Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Accounted for	Cumulative	Standard Deviation	Correlation 2
1	.307	.094			.839	.839	.033	.140
2	.135	.018			.161	1.000	.055	
Total		.112	46.104	.017 ^a	1.000	1.000		

a. 28 degrees of freedom

In the above table (Table 18) the first column indicates the existence of the two factorial axes (dimensions).

In the Singular Value column are the values that represent the importance of the two dimensions, while in the Inertia column there are the squares of the individual values, representing a total dispersion of the points consisting of individuals belonging to each category (Constantin, 2006, p. 261).

The third column shows a measure of the total variance of the points taking into account their marginal rate, and their values λ_1 and λ_2 , respectively. It is the square of the singular value (Lefter, 2004, p. 424).

Differences among frequencies of the categories and relationships between the two variables are highlighted by Chi Square value, leading to acceptance of alternative hypothesis H_1 of the existence of a connection between the two variables, whereas the minimum level of significance that can be accepted for this hypothesis is less than 0.05 (Sig. = 0.017).

In the columns Proportion of Inertia there are the proportions between the two factors that explain the scattering of data. It is noted that the first component explains the scattering with a 83.9% rate, the second at 16.1% rate.

This can be also viewed in the graphical representation in Figure 1, where there is a greater proximity to the first axis categories.

From the chart below it can be observed that the first factorial axis, namely the 1st factor, is explained by the yes answer variant, the second factorial axis, respectively the second factor, is explained by the do not know or no answer variants. Differences between the three categories of answers are obvious.

Graphic expression of the above results is as follows:

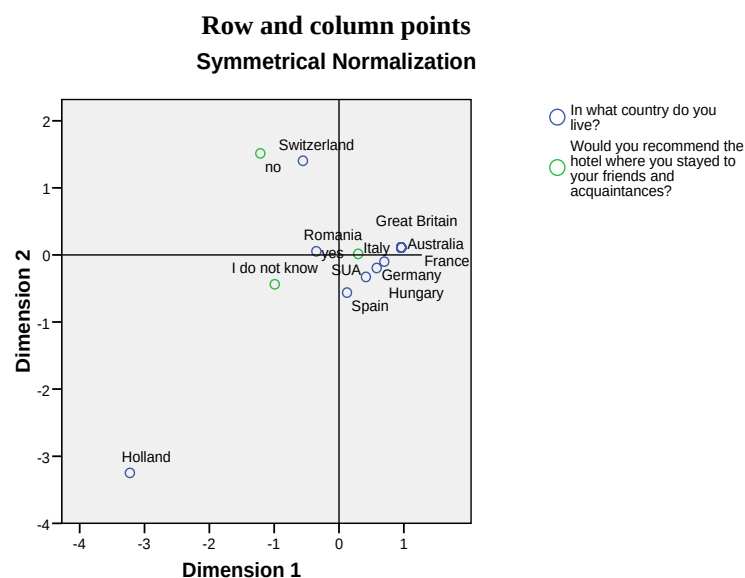


Figure 1. Graphical representation of the correspondences between the categories of response

5. Conclusion

Following the analysis of Kruskal Wallis test I found that:

- Between the six groups of population (ages of respondents) there is no difference in terms of assessing the organization of tours.
- Between the six groups of population (ages of respondents) there is a difference in the assessment by the tourists of the variety of excursions.
- There are differences between the six groups of population (ages of respondents) in assessing the attractiveness of tours.

Development and modernization of services (...) is one of the decisive factors in increasing the competitiveness of the offer on the international market. Developments in recovering Romania's tourism potentials are still modest (Nita, Nita, 2008, p. 198).

For these reasons I believe that companies operating on the tourism market in the Center Development Region should concentrate their efforts, for the period to come, on strategic alternatives and they should understand that if they don't have something special to offer they have no chance to assert themselves. A person generally wants to discover new places, new entourages, new people, other lifestyles, other civilizations and cultures. He seeks exotic, unusual, miracle, wellness. From this point of view companies should adapt the marketing strategies to the needs and expectations of each segment of tourists since as outlined by the bivariate analysis, there is a differences between tourists in terms of group age and the assessment of the variety and attractiveness of tours. But in this analysis I included both Romanian tourists and foreign tourists and it is well known, the consumer behavior, even if it falls in the same age category, is different not only from one country to another but from one region to another. For example in Romania, most tourists in balneal resorts are pensioners and people over 45-50 years, who wish to follow treatment procedures. In West spas are dedicated especially to prevention and restoration and not treatment. The current profile of balneoclimateric tourism will need to bear changes because the current model, of treatment of various diseases, is not in accordance with the European model, which emphasizes prevention and recovery.⁽³⁾ In my opinion companies operating in the tourist market of the Centre Development Region should select a particular segment to be very well served.

As a final conclusion of the logistic regression analysis I found that, forecasting the days spent, the purpose of the staying and whether or not they are for first in this region of the country (Centre Development Region) differentiate Romanian tourists from the foreign tourists. Regarding the variable

In the next years do you plan to return to the region? it does not differentiate Romanian tourists from foreign tourists.

And following the factorial analysis of correspondences there are connections between the two variables, namely the variables “in which country the respondent reside” and “if they would recommend the hotel they have stayed in to friends and acquaintances”.

As a final conclusion multivariate analysis of marketing data can identify differences between Romanian and foreigners consumer behavior which highlights once again that it is extremely important for companies operating on the tourist market in the Center Development Region to understand the importance of market segmentation because market segmentation is one of the main sources of success on the market.

Notes

- ⁽¹⁾ see http://thor.info.uaic.ro/~val/statistica/StatWork_10.pdf.
- ⁽²⁾ see <http://inf.ucv.ro/~gorunescu/courses/curs/7.pdf>.
- ⁽³⁾ see <http://www.newschannel.ro/stiri/39/4239/Aderarea-va-creste-ponderea-turismului.html>, newschannel.ro, 2006.

References

- Constantin, C. (2006). *Sisteme informatice de marketing. Analiza și prelucrarea de marketing. Aplicații în SPSS*, Editura Infomarket, Brașov
- Labăr, A. V (2008). *SPSS pentru științele educației*, Editura Polirom, Iași
- Lefter, C. (2004). *Cercetarea de marketing* Editura Infomarket, Brașov
- Malhotra, K.N, *Cercetarea de marketing*, Editura Akadémiai Kiadó, Budapesta
- Marques de Sá J. P. (2007). *Applied Statistics. Using SPSS, STATISTICA, MATLAB and R*, Editura Springer Berlin Heidelberg, New York
- Niță, I., Niță, C. (2008). *Piața turistică a României*, Editura Economică, București

Transformational and Transactional Leadership Styles as a Predictor of Individual Outcomes

Azman ISMAIL

Universiti Pertahanan Nasional, Malaysia
azisma08@gmail.com

Mohd Hamran MOHAMAD*

Universiti Pertahanan Nasional, Malaysia
hamran@upnm.edu.my

Hassan Al-Banna MOHAMED

Universiti Pertahanan Nasional, Malaysia
hassanalbanna@upnm.edu.my

Nurhana Mohamad RAFIUDDIN

Universiti Pertahanan Nasional, Malaysia
nurhana@upnm.edu.my

Karen Woon Pei ZHEN

Universiti Pertahanan Nasional, Malaysia
karen_wpz@yahoo.com

Abstract. *This study was conducted to measure the relationship between transformational and transactional leadership styles and individual outcomes (i.e., perceptions of justice and trust in the leaders) using 118 usable questionnaires gathered from employees who have worked in a US subsidiary firm in East Malaysia, Malaysia. The results of exploratory analysis confirmed that the measurement scales used in this study met the acceptable standards of validity and reliability analyses. Further, the outcomes of Pearson correlation analysis showed six important findings: first, transformational leadership significantly correlated with procedural justice. Second, transactional leadership significantly correlated with distributive justice. Third, transformational leadership significantly correlated with trust in the leaders. Fourth, transactional leadership significantly correlated with trust in the leaders. Statistically, this result confirms that transformational leadership is an important predictor of procedural justice, transactional is an important predictor of distributive justice, and both leadership styles are important predictors of trust in the leaders. In addition, implications and discussion are elaborated.*

Keywords: transformational leadership; transactional leadership; procedural justice; distributive justice; trust in the leaders.

JEL Code: M12.

REL Codes: 12C, 14K.

1. Introduction

In the early studies of human resource development much describe on the characteristics of leadership behavior where it emphasizes more on the type of relationship between leaders and followers in organizations (Bass, Avolio, 1991, 1993, Howell, Avolio, 1993, Schriesheim et al., 1999). The type of such relationships can occur in two different forms: transformational leadership and transactional leadership (Burns, 1978, Bass, Avolio, 1991, 1993, MacKenzie et al., 2001, Rowold, 2008). Both leadership styles were first developed by Burns (1978) and this was expanded by Bass and Avolio (1991) to become the generic leadership model for dynamic organizations, which include four primary elements: first, individualized considerations is often viewed as leaders aware about employees concerns and developmental needs as well as providing the learning opportunities for them to grow in a supportive environment. Intellectual stimulations are usually seen as leaders develop followers' innovation and creativity in managing their tasks and responsibilities. Followers are encouraged to question their own way of doing things and sideline outdated principles and practices. Inspirational motivations are related to leaders frequently articulate future goals of the organization which are perceived as meaningful and challenging to the work and personal goals of the followers. The followers are motivated and inspired by the goals of the organization. Idealized influence is often referred to leaders who are very determined, persistent and always emphasized achievement in their mission. They take personal responsibility and display high moral standards and behavior. As such, they are well respected and trusted by their followers (Bass, 1985, Bass, Avolio, 1991, 1993, Twigg et al., 2008).

Transformational leadership concept is based on relational contract rather than on economic contract, where it takes the form of social exchange (subordinates obliged to their leaders and willing to contribute beyond the requirements of formal employment contracts), covenant (agreed commitment to the welfare of both parties to the exchange) and psychological contract, that is a set of beliefs held by a person regarding the terms of the exchange agreement to which that person is a party (Kanungo, Mendonca, 1996, MacKenzie et al., 2001, Rowold, 2008, Twigg et al., 2008). In this era of global competition, this leadership approach is often used to develop personality capabilities of leaders simply to create a positive transformational process, such as creating awareness amongst employees on the benefits of growth, importance of self-expression, motivation to perform at new and higher levels, encourage teaching and coaching which serves as a leverage for followers to perform beyond their expectations, changing their values and beliefs, and raising their

hierarchy of needs (Bass, Avolio, 1993, Gillespie, Mann, 2004, Twigg et al., 2008, Howell, Avolio, 1993).

Conversely, transactional leadership concept is based on economic contract, economic exchange or cost-benefit concept which is done in the short-term (MacKenzie et al., 2001, Rowold, 2008, Seltzer, Bass, 1990). Relying on an economic based transaction, transactional leadership concept is developed based on two primary factors: contingent reward approach (rewards are provided in exchange for meeting agreed upon objectives or the ability of followers to perform tasks based on their leaders' wish) and management-by-exception (the leaders intervene when employees make mistakes by establishing visible mechanisms to implement proper rules) (Bass, Avolio, 1991, 1993, Howell, Avolio, 1993, Lowe et al., 1996, MacKenzie et al., 2001). In practice, transactional leadership is equally important as transformational leadership in order to help leaders increase organizational competitiveness in an era of global competition (Bass, Avolio, 1993, Howell, Avolio, 1993, Pillai et al., 1999).

Surprisingly, recent studies using a wide variety of samples have shown that the ability of leaders to properly use transformational and transactional leadership styles may have a significant impact on individual outcomes, especially followers' perceptions of justice (Greenberg, 1996, 2003, Tatum et al., 2003a, 2003b), and trust in the leaders (Konovsky, Pugh, 1994, Korsgaard et al., 1995, Pillai et al., 1999). Many scholars, such as Folger (1977), Brockner and Wiesenfeld (1996), Leventhal (1976, 1980), Leventhal et al. (1980), and Greenberg (1996, 2003), divide perceptions of justice in two major features: procedural justice and distributive justice. Procedural Justice is often defined as individuals perceive fairness about the process and systems used by their employers to allocate outcomes (e.g., rewards and recognition). While distributive justice is usually defined as individual's sense of fairness about the outcomes (e.g., rewards and recognition) received from their employers (Brockner, Wiesenfeld, 1996, Folger, Greenberg, 1985, Folger, Konovsky, 1989, Konovsky, Pugh, 1994, Greenberg, 1996, 2003). Although, a linkage of transformational and transactional styles to perceptions of justice has been well established, but the effect of different leadership styles on procedural justice and distributive justice is given less attention in leadership research literature (Bass, 1990, Podsakoff et al., 1990, Schriesheim et al., 1999).

Conversely, scholars like Fine and Holyfield, (1996), Bass (1990), Kramer and Isen (1994), Kramer and Tyler (1996), Mishra (1996), Lane and Bachmann (1998), and Gefen et al. (2008) conceptualize trust as a psychological state where an employee faith in and loyalty to the leaders, especially in the following aspects: can make good decisions and judgments, overcome obstacles, helpful, establish a cooperation between organizational members, good in leading followers when doing organizational projects,

provide correct information about the tasks, and give full commitment to organization (Cummings, Bromiley, 1996, Das, Teng, 1998, Fine, Holyfield, 1996, Podsakoff et al., 1990).

In a leadership framework, several scholars think that that transformational leadership style, transactional leadership style, and trust in the leaders are distinct constructs, but highly interrelated (Bass, Avolio, 1993, Konovsky, Pugh, 1994, MacKenzie et al., 2001, Schriesheim et al., 1999). For example, transformational style is relied on social exchange (e.g., follower development) and transactional style is based on economic exchange (e.g., reward contingent job) in managing followers to achieve job targets. The ability of leaders to properly implement transformational style may strongly invoke perceptions of procedural justice, transactional style may strongly increase invoke perceptions of distributive justice, and both leadership styles may lead to higher trust in the leaders. Although this relationship is interesting, little is known about the effect of transformational and transactional justice on individual outcomes in organizational leadership literature (Gefen et al., 2008, Korsgaard et al., 1995, Pillai et al., 1999). Hence, it motivates the researchers to further explore the issue.

2. Objective of the study

This study has four major objectives: first, to measure the relationship between transformational leadership and procedural justice. Second, to measure the relationship between transactional leadership and distributive justice. Third, to measure the relationship between transformational leadership and trust in the leaders. Fourth, to measure the relationship between transactional leadership and trust in the leaders.

3. Literature review

Transformational leadership, transactional leadership and perceptions of justice

Human resource development literature highlights that many scholars make interpretations about the relationship between leadership and perceptions of justice based on their observations and understanding about leadership behavior theory (Avolio et al., 1995, Bass, 1990, Howell, Avolio, 1993, Liangding et al., 2007, Schriesheim et al., 1999) and organizational justice theory (Folger, Konovsky, 1989, Konovsky, Pugh, 1994, Lind, Tyler, 1988, Tyler, Degoe, 1996). Outcomes of this study generally show that leaders who properly implementing both transformational and transactional leadership styles will strongly invoke followers' perceptions of justice about the leadership styles

(Alexander, Ruderman, 1987, Folger, Konovsky, 1989, Korsgaard et al., 1995, Lind, Tyler, 1988).

Organization justice addresses two major theories: procedural justice theories and distributive justice theories (Folger, Cropanzano, 2001, Greenberg, 1996, 2003). Procedural justice theories emphasize on fairness about the process and systems and/or methods used to distribute outcomes or make decisions (Lind, Tyler, 1988, Tyler, Lind, 1992, Walker et al., 1979), such as consistency, bias suppression, accuracy, correct ability, ethicality, and representativeness (Leventhal, 1976, 1980). Application of this theory in a leadership model shows that the ability of leaders to properly use transformational process in planning and administering jobs (e.g., clarity of policy and work process, communication openness, participation, and empowerment) tends to invoke followers' perceptions of procedural justice in organizations (Korsgaard et al., 1995, Pillai et al., 1999).

Distributive justice theories explain that fairness of outcomes will exist if employees perceive that they receive outcomes equitable with their contributions (Adams, 1963, 1965, Hegtvedt, Markovsky, 1995, Konovsky, Pugh, 1994, Thibaut, Walker, 1975), such as equity rule (recognize contribution), needs rule (promote personal welfare) and equality rule (preserve social harmony) (Leventhal, 1976, 1980, Leventhal et al., 1980). Application of this theory in leadership model shows that the ability of leaders to properly use transactional process in planning and administering jobs (e.g., no discrimination, obey to work regulation, adequacy of reward, and warning when mistakes are made) will invoke followers' perceptions of distributive justice in organizations (Gefen et al., 2008, Korsgaard et al., 1995, Pillai et al., 1999).

Transformational leadership, transactional leadership and trust in the leaders

Many previous studies on organizational leadership were done using a direct effects model and found that properly implemented transformational and transactional leadership styles had increased followers' trust in the leaders (Greenberg, 1996, 2003, Pillai et al., 1999, Tatum et al., 2003a, 2003b). For example, two surveys about organizational leadership based on different samples, such as 192 and 155 matched leaders and subordinates in US organizations (Pillai et al., 1999), and 40 executives using a 360 degree feedback survey (Bradberry, Tatum, 2002; Tatum et al., 2003a, 2003b) found that the ability of leaders to properly implement transformational style (i.e., managers who focus on developing followers, creating a future vision, neglecting a status quo, looking a head and establishing new purposes) and transactional style (i.e., managers who focus on tasks, explaining expectations, solving immediate problems, and

rewarding performance) in managing organizational functions had been an important predictor of trust in the leaders in the organizations.

The literature has been used as foundation of developing a conceptual framework for this study as shown in Figure 1.

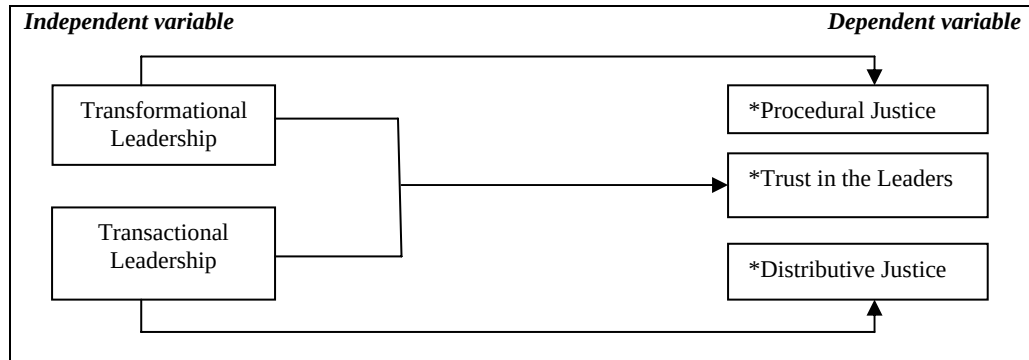


Figure 1. *Conceptual framework*

Note: * are individual outcomes

Based on the framework, it can be hypothesized that:

H1: There is significant relationship between transformational leadership and procedural justice.

H2: There is significant relationship between transactional leadership and distributive justice.

H3: There is significant relationship between transformational leadership and trust in the leaders.

H4: There is significant relationship between transactional leadership and trust in the leaders.

4. Methodology

Research design

This study used a cross-sectional method which allowed the researchers to integrate the leadership research literature, in-depth interview, pilot study and the actual survey as a main procedure to collect data. The use of such methods may gather accurate, less bias and high quality data (Cresswell, 1998, Sekaran, 2000). In the first step of data collection, in-depth interviews were conducted involving four experienced employees, namely one HR manager, one supervisor, and two experienced supporting administrative staffs. This interview enhanced the understanding of the researchers on the nature of transformational and transactional leadership styles, trust in the leader

characteristics, as well as the relationship between such variables in the organization. The information gathered from the interviews was used to develop the content of questionnaires for a pilot study. Subsequently, the pilot study was done by discussing pilot questionnaires with the participants. Feedbacks from the participants were used to verify the content and format of survey questionnaire for an actual study. Back translation technique was used to translate the content of questionnaires in Malay and English in order to increase the validity and reliability of the instrument (Hulland, 1999, Wright, 1996).

Measures

The survey questionnaires have four sections as shown in Table 1. These items were measured using a 7-item scale ranging from “strongly disagree/dissatisfied” (1) to “strongly agree/satisfied” (7). Demographic variables were used as controlling variables because the study focused on employee attitudes.

Table 1

Item validity		
Variable	Item	Source
Transformational Leadership	1. Instills pride in me 2. Spends time teaching and coaching 3. Considers moral and ethical consequences 4. Views me as having different needs, abilities, and aspirations 5. Listens to my concerns 6. Encourages me to perform 7. Increases my motivation 8. Encourages me to think more creatively 9. Sets challenging standards 10. Gets me to rethink never-questioned ideas	15 items adapted from Bass and Avolio's (1991) multi factor leadership questionnaire.
Transactional Leadership	11. Makes clear expectation 12. Will take action before problems are chronic 13. Tells us standards to carry out work 14. Works out agreements with me 15. Monitors my performance and keeps track of mistake	
Procedural Justice	1. Treats subordinates fairly 2. I can participate in decision making 3. Pay and benefits are allocated according to proper procedures	7 items adapted from Moorman's (1991) perceptions of justice scale
Distributive Justice	1. Pay and benefits are given fairly according to my effort and needs 2. Receives rewards as promised by leader 3. My pay is fair compared to the pays of my colleagues 4. My leader will punish me fairly if I often make mistakes in my work	
Trust in Leaders	1. My leader can make good decisions & judgments 2. I am ready to trust my leader to overcome any obstacle 3. My leader is good in leading us when doing organizational projects 4. I give full commitment to work with my leader 5. My leader's ideas/opinions are useful for me in doing my job 6. I believe that my leader will provide correct info bout the tasks for me 7. I can share my ideas and thoughts with my leader	7 items adapted from Marlowe and Nyhan's (1992) trust to leaders scale

Unit of analysis and sample

The targeted population for this study is 2,660 employees who have worked in the studied organization. In the first step of data collection procedure, the researchers met the HR Department to get their opinions about the rules for distributing survey questionnaires in its organizations. Considering the organizational rules, a quota sampling was used to determine the number of sample size based on the period of study and budget constraints. After that, a convenient sampling was chosen to distribute survey questionnaires since the list of registered employees was not made available to the researchers and the situation did not allow the researchers to choose respondents randomly. As such, 150 survey questionnaires were distributed to the employees who are willing to answer the questionnaires through contact persons (i.e., secretary of department heads, senior supporting staff and/or assistant managers) of the organizations. Out of a total of 150 questionnaires, 118 usable questionnaires were returned to the researchers, yielding 78.7 percent response rate. The number of this sample exceeds the minimum sample of 30 participants as required by probability sampling technique, showing that it may be analyzed using inferential statistics (Sekaran, 2000). The survey questionnaires were answered by participants voluntarily based on their consents.

Data analysis

A statistical package for social science (SPSS) version 16.0 was used to analyze the questionnaire data. Firstly, exploratory factor analysis was used to assess the validity and reliability of measurement scales (Hair et al., 1998). Secondly, Pearson correlation analysis and descriptive statistics were conducted to determine the collinear problem, further confirm the validity and reliability of constructs and thus test research hypotheses (Tabachnick et al., 2001, Yaacob, 2008).

5. Findings

Participant characteristics

Table 2 shows the participant's characteristics. Majority of respondents were male (64.4 percent), age between 26 to 30 years old (33.9 percent), Malay (42.4 percent), diploma holders (30.5 percent), lower-level management workers (75.4 percent), workers who worked more than years 10 (26.3 percent).

Table 2

Participant characteristics (N=118)		
Participant characteristics	Sub-Profile	Percentage
Gender	Male	64.4
	Female	35.6
Age	18-20	4.2
	21-25	29.7
	26-30	33.9
	31-35	18.6
	36-40	8.5
	> 41	5.1
Race	Malay	42.4
	Chinese	17.8
	Indian	0.8
	Bumiputera	33.9
	Others	5.1
Education level	SPM/MCE/Senior Cambridge	29.7
	STPM/HSC	12.7
	Diploma	30.5
	Degree	16.9
	Others	10.2
Job Category	Middle-level Management	24.6
	Lower-level Management	75.4
Length of Service	<1 year	10.2
	1-3 years	25.4
	4-6 years	21.2
	7-9 years	16.9
	> 10 years	26.3

Notes:

SPM/MCE: Sijil Pelajaran Malaysia/ Malaysia Certificate of Education

STPM/HSC: Sijil Tinggi Pelajaran Malaysia/ Higher School Certificate

Validity and reliability analyses for measurement scales

Table 3 respectively show the results of validity and reliability analyses for measurement scale. The original survey questionnaires consisted of 29 items, which related to five variables: transformational leadership (10 items), transactional leadership (5 items), procedural justice (3 items), distributive justice (4 items), and trust in the leaders (7 items). A factor analysis with the varimax rotation was first done for four variables with 40 items. After that, Kaiser-Mayer-Olkin Test (KMO), which is a measure of sampling adequacy, was conducted for each variable and the results indicated that it was acceptable. Relying on Hair et al. (1998) and Nunally and Bernstein's (1994) guidelines, these statistical analyses showed that (1) the value of factor analysis for all items that represent each research variable was 0.4 and more, an indication that the items met the acceptable standard of validity analysis, (2) all research

variables exceeded the acceptable standard of Kaiser-Meyer-Olkin's value of 0.6, were significant in Bartlett's test of sphericity, (3) all research variables had eigenvalues larger than 1, (4) the items for each research variable exceeded factor loadings of 0.50 (Hair et al., 1998), and (5) all research variables exceeded the acceptable standard of reliability analysis of 0.70 (Nunally, Bernstein, 1994). These statistical analyses confirmed that measurement scales used in this study have met the acceptable standard of validity and reliability analyses as shown in Table 3.

Table 3

The results of validity and reliability analysis for measurement scale							
Measure	Item	Factor loadings	KMO	Bartlett's test of sphericity	Eigenvalue	Variance explained	Cronbach alpha
Transformational Leadership	10	0.48 to 0.84	0.93	1024.39, p=.000	6.925	69.26	0.950
Transactional Leadership	5	0.45 to 0.81	0.83	237.22, p=.000	3.109	62.18	0.844
Procedural Justice	3	0.52 to 0.69	0.67	160.87, p=.000	2.275	75.85	0.838
Distributive Justice	4	0.52 to 0.78	0.80	197.50, p=.000	2.752	68.81	0.848
Trust in Leaders	7	0.50 to 0.73	0.92	657.77, p=.000	5.045	72.08	0.935

Analysis of constructs

Table 4 shows the result of Pearson correlation analysis and descriptive statistics. The mean numbers for the variables are from 4.1 to 4.9, signifying that the levels of transformational leadership, transactional leadership, procedural justice, distributive justice and trust in the leaders ranging from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variable (i.e., transformational leadership and transactional leadership) and the dependent variable (i.e., procedural justice, distributive justice and trust in the leaders) were less than 0.90, indicating the data were not affected by serious collinear problem (Hair et al., 1998). The measurement scales that had validity and reliability were used to test research hypotheses.

Table 4

Pearson correlation analysis and descriptive statistics							
Variables	Mean	Standard deviation	Pearson correlation (r)				
			1	2	3	4	5
1. Transformational Leadership	4.7	1.48	(1)				
2. Transactional Leadership	4.9	1.26	0.76**	(1)			
3. Procedural Justice	4.6	1.55	0.78**	0.64**	(1)		
4. Distributive Justice	4.1	1.47	0.65**	0.61**	0.72**	(1)	
5. Trust in the Leaders	4.9	1.36	0.80**	0.71**	0.80**	0.69**	(1)

Note: Significant at **p<0.01

Reliability estimation are shown diagonally (value 1)

Outcomes of testing hypothesis

As described in Table 4, the results of Pearson correlation analysis showed four important findings: first, transformational leadership positively and significantly correlated with procedural justice ($r=0.78$, $p<0.01$), therefore H1 was supported. Second, transactional leadership positively and significantly correlated with distributive justice ($r=0.61$, $p<0.01$), therefore H2 was supported. Third, transformational leadership positively and significantly correlated with trust in the leaders ($r=0.80$, $p<0.01$), therefore H3 was supported. Finally, transactional leadership positively and significantly correlated with trust in the leaders ($r=0.71$, $p<0.01$), therefore H4 was supported. Statistically, this finding demonstrates that transformational leadership is an important predictor of procedural justice, transactional leadership is an important predictor of distributive justice, and both leadership styles are important predictors of trust in the leaders.

6. Discussion and implications

Findings of this study generally demonstrate that transformational leadership is an important predictor of procedure justice, but transactional leadership is an important predictor of distributive justice. Hence, both leadership styles are important predictors of trust in the leaders. In the context of this study, majority of employees perceived the transformational and transactional styles are actively implemented in job execution, perceived justice about the procedures of allocating outcomes is high, and perceived justice about the allocation of outcomes is high and perceived trust in the leaders is high. This situation shows that the ability of leaders to properly implement transformational and transactional styles may lead to increased positive individual outcomes, especially perceptions of justice and trust in the leaders in the studied organization.

The implications of this study can be divided into three major aspects: theoretical contribution, robustness of research methodology, and contribution to practitioners. In terms of theoretical contribution, this study reveals that the ability of leaders to properly implement transformational leadership can lead to increased followers' perceptions of procedural justice. These findings have supported studies by Tyler and Lind (1992), Korsgaard et al. (1995) and Pillia et al. (1999). Conversely, the ability of leaders to properly implement transactional leadership can lead to increased followers' perceptions of distributive justice. These findings have supported studies by Hegtvedt and Markovsky (1995), Leventhal (1980), and Gefen et al. (2008). Further, the ability of leaders to properly implement transformational and transactional leadership styles can lead to higher followers' trust in the leaders. These

findings have supported studies by Pillai et al. (1999), Bradberry and Tatum (2002), Greenberg (2003), and Tatum et al. (2003b).

With respect to the robustness of the research methodology, the measurement scales used in this study had exceeded an acceptable standard of validity and reliability analyses. This situation could lead to the production of accurate and reliable findings.

Regarding practical contributions, the findings of this study can be used as a guideline to improve leadership behaviour in dynamic organizations. This objective may be achieved if organizations consider several plausible suggestions: firstly, choose the appropriate recruitment policy. For example, leaders need to review the performance of all employees and design better rewards to motivate and retain high performing employees. These employees may help to sustain and increase organizational competitiveness. Secondly, properly designing and administering management development program. For example, leaders need to design training content based on the up to date knowledge, relevant skills, and good moral values. In order to increase the effectiveness of training content, leaders to find trainers who can use different teaching and learning techniques in order to help trainees transfer what they learn in the workplace. Thirdly, promote participative decision making. For example, leaders need to use participation style whereby they hear intelligent and practical suggestions from experienced employees before making a final decision. This practice may help to design appropriate job specifications and improve the process of doing the various job categories in organizations. If these suggestions are heavily considered, this may improve quality of relationship between leaders and followers in order to achieve organizational strategy and goals.

7. Conclusions

This study confirms that transformational leadership is an important predictor of procedural justice and transactional leadership is an important predictor of distributive justice. While the ability of leaders to properly implement both leadership styles has been an important predictor of followers' trust in the leaders. These findings have supported all research hypotheses and broadened leadership research literature mostly published in Western countries. Therefore, current research and practice within the organizational leadership models needs to consider justice perceptions and trust in the leaders as critical dimensions of leadership behavior. This study further suggests that the ability of leaders to properly implement transformational and transactional styles in planning and administering jobs will strongly increase positive attitudinal and behavioral outcomes (e.g., satisfaction, commitment, performance and good

work ethics). Thus, these positive outcomes may lead to sustained and enhanced organizational competitiveness in a global economy.

The conclusion drawn from the results of this study should consider the following limitations. Firstly, this study used a cross-sectional design as a main procedure to collect data once during the duration of this study. Therefore, it did not capture the developmental issues such as intra-individual change and restrictions of making inference to participants and/or causal connections between variables of interest. Secondly, the translation of the survey instrument into the Malay language was one of the challenges encountered by the researchers during the study. Moreover, this study was based on self-reported data, taking only perspectives of employees. Further research is needed taking into consideration the perspectives of other employees within the organization to minimize the limitations of self-reported data. In addition, this study included only two outcome variables that could correlate significantly with each other. In this sense, focusing on alternative outcome variables such as performance, commitment and organizational citizenship might be an alternative way to shed light at the relationships between leadership behavior and individual outcomes. This research may be replicated in different organizational context and work environments. In other words, applying the research design to other professions and cross-company comparison is another recommendation for future research to generalize the applicability of the dimensions of the leadership behavior in the Malaysian context. Finally, a different approach, such as an in depth qualitative study, is advised especially when focusing on specific variables. The importance of these issues needs to be further discussed in future researches.

References

- Adams, J.S., „Towards an understanding of inequity”, *Journal of Abnormal and Social Psychology*, 67, 1963, pp. 422-36
- Adams, J.S. (1965). *Inequity in social exchange*, In Berkowitz, L. (Eds). *Advances in Experimental Social Psychology*, NY: Academic Press, 2, pp. 267-99
- Alexander, S., Ruderman, M., „The role of procedural and distributive justice in organizational behaviors”, *Social Justice Research*, 1, 1987, pp. 177-198
- Avolio, B.J., Bass, B.M., Jung, D.I. (1995). *Construct validation and norms for the multifactor leadership questionnaire (MLQ – Form 5X)*. New York: Center for leadership studies, Binghamton University, State University of New York
- Baron, R.M., Kenny, D.A., „This moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations”, *Journal of Personality and Social Psychology*, 51(6), 1986, pp. 1173-82
- Bass, B.M. (1985). *Leadership and performance beyond expectations*, New York: Free Press

- Bass, B.M. (1990). *Bass and Stogdill's handbook of leadership: Theory, research, and managerial applications*, New York: Free Press
- Bass, B.M., Avolio, B.J. (1991). *The multi-factor leadership questionnaire*, Palo, Alto, CA: Consulting Psychologists Press
- Bass, B.M., Avolio, B.J., „Transformational leadership and organizational culture”, *Public Administration Quarterly*, 17, 1993, pp. 112-121
- Blanchard, H., Johnson, S. (1985). *The one-minute manager*, Berkeley, CA: Berkeley Publishing Co.
- Bradberry, T., Tatum, B.C., „Seeking justice in organizations: The time is now”, *The 2nd Biannual Conference on Personal Meaning: Freedom, Responsibility and Justice*, July 18-21, 2002, Vancouver, British Columbia, Canada
- Brockner, J., Wiesenfeld, B.M., „An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures”, *Psychological Bulletin*, 120 (2), 1996, pp. 189-208
- Burns, J. M. (1978). *Leadership*, New York: Harper & Row
- Cohen, J., Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioural sciences*. Hillsdale, NJ: Erlbaum
- Cresswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*, London: SAGE publications
- Cummings, L.L., Bromiley, P. (1996). *The organizational trust inventory (OTI): Development and validation*, In R.M. Kramer, T.R. Tyler (Eds.). *Trust in Organizations: Frontiers of theory and research*, pp. 302-330, Thousand Oaks, CA: Sage
- Das, T.K., Teng, B.S., „Between trust and control: Developing confidence in partner cooperation in alliances”, *Academy of Management Review*, 23(3), 1998, pp. 491-512
- Fine, G., Holyfield, L., „Secrecy, trust, and dangerous leisure: Generating group cohesion in voluntary organizations”, *Social Psychology Quarterly*, 59(1), 1996, pp. 22-38
- Folger, R., „Distributive and procedural justice: Combined impact of ‘voice’ and improvement of experienced inequity”, *Journal of Personality and Social Psychology*, 35, 1977, pp. 108-119
- Folger, R., Cropanzano, R. (2001). *Fairness theory: Justice as accountability*, In Greenberg, J., Cropanzano, R. *Advances in Organizational Justice*, 1-55, Stanford, CA: Stanford University Press
- Folger, R., Greenberg, J., „Procedural justice: An interpretive analysis of personnel systems”, In K.M. Rowland, G.R. Ferris (Eds.), *Research in Personnel and Human Resources Management*, 1, 1985, pp. 141-83, Greenwich, CT: JAI Press
- Folger, R., Konovsky, M., „Effects of procedural and distributive justice on reactions to pay raise decisions”, *Academy of Management Journal*, 32, 1989, pp. 115-30
- Foster, D.P., Stine, B., Waterman, R. (1998). *Business analysis using regression: A casebook*, Springer-Verlag
- Gefen, D., Ragowsky, A., Riding, C., „Leadership and justice: Increasing non participating users' assessments of an IT through passive participation”, *Information & Management*, 45(8), 2008, pp. 507-512
- Gillespie, N.A., Mann, L., „Transformational leadership and shared values: The building blocks of trust”, *Journal of Managerial Psychology*, 19 (6), 2004, pp. 588-607
- Greenberg, J. (1996). *The quest for justice on the job: Essays and experiments*, Thousand Oaks, CA: Sage
- Greenberg, J., „Creating unfairness by mandating fair procedures: The hidden words of a pay-for-performance plan”, *Human Resource Management Review*, 13, 2003, pp. 41-57

- Hair, J.F., Anderson, R.E., Tatham, R.L., Black, W.C. (1998). *Multivariate data analysis* (5th Ed.), New Jersey: Prentice Hall International, Inc.
- Hegtvedt, K., Markovsky, B. (1995). *Justice and injustice*, In Cook, K., Fine, G., House, J. (Eds.). *Sociological Perspectives on Social Psychology*, pp. 257-280, Boston: Allyn and Bacon
- Howell, J.M., Avolio, B.J., „Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictor of consolidated-business-unit performance”, *Journal of Applied Psychology*, 78, 1993, pp. 891-902
- Hulland, J., „Use of partial least square (PLS) in strategic management research: A review of four recent studies”, *Strategic Management Journal*, 20, 1999, pp. 195-204
- Jaccard, J., Turrisi, R. Wan, C.K. (1990). *Interaction effects in multiple regression*, 72, Newbury Park, California: SAGE Publications, Inc.
- James, L.R., Mulaik, S.A., Brett, J.M., „Mediators, moderators, and tests for mediation”, *Journal of Applied Psychology*, 68(2), 1982, pp. 307-321
- Kanungo, R.N., Mendonca, M. (1996). *Ethical dimensions of leadership*, Thousand Oaks, CA: SAGE Publications, Inc.
- Konovsky, M.A., Pugh, D.S., „Citizenship behavior and social exchange”, *Academy of Management Journal*, 37, 1994, pp. 656-669
- Korsgaard, M.A., Schweiger, D.M., Sapienza, H.J., „Building commitment, attachment, and trust in strategic decision-making teams: The role of procedural justice”, *Academy of Management Journal*, 38, 1995, pp. 60-84
- Kramer, R.M., Isen, A., „Trust and distrust: Its psychological and social dimensions”, *Motivation and Emotion*, 18, 1994, pp. 105-107
- Kramer, R.M., Tyler, T.R. (Eds.). (1996). *Trust in organization: Frontiers of theory and research*, Thousand Oaks, CA: Sage
- Lane, C., Bachmann, R. (Eds.). (1998). *Trust within and between organizations*, New York, NY: Oxford University Press
- Leventhal, G.S. (1976). Fairness in social relationships. In Spence, J.T., and Carson, R.C. *Contemporary Topics in Social Psychology*, pp. 211-240, Morristown, New Jersey: General Learning Press
- Leventhal, G.S. (1980). *What should be done with equity theory?*, In Gergen, K.J., Greenberg, M.S., Willis, R.S. (Eds.). *Social exchange: Advances in theory and research*, pp. 27-55, New York, NY: Plenum
- Leventhal, G.S., Karuza, J., Fry, W.R. (1980). *Beyond fairness: A theory of allocation preferences*, In Mikula, G. (Ed.). *Justice and Social Interaction*, pp. 167-218, New York: Springer-Verlag
- Liangding, J., Jiwen, S., Chaoping, L., Rongjun, C., Yongxia, C., „Leadership styles and employees' job-related attitudes: An empirical study on the mediating effects of reciprocity and trust”, *Frontiers of Business Research in China*, 1 (4), 2007, pp. 574-605
- Lind, E.A., Tyler, T.R. (1988). *The social psychology of procedural justice*, New York: Plenum Press
- Lowe, K.B., Kroeck, K.G., Sivasubramaniam, N., „Effectiveness correlates of transformational leadership: A meta-analytic review of the MLQ literature”, *Leadership Quarterly*, 7, 1996, pp. 385-425
- MacKenzie, S.B., Podsakoff, P.M., Rich, G.A., „Transformational and transactional leadership and salesperson performance”, *Journal of Academy of Marketing Science*, 2, 2001, pp. 115-34
- Marlowe, Jr., H A., Nyhan, R.C. (1992). *Development and psychometric properties of the organizational trust inventory*, Unpublished manuscript, University of Florida

- Mishra, A.K. (1996). *Organizational responses to crisis: The centrality of trust*, In R.M. Kramer, T.R. Tyler (Eds.). *Trust in organizations: Frontiers of theory and research*, pp. 216-87, Thousand Oaks, CA: Sage
- Moorman, R.H., „Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship?“, *Journal of Applied Psychology*, 76, 1991, pp. 845-55
- Nunally, J.C., Bernstein, I.H. (1994). *Psychometric Theory*, New York: McGraw-Hill
- Pillai, R., Schriesheim, C.A., Williams, E.S., „Fairness perceptions and trust as mediators for transformational and transactional leadership: A two-sample study“, *Journal of Management*, 25 (6), 1999, pp. 897-933
- Podsakoff, P.M., MacKenzie, S.B., Moorman, R.H., Fetter, R., „Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors“, *Leadership Quarterly*, 1, 1990, pp. 107-142
- Rowold, J., „Effects of transactional and transformational leadership of pastors“, *Pastoral Psychology*, 56(4), 2008, pp. 403-411
- Schriesheim, C., Castro, S., Coglisier, C., „Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic procedures“, *Leadership Quarterly*, 10, 1999, pp. 63-113
- Sekaran, U. (2000). *Research methods for business: A skill building approach*, NY: John Wiley & Sons, Inc.
- Seltzer, J., Bass, B.M., „Transformational leadership: Beyond initiation and consideration“, *Journal of Management*, 16 (4), 1990, pp. 693-703
- Tabachnick, B.G., Fidell, L.S. (2001). *Using multivariate statistics*, Sydney: Allyn & Bacon
- Tatum, B.C., Eberlin, R., „Leadership, ethics, and justice in strategic decision making“, *Business Strategy Series*, 8(4), 2007, pp. 303-310
- Tatum, B.C., Eberlin, R., Kottraba, C., Bradberry, T., „Leadership, decision making, and organizational justice“, *Management Decision*, 41(10), 2003, pp. 1006-1016
- Thibaut, J., Walker, L. (1975). *Procedural justice: A psychological analysis*, Hillsdale, NJ: Erlbaum
- Twigg, N.W., Fuller, J.B., Hester, K., „Transformational leadership in labor organizations: The effects on union citizenship behaviors“, *Labor Res*, 29, 2008, pp. 27-41
- Tyler, T.R., „Why people cooperate with organizations: An identity-based perspective“, *Research in Organizational Behavior*, 21, 1999, pp. 201-246
- Tyler, T.R., Degoe, P. (1996). *Trust in organizational authorities: The influence of motive attributions on willingness to accept decisions*, In Kramer, R.M., Tyler, T.R. *Trust in Organizations: Frontiers of Theory and Research*, pp. 331-350, Thousand Oaks, CA: Sage
- Tyler, T.R., Lind, E.A., „A relational model of authority in groups“, In Zanna, M.(Eds.). *Advances in Experimental Social Psychology*, 25, 1992, pp. 115-119, New York, NY: Academic Press
- Van Maanen, J. (1983). *Qualitative methodology*, Beverly Hills, CA: Sage Publications
- Walker, L., Lind, E.A., Thibaut, J., „The psychology of procedural justice: A test of the group value model“, *Journal of Personality and Social Psychology*, 38, 1979, pp. 1400-1412
- Wong, C., Hui, C., Law, K.S., „Causal relationships between attitudinal antecedents to turnover“, *Academy of Management Journal*, 1995, pp. 342-346
- Wright, L.L. (1996). *Qualitative international management research*, In Punnett, B.J., and Shenkar, O. *Handbook for International Management Research*, pp. 63-81, Oxford, UK: Blackwell Publishers Inc.
- Yaacob, M.R. (2008). *SPSS for business and social science students: Version 14 for windows*. Pustaka Aman Press Sdn. Bhd

Study on the Local Financial Self-government in Romania

Eugen DOGARIU
West University, Timișoara

Abstract. *Local authority financing is currently at the heart of the political debate. All the states are faced with the challenge of reconciling the need to control and reduce public spending with greater financial autonomy in local government; they are accordingly seeking ways of achieving an equitable distribution of financial resources among the different levels of government in a context of budgetary cutbacks at every level of public administration. If strengthening democracy means strengthening local self-government, this in turn means establishing systems of financing for local authorities which are at once efficient, fair and consistent with the state's economic imperatives. In other words, the principle of subsidiary, decentralization and local finances are all interdependent.*

In Romania this process started in 1990 and it is on the move even today. This paper is trying to find, by using economic instruments, what is the degree in which we succeed to create a real local financial self-government.

Keywords: self-government; local authorities; local communities; income; Romania.

JEL Codes: H72, H76.

REL Code: 13C.

1. Introduction

Local decentralisation is inseparably connected to financing the activity of the local communities, meaning the financial decentralisation or *the local financial self-government*, without the financial component, the administrative decentralisation would be difficult or even impossible to achieve. Justly, most researchers deem financial decentralisation as being the backbone of the administrative decentralisation system, the financial resources being those operationally making the connection between the needs of the local communities and the means necessary for satisfying them. Thus, the absence of financial resources would lead the local communities into the impossibility of satisfying the needs of its members, which would simultaneously determine the failure of administrative decentralisation. Financial decentralisation may also be the transmittance of some specific functions by the central government to the local public authorities, by line of administrative authority and tax incomes.

2. Theoretical bases

“The European Charter of the Local Self-government”, adopted in October 1995, specifies to article 9 regarding the financial resources that “Local authorities shall be entitled, within national economic policy, to adequate financial resources of their own, of which they may dispose freely within the framework of their powers.”⁽¹⁾.

The general principles listed by the European Charter of Local Self-government are:

1. Local authorities shall be entitled, within national economic policy, to adequate financial resources of their own, of which they may dispose freely within the framework of their powers.

2. Local authorities' financial resources shall be commensurate with the responsibilities provided for by the constitution and the law.

3. Part at least of the financial resources of local authorities shall derive from local taxes and charges of which, within the limits of statute, they have the power to determine the rate.

4. The financial systems on which resources available to local authorities are based shall be of a sufficiently diversified and buoyant nature to enable them to keep pace as far as practically possible with the real evolution of the cost of carrying out their tasks.

5. The protection of financially weaker local authorities calls for the institution of financial equalisation procedures or equivalent measures which

are designed to correct the effects of the unequal distribution of potential sources of finance and of the financial burden they must support. Such procedures or measures shall not diminish the discretion local authorities may exercise within their own sphere of responsibility.

6. Local authorities shall be consulted, in an appropriate manner, on the way in which redistributed resources are to be allocated to them.

7. As far as possible, grants to local authorities shall not be earmarked for the financing of specific projects. The provision of grants shall not remove the basic freedom of local authorities to exercise policy discretion within their own jurisdiction.

8. For the purpose of borrowing for capital investment, local authorities shall have access to the national capital market within the limits of the law.

Even though certain basic principles are not set forth, a series of discrepancies occur between the local communities, thus determining the occurrence of several systems of expression. Thus, besides the territorial and demographic discrepancies, other factors also occur, such as the status of the local communities, the number of levels for local public administration, the division of competences, the regime of public finances.

The objectives of financial decentralisation are *to efficiently assigning the financial resources, equitably supplying the public goods in various geographical areas, providing the macroeconomic stability and promoting the economical improvement*. The financial independence is mainly achieved by the revenue budget and expenses of the local community, and the distinct organisation of the public finances is achieved based on the financial decentralisation allows:

- The exemption of central finances from a series of expenses;
- The decrease of the number of financial flows between the central authority and local authorities;
- The creation of a clearer image of the way of managing the national public finances.

As we were saying above, financial decentralisation may be achieved differently, depending on several factors, starting to be operational beyond the limit which the volume of public goods supplied at a central level is narrowing by a too high increase in the comparative cost for making decisions at a central level. An analogy may be done between the financial decentralisation and the concept of tax federalism, but their applicability is different depending on the organisational nature of the states (unitary states and federal states).

The analysis of the financial autonomy of the administrative-territorial units in Romania represents an interesting and inciting process, but a very complicated one, under the conditions where certain factors exist and are

difficult to quantify. A major impediment also consists in the existence of the statistic data at the regional level, which are either inexistent or they exist, but are incomplete.

The selected analysis method is of “analysis-diagnosis” type, based on financial indicators. The study of the local financial independence at a national level was focused on the statics and dynamics of own incomes (fiscal incomes and non-fiscal incomes of the local budgets), of the incomes and total expenses of all local public authorities, in lei for current prices, respectively constant prices, for the time interval 1991-2008, according to the data centralised from the control accounts of the local budgets.

3. Method and results

In order to study the local financing, a series of synthetic indicators have been created: the local authorities’ capacity of self-financing, the degree of local authorities’ financial dependence, the general degree of covering the expenses onto the own incomes and index of financial position of a local authority.

a. The local authorities’ capacity of self-financing or the degrees of financial independence indicate the weight which own incomes have within the total of the incomes of local budgets. The mathematical relation is:

$$Ca_{loc.} = \frac{Vp_{loc.}}{Vt_{loc.}} \times 100 \quad (1)$$

where:

$Ca_{loc.}$ shows the local authorities’ capacity of self-financing;

$Vp_{loc.}$ signifies the local authorities own incomes;

$Vt_{loc.}$ shows the total incomes of local jurisdictions.

b. The degree of local authorities’ financial dependence signifies the weight which all of the following have in the volume of total incomes of the local budgets: the quota and amounts deducted from the income tax, the amounts deducted from the value added tax, as well as the budgetary transfers received by the local authorities from the state budget or other budget. The calculation method is:

$$Gd_{loc.} = \frac{CST_{loc.}}{Vt_{loc.}} \times 100 \text{ or } Gd_{loc.} = 100 - Ca_{loc.} \quad (2)$$

where:

$Gd_{loc.}$ represents the degree of local authorities' financial dependence in relation to the central authority;

$CST_{loc.}$ signifies the quotas and amounts deducted from the income tax, the amounts deducted from the value added tax, as well as the budgetary transfers received by the local authorities from the state budget or other budgets;

$Vt_{loc.}$ shows the total incomes of local jurisdictions.

c. The degree of covering the local expenses based on the own incomes indicate the extent where the total expenses of the local budgets are financed based on the own incomes.

The calculation algorithm is:

$$Gvp/c_{loc.} = \frac{Vp_{loc.}}{Cht_{loc.}} \times 100 \quad (3)$$

where:

$Gvp/c_{loc.}$ represents the degree of covering the local expenses based on the own incomes;

$Vp_{loc.}$ signifies the local authorities own incomes;

$Cht_{loc.}$ shows the total expenses of local jurisdictions.

1. As it results from Table 1, after the calculations made, *the own incomes* of all administrative-territorial units of Romania have an oscillating evolution generally caused by the frequent legislative amendments. In real terms, these indicates a significant increase in the middle of the range, in between 1991 – 1994, of 47.1% in 1994 compared to 1992, due to the fiscal and budgetary policies in the direction of financial decentralisation, so that it would drop by 8.1% in 1994 compared to 1993.

Table 1

**The evolution of own incomes, local revenues and expenses
in Romanian, in between 1991 -2008 – sample assembly**

Indicator	UM	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Venituri proprii (prețuri curente)	mil. lei	17	32	153	335	923	1.130	1.984	3.327	7.557	12.135	15.518	20.533	27.284	30.759	31.495	26.172	17.441	20.599
Venituri proprii (prețuri constante)	mil. lei		11	47	140	682	778	802	2.144	5.113	8.410	11.294	16.626	22.889	26.747	28.070	23.621	15.475	18.069
Deflator (anual)	%		300	327,4	239,1	135,3	145,3	247,3	155,2	147,8	144,3	137,4	123,5	119,2	115,0	112,2	110,8	112,7	114,0
Venituri totale (prețuri curente)	mil. lei	59	200	713	1.767	3.336	4.999	10.469	13.454	21.253	33.357	71.043	93.022	128.143	158.989	194.287	276.934	368.031	456.977
Venituri totale (prețuri constante)	mil. lei		67	218	739	2.466	3.440	4.233	8.669	14.379	23.116	51.705	75.322	107.503	138.251	173.161	249.940	326.538	400.857
Cheltuieli totale (prețuri curente)	mil. lei	58	199	696	1.735	3.265	4.955	10.371	13.382	20.849	33.141	70.523	92.487	128.284	155.139	187.527	253.608	339.314	438.956
Cheltuieli totale (prețuri constante)	mil. lei		66	213	726	2.413	3.410	4.193	8.622	14.120	22.966	51.327	74.888	107.621	134.904	167.136	238.888	301.077	433.295
Variația veniturilor proprii (față de anul anterior)	%		-38,69	47,13	-8,15	103,69	-15,73	-29,02	8,03	53,70	11,28	-6,93	7,14	11,47	-1,97	2,39	-16,90	-40,87	3,60
Variația veniturilor totale (față de anul anterior)	%		13,53	9,00	3,72	39,55	3,11	-15,31	-17,19	6,88	8,77	55,00	6,02	15,57	7,89	8,91	28,64	17,92	8,92
Variația cheltuielilor totale (față de anul anterior)	%		13,72	6,61	4,27	39,09	4,44	-15,37	-16,86	5,52	10,05	54,88	6,19	16,36	5,16	7,73	22,06	18,72	27,70
Capacitatea de autofinanțare a autorităților locale	%	29,37	15,86	21,41	18,96	27,67	22,61	18,95	24,73	35,56	36,38	21,84	22,07	21,29	19,35	16,21	9,45	4,74	4,51
Gradul de dependență financiară a autorităților locale	%	70,63	84,14	78,59	81,04	72,33	77,39	81,05	75,27	64,44	63,62	78,16	77,93	78,71	80,65	83,79	90,55	95,26	95,49
Gradul de acoperire a cheltuielilor locale pe seama veniturilor proprii	%	29,46	15,88	21,92	19,31	28,27	22,81	19,13	24,86	36,21	36,62	22,00	22,20	21,27	19,83	16,79	10,32	5,14	4,17

Source: data processed by the Statistic Journal of Romania 1992-2008.

In 1995, as consequence of the measures taken in order to amend the legal frame concerning the local taxation, materialised by the stipulations of Law no. 27 of 17th May 1994 regarding the taxes and local charges and of Law no. 35 of 30th May 1994 concerning the agricultural income tax, an “explosion” of the own incomes occurs, by an increase of 103.7% compared to 1994. Unfortunately, the tendency is not maintained during the following two budgetary years, the financial own resources of the local budgets dropping by 15.7% in 1996 compared to 1995 and by 29% in 1997 compared to 1996, due a locally weak fiscal efficiency.

For 1998 – 2002, the dynamics of the own incomes is an ascending one, with a maximum increase of 53.7% in 1999 compared to 1998 and of 11.2% in 2000 compared to 1999, caused by the extension of the local self-government as consequence of Law no. 189 coming into force on 22nd October 1998, regarding the local public finances.

As of 2003, the own incomes indicate a sinuous evolution, with increases and decreases, in real terms, due, on one hand, to Law no. 571 coming into force in December 2003 regarding the fiscal code, and, on the other hand, due to amending the organic regularisation regarding the local public finances, by

the Emergency Ordinance no. 45 of 5th June 2003 concerning the local public finances. The first regularisation brings about significant sifts at the level of fiscal base of taxes and local rates.

Towards the end of the analysed interval, the drop most emphasised is found in 2007, compared to 2006, by 40.8% caused especially to action of Law no. 273 of 29th June 2006 regarding the local public finances.

2. As it may be noticed from the same Table 1, the *total revenues and expenses of all Romanian local authorities* indicate an ascending tendency during the period taken into consideration, an exception being years 1997 and 1998, with drops of approximately 15-17% each year, compared to the previous one.

Starting with 2000, introducing the global system of taxation the natural persons' incomes, as well as applying the quotas and amounts deducted from this income tax, has provided an increase of the total local incomes by 8.8% compared to the previous year. The growth by incomes recorded locally in 2001, when the total financial resources have risen by 55% compared to 2000 results entirely from the amounts deducted from the state budget from the value added tax.

Moreover, what is very important is that after 2003 we notice a major discrepancy between public incomes and expenses. The increase or even the drop of the incomes was accompanied by a sustained augmentation of the local total expenses, caused by the ample process of financial decentralisation, by relieving the state budget of a series of categories of expenses, but without appropriately providing the needed local financial resources.

3. As it results from Table 1, *the Romanian local authorities' capacity of self-financing* is sufficiently low in the interval 1991-1994, with values within the range 15.9 and 29.4%, which indicates a strong centralised feature of the national public budget. This was due to the additions of local financial resources based on the amounts deducted from the wage tax, but especially based on the subventions assigned by the central authority.

The regulations regarding the local taxes, which were adopted in 1994, had effect in 1995, a year when the degree of local financial independence increased suddenly from 19% in 1994 to 27.7%. The low tax output registered in 1996 through 1998 has naturally caused a drop in the capacity of self-financing, which reached 19% in 1997, the addition of the local incomes being predominantly done by means of the subventions assigned from the state budget.

The sudden change of the indicator in between 1999 – 2000, when it exceeds the threshold of 35% as consequence of Law no. 189 coming into force on 22nd October 1998, regarding the local public finances, is not also

maintained in the upcoming period. For example, in 2002, the degree of independence reaches 22%, especially due to the increases that occurred at the level of the fiscal transfers.

Moreover, the auto-financing capacity indicates an obviously decreasing tendency towards the end of the range, going from 22% in 2002 to only 4.5% in 2008. In this case also the main factor is represented by the deduction realised only at the level of the local public expenses, not on the component of incomes.

4. *The degree of the Romanian local authorities' financial dependence* evolves inversely to the self-financing capacity and is high enough, especially within the range 1991 – 1994, when it reaches the level of 84.1% in 1992 and extremely high, of over 90%, starting with 2006 (Table 1).

5. *The degree of covering the local expenses based on the own incomes in Romania* indicates a dynamics that is very similar to the self-financing capacity (refer to Table 2 and Figure 1), determined, on one hand, by the endless legislative changes, and, on the other hand, by the fact that total incomes mobilised locally differ slightly from the volume of local expenses.

Low values of the indicator are registered, especially for the range 1991-1994, between 15.9 and 19.3%, which indicates the fact that public expenses were financed preponderantly based on the amounts deducted from the wage tax, but especially based on the subventions assigned by the central authority. After 1994, due to notable legislative changes on the way of decentralisation from 1994 and 1998, a tendency of increase in the degree of financing the expenses by means of own incomes is found out, the lowest value being 19.1%, registered in 1997.

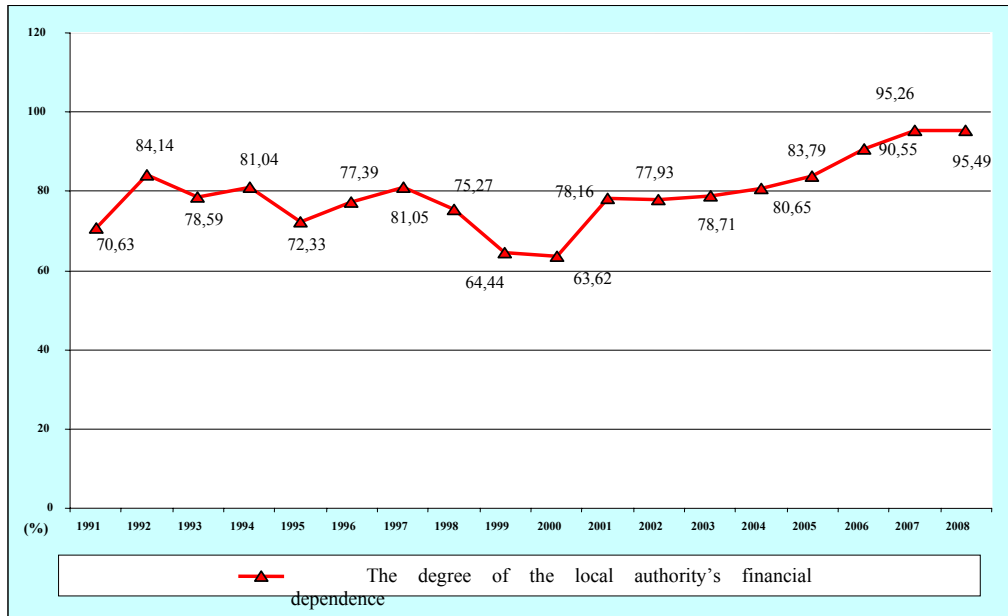


Figure 1. *The degree of covering the local expenses based on the own incomes in Romania between 1991-2008*

4. Conclusions

In consonant with passing at the local level of a series of public services, without providing the needed resources based on the own incomes, the degree of financing the expenses by means of own incomes reaches only 4.1% in 2008.

The essential remark is the one according to which the decentralisation process has followed a slow but sure trend up to 2002. Starting with 2003, the central authority has transferred locally a series of public services, but without accompanying this procedure by the necessary own local financial resources. Consequently, it is found that the local entities are “under a significant financial control” of the central authority’s.

Note

⁽¹⁾ See *European Charter of local Self-Government*, European Treaty No.122, Strasbourg, 15th October 1995, art. 9, par.1.

References

- Bird, R., Vaillancourt, Fr., „Décentralisation financière et pays en développement: concepts, mesure et evaluation”, *Working Paper, University of Toronto*, 1997
- Mutaşcu, M., Enache, E.C., Dănuleţiu, D., Crăşneac, Al., Dogaru, E., Pătru, Roxana (2007). *Modele de finanţare a dezvoltării regionale*, Editura Mirton, Timişoara
- Popescu, C.-L. (1999). *Autonomia locală şi integrarea europeană*, Editura All Beck, Bucureşti,
- Stanković, V., „Local and regional self-government in a democratic theory”, *Facta Universitatis Journal*, University of Niš, 1997
- Stigler, G., „Tenable Range of Functions of Local Government”, *Federal Expenditure Policy for Economic Growth and Stability, Joint Economic Committee, Washington*, 1957
- * * * European Charter of local Self-Government, European Treaty No. 122, Strasbourg, 15th October 1995
- * * * Statistical yearbook, 1995-2008