

POLAND – SERBIA

The Challenges of the Scientific Cooperation

ACTA ACADEMIAE MODREVIANAЕ

POLAND – SERBIA

The Challenges of the Scientific Cooperation

scientific editor

Zbigniew Paszek

Kraków 2010

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Cover design

Joanna Sroka

English translation

Mgr Joanna Skrzypiec: Klemens Budzowski.

Language Centre of KA AFM: Foreword, Slobodan M. Malinic, Zbigniew Paszek, Marek Lisiński, Jerzy Mikułowski Pomorski, Roman Nicstrój

Proof-reading:

Language Centre of KAAFM

ISBN: 978-83-7571-156-1

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Commissioned by

Andrzej Frycz Modrzewski Krakow University

www.ka.edu.pl

Publisher

Krakow Society for Education: AFM Publishing House

(Krakowskie Towarzystwo Edukacyjne sp. z o.o.

– Oficyna Wydawnicza AFM; e-mail: biuro@kfc.pl)

Kraków 2010

Sale conducted by

Bookstore “u Frycza”

Krakow Society for Education: AFM Publishing House

ul. Gustawa Herlinga-Grudzińskiego 1, 30-705 Kraków, tel/fax (012) 252 45 93

Print

Eikon Plus

PRO MEMORIA
dedicated to Professor Ilija Rosić,
Rector of Kragujevac University
(1990–1992) and Dean of the Faculty
of Economics, Kragujevac University
(1987–1990; 2000–2002).



Professor Ilija Rosić
1946–2008

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Foreword

This book contains the collection of 21 academic articles (arranged alphabetically according to the names of the Authors) dedicated to Professor Ilija Rosić, former Rector of Kragujevac University and the Dean of the Faculty of Economics, who died on January 11, 2008. The book contains the preface, a biographical note including a complete list of academic achievements, as well as the outline of Professor Rosić's scholarly, academic and organizational activities in Poland.

A number of people who had the privilege to know and become friends of Professor Ilija Rosić have been asked for their contribution to this book. They include the academics of the Faculty of Economics of the University of Kragujevac, the Faculty of Economics of Belgrade University, Andrzej Frycz Modrzewski Krakow University, University of Economics in Krakow, College of Informatics and Management in Rzeszów as well as an employee of Variant and Frog d.o.o. in Mladenovac (Serbia). It should be noted here that from the Polish side the authors of the articles are Rectors' representatives, as these are the people with whom Professor Ilija Rosić for many years cooperated personally and signed academic cooperation agreements as a Rector and Dean.

I should like to extend my thanks to all contributors and authors of academic papers and to all those who helped in their publication.

Another remarkable initiative undertaken in 2008 which has to be mentioned here is the establishment of 'Professor Ilija Rosić Fund' – Nowy Sad (Služebni glasnik SRS, broj 59/89). The aim of the Fund is to provide financial assistance to the most outstanding students of economics and medicine. It creates new opportunities of development for talented students and provides inspiration for further activities in their chosen field of interest.

I would like to thank the reviewers of the respective articles for their acute criticism which contributed to the improvement of the texts.

Let me also thank Marta Woźniak, PhD, Eng. for her engagement in the preparation of the manuscript of the book.

Zbigniew Paszek

SLOBODAN D. MALINIĆ

Life and Work of Ilija Rosić. Educational and Scientific Achievements

Ilija Rosić was born on 2 August, 1946 in Raška, Serbia. He completed his primary and secondary education with honours in his home town. As the first in his class and generation, he graduated in September 1969 from Faculty of Economics at the University of Belgrade, Department in Kragujevac.

In 1970 he was engaged as a Teaching Assistant at the course entitled Yugoslav Economy. At the Faculty of Economics in Belgrade he pursued his postgraduate studies, which he completed in 1973 with an accompanying Master's Thesis, mentored by academic Nikola Čobeljić.

During 1974 and 1975, he spent a period of time in France at the Institute for Mathematics Applied in Economics, for his specialization studies mentored by Professor Francois Peru. In November 1976 Mr. Rosić received his PhD by defending the work entitled "The Policy and Methods of Regional Development in Yugoslavia" at the Faculty of Economics, University of Belgrade.

In 1989 Dr. Rosić was appointed a full-time Professor, the highest university rank. Besides his regular activities at the Faculty of Economics in Kragujevac, he gave lectures and held exercises at Faculties of Economics in Belgrade and Niš, as well as at the Faculty of Mechanical Engineering in Kragujevac. He assumed an active role in postgraduate studies, teaching and mentoring students, helping them complete their MA theses and doctoral dissertations at Faculties of

Economics in Kragujevac, Belgrade, Niš, Sarajevo, Pristina and Skopje. He gave a number of lectures at the Department of Regional and Political Economics for bachelor, graduate and postgraduate students in Sofia.

He gave a number of lectures to postgraduate and bachelor students at the Department of Economic Development and Regional Economics at the Academy of Economics in Cracow. In 1991 he held a series of lectures at the School of Economics in New Haven, USA.

The Rector and the Senate of University of Cracow awarded Dr. Rosić a Silver Coronation Medal for his successful cooperation with Academy of Economics. In the year 2000 Cracow College and the President of Cracow College Senate awarded Dr. Rosić another medal.

Professor Rosić was given an Award of Kragujevac Academia, on its thirtieth anniversary, for his contribution to the development of this institution of higher education. The Council of Professors and Scientists of Medical School of Kragujevac awarded him an Award of Gratitude in 1988. He was also awarded a Citizen of Honour of the town of Vrnjačka Banja.

Dr. Rosić was awarded an Award of Gratitude for his contribution towards promotion and development of KVB Kragujevac in 1992. He was also awarded a Gold Plaque by ASOFK Serbia in 1988 in 1991, The Association of Students of University of Kragujevac expressed their gratitude by awarding Dr. Rosić for his thoughtfulness and understanding. He was given another award for his special efforts and contribution to the development of Faculty of Musical Arts in Belgrade. In 1991 The Council of Faculty of Technology's Award in Čačak was one of many awards given to Dr. Rosić. In 1978 he was engaged as a Social Planning Manager at the Municipality Social Planning Department in Kragujevac. He was the first Director at the Institute of Research in Economics at the Faculty of Economics in Kragujevac.

Professor Rosić was a founder and the first president of the Association for Promotion of Culture and Arts bearing the name of Svetozar Marković at University of Kragujevac.

Several times he was appointed the Head of Department at Faculty of Economics in Kragujevac and the Dean of Faculty of Economics.

In 1986 he was appointed a President of Vocational Educational Council of Serbia. He was also the president of the Section of Economic Theory and System of the Association of Economists in Serbia.

In 1990 and 1991 he was elected a republic and federal Member of Parliament.

Professor Rosić was appointed Rector of University of Kragujevac in the period between March 1990 and December 1992.

In October 2005 Professor Rosić was engaged as a part-time professor at Singidunum University in Belgrade.

Professor Ilija Rosić published more than 130 scientific and research papers in Serbia and abroad.

He managed a multitude of projects, the best known of which was "The Strategy of Regional Development of Serbia", developed for the needs of the Government of the Republic of Serbia in 2001.

In his rich researcher's career, Professor Rosić was devoted to the following fields: Economic system, Economic development, Macroeconomic policy and Regional development.

Years long experience in publishing works devoted to the above-mentioned fields, enabled a quality analysis of the manner a national economics functions, from the perspective of macroeconomics in particular.

In his works, Professor Rosić distinctly portrayed specific developmental periods of Serbian national economy. Also, he presented a review on the causes of critical periods in decades of the national economic development.

The point of view in many of his works reflects the problems regions faced as well as the impact regional policy had on the overall development of the country. Various perspectives were taken to observe different scopes of regional issues. The distinctive feature of the regional development of Serbia, as observed by Professor Rosić, was characterized by distinctive disbalance and accentuated domination of sectoral over structural and spatial criteria, as well as local objectives prevailing over the long-term goals of the overall regional development.

The following works are deemed exceptionally significant, for they present the top ten quoted works by Professor Ilija Rosić:

1. I. Rosić, "Intersectoral models and regional development planning", Vol. 6, University of New Haven Bulletin, USA, No. 6, 1992.
2. N. Čobeljić, I. Rosić, *Economic System and Economic Development of Yugoslavia*, Contemporary Administration, Belgrade 1992.
3. N. Čobeljić, I. Rosić, G. Pitić, *Macroeconomics and Economic Development*, Faculty of Economics, Kragujevac 1995.
4. Lj. Madžar, I. Rosić, M. Djordjević, *Theory of Economic Development*, Komino Trade, Kraljevo 1997.
5. I. Rosić, S. Devetaković, M. Djordjević, *Technological Progress and Economic Development*, Faculty of Economics, Kragujevac 1999.
6. I. Rosić, *Makroekonomiczne podejście do procesu transformacji w Federalnej Repulice Jugosławii*, Akademia Ekonomiczna w Krakowie (Cracow University of Economics), Rector's Lectures No. 27, Cracow 2001.
7. I. Rosić, *National Macroeconomics*, Faculty of Economics, Kragujevac, Faculty of Tourism and Hotel Management Belgrade, Belgrade 2003.
8. I. Rosić, *Reintegration Possibilities of Serbia in the World Market*, Cracow 2004.
8. I. Rosić, *Regional Aspect of the Economic Development in Serbia*, (5–24), in: *Strategy of Regional Development in Serbia* (edited by I. Rosić), Faculty of Economics, Kragujevac 2004.

9. I. Rosić, P. Veselinović, *National Economy, course book for students at Faculty of Economics in Kragujevac*, Faculty of Economics, Kragujevac 2006.

Still in prime of his scientific creativity, Professor Ilija Rosić suddenly passed away on 11 January, 2008.

Bibliografija

prof. dr. Ilije Rosića, redovnog profesora Ekonomskog fakulteta
Univerziteta u Kragujevcu

1. *Quo Vadis Jugoslovenska privreda*, "FAKK", Kragujevac, 1970.
2. Prikaz knjige R. Stojanović: Veliki ekonomski sistemi, u časopisu "Samoupravljačka iskustva", br. 4, Kragujevac 1970. (koautor sa D. Kolarević).
3. Samoupravljanje i humanizacija rada, izlaganje na Trećem susretu samoupravljanja "Crveni barjak", objavljeno u časopisu "Samoupravljačka iskustva", br. 1, Kragujevac, 1971. (koautor sa D. Kolarević).
4. *Beleške o savetovanju jugoslovenskih ekonomista o kretanjima u privredi*, Sarajevo 1970. godine, "Nauka i praksa", br. 1, Niš 1971. (koautor sa D. Kolarević).
5. *Funkcionisanje velikih ekonomskih sistema na samoupravnim ekonomskim osnovama sa posebnim osvrtom na energetske sistem*. Izlaganje na Četvrtom susretu samoupravljača "Crveni barjak", "Samoupravljačka iskustva", br. 1, Kragujevac 1971 (koautor sa D. Kolarević).
6. *Koncept specijalizacije i kompleksnog razvoja u radovima teoretičara SSSR-a*, "Ekonomika", br. 6, Niš 1974.
7. *Ekonomski razvoj subregiona Raška–Novi Pazar i Kraljevo i njihovo mesto u privrednom razvoju SR Srbije*, magistarski rad, Ekonomski fakultet, Beograd 1973.
8. *Utvrdjivanje okvira za definisanje ekonomskih regiona*, "Ekonomika udruženog rada", br. 11, Beograd 1974.
9. *Osnovni problemi regionalnog razvoja u Jugoslaviji s posebnim osvrtom na privredni razvoj SR Srbije*, uvodni referat za III okruglim stolom "Regionalno planiranje" na Sedmom susretu samoupravljača "Crveni barjak", "Samoupravna iskustva", br. 3, Kragujevac 1975.
10. *Ekonomska razvijenost subregiona u SR Srbiji*, "Komuna", br. 9, Beograd 1975.
11. *Nacionalna energetika*, prikaz knjige D. Kolarević, *Ekonomska ocena energetskih izvora Srbije – poseban osvrt na perspektive lignita*, "Direktor", br. 3, Beograd 1975.
12. *Koncepcija dugoročnog razvoja opštine Kragujevac*, Studija Ekonomskog fakulteta Univerziteta u Kragujevcu, "Kragujevac 200. godine", Kragujevac 1975.
13. *Koncepcija razvoja Šumadije i Pomoravlja*, rad iz Studije navedene pod brojem 12.

14. *Analiza materijalnih uslova i pretpostavki u kragujevačkoj privredi*, rad iz Studije navedene pod brojem 12.
15. *Politika i metodi regionalnog razvoja Jugoslavije*, doktorska disertacija, Ekonomski fakultet Univerziteta u Beogradu, 1977.
16. *Efektivnost ostvarene teritorijalne podele rada u Jugoslaviji*, Zbornik radova Ekonomskog fakulteta Univerziteta u Nišu, Niš 197.
17. *Analiza nacrtu rezolucije o politici ostvarivanja društvenog plana SR Srbije za period 1976–1980. g.* U 1979 godini sa aspekta regionalnog razvoja i ostvarivanja nacionalne ravnopravnosti, uvodno izlaganje na ovu temu u Komisiji za razvoj međunacionalnih odnosa predsedništva CK SK Srbije, “Bilten” Predsedništva CK SK Srbije, br. 1, Beograd 1979.
18. *Regionalni razvoj i međunacionalni odnosi*, u Zborniku radova “Međunacionalni odnosi danas”, Zagreb – Beograd 1979.
19. *Slobodna razmena rada između materijalne proizvodnje i društvenih delatnosti*, “Samoupravljačka iskustva”, br. 1, Kragujevac 1979.
20. *Razvoj teorije polova rasta*, “Ekonomika”, br. 6, Niš 1979.
21. *Regionalna ekonomika Jugoslavije*, I izdanje, “Naučna knjiga”, Beograd 1979.
22. *Neki aspekti regionalnog razvoja SR Srbije*, izlaganje na Savetovanju o Nacrtu rezolucije ostvarivanja Društvenog plana SR Srbije za period 1976–1980. g. u 1980. godini, “Ekonomika misao”, br. 4, Beograd 1979.
23. *Društveno-ekonomska sadržina slobodne razmene rada*, izlaganje za “Okruglim stolom” XI susreta samoupravljača “Crveni barjak”, objavljeno u knjizi “Crveni barjak” o slobodnoj razmeni rada i samoupravnom interesnom organizovanju, Kragujevac 1979.
24. *Osnovni problemi stabilizacije*, objavljeno u materijalu “Ostvarivanje politike ekonomske stabilizacije u opštinama u gradovima u 1979 godini”, Beograd 1979.
25. *Analiza strukture proizvodnje i zaposlenosti u funkciji privrednog rasta*, izlaganje na Savetovanju o koncepciji dugoročnog razvoja SR Srbije do 2000 godine, “Ekonomika misao”, br. 1, Beograd 1980.
26. *Akumulativna i reproduktivna sposobnost privrede opštine Kragujevac*, “Godišnjak” Ekonomskog fakulteta Univerziteta u Kragujevcu, Kragujevac 1980.
27. *Regionalna ekonomika Jugoslavije*, II izdanje, “Naučna knjiga”, Beograd 1980.
28. *Akumulativna i reproduktivna sposobnost organizacija udruženog rada*, Idejno politička osnova XII susreta samoupravljača “Crveni barjak”, Kragujevac 1980 (koautor).
29. *Investicije, privredni rast i problem zaposlenosti*, izlaganje na Savetovanju o Nacrtu Rezolucije o politici ostvarivanja Društvenog plana SR Srbije za period 1981–1985, u 1981 godini, “Ekonomika misao”, br. 4, Beograd 1980.
30. *Problem zaposlenosti u nacrtu rezolucije*, izlaganje na Savetovanju “Aktuelni problemi privrednih kretanja i ekonomske politike Jugoslavije 1980/81 godine”, “Ekonomist”, br. 4, Zagreb 1980.
31. *Regionalni razmeštaj industrijske proizvodnje i ostvarena teritorijalna podela rada*, “Godišnjak” Ekonomskog fakulteta Univerziteta u Kragujevcu, Kragujevac 1981.

32. *Neki elementi društvenog planiranja u uslovima socijalističkog samoupravljanja*, uvodno izlaganje za raspravu za "Okruglim stolom" u Stalnoj konferenciji gradova i opština Jugoslavije na temu "Planiranje društvenog razvoja opštine i gradova", objavljeno u časopisu "Komuna", br. 11, Beograd 1981.
33. *Rast zaposlenosti, izvoza i akumulacija*, izlaganje na savetovanju o Nacrtu Rezolucije o politici ostvarivanja Društvenog plana SR Srbije za period 1981–1985 g. u 1982, "Ekonomska misao", br. 4, Beograd 1981.
34. *Društveno i materijalno vrednovanje proizvodnog i stvaralačkog rada* – Idejno politička osnova XIV Susreta samoupravljača "Crveni barjak", Kragujevac 1982 (koautor).
35. *Društvena afirmacija proizvodnog i stvaralačkog rada*, uvodno izlaganje na III komisiji XIV susreta samoupravljača "Crveni barjak", objavljeno kao posebna brošura i u knjizi "Crveni barjak o društvenom i materijalnom vrednovanju proizvodnog i stvaralačkog rada", Kragujevac 1982.
36. *Privredni rast, zablude u izvozno-uvoznjoj orijentaciji i problemi zaposlenosti, izlaganje na Savetovanju o aktuelniert problemima privrednih kretanja i ekonomske politike Jugoslavije u 1981/82 godini*, "Economist", br. 1/2, Zagreb 1982.
37. *Zaoštriti odgovornost za promašaje u našoj ekonomskoj politici*. "Komunist", br. 1309, Beograd 1982.
38. *Analiza medusektorskih-međuregionalnih modela*, "Godišnjak" Ekonomskog fakulteta u Kragujevcu, Kragujevac 1982.
39. *O realnosti i uticaju stope proizvodnje na zaposlenost, izvoz i privredna kretanja u celini*, "Ekonomska misao", br. 4, Beograd 1982.
40. *Aktuelni problemi privrednog razvoja Jugoslavije – udžbenik*, u izdanju "Svetozar Marković", Beograd 1984.
41. *Neke zablude u sadašnjim i opredeljenjima za budući privredni razvoj*, u Zborniku "Dugoročni razvoj Jugoslavije", SANU, Beograd 1982.
42. *Razvoj agrokompleksa i snabdevanje gradova u svetlu nekih iskustava iz Kragujevca*, "Komuna", br. 9/10, Beograd 1982.
43. *Centemporarv theoretical conceptions in regional development*, Polska Akademia Nauk, Oddział w Krakowie, Warszawa–Kraków 1987.
44. *Koncepcija specijalizaciji i kompleksowego razwoju gospodarki*, objavljeno u časopisu Akademii Ekonomicznej w Krakowie, Krakov 1986.
45. *Privredni sistem i razvoj društvene svojine u Jugoslaviji*, objavljeno u Zborniku radova "Strategija dugoročnog društveno-ekonomskog razvoja jugoslovenskog samoupravnog društva, izdanje Univerziteta "Svetozar Markovic" – Centra za marksističko obrazovanje, Kragujevac 1985.
47. *O realnosti predviđenih materijalno bilansnih okvira razvoja privrede*, "Ekonomska misao", br. 3/1985.
48. *Neka otvorena pitanja privrednog sistema i razvoj međunacionalnih odnosa*. Objavljeno u Zborniku radova "Savez komunista Srbije u ostvarivanju nacionalne ravnopravnosti i u borbi protiv nacionalizma", "Komunist", Beograd 1985.

49. *Kriza – uzroci i izlazi* (Esej 4 autorska tabaka) objavljen u “Svetlosti” u nekoliko brojeva, Kragujevac, decembar 1984 – Januar 1985.
50. *Vek i po industrije kože u Kragujevcu 1835–1985 god.* (grupa autora), autor dela monografije “Ekonomski razvoj Partizana u periodu 1970–85 god” Monografija štampana kao knjiga, Kragujevac 1985 (četiri autorska tabaka).
51. *Mreža i struktura srednjeg usmerenog obrazovanja na području Regiona ŠiP za kadrovima* (7 autorskih tabaka). Institut za ekonomska istraživanja, Kragujevac 1985.
52. *Ekonomska ocena poslovanja RO “22. decembar”* (grupa autora), 2 autorska tabaka, Institut za ekonomska istraživanja, Kragujevac 1985.
53. Monografija: *Analiza Ekonomskog razvoja Opštine Kragujevac u periodu 1965–1983. god.*, Institut za ekonomska istraživanja i Skupština opštine Kragujevac, Kragujevac 1986, 4 knjige.
54. Zbornik radova: *Ekonomska efikasnost i samoupravljanje*, Neka systemska rešenja i efikasnost investicija, Istraživačko-izdavački centar SSO Srbije i Marksistički centar CK Srbije, Beograd 1986, p. 8.
55. Monografija: *Ekonomski razvoj regiona Sumadije i Pomoravlja u periodu 1965–1985. god.*, Konceptija dugoročnog društveno-ekonomskog razvoja regiona Sumadije i Pomoravlja, Institut za ekonomska istraživanja Kragujevac i Ekonomski institut Beograd, Beograd, 1986, p. 185.
56. *Centerporary Theoretical Conceptions in Regional Development*, Polska Akademia Nauk, Oddział w Krakowie, Warszawa–Kraków 1987, 7 p.
57. Zbornik radova: *Klasno i nacionalno u razvoju sistema socijalističkog samoupravljanja*. Uloga systemskih rešenja u razvoju međunacionalnih odnosa, Univerziteta “Svetozar Marković, Centar za marksističko obrazovanje, Kragujevac 1987, 18 p.
58. Zbornik radova: *Ekonomski subjekti u jugoslovenskom privrednom sistemu*, Regionalni aspekt razvoja privrednih subjekata, Univerzitet “Svetozar Marković, Centar za marksističko obrazovanje, Kragujevac 1987, 11 p.
59. *Ekonomski razvoj fabrike “Crvena zvezda” Kragujevac od 1965–1983 god.*, “Od pekmezare do fabrike”, Institut za ekonomska istraživanja, Kragujevac 1987, 7 aut. tab.
60. Esej: *Ekonomska nemoć Jugoslavije*, “NON” Beograd, april maj 1987, 16 brojeva
61. Poglavlje u monografiji: *Ekonomski razvoj Batočine u sadašnjosti, prošlosti i perspektive*, Ekonomski fakultet i Skupština opštine Batočina, Kragujevac–Batočina 1988, 280 p.
62. Zbornik radova: *Problem privrednog rasta i nezaposlenosti u SR Srbiji, Privredni rast i problem zaposlenosti u SR Srbiji*, Uvodni referat na Naučnom skupu. nacionalnog značaja po pozivu, štampan u celosti, u izdanju Ekonomskog fakulteta Univerziteta u Kragujevcu 1988, 32 p.
63. *Planiranje narodne privrede i regionalni razvoj*, *Ekonomski zbornik*, knj. VII SANU, Beograd 1988, 12 p.
64. *Ekonomski razvoj Svetozareva*, Zbornik radova, Svetozarevo 1989, 23 p.
65. Zbornik: *Aktuelni problemi na politika pobrzoit razvoj na Stopansku nedovoljno ravienite područja vo SFRJ*, Uzroci širenja regionalnih razlika u Jugoslaviji, Naučni skup, Skoplje 1989, 2 aut. tab.

66. Zbornik radova: *Mesto i uloga Srbije u regionalnom razvoju Jugoslavije*, Naučni skup, Beograd 1989, 2 aut. tab.
67. Diskusija: *Cena zablude i neophodnost otrežnjenja*, „Redefinisanje samoupravnog socijalizma“, Naučni skup u organizaciji časopisa „Ekonomika“, Beograd 1989, 1 aut. tab.
68. Deo Studije: *Ekonomski razvoj Batočine do 1985. godine*, Institut za ekonomska istraživanja Ekonomskog fakulteta Univerziteta u Kragujevcu, Kragujevac 1989, 5 aut. tab.
69. *Razvojni pravci, društveni proizvodi i nacionalni dohodak Kragujevca u naredne dve decenije*, „Zastava“, br. 25, 1989, 210 p.
70. *Poglavlje studije: Univerzitet 2000 god.*, Institut za ekonomska istraživanja Ekonomskog fakulteta Univerziteta u Kragujevcu, Kragujevac 1990, 5 p.
71. *Ekonomska efikasnost socijalizma i zaštita svojine*, Poslovna politika, Beograd, decembar 1990, 11 p.
72. Monografija: *Tri decenije Ekonomskog fakulteta Univerziteta u Kragujevcu 1960–1990*, Razvoj Ekonomskog fakulteta u Kragujevcu u prethodne tri decenije, Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac 1990, 11 p.
73. *Od Liceja do Univerziteta*, “Napredak”, Aranđelovac, br. 1, 1991, 6 p.
74. *Intersektor models in regional development planning*, Wol. 6, “Bilten” Univerzitet Nju Xejven, USA, br. 6, 1992, 8–13 p.
75. *Privredni sistem i privredni razvoj Jugoslavije*, Savremena administracija, Beograd, br. 1, 1992, 747 p.
76. Monografija: *Razvojni potencijali i osnovni pravci razvoja grada Kragujevca*, Institut za ekonomska istraživanja u Kragujevcu 1993, 35–85 p.
77. *Promene u privrednom sistemu Jugoslavije*, Referat na Međunarodnom naučnom skupu, “Tranzicija privrednog sistema postsocijalističkih zemalja”, Beograd, br. 3–4, jun 1994, 12 p.
78. *Privredni sistem Jugoslavije*, Udžbenik, Izdavač: “Kastor”, Kragujevac 1994, 146 p.
79. Monografija: *Društveno-ekonomski razvoj opštine Smederevska Palanka do 2010. god.*, Institut za ekonomska istraživanja, Kragujevac 1994, 65 p.
80. *Problemi razvoja i strukturne promene privrede Srbije*, Monografija, Ekonomski fakultet Univerziteta u Nišu, IEI Kragujevac, Niš 1995, 14 p.

Bibliografija naučnih radova 1.01.1996–30.06.2001

O Naučne knjige i monografije Naučna knjiga i monografija nacionalnog značaja

1. I. Rosić, M. Đorđević, *Ekonomika Jugoslavije*, Komino Trade, Kraljevo 1996 (223 p.).
2. N. Čobeljić, I. Rosić, G. Pitić, *Makroekonomija i privredni razvoj*.
3. Lj. Madžar, I. Rosić, M. Đorđević, "Teorija privrednog razvoja," Komino Trade, Kraljevo, 1997 god. (234 p.).
4. I. Rosić, Lj. Madžar, M. Đorđević, *Sistemski pristup privrednom razvoju*, Komino Trade, Kraljevo 1998 (218 p.).
5. I. Rosić, S. Devetaković, M. Đorđević, *Tehnički progres i privredni razvoj*, Ekonomski fakultet Kragujevac 1999 (272 p.).
6. I. Rosić, *Rast, strukturne promene i funkcionisanje privrede*, Komino Trade, Kraljevo 2000 (464 p.).
7. I. Rosić, Ž. Gligonjević, *Regionalni razvoj Jugoslavije*, Ekonomski fakultet, Niš 2001 (210 p.).

Napomena: *Problematika regionalnog razvoja i demografija zauzima značajno mesto u sledećim monografijama*: a) 1: p. 95–106, 153–223, b) 3: p. 203–234; c) 6: p. 314–435.

Poglavlja u knjigama i pregledni članci

Poglavlje u knjizi, pregledni članak u časopisu, u tematskom Zborniku radova, u monografiji, ili ediciji posvećenoj određenoj naučnoj oblasti

8. Monografija: *Regionalni razvoj i demografski tokovi u SR Jugoslaviji 1* (ed. Z. Arandelović), Ekonomski fakultet, Niš 1999.
– Ilija Rosić je autor poglavlja: *Neka demografska kretanja i problem zaposlenosti u regionima SR Jugoslavije*, p. 47–55.
9. Monografija: *Tranzicija i privredni razvoj* (ed. D. Marsenić i G. Rikalović) CIP 330.342 (082), Ekonomski fakultet, Beograd 1998.
– Ilija Rosić je koautor poglavlja: *Prilog filozofskoj raspravi privrednog rasta i razvoja*, p. 16–22.
10. Monografija: *Regionalni razvoj i demografski tokovi balkanskih zemalja 3*, (ed. Z. Arandelović, Ž. Gligorićević), Ekonomski fakultet, Niš 1998.
– I. Rosić je koautor poglavlja u 1 delu, *Regionalni aspekt privrednog razvoja Srbije u novom balkanskom okruženju*, p. 33–47.

11. Monografija: *Ključni aspekti razvoja seoskog turizma Srbije* (ed. I. Rosić, J. Popesku).

– I. Rosić je autor poglavlja: *Uloga turizma u strukturnim promenama i privrednom rastu Srbije*, p. 21–33.

12. Monografija: *Regionalni razvoj i demografski tokovi balkanskih zemalja 5* (ed. Z. Arandelović, Z. Gligorijević), Ekonomski fakultet, Niš 2000.

– I. Rosić je koautor poglavlja u II delu, *Regionalni aspekt nezaposlenosti u jugoslovenskoj privredi*, p. 131–143.

13. Monografija: *Regionalni razvoj i demografski tokovi balkanskih zemalja 6* (ed. Z. Arandelović, Ž. Gligorijević), Ekonomski fakultet, Niš 2001.

– I. Rosić je autor poglavlja u I delu, *Regionalni razvoj i teorija polova rasta*, p. 7–31.

Objavljeni radovi međunarodnog značaja Rad u časopisu međunarodnog značaja

14. I. Rosić, *Technical Progress and new Approach to the Explanation of Economic Growth*, Kraków 2001, Godišnjak, Ekonomske akademije, p. 15–28.

Rad saopšten na skupu nacionalnog značaja štampan u celini

15. I. Rosić, M. Đorđević, *Osnovni indikatori makroekonomske nestabilnosti*, rad saopšten na tradicionalnom savetovanju naučnog društva ekonomista Jugoslavije.

– Rad je u celini štampan u *vanrednom broju Ekonomskih analiza*, Ekonomski fakultet Univerziteta u Beogradu, 200. god., p. 75–85.

16. I. Rosić, M. Đorđević, *Privredni sistem i tranzicija*, rad saopšten na tradicionalnom savetovanju SEJ u Miločeru.

– Rad je u celini štampan u zborniku *Tranzicija i reintegracija privrede*, SEJ, Beograd. 2001, p. 51–57.

Bibliografija naučnih radova 30.06.2001 – 31.12.2006 god**Naučne knjige i monografije**
Naučna knjiga i monografija nacionalnog značaja

1. I. Rosić, *Privredni razvoj Jugoslavije u poslednjoj deceniji XX veka*, (3–25 p.), objavljen u monografiji Strategija razvoja i strukturne promene privrede Srbije u uslovima tranzicije (jedan od redaktora bio je I. Rosić), Ekonomski fakultet Univerziteta u Kragujevcu, Ekonomski fakultet Univerziteta u Nišu, 2001.
2. I. Rosić, *Nacionalna makroekonomija* (monografija), Ekonomski fakultet Univerziteta u Kragujevcu, Fakultet za turistički i hotelijerski menadžment Beograd, Beograd 2003.
3. I. Rosić, *Regionalni aspekt privrednog razvoja Srbije*, (5–24 p.), objavljen u monografiji Strategija regionalnog razvoja Srbije (redaktor Monografije I. Rosić), Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac 2004.

Poglavlja u knjigama i pregledni članci**Poglavlje u knjizi, pregledni članak u časopisu, u tematskom zborniku radova, u monografiji, ili ediciji posvećenju određenoj naučnoj oblasti**

4. I. Rosić, *Turizam i razvoj nerazvijenih područja Srbije*, (15 p.), AEERT Prirodno-matematički fakultet i Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac 2001.
5. I. Rosić, *Makroekonomski pristup procesu tranzicije u SR Jugoslaviji* (63–69 p.), Ekonomist, Beograd 2002.
6. I. Rosić, P. Veselinović, *Konkurentnost privrede ključna determinanta strategije razvoja* (171–181 p.), Ekonomist, Beograd 2004.
7. I. Rosić, *Regionalni aspekt privrednog razvoja Srbije* (197–218 p.), objavljen u monografiji Ekonomske slobode i poslovno okruženje, Miločer 2004.
8. I. Rosić (redaktor), *Institucionalne promene kao determinanta privrednog razvoja Srbije*, Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac 2003.
9. I. Rosić, N. Makojević, *Prilog savremenom shvatanju regiona u novom milenijumu* (13 p.), objavljen u monografiji Regionalni razvoj i demografski tokovi balkanskih zemalja, Ekonomski fakultet Univerziteta u Nišu, Niš 2005.
10. I. Rosić, N. Makojević, *Makroekonomska politika u procesu tranzicije* (52–62 p.), Ekonomist br. 1, Beograd 2005.
11. I. Rosić, P. Veselinović, *Ključni faktori evropske integracije nacionalne ekonomije* (68–79 p.), Ekonomist br. 1, Beograd 2006.
12. I. Rosić, P. Veselinović, *Nacionalna ekonomija, udžbenik za studente Ekonomskog fakulteta Univerziteta u Kragujevcu*, Ekonomski fakultet u Kragujevcu, Kragujevac 2006.

13. I. Rosić, P. Veselinović, *Osnovi ekonomije, udžbenik za studente Fakulteta za turistički i hotelijerski menadžment Univerziteta Singidunum u Beogradu*, Univerzitet Singidunum, Beograd 2006.

**Objavljeni radovi međunarodnog značaja
ad u časopisu međunarodnog značaja**

14. I. Rosić, *Makroekonomiczne podejście do procesu transformacji w Federalnej Republice Jugosławii*, Akademia Ekonomiczna w Krakowie (Cracow University of Economics), Rector' s Lectures No. 27, Kraków 2001.

15. I. Rosić, *Funkcjonowanie gospodarki Jugosławii i jej zmiany strukturalne*, Akademia Ekonomiczna w Krakowie (Cracow University of Economics), Rector' s Lectures No. 54, Kraków 2002.

16. I. Rosić, *Reintegration possibilities of Serbia in world market (337–345)*, “Państwo i Społeczeństwo w XXI wieku”, Kraków 2004.

ZBIGNIEW PASZEK

Ilija Rosić – A Man Dedicated to Science, Education and Academic Cooperation with Polish Universities

Success in any given profession depends on fulfilling certain clearly specified conditions, which include knowledge, experience, vision, enthusiasm, luck, professionalism in approach to work, appropriate selection of fellow academics, good atmosphere at work and finally, having good contacts with influential people. The aforementioned conditions should be fulfilled by a manager – leader, who should have a charismatic personality, immaculate professional ethics, high professional qualifications, including the ability to think analytically as well as the ability to solve possible problems and conflicts.

In view of the above-mentioned considerations, a question arises, was Professor Ilija Rosić a man of success? In view of his overall academic, scholarly and organizational achievements of Professor Ilija Rosić, one can have no doubts that the answer has to be in the affirmative.

One of the more important stages of Professor Ilija Rosić's work was his time spent in Poland, spanning nearly 25 years (from 1985 till 2008), the backbone for his activities being numerous cooperation agreements specifying details of mutual cooperation. The cooperation involved the Faculty of Economics of the University of Economics in Kragujevac on the one side and, from the Polish side, such universities as Academy of Economics (renamed on 25 August 2007 University of Economics in Kraków), Andrzej Frycz Modrzewski Kraków University, College

of Informatics and Management in Rzeszów, Kraków University of Technology, Polish Institute of Inner Control, Sp. z o.o. in Warsaw. The above-mentioned universities and institutions were involved in such academic and research activities as: exchange programs for both students and professors, exchange of information covering such areas as methodology of academic and scientific research, exchange of academic syllabi and various publications (books and academic periodicals). The academic cooperation also created the opportunity for joint scientific research and the publication of academic articles by partner university periodicals. Additionally, both sides had the opportunity for cooperation within the framework of programs and projects offered by the European Union.

Professor Ilija Rosić inspired the above-mentioned activities and supervised them effectively. He was one of the very few people who always had a very carefully prepared agenda for his visits in Poland.

During his numerous visits to Poland Professor Rosić always tried to meet with the academic community and deliver a lecture on a current topic. Additionally, he took part in international academic conferences and seminars, which gave the opportunity to publish articles and materials prepared earlier. Most articles were preceded by his lectures.

In 1983 'The Concept of Specialization and Comprehensive Development of Economy, Problemy Ekonomiczne PTE, Oddział w Krakowie, No. 4/84, p. 101–109.

In 1987 'Contemporary Theoretical Conceptions in Regional Development', Polska Akademia Nauk, Oddział w Krakowie, Warszawa, Kraków.

In 1990 Professor Ilija Rosić gave two lectures on the subject of regional development for the academics of the Chair of Economic Development and Regional Economics and for post-graduate students.

In 2001 he published an academic paper entitled 'Macroeconomic Approach to the Process of Transformation in the Federal Republic of Yugoslavia', Akademia Ekonomiczna w Krakowie, Rector's Lectures No. 27, Kraków 2001.

In 2001, 'Technical Progress and New Approach to the Explanation of Economic Growth', Zeszyty Naukowe; Akademia Ekonomiczna w Krakowie.

In 2003 'Macroeconomic Approach to the Process of Transformation in the Federal Republic of Yugoslavia', Andrzej Frycz Modrzewski Kraków University, conference materials, volume 2, p. 230–249, Kraków.

In 2004 'Reintegration Possibilities of Serbia in World Market', magazine of Akademia Ekonomiczna in Kraków.

In 2003 he gave a series of lectures on the process of transformation in European countries for academics and students of Warsaw Polytechnic, University of Gdańsk, College of Informatics and Management in Rzeszów and University of Economics in Kraków.

In the years 2003–2006, while staying at the University of Economics in Kraków, he conducted discussions and seminars for post-graduate students of the School of Entrepreneurship and Management of the University of Economics in Kraków.

Professor Ilija Rosić is the author of a number of significant works. The most popular ones in Poland include the following:

1. 'Aktuelni problemi privrednog razvoja Jugoslavije', IRO Svetozar Marković, Beograd, 1984. In 1986 this book was reviewed by Zbigniew Paszek, and the review was published in 'Ruch Prawniczy, Ekonomiczny i Socjologiczny,' official bulletin of Adam Mickiewicz University in Poznań and Academy of Economics in Poznań (4th quarter, 1985).
2. 'Rast, strukturne promene i funkcionisanje privrede (Nacionalna Ekonomija)', Kraljevo 2000.
3. 'Nacionalna makroekonomija – rast, struktura i funkcionisanje privrede', Ekonomski fakultet Univerziteta u Kragujevcu, fakultet za Turistički i Hotelski Menadžment–Beograd 2003.

It is worth noting Professor Rosić's activities outside the field of academic research. He was always greatly interested in the development of young people on the threshold of their academic career, taking great care of their academic development and promotion. His interest concerned not only the best assistants at University, but also excellent students of Gimnazjum (secondary school). In many cases he was interested in their process of education and facilitated their visits to important academic centres abroad, in order to prepare them for future work in Serbia. Thanks to the cooperation agreement signed in 2002 between the Faculty of Economics of the University of Kragujevac and the School of Entrepreneurship and Management of the University of Economics in Kraków, one of the best students of Gimnazjum in Kragujevac started her studies (first for Bachelor's and later Master's degree) in the Faculty of Economics and International Relations at the University of Economics in Kraków, specializing in International Business. In 2008 she graduated with honours and received Master's degree, becoming an assistant at Andrzej Frycz Modrzewski Kraków University. It is worth noting that she is the author of three published scientific articles. In 2009 she started working for Variant&Frog d.o.o. in Mladenovac in Serbia.

Professor Ilija Rosić was the founder and the first President of OKUD Svetozar Marković Association, functioning within the University of Kragujevac, one of the main aims of which was the promotion of culture abroad. Numerous visits abroad, also in Poland, not only gave the members of this Association lots of satisfaction, but also were a splendid opportunity to promote Serbia abroad.

The figure of Professor Rosić

Professor Ilija Rosić was always full of energy and enthusiasm in any work he undertook. He was very well known for being good-natured, for his optimism and cheerfulness as well as his witty comments. He was noted for his friendly approach to students, he was an outstanding lecturer. On top of that, he had exceptional organizational skills. He avoided easy compromises and was always ready to help and offer his advice to others. He was also the person who inspired in many ways a great deal of people. He often liked to quote a well-known saying: 'Let's do everything to the best of our abilities, and if we are unable to do something well, let's not do it at all.'

Professor Ilija Rosić was awarded the medal of the University of Economics in Kraków for his lifetime achievements and activities in Poland.

VERICA BABIĆ, JELENA ERIĆ

Innovation Processes Through SME's Networking

Introduction

Today, the difference in development levels between some regions and countries throughout the world is rather interpreted by their ability to generate and apply new knowledges than by the rate of investment and other incentives. Underdeveloped countries and regions are increasingly facing the need to create strategies, policies and institutional environment which would promote local innovations effectively and enable the diffusion of knowledge with the aim to support the development of modern industry and top technologies.

Actually, the generation and improvement of knowledge represent a critical point in the activities of enterprises. In order to be able to conduct this development activity more successfully, enterprises have begun to connect within the networks which would in process enable them with the access to the critical resources of knowledge and achievements of other enterprises. Identifying the conditions that affect the raising of the level of knowledge in such networks is essentially important, especially in the early stages of network development. Competitiveness and growth of the world economy are connected not only with the development of local innovative capacities but also with the ability of small and medium enterprises to participate in the networks of information and production resources¹.

¹ *OECD Financing Innovative SME's In A Global Economy*, 2nd Conference of ministries for SME's development, Istanbul, June 2004.

The expansion of SME's, which are based on knowledge and new technologies, has made its influence on the formation of an attitude according to which knowledge and intellectual skills are fundamental strategic resources of our age as well as the main prompter of productivity and economic performance. Precisely for this reason, enterprises in modern economy increasingly tend to connect and cooperate within strategic networks, with the aim to realize the benefits of synergy and reduction of risks through the process of mutual promotion of research spirit, innovation and creativity. Although individual activities of each enterprise offer benefits of greater flexibility and autonomy of business, the obvious superiority of the concept of mutual cooperation, communication and joint decision-making on strategic issues is emphasized. The principal idea is to develop a pragmatic, unique and long-term system of networking of innovative small and medium enterprises which would enable their continuous individual development while simultaneously developing strategic orientation within the network.

Networking of innovative SME's enables a sustainable level of growth and development in the global economy on the basis of knowledge management, transfer of new knowledges and technologies and resource mobilization. Thus, interorganizational cooperation between SME's represents an opportunity to raise the level of competitiveness and flexibility in global markets.

The paper specifically analyzes the benefits of the innovative processes which are created in strategic SME networks. Firstly, it points out the importance of innovative processes, and analyzes the characteristics and types of innovation networks of SME's, and in the end it summarizes the key factors of knowledge generation within networks.

1. Innovation and SMEs

Organizational learning, knowledge and its development are the issues to which particular attention has been paid only in the recent times. The very idea of knowledge being an important factor for organizational development is not at all new, but its importance has started to be recognized only in the recent times. It is widely accepted that knowledge and innovations based on the continuous process of knowledge development in particular represent the basis for competitive advantages of enterprises.

Innovation represents a key element in the process of economic development and, in a wider sense, it may be defined as a development, improvement and use of new products, production processes and services. Since global economy becomes more integrated and its members become interdependent from each other, entrepreneurs and their enterprises search more intensively for global business opportunities by employing the commercialization of their products and services more efficiently than their competitors. The development of new products and services represents a very important factor for accomplishing future growth and

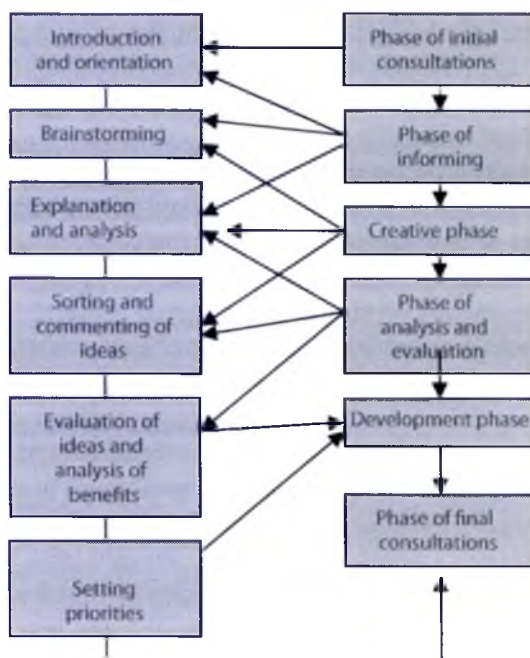
success of each enterprise in particular. Growing needs, shortening of product life cycle and increasing competition are only some of the factors which force enterprises to invest increasingly and systematically into the process of innovation and gaining of knowledge. Innovation represents the main precondition for economic progress and a critical element for competitive superiority of enterprises as well as for the entire national economy.

Innovation process is of a cyclic character not of linear. It usually begins with the idea of a new product, which is then further implemented through the development of prototypes of new products and their testing after which follows the production of the so-called *zero-series* products that are tested in the market, and then modified and adjusted according to the observed preferences of customers. In the end there is mass production and launching of new products on the market. It is clear that each phase represents a source of potential difficulties and therefore a risk and the unknown field for each individual investor (Figure 1).

Innovative companies in the sector of small businesses, many of which are based on the development and promotion of new technological processes represent a key factor for raising competitiveness of entire economy. Some researches have shown that SME's are main leaders of innovation, and that even in cases when innovation is realized in large enterprises, the main source of new ideas comes from small organizational parts². Enterprises are connected into networks in order to have access to wide-ranging knowledge databases which could be further developed, transferred and used. Networks, whose main task is to generate new knowledge, are defined as development (research) networks. Research networks are not a static entity, but rather represent a continuous process of evolution into the next, higher stage of development [4]. By forming networks of SME's innovative environment is being developed through the promotion and improvement of mutual understanding and cooperation of all members of the network, through the market commercialization of ideas, exchange of knowledge and experiences and encouragement of creative spirit. Enterprises may form local networks with the aim to become not only more specialized, but also to make their capacities more compatible through the common use of production and sales resources. That way, enterprises realize the economic effects by reaching scale economies and by winning market on a large scale, which would if performed independently, remain out of their reach. A key element to be realized by the state policy makers is to observe and realize the importance and benefits of such cooperation as well as to create institutional and political environment for its maximum exploitation.

²Torkelli M., Miettinen P., *Innovationroom – A Service for SME's to cope with Virtual Innovation Teams*, "Frontiers of E-business research" 2005, p. 538–541.

Figure 1. Process of innovation in SME's



There is a perception that networking is not a suitable strategy for SME's if their size and return is taken into consideration. However, having in mind that the process of knowledge integration involves innovation, cooperation, building of trust, collective engagement and overcoming the differences, size is not that important. Knowledge Integration may bring significant benefits to SME's, but the point is that it is necessary to support the most profitable activities and have a full understanding of gaps which arise regarding their exchange. The first step in understanding the process of creation of networks of SME's is to identify obstacles and problems for small businesses which do not possess substantial financial resources.

During their development, small and medium enterprises meet the whole range of difficulties and obstacles, particularly those related to the financing of new business ventures. They are, however, an especially aggravating factor when it comes to innovative SME's. First of all, the rate of return on funds invested in innovation is often insufficient and very unpredictable. Innovation often means constant development of new products and use of new technological processes in completely unfamiliar markets. That is why it is so difficult for potential investors to evaluate investment risks and predict the likelihood of failure. In addition, innovative ideas are generally intangible in nature thus making their market evaluation and foreseeing more difficult and uncertain³.

³ Baron A., Shane A., [in:] *Entrepreneurship – a Process Perspective*, 2005, p. 29–45.

2. Innovative SMEs Networks Characteristics

Networking of SME's represent a kind of organizational cooperation which, on the basis of institutional assumptions, mobilizes resources and human potentials from large number of enterprises, while giving them at the same time the opportunity to maintain their business independence, and to take advantages offered by the network.

Innovative networks have the capacity to overcome the traditional understanding of the limits of enterprises and to connect them horizontally through partnerships at the project base. The traditional understanding of the organization as a closed, hierarchical system has been overcome. Networks of enterprises represent a new concept that transcends traditional boundaries of organization and promotes an innovative approach towards setting the new values. Modern economy is increasingly moving from the vertically integrated structures to flexible organizations and towards their ability to effectively establish, maintain and develop partnerships with other, likewise enterprises.

Network, as a flexible structure, implies the existence of elements and relations. Elements, that is members, may represent people, groups and even enterprises since networks operate on multiple levels. Networks are often formed because it is the only way for small businesses to cope with large competitors in the market. Relations are not established on the basis of different types of business arrangements and agreements. A high level of informal communication within the network has numerous advantages and shows superiority in relation to the application of formal authority and organizational hierarchy. Reciprocal relations and two-way connections are those which make the network functional.

Relations between the members of the network are established with the aim to enable the access and use of resources of other enterprises included within the network. The theory of industrial networks⁴ suggests that there is a model of participant-resource-activity (PRA model) by which the key elements of such network may be described. According to this model, the network consists of several participants who perform a large number of activities using all available resources of the network as a whole. Within the network, individuals, groups and enterprises represent members of the group. Participants have different types of interactions with other members of the network. Resources are of a technical, financial and intellectual type. Therefore, within this model the knowledge is also considered to be an important factor. When members of the network undertake activities regarding the use of resources: combining, development, exchange and creation, the network operates. One of the basic characteristics of the network is that it is very complex due to the large number of members, their activities and relations with others. They are mutually dependent in many activities within the network, and the way in which the activities were performed in the past directly

⁴Hakansson & Johanson, *A model of industrial networks*. Routledge 1992.

affects the way that they would be performed in the future. Different types of networks differ in the goals they have, group dynamics and the type of information generated.

Christoph and Wolfgang⁵ have presented three dimensions of cooperation between SME's – the business process, market and product, which are aimed at achieving the seven strategic goals of the network: innovation of processes, performance on the market, research and development, service delivery, automation of processes, brand promotion and globalization.

The capacity of SME's to enter the network, the ability to be a "good partner" who would pursue common goals in the spirit of togetherness and mutual cooperation is at the heart of business networking. That not being the case, it is not possible to form networks, and relations, both those internal, between the members of the network, and those external, with other relevant social factors, would be very fragile and would require a great effort for them to be maintained and improved.

Table 1. Types of strategic goals of SME's cooperation

Type	The focus of cooperation			Objective of cooperation
	Business process	Market	Product	
Process of innovation	■			Reduction of costs of planning and innovation and improvement of business process
Performance on the market		■		Reduction of fixed costs of marketing and performance in new markets using the strategy of market penetration
Research and development			■	Reduction of costs of designing and developing new products
Provision of services	■	■		Development or improvement of crucial business process and services through joint activities
Process automation	■		■	Reduction of costs of planning and designing new products/services, as well as the process of their creation
Brand promotion		■	■	Creation of joint promotional brand, promotional strategies, development and joint marketing of products
Globalization	■	■	■	Products/services, their production processes as well as marketing of the activities are jointly developed and applied

⁵ Hafcez A., *Knowledge Based Network Integration, Digitizing and Sustainable Business Models for Competitiveness of Small and Medium Size Enterprises in Global Economy*, 13th International Conference on Management of Technology, Washington 2004, p. 2-16.

There are two major encouraging factors which affect the formation of networks, and which are in close relation to each other:

- Firstly, management is faced with trends such as globalization, shortening product life cycles and the deregulation of the economy, which all together lead to an overall dynamic competitive struggle. This imposes the need for new strategies, such as much greater focus of companies on core competence, cession of activities in the chain of values to subcontractors and stronger orientation towards customers. Business networking is in itself an integral element of these strategies.
- Secondly, information technologies allow an efficient exchange of information between enterprises and act as the main factor which enables networking. Wigand explains such a phenomenon in the following way: "Traditional borders of enterprises are increasingly blurred, they are changed internally and externally, and in some cases even disappear." Information technology is an important factor in networking and integrating of enterprises into certain types of networks. It creates a suitable environment for the virtual networking, which is the main condition for cooperation between a large numbers of SME's. Accordingly, cooperation and business networking create a platform for individual entrepreneurs and enterprises to, by means of acting as independent individuals, connect and work together on achieving the common goals.

Networks have the ability to connect and develop three main factors: enterprises, business process and resources. Network structures are characterized by five key organizational principles⁶:

- Unique purpose – common views, values and objectives maintain the network together. Common focus on the intended results enables synchronized operation and strategic orientation of the members;
- Independence of the members – each member of the network, whether an individual or enterprise, retain its own identity and legal personality while using at the same time the advantages provided by the network;
- Voluntary matching – a unique feature of the network is to establish relations between the members on a voluntary basis, and new members to join on their own initiative;
- Multiple leadership – bearing in mind that the network has no strictly defined structure, it opens the possibility for each member of the network to be in some way a leader and to give full contribution in the aspect of business process and cooperation. By means of such conception, which encourages everyone to give the best they can, the network as a whole becomes stronger and more stable.
- Integration of level – networks are by nature multi-layered, not flat. They operate at different levels, which mean that cooperation takes place simultaneously between several enterprises, but also between their organizational units and individuals.

⁶ *Ibidem.*

The network has the potential to generate positive synergies and raise the level of competitiveness of SME's. Competitiveness arises as a result of the quality of connections which are established between enterprises in the network. The performance of a unity directly depends on the efficiency and effectiveness of connections established between enterprises, as well as with other social actors (suppliers, wholesalers, financial institutions, research institutes, educational institutions and agencies for regional development). Some of the main benefits of the networking of SME's are:

- Approaching the customer – there is a strong communication between end users of products and services and enterprises in the network;
- Maximizing of development capacities and know-how of each enterprise - they use the knowledge of the entire network, no matter which member of the network found it first;
- Minimizing instability – the network as a whole shows the stability of functioning even when some of its members leave or some parts are separated;
- Quick response and flexibility – the network is as amorphous body, it has no solid structure and it is easily transformed.

The level of knowledge integration in the network may range from very high to very low. It may be defined as a standard of the level of interaction among network members in terms of their willingness to share knowledge and results of their research and development activities with other members of the network. Activities of knowledge management in different types of networks are to be classified into either mitigating or encouraging activities. Mitigating actions are defined as activities that aim to create an environment and organizational culture in a network suitable for knowledge management. Encouraging activities are focused on the process of knowledge management. Thus, each type of network produces a specific value through various types of joint activities. Networks which aim to create new knowledge (technology, products, business concept) may be defined as networks oriented to create a complete value system, which is oriented towards future and imposes the need both for radical changes in the existing system of values, as well as the creation of a completely new system. Such networks have network members who are members from its foundation, as well as new members. Therefore, both value system that is subject to change and constant mobility of members of the network represent the two factors of uncertainty and instability of the network.

3. Types of Innovative SMEs Network

Innovative SME's networks based on new knowledge and achievements are one of the most important modern business trends. Depending on the type of activities, leadership style, risk tendencies, historical and cultural heritage in the area of cooperation between the ways enterprises it is possible to differentiate various types of strategic SME's networking. A mention should be made of three types of

innovation network for SME's which are a consequence of variations in the way of integration of activities, resources and knowledge⁷:

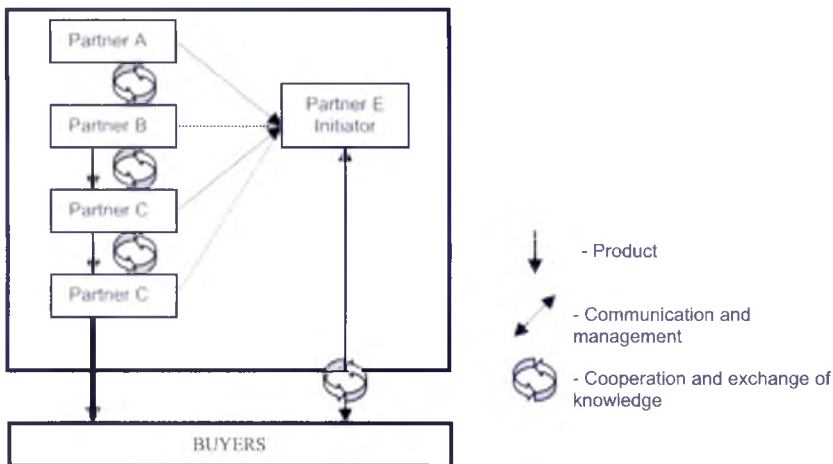
1. SME's network based on the integration of procurement functions,
2. business SME's networks and
3. research networks.

3.1 SME's Network Based on the Integration of Procurement Functions

In these networks the level of integration of knowledge is usually at a relatively lower level, and they are usually created in the way that previously established relations within the supply chain are being promoted and developed up to the stage of becoming a network. Certain products or processes upon which the network as a whole is focused are divided into certain stages within the value chain of which one enterprise takes care of the implementation of each phase separately, where one enterprise has the role of a leader and main contractor, which is connected to all enterprises in the network. Within this type of the network, it is very common that the enterprises have a role of suppliers and competitors to one another because sometimes it happens that more enterprises are positioned in certain phases in the chain of values.

Although these enterprises are very closely connected in the strategic context of speaking, the level of formalization of their relations is not as high. In these networks investment in information technology is encouraged because they offer their partners a possibility to share relevant knowledge and information. The aim of the network is to create an environment of mutual cooperation and use of information, but the activities alone are left to enterprises directly.

Figure 2. SME's network based on the integration of procurement functions



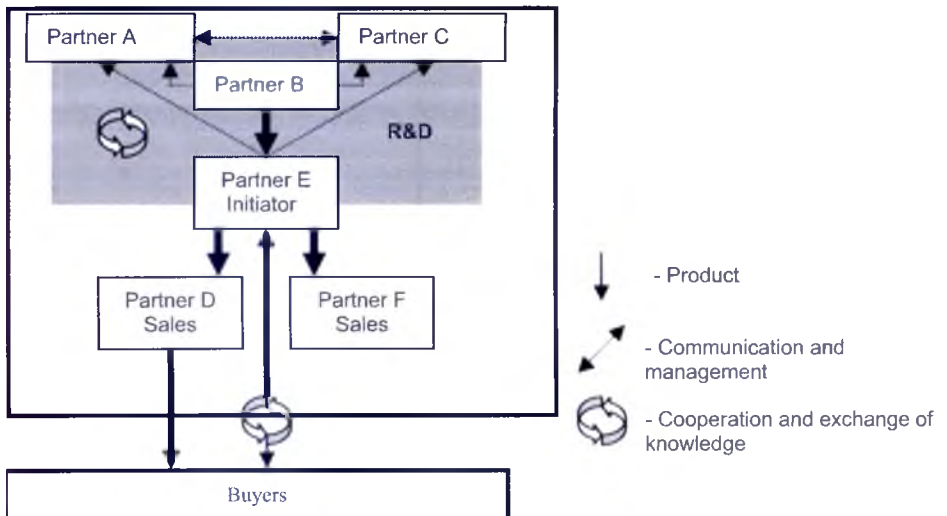
⁷Enquist H., Magnusson J., Nilsson A., *Change Management Implications for Network Organizations*, Proceedings of the 37th International Conference on System Sciences, Hawaii 2004, p. 1-10.

3.2. Business SME's Networks

Business networking occurs through the participation of more enterprises motivated to achieve higher sales and profits by means of cooperation within the network. The initiative for the creation comes from one of the enterprises which has identified an opportunity in the market and has created a network in order to satisfy the perceived need. The enterprise which is the initiator of the network with its products or services is the main source of setting the values, but only through the dynamic structure of the business network and its capability to adapt to constantly changing market conditions. The management of the business network is directed towards the balance of political influence among the participants. The main advantage of the formation of business networks is flexibility, but it is necessary to be constantly maintained in order for partners not to leave the network. The enterprise which is the initiator has the highest responsibility for gathering and connecting the partners in the business network.

Knowledge management in business network is directed towards achieving a high level of cooperation between partners. The level of integration of knowledge may be defined as moderate, bearing in mind the fact that the enterprise which has established a network shows a high tendency towards controlling other members to a greater extent and adjusts the activities as needed, and by its sole discretion. Therefore, that enterprise controls to a significant degree the management process and knowledge sharing. Thus, the focus is increasingly directed towards the process management and the activities of information exchange.

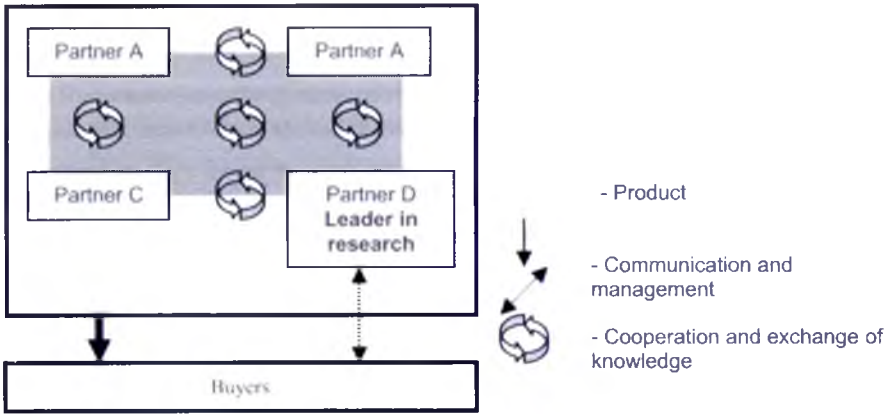
Figure 3. Business SME's networks



3.3. Research SME's Networks

Research SME's networks are created by linking enterprises motivated by the need to expand knowledge through the organization of joint research and development activities. In this type of networks, the level of integration of knowledge between partners is very high. Given the fact that the primary purpose of research networks is to create new knowledge, a measure of success is defined by the level of realized synergies in research and development activities. The network is usually formed between enterprises that have previously had some form of cooperation in the field of research, but which was not actualized on the market.

Figure 4. Research SME's networks



The main emphasis of all activities of research networks is creating a suitable environment and a compatible organizational culture that will contribute to the exchange of knowledge, its promotion and development by means of mutual cooperation of interlinked SME's. The management of the research network should be directed towards creating conditions for unimpeded use of knowledge, which is possible by limiting the range of control. The most important thing is to provide a high quality communication and cooperation between certain experts as well as transparency of the used knowledge for all participants in the network.

4. Process of Knowledge Generation within Networks

Knowledge possesses an implicit and explicit dimension. An Implicit dimension is very personal, rooted in man as a person who has unique experience and actions, and it is difficult to be formalized, transferred or explained⁸. On the other hand, explicit knowledge is clearly defined, expressed and it is transferred through the formal system of learning and transmission of information through the network. Also, knowledge may be defined as individual and social. The individual knowledge refers to the observations and actions of the individual in certain situations, while the social knowledge is derived from business practices, organizational culture of enterprises and tradition⁹. Therefore, knowledge represents a broad term in itself; it may appear in various forms, some of which may be easily transmitted and understood.

Some authors believe that the new knowledge originates from a social interaction between people and that it is the main impetus for the process of organizational learning. Intraorganizational learning takes place through the interaction of members of the network. Networks, especially those based on innovation, are complex and heterogeneous in nature, with various members who operate within them. From the point of impact on the process of knowledge generation in networks, we will point out two relevant categories: organizational culture and management¹⁰. Organizational culture is seen here through the balancing of differences that appear in organizational cultures of individual partners in the network. Organizational culture is a pattern of basic assumptions, beliefs, values and norms of conduct which is developed and adopted by the group members in the processes of external adaptation and internal integration and which is, as a successful template, used for directing and shaping the organizational and individual behavior. There is no homogeneous organizational culture in the enterprise, but it is rather possible to perceive a dominant culture and subculture specific to organizational units, business functions and individuals. This differentiation of organizational culture is further complicated by the formation of networks and reflects the ability of partners to communicate and share common values. Cultural patterns influence the attitude towards cooperation and sharing of information among participants in the network. The culture that supports the generation and use of knowledge in the network must be based on a straightforward communication, mutual trust, commitment and high level of identification. In addition, the organizational culture affects the formation of a common knowledge database, which will have some degree of redundancy and “common language” to facilitate understanding between the partners in the network. It is considered that the heterogeneity of cultures is good from the standpoint of avoiding group

⁸ Sanchez, R., [in:] *Management and Organizational Competence*, New York 2001, p. 97–101.

⁹ Still, J., “Conditions Influencing Knowledge Creation in the Early Stages of Research Networks”, *Frontiers of E-business research*, 2005, p. 381–383.

¹⁰ *Ibidem*, p. 384–385.

opinions and that partners bring necessary diversity into the approach for solving problems.

Management within the network must be specifically directed towards the creation of favorable conditions for the generation of knowledge. Nonaka and Takeuchi¹¹ stress the role of organizational intentions and vision in knowledge generation. Organizational learning occurs through a processes in which people with multiple organizational levels combine, conceptualize and systematize the existing explicit and implicit, as well as social and individual knowledge. Doz¹² thought that in the early stages of cooperation, members not only generate knowledge thanks to the shared knowledge database, but also learn from each other how to cooperate and direct their activities towards a common goal.

A stage of development in which the network is, greatly affects the process of knowledge generation and its results. New knowledge which is being generated is incorporated over time into new products, services and technological procedures. The management of the activities must be adapted to the requirements and specific qualities of the network structure. Different ways of conducting business activities and the course of the communication process create barriers, and that is why individuals who have the skills in bridging the difference in the network are very important for the management. They represent an integrating factor in building trust between some members of the network and thus provide an incentive for acquiring, transferring, creation and use of knowledge¹³.

Conclusion

Modern business conditions are characterized by economies based on knowledge and application of information and communication technologies. Small business is the main lever of development and it is primarily thanks to its innovative potential. Essentially speaking, the purpose of the innovative orientation in small enterprises is the same as in large enterprises – to create a specific and unique competitive advantage. The new economy is increasingly moving from vertically integrated structures to flexible organizations and their ability to effectively establish, maintain and develop partnerships with other, likewise enterprises. Networks of enterprises represent a new concept that transcends traditional boundaries of an organization and promotes an innovative approach to setting of new values. By operating in the network, SME's are often in a position to realize better results than large integrated enterprises, in terms of promptness in response to changing preferences of the customers, flexibility, and ability to identify and exploit oppor-

¹¹ Nonaka, I. & Takeuchi, H., "*The Knowledge-Creating Company*", Oxford University Press 1995.

¹² Doz, Y., [in:] *The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Process*, "Strategic Management Journal", Vol. 21, 1996, p. 55-84.

¹³ Longenecker, Moore, Petty, [in:] *Small Business Management-an Entrepreneurial Emphasis*, 2003, p. 465-468.

tunities and adopt new technologies. Small and medium enterprises are still faced with numerous problems in the process of development of integrated network of knowledge. Not only is that cooperation between enterprises from specific field needed for network formation, but also it is necessary to provide institutional support and the support of government bodies, trade associations, local communities and universities.

Finally, it could be said that networks by their nature involve the acquisition, transfer, generation and use of knowledge. In the early stages of network formation, members learn to cooperate. In this phase, problems often occur in communication between certain members who have yet to adjust to new ways of doing business. They generate new knowledge not only to achieve strategic objectives of the network, but also to enhance the development capacity and opportunities for future action. This way they affect the future orientation of the network as a single unity. In addition, although the diversity of members represents a big challenge for the network, at the same time it is its an essential comparative advantage. The wide range of diverse ideas, views and attitudes leads to a series of innovative solutions and contributes to their quality.

Abstract

In today's knowledge-intensive and networked society the ability to manage knowledge flows is crucial for companies to gain a competitive advantage. To be able to create knowledge, organizations have begun to operate in networks that offer access to the critical resources and expertise of other organizations. The objective of this paper is to increase the understanding and knowledge of the management innovation process and creation of innovative SME's networks. The issue areas in SME's which have been explored in this paper, are innovation and knowledge integration. Knowledge management activities in SME's network can be of either a facilitating or intervening nature and that the different network types display a generic pattern regarding the mix of knowledge management activities.

Literature

Baron A., Shane A., [in:] *Entrepreneurship – a Process Perspective*, South-Western, Thomson, 2005, p. 29–45.

Doz Y., [in:] *The Evolution of Cooperation in Strategic Alliances: Initi – I Conditions or Learning Process*, "Strategic Management Journal", Vol. 21, 1996, p. 55–84.

Enquist H., Magnusson J., Nilsson A., *Change Management Implications for Network Organizations*, Proceedings of the 37th Hawaii International Conference on System Sciences 2004, p. 1–10.

Foss J., Nicolai, [in:] *Strategy, Organization and the Knowledge Economy*, Oxford University Press Inc., New York 2005, p. 3–14.

Hafeez A., *Knowledge Based Network Integration, Digitizing and Sustainable Business Models for Competitiveness of Small and Medium Size Enterprises in Global Economy*, 13th International Conference on Management of Technology, Washington 2004, p. 2–16.

Hakansson & Johanson, [in:] *A model of industrial networks*, Routledge 1992.

Longenecker, Moore, Petty, [in:] *Small Business Management-an Entrepreneurial Emphasis*, South-Western, Thomson 2003, p. 465–468.

Nonaka, I. & Takeuchi, H., [in:] *The Knowledge-Creating Company*, Oxford University Press 1995.

OECD *Financing Innovative SME s In A Global Economy*, 2nd Conference of ministries for SME's development, Istanbul 2004.

Sanchez R., [in:] *Knowledge Management and Organizational Competence*, Oxford University Press Inc., New York 2001, p. 97–101.

Still J., *Conditions Influencing Knowledge Creation in the Early Stages of Research Networks*, "Frontiers of E-business Research", 2005, p. 381–385.

Torkelli M., Miettinen, P., *Innovationroom – A Service for SME s to cope with Virtual Innovation Teams*, "Frontiers of E-business Research" 2005, p. 538–541.

KLEMENS BUDZOWSKI

Possibilities of the Application of Pricing Strategies in the Development of Trade Between Poland and Serbia

The Republic of Serbia, together with Slovenia, was recognized as one of the most developed republics of the former Yugoslavia. Now Serbia is the biggest (77.500 km) and most populated (7.4 million people) country established after the former Yugoslav state had come to an end. Losses and damages caused by the civil war in the years 1990–1995, the UN embargo, bombardment and the NATO air forces raids which in 1999 destroyed the industrial, economic, transport and communication infrastructure are the main factors determining the decrease of the Gross Domestic Product (GDP) and economic and social problems of Serbia which have appeared in former and present decade. The war of Kosovo and the bombardment of Serbia in 1990 cost Serbia between 30 and 50 billion dollars (and according to experts even 100 billion USD) and the GDP per capita decreased by about 46%. The industrial production in 1999 was even 45% lower than in the previous year.¹ The restoration and the reconstruction of the productive property, obtaining the production level which was achieved in 1988 can take even between ten and twenty years on condition that there is a big inflow of foreign investment to Serbia.

Economic recovery, increase of the GDP observed in the second half of the present decade constitute a chance for quicker restoration of the destroyed economic

¹ J.M. Philibert, *Wojna o Kosowo*, "Le Figaro" of 4 June 2000, also: www.abcnec.com.pl/nodc/1722 (7.02.2010).

infrastructure, the development of industrial production/output, the change of export structure, better life conditions, elimination of disproportions in the social and economic development in relation to the neighboring countries, former republics of Yugoslavia and in relation to the economically developed member states of the European Union. The present-day GDP production structure in Serbia is similar to the one of the developed countries, almost two thirds of the GDP is produced in services, one fourth in industrial production and about 12–13 % in agriculture (agriculture together with the agricultural and food industry produce about 20–23% of the Serbian GDP). The industrial production in Serbia is mainly based on its natural raw materials (ores of copper, zinc, lead, iron, manganese, bauxite). Due to little resources of energy sources, Serbia is forced to import substantial amounts of energy sources such as: oil, gas, coal etc. In 2008 Serbia signed an agreement with Russian Gasprom on the basis of which Gasprom took over 51% of shares of NIS (Naftna Industrija Srbije) – the national petroleum concern - and undertook to build, through the territory of Serbia, a pipeline South Stream which was to supply gas to Southern and Eastern Europe. The biggest lines of Serbian industry consist in car industry (Zastava), pharmaceutical, textile, and telecommunication industries.

The cultivated land constitutes almost 70% of the country. The agriculture developed in Vojvodina and valleys of big rivers generates substantial number of products, also to be exported (Serbia is one of the biggest maize producers in Europe; it also leads in producing raspberries and plum products).

The economic development observed in Serbia during the past few years is to some extent determined by the inflow of foreign investment (table 1). It is estimated that by the end of 2008 the value of the accumulated foreign investment was 12.0 billion USD. Among the biggest investors in Serbia are: the Russian Gazprom, FIAT, Michelin, Delphi, Ericsson, Motorola, Oracle, Siemens etc. Polish companies have also invested in Serbia within the past few years, for example: Tele-Fonica (cable industry), Organika (materials for carpentry industry), Asseco (IT), Rafako (electric power industry) and other.²

Table 1. The structure of foreign investment in Serbia between 2004 and 2008

Specification	2004	2005	2006	2007	2nd quarter 2008
Investments Total	966	1550	4387	2195	2008
Portfolio Investments	-	-	-	911	-126
Polish Investments in Serbia	0.037	0.453	1.6	10.0	22.6

Source: National Bank of Serbia

Quoted after: www.mg.gov.pl/Wspolpraca+z+zagranica/ of 07.02.2010.

² www.een.org.pl/handcl-zagraniczny/articles/serbia-moze-byc-atrakcyjnym-partnerem-gospodarczym.html(07.02.2010).

The Republic of Serbia, previously a constituent republic of Serbia and Montenegro, became independent on 5 June 2006. It is one of the smallest commercial and economic partners of Poland. Despite cultural and geographical similarities between the two countries and common European roots or Christian tradition, neither Poland nor Serbia have been successful in creating firm trade connections which could guarantee profits resulting from international exchange for both parties.

Due to the trading value, the trade exchange (Table 2) is still small, even though the turnover has tripled within the last five years. Between 2003 and 2008 the value of Polish export to Serbia increased from 101.4 million USD to 320.5 million USD. The share of export to Serbia in the global Polish export is only about 0.2% (in import this ratio is even lower and amounts to 0.1% of Polish import). In 2008 the turnover with Poland constituted 1.6% of Serbian export and 1.8% of import. At the same time the import from Serbia to Poland increased from 82 to 171 million USD. Serbia is one of the smallest European trade partners of Poland.

Table 2. Foreign trade turnover of Poland with Serbia

Years	Polish export to Serbia		Polish import from Serbia		Balance	
	mln euro	mln USD	mln euro	mln USD	mln euro	mln USD
2003	---	101.391	---	19.138	---	+82.253
2004	114.187	141.751	23.373	28.872	90.814	+112.880
2005*	---	55.9	---	17.9	---	+38.000
2006	177.264	221.563	63.957	80.425	+113.307	+141.138
2007	163.256	223.065	99.832	135.550	+63.424	+87.515
2008	218.126	320.524	100.065	149.454	+118.061	+171.070

* Data for 2005, Departament Spraw Europejskich, Ministerstwa Gospodarki, (www.mg.gov.pl (of 7.02.2010).

Source: Own calculations on the basis of: Yearbook of Foreign Trade Statistics 2007. Central Statistical Office, Warsaw, 2007, p. 103), Yearbook of Foreign Trade Statistics 2008. Central Statistical Office, Warsaw, 2008, p. 106), data for 2008 according to Yearbook of Foreign Trade Statistics 2009 Central Statistical Office, Warsaw, 2009, p. 113), www.stat.gov.pl/cps/rde/xbcr/gus?PUBL.rocznik_statystyczny_handlu_zagranicznego_2009.pdf (of 7.02.2010).

Within the analysed time there was a trade surplus for Poland. Serbia had a trade deficit resulting from its fuel import and mainly from the relatively low level of export in relation to the GDP (in 2008 export constituted one third of the GDP of the country). The structure of the trade turnover of Poland with Serbia is presented in Table 3.

In Polish export to Serbia the basic role is played by those goods which according to the Standard International Trade Classification (SITC)³ belong to the groups as follows: 6 – Manufactured goods classified chiefly by material; 7 – machinery and transport equipment; 5 – Chemicals and related products; 3 – Mineral fuels, lubricants and related materials; and 2 – Food and live animals, whereas in Serbian export to Poland there are two predominant groups of goods which comprise in total 82.2% of Polish export from that market, i.e.: 6 – Manufactured goods classified chiefly by material; and 5 – Chemicals and related products; according to SITC classification (Table 3).

Table 3. The structure of Polish–Serbian trade in 2008

SITC Sections	Polish Import from Serbia in thousands of euro	Polish import from Serbia (in %)	Polish export to Serbia in thousands of euro	Polish export to Serbia (in %)
Exports total	100065	100.0	218126	100.0
Imports total				
0. Food and live animals	4895	4.9	22845	10.5
1. Beverages and tobacco	391	0.4	467	0.2
2. Crude materials (inedible, except fuel)	2558	2.6	5587	2.6
3. Mineral fuels, lubricants and related materials	0	0.0	26529	12.2
4. Animal and vegetable oils, fats and waxes
5. Chemicals and related products	17251	17.2	24533	11.2
6. Manufactured goods classified chiefly by material	65052	65.0	66328	30.4
7. machinery and transport equipment	7588	7.6	55819	25.6
8. Miscellaneous manufactured articles	2330	2.3	15829	7.3
9. Commodities and transactions not classified elsewhere in SITC	

Source: Yearbook of Foreign Trade Statistics 2009 Central Statistical Office, Warsaw, 2009, pp.60–81, www.stat.gov.pl/cps/rdc/xber/gus?PUBL=rocznik_statystyczny_handlu_zagranicznego_2009.pdf, (7.02.2010) and own calculations.

³ Standard International Trade Classification (SITC) was published by the UN Statistics Division in 1950 and amended in 2007 (revision 4). It is used for classification of all commodities in foreign trade.

Geographical location, population, membership in the Central European Free Trade Agreement (CEFTA), concluding a Stabilization and Association Agreement (SAA) between Serbia and the European Union and finally signing, on 29 April 2008, the Interim Agreement which allowed for quick application of provisions on trade between Serbia and the European Union member states turned Serbia into an important partner for the European Union member states.⁴ Notwithstanding the provisions of the Interim Agreement Serbia will exercise the exceptional trade measures which were introduced by the Council Regulation (EC) No. 2007/2000 of 18 September 2000 for countries or territories participating in or linked to the European Union.⁵

Further development of trade between Poland and Serbia will require the application of new forms of elicitation, searching for fields in which the countries are complementary and creating new forms of specializations in production and in-branch exchange. Both parties have to create legal and organizational frames supporting trade exchange, creating mixed Polish-Serbian companies and conditions for learning about trade partners, including small and medium-sized companies. The development of trade exchange shall go along with learning about each other's consumer habits, clients' reactions to market changes, e.g. the rise of demand, domestic inflation, appreciation or depreciation of national currency, increase or decrease of individual income, price rise or fall of defined goods, correlation between price and demand, price and consumers' income, etc.

One of the basic economic parameters is price including all components of a benefit of the seller and buyer of a good or service.⁶ Through prices or rather the realized price policy a company realizes its current and strategic goals. Price is understood as the size expressed in money, which the buyer is obliged to pay to the seller for the delivered good or service,⁷ or a defined number of money units the buyer has to pay for a unit of a product or service.⁸ Price reflects the quantitative estimate or a subjective idea of a benefit that the chosen features of products or services assure.⁹ It is often assumed that the price of a good is its value expressed in money and, analogically, the world price is the value of a good in the world market expressed in international money¹⁰ (or the value of goods participating

⁴ However, the lack of political stability prevents the flow of capital to this country. In 2008 the World Bank, the rating institutions such as Standard & Poor s indicate the threats connected with investments in Serbia, such as: complicated administrative procedures or weak administration, high inflation and unemployment etc.

⁵ Council Regulation (EC) No. 2007/2000 of 18 September 2000 introducing exceptional trade measures for countries and territories participating in or linked to the European Union's Stabilisation and Association process amending Regulation (EC) No 2820/98 and repealing Regulations (EC) No. 1763/1999 and (EC) No. 6/2000.

⁶ K. Białecki, *Operacje handlu zagranicznego*, PWE, Warsaw 1996, p. 84.

⁷ H. Nessim, M. Dodge, *Kształtowanie cen – strategie i procedury*, PWE, Warsaw 1997, p. 25.

⁸ H. Simon, *Zarządzanie cenami*, Wydawnictwo Naukowe PWN, Warsaw 1966, p. 15.

⁹ H. Nessim, M. R. Dodge, *Kształtowanie cen – strategie i procedury*, PWE, Warsaw 1997, p. 25.

¹⁰ Cf. A. J. Klawe, A. Makać, *Zarys międzynarodowych stosunków ekonomicznych*, PWN, Warsaw 1987, p. 176.

in international exchange.¹¹⁾ The correct price system is favorable to optimal allocation of production factors resources, creates conditions to choose the export specialization in the fields characterised by the highest efficiency, contributes to the liquidation of inefficient production fields, and enables to choose the objective production and investment decisions made by independent entities operating business enterprises.

When setting the level of prices various relationships should be taken into account, i.e. between price and demand, price rise/ fall and purchase level allowing for various principles or regularities and also paradoxical correlations between price and demand characteristic for a given market for goods (Table 4).

Table 4. Paradoxical relationships between price and demand

Consumer's reaction	Description of behaviour
People purchase more of necessity goods when their prices rise	Giffen's Paradox
People purchase more of selected luxury goods when their prices rise	Veblen's Paradox
People purchase goods regardless of the price level and its change, only because the goods are bought by other people, mainly family and friends etc.	Imitation Effect (a scene effect)
People purchase a good only because it is very expensive, not available for others – only because the good, due to its price level, is unavailable for most consumers	The Snob Effect (buying 'to show off')
The fall of prices of substitute goods is perceived by consumers as the rise of their income	The Income Effect of Price Reduction
Aiming at preserving the same level of consumption despite the rise of prices of particular goods	The Bolt Effect (keeping the consumption level)
As the prices of some goods rise, people purchase less and then they purchase more again despite higher prices	The Shock and Taming Effect (habit)
As the prices of some goods rise, people purchase more of the goods as they fear further price rises	Fear of further increase (Buying anticipation)
Buying out the goods whose prices rise for future resale with big profit	Speculative Effect

Source: Mazurek-Lopacińska K., *Zachowania nabywców jako podstawa strategii marketingowej*, Wydawnictwo AE Wrocław 1997, p. 61, also Waniowski P., *Strategie cenowe*, PWE Warsaw 2003, p. 58–67.

The internationalization of the activities of companies, i.e. their more frequent presence in foreign markets, forces to investigate consumer reactions to price changes of a given product, increase or decrease of income, behaviour of the consumer's friends, family and also the reaction of local companies to the activ-

¹¹ Cf J. Sołdaczuk, Z. Kamecki, P. Bożyk, *Międzynarodowe stosunki ekonomiczne. Teoria i polityka*, PWE Warsaw 1983, p. 122, also; Dudziński J., Naręćkiewicz J., *Podstawy handlu zagranicznego*, Wydawnictwo Zachodniopomorskiej Szkoły Biznesu w Szczecinie, Szczecin 2002, p.73–76, *Handel zagraniczny. Wybrane zagadnienia*, red. J. Dudziński, Wydawnictwo Zachodniopomorskiej Szkoły Biznesu w Szczecinie, Szczecin 2006, p. 131–164.

ity of a foreign one. When setting prices in a particular market, a company has to consider the price relations existing in a given market, how the competition as well as the consumers can react. The Giffen Paradox shows that a consumer, with reference to basic goods, the necessity goods, increases his/her expenditures on necessity goods regardless of the scope of price rises. In Polish- Serbian trade there are almost no such goods. The luxury goods seem to be far more important here. According to the Veblen Paradox, the rises of prices of such products can lead to the increase in their sale. The imitation effect and the Veblen Paradox should be considered while creating the sale policy of goods such as: cars, furs, luxurious jewellery, expensive gifts i.e. goods present in the trade between Poland and Serbia. Polish exporters owing to the scale of inflation processes and political instability in Serbia should consider the speculative paradox (buying out goods for future resale) in their price strategies and the phenomenon of shopping anticipation (the increase in purchase despite the price rise in fear of further price rises caused by inflation processes) due to the high level of inflation and unemployment in Serbia.

Companies operating in foreign markets apply various pricing strategies.¹² The **low price strategy** is one of the basic ones. It enables to reach a wide range of buyers. This strategy, taking into consideration the scale effects, assumes minimizing all costs (from production costs, packaging, transport, to promotion and advertising) at all stages of a product's life. The low price strategy was very popular in 1970s in relation to the relatively technologically simple products. The low price strategy is mainly used by companies that have a strong and stable position in the market, with free production capacity and with possibilities to increase their scale of production quickly. (Table 5). The low price strategy is also used in companies producing a narrow assortment of products. Low price is assumed by another strategy – the **market penetration strategy**. When the intended market goal; is achieved, a company tries to raise prices gradually until the satisfactory level is achieved. The penetration strategy allows for the use of mass production effect and very often discourages potential competitors from entering a given market.

Table 5. Advantages and disadvantages of the low price strategy

Advantages of the low price strategy	Disadvantages of the low price strategy
Possibility of narrow assortment of products predominance in the market.	Difficulty in introducing innovation and modern technological solutions.
Wide production scale, use of modern techniques of production organization (e.g.: just in time), possibility to minimize and optimize unit production costs.	Difficulty in competing with companies with cheap labor force, access to cheaper raw materials etc.
Possibility to identify consumers needs.	A consumer identifies the cheap product with its low quality.

¹² Cf. Budzowski K., *Ekonomiczne problemy handlu międzynarodowego*, KSW, Kraków 2008, p. 31–35.

Possibility to achieve the projected profit despite the relatively low rate of profit.	Difficulty in improving the image of the company associated with low quality products.
Strong position in the market both in relation to suppliers and buyers.	Lack of measures and resources for big marketing or promotion.
Standardization of products.	Risk of being accused by the competitors of prohibited practices (dumping).
Possibility of flexible management of costs due to a narrow assortment of products (use of modern cost-minimizing methods, e.g.: outsourcing, subcontracting).	Cannot be used for a longer period of time in small and medium-sized companies.

Source: own study.

It seems that consumers, in both Polish and Serbian markets, due to the achieved level of economic development, GDP per capita, still prefer low price products. High unemployment in Serbia (21–23%), relatively high index of unemployment in Poland (10–11) and above all big share of food expenditures in the structures of home budgets in the two countries under analysis show that the behaviour of Polish and Serbian consumers is very similar. Companies which prefer the low price strategy have far greater chances to be successful in the market than those which enter the market with very high prices. Low prices allow for a big production scale and do not require big expenditures on marketing, market research and promotion. It seems that for Polish companies operating in Serbia and engaged in direct investment or selling goods and for Serbian companies exporting goods to Poland from sectors such as: transport equipment, food, mineral fuels, manufactured goods classified mainly according to the raw material, the optimal price strategy can be the low price one.

Another strategy, the **high price strategy**, is used in relation to luxurious goods, of highest quality, made by well-known brand producers that have been functioning in the market for many years and whose products have always been associated with high quality. The high price policy supported by the patent protection and licenses is used by producers interested in high quality level of their own product creating the quality image of the company.¹³ Products of the highest quality are sold in boutiques to selected clients (Table 6). The high pricing strategy is related to the **skimming pricing**, i.e. selling a new product at a high price. This strategy is used by companies – leaders in introducing new products in a market. It allows additional high profits from the ‘benefit of innovation’. The skimming policy is used by well-know international companies, companies running global strategies, which by the introduction of market innovation or a new product at relatively high price reach in the same time a narrow, selected group of clients in many countries. The skimming strategy, also known as market plus, is used by producers manufacturing technologically developed products and of high quality, market innovators with stable market position.

¹³ H. Nessim, M. R. Dodgc, *Kształtowanie cen strategie i procedury*, PWE, Warsaw 1997, p.124 and further.

Table 6. Advantages and disadvantages of the high price strategy

Advantages of the high price strategy	Disadvantages of the high price strategy
Technologically modern or innovative products can be introduced in the market,	Small production scale,
Market use of benefit of innovation,	The market has to be protected against imitations and fakes,
The market is protected by patents and licenses,	Competition imitation; fakes, imitations appear in the market,
Image of the company producing technologically best products,	Continuous introduction of technologically new products,
Possibility to create the market and meet the needs of clients who are not sensitive to price level,	No possibility of standardization, unit production in small numbers is necessary,
Being dominant in a chosen market.	Exclusive retail chains have to be kept in city centres.

Source: own study.

In the export offer of Polish companies addressed to the Serbian market and that of Serbian companies for the Polish market there are products of average technological level that are predominant. The price strategies which are based on high prices can be applied only to the IT products and services directed to or realized to order by the defined companies. However, it seems that Polish and Serbian companies that offer technologically developed products, first of all will be present in the markets of the economically developed countries. In mutual relations, with the existing export and import structure, it is difficult to point out those goods on which the high pricing strategy and skimming pricing can be applied (the exceptions might be as follows: jewellery, yachts, some household goods). Polish and Serbian companies should apply the market penetration strategy to a larger extent in the mutual markets, searching for market gaps to introduce new products at relatively low prices in the partner's market and only when the demand is stabilized on a certain level, gradually introduce new, higher prices. However, the introduction of low-price products in the partner's market can cause a defensive reaction of home companies i.e. instituting or applying to institute the anti-dumping proceeding. Selling at very low prices, sometimes below the costs, cannot last for a long period of time, especially in those companies that do not operate globally and which are not a multinational corporation. Most Serbian companies which sell products in Poland and Polish companies which sell their goods in Serbia operate in their domestic markets and gradually enter the international market. These are companies that do not have much global experience. Another important strategy is the **concentration strategy** of operating in the selected market segments and on particular goods. This strategy is applied by companies with no possibility of flexible operation or quick reaction to changes taking place in the market, the companies that want to avoid confrontations with

strong competitors. This strategy allows concentrating on the market with few competitors.¹⁴ However, the basic difficulty as regards the strategy is in finding the right gap in the market, the market niche, within which the given company could operate effectively.

There seem to be scanty possibilities of applying in the Polish-Serbian trade the strategy of the **market gap of the imitation or innovative type** which consists in entering the market by replacing the producer withdrawing its production (the imitation type gap) or creating demand for a new product (the innovation type gap) due to high costs of promotion and advertising and especially manufacturing a technologically new product; or the **competition overtaking, displacing strategy** used to control the market in a relatively short period of time by the significant price reduction in relation to market prices. Such a strategy is used by companies which enter the market with their new brand or product using the preliminary price reduction to achieve the market leader position at the cost of previous producers.

In both analysed countries, application of the **competition-based pricing strategy** consisting in adjusting the price to the price level of the market leader seems to be more feasible. This strategy is one of the most commonly used, especially by companies which enter a market with the product already existing in the market, but trying to achieve a particular market position by competing using factors other than price e.g.: quality, service, guarantee period, product availability in the internet, aggressive marketing etc. Sometimes companies use the **imitation or creative imitation** strategy which consists in introducing in the market the same product as the competition's, which is in demand, but with the changed name or packaging, very often at lower price and using similar to the leader's distribution channels, e.g.: through the supermarket chains, or using the experience of the company which introduced the new product in the market, by introducing new kinds of marketing activities, by improving the product, adjusting the product to the consumers' expectations. The imitation strategy allows to set the prices on the level similar to the competitor's and, at the same time, allows to get from the innovation created by the competition.

Price is one of the most important economic parameters of the activity of every business entity because, on the one hand, it informs entities about the market situation, and on the other hand, it lets the clients make the right choice (from their perspective). When running the price policy the following issues should be taken into consideration: the client's reaction, the situation in the market and the behavior of the competition. As the price of a good or service determines the profitability of a defined export transaction, the companies that realize export have to run an active marketing policy of influencing the market. The right selection of partners and supply chains, effective measures appropriate for the given

¹⁴ A. Sznajder, *Strategie marketingowe na rynku międzynarodowym*, Wydawnictwo Naukowe PWN, Warsaw 1992, p. 112–115.

market (marketing, promotion), quality of the good, quality of the provided services, building works carried out, building and assembling works, meeting the deadlines, modernity and the right organization of work, organizational progress etc. influence the level of the achieved prices in export, paid in import, thus the profitability of the contracts realized in foreign markets.

Further development of trade cooperation between Poland and Serbia is necessary and possible. Geographical and cultural similarities as well as traditions of cooperation constitute a firm base for further development. The formal and legal co-operation, at the level of Trade Chambers, bilateral commissions or specialists in market analysis and marketing, as well as broader use and application of market mechanisms, including the adequate pricing strategies, should actuate the mutual Polish–Serbian trade.

Abstract

The article presents a description of mutual relations between the Republic of Serbia and the Republic of Poland from the economic perspective. It shows the existing export and import structure and points out what the development of the trade exchange between the two countries is determined by. A number of pricing strategies are presented in the article and the author defines which of them could be applied by Polish or Serbian companies in order to enhance the development of trade between the countries.

DEVETAKOVIĆ STEVAN

Regional Development Incentives in Serbia

1.

Efficiency of regional development and encouraging competition will be considered from the standpoint of the possibilities of their application to different territorial units in Serbia. We will particularly point out those possibilities whose potential effects may be greater in regions where the general level of development is significantly below the national average. First, we will focus on the financial and tax incentives and infrastructure, making due allowance for other incentives for regional development that contemporary literature deals with, such as – learning regions¹, innovation milieu, industrial areas which are all usually defined as “new wave” policies or the demand side policies.

Generally speaking, we start from the assumption that the favorable conditions for regional development taken into consideration are infrastructure attraction, promoting opportunities for employment or in a broader sense favorable circumstances not only regarding employment, but also regarding good conditions for living and conducting business activities. Some authors² consider provision of

¹ *Learning Regions – Providing Support for Networks*, Programme Presentation, www.bmbf.de/pub/learning_regions_providing_supports_for_networks.pdf, March 2009.

² Bartik T. J., 1991, *Who Benefits from State and Local Economic Development Policies?* Kalamazoo: W.E. Upjohn Institute for Employment Research, 1991.

financial and infrastructure incentives very important for regional development for one reason or another³.

They take the tax and infrastructure incentives as significant regional support mechanisms for development, claiming that the social effects are greater than private costs, which, in turn, justifies their subsidizing. They give an example of new industries, no matter whether they are related to information technology or services they require. They face difficulties when they first enter this domain because they require specialist knowledge and staff qualified for specific jobs, which is on the labor market scarce in relation to demand. When entering this domain investors face increased expenditure on training and preparation of the necessary qualifications, so that incentives which they receive through tax relief and infrastructure support will be very important, enabling them to achieve significant growth in employment.

On the other hand, these authors estimate that the applied mechanism of infrastructure incentives which is materialized through the successful set-up of new companies and leads to regional development, afterwards shows less inclination to change of location. For example, in case of India⁴, as the developing country for which the data have been provided, there is a tendency for new industries to stay in a given region once attracted there. This means that if industries make use of infrastructure incentives when starting an activity, they are linked to the location, so any subsequent relocation is very rare. In addition, infrastructure investments generate some additional effects, among which direct and indirect rise in employment⁵ is particularly important. Investments in telecommunications, for example, will increase the demand for goods and services used in their creation, and at the same time the total national product and employment⁶.

In applying the above mentioned mechanisms, there are naturally certain dangers, especially if they refer to the country as a whole and to the possibility that all regions compete severely with each other, primarily by way of tax incentives. If

³ Here we mention only those who entered in direct discussion with Bartik McGuire, Th. J., 2002, *Who Benefits from State and Local Economic Development Policies? Kalamazoo: W.E. Upjohn Institute for Employment Research, 1991*, in National Tax Journal, Vol. XLV, No. 4, Evanston, IL, USA, p. 457-459., [http://ntj.tax.org/wwwtax/ntjrec.nsf/41B0CF662B5921A48525688000698813/\\$FILE/v45n4457.pdf](http://ntj.tax.org/wwwtax/ntjrec.nsf/41B0CF662B5921A48525688000698813/$FILE/v45n4457.pdf).

⁴ Sridhar K. S., 2005. *Incentives For Regional Development. Competition Among Sub-National Governments*, Palgrave Macmillan, p. 124.

⁵ Alleman J., C. Hunt, D. Michaels, M. Mueller, P. Rappaport and L. Taylor, 2002. *Telecommunications And Economic Development: Empirical Evidence From Southern Africa*. mcmco, Sydney International Telecommunication Society; from http://www.colorado.edu/engineering/alleman/print_files/soafrica_paper.pdf, mart 2009.

⁶ On the basis of Rubin M. and R. Armstrong, 1989, *The New Jersey Urban Enterprise Zone Program: An Evaluation*, Wayne, NJ, Urbanomics, 1989. It is estimated that the production multiplier 1.61, and 2.26 employment multiplier. In other words, it means that the \$ 1 increase in direct production for the increase is \$ 0.61 in other companies, or for a new employee in the new companies it is more of the additional 1.26.

a certain limit is exceeded, the ability of territorial segments/regional authorities to provide finance for building economic and social infrastructure at this level may be compromised. Therefore, in some cases, instead of offering tax incentives, countries primarily opted for providing infrastructure support to investors who decided to locate their capacities at chosen points. In other words, countries around the world, at different stages of development, from the United States to China and India choose a form of spatially-oriented (intent upon) policy in the form of special economic zones (growth points). Their advantage is that they may be at first designated as relatively small, limited areas (in our country the term *growth incubators or incubators for small and medium sized enterprises* is now frequently used) that are associated with incentive tendency to concentrate economic activities there, so that when they show good development results and start to attract investments themselves, they gradually disperse in space, better to say, introduce a few new growth points into the existing network of the given regions or sub-regions.

When choosing one of the solutions mentioned above that could be applied in the economic reality of Serbia, it should be noticed that Serbia is a small country, at a low level of social and economic development, with still unfinished process of transition, which all asks for a special precaution in the selection and implementation of various measures of economic/regional policy. Since it is also characterized by large and numerous differences in territorial development, it is certainly necessary to have them in mind when selecting incentives to at least stop further spread of disparities, and as much as possible create conditions for their gradual reduction and direct developmental connection, deepening of territorial division of labor, raising the general level of competitiveness and development of economy and the whole society.

At the same time, the establishment of basic infrastructure network should be provided (it is under the jurisdiction of the state as a whole, and the state of Serbia as well), so that all the regions in the country should be linked into a single system. In other words, this network would create equal opportunities for promotion and protection of all people, and the possibilities of action for economic subjects and their development.

2.

Here inevitably the issue of imposing regionalization is being raised, the one which has not been adequately solved in Serbia yet. Still, one may claim that there is a broad consensus among the scholarly public about the possible solutions, one having been put forward in already adopted Strategy of regional development of

Serbia⁷, while observing the statistical regions NUTS2 and NUTS3⁸. In current debates, political dimension is still very present, and no final decision and the coverage of the region seem to come into focus.

Current definitions of the region start from the division of the NUTS2, into regions and NUTS3 subregions, because the level of NUTS1 predicts threshold of 3 to 7 million people. It is assessed that Serbia is small, and that the existing development has not given a basis for the division into two possible macroregions. The practice in several member states of the European Union, as well as in four European countries outside this Association of States, whose reality does not include NUTS1 speaks in favor of solutions which exclude macroregions.

On the other hand, in the overall analysis of the territorial aspect of development, lower segments of the sub-regions cannot be disregarded; therefore, the modified system of statistical territorial units at the beginning of this century also introduces **two levels of local administrative units**⁹. Since within the NUTS 3, very significant differences according to the level of development can be seen in Serbia, and a considerable number of deviations that determine the size of this multidimensional phenomenon, we are of the opinion that they certainly should be borne in mind. Thus given, they cannot be treated or presented analogous to the differences by region, or by analogy include NUTS in the analysis of the whole country development. Besides, local levels cannot be directly compared to any regional development, particularly with respect to the incentives we deal with in this paper, although they certainly should be taken into account when considering and assessing the internal homogeneity of singular regions/sub-regions.

3.

The assessment of exposure to incentives should consider the standpoint from which the valorization is done. Namely, one of the possibilities is to assess the effects from the aspect of individual or separate regions or sub-regions, another approach takes into account the mutual relations of the territorial units, primarily those that are the least developed according to the average or the most developed, and the third possibility is to assess regional aspects at the same time and evaluate the results at the level of the overall economy of the country¹⁰.

⁷ *Regional Development Strategy of the Republic of Serbia from 2007 to 2012 year*, see http://www.razvoj.sr.gov.yu/Strategije/SRRS/strategija_regionalnog_razvoja.pdf, (febr. 2009).

⁸ See more on http://cpp.eurostat.ec.europa.eu/portal/page?_pageid=1335,72265683,1335_72320391_dad=portal&_schema=PORTAL#principles, (jun 2007).

⁹ Local administrative units are the basic components of NUTS regions. They have been introduced since 2003 in The Nomenclature of Territorial Units for Statistics EU, instead of NUTS4 and NUTS5. They usually mark the Lau-1 and Lau -2, but for the local administrative units there is no intended population that would determine them.

¹⁰ This approach is thoroughly discussed in the book mentioned forward Sridhar K. S., 2005, *Incentives For Regional Development*, *op. cit.*, p. 4–12.

In order to avoid constant confrontation over the regional tax incentives, and not to threaten “fiscal health” of public finances in some regions, especially those undeveloped, we believe that it is rational to make the selection of one or more growth points in the regions (growth incubator or incubators for small and medium-sized enterprises) in which the mechanism of fiscal incentives will be applied. Thanks to this selection and a limited number of points, the possibility to fund from local sources (which would not be too narrow) and make the infrastructure connecting with the national networks/systems of economic and social infrastructure will be retained. In such a way the territorially-oriented stimulation of economic growth through political measures at the regional or subregional level would be provided. Since their reach is limited to selected points, this implies reducing the risk of uncertain outcomes and costs if the amount of the incentive mechanisms includes the entire territory of the regions/sub-regions. In addition, territorially/-targeted incentives take into account the fact that a large part of the working population is linked to the area where they live due to social and psychological reasons, or economic ones - primarily related to the cost of job changes and relocation, which particularly affects and is unfavorable to those with the lowest level of qualifications. Hence, the existing territorial distribution of population should be respected with each selection of points.

4.

The use of incentives may be directed to all the investors who are ready to locate their new capacity in selected points. This generally contributes to economic activity in the first phase of construction of buildings and installation of equipment, whereupon their activation – to permanent employment of the required number of workers and wider offer of products/services created. This leads to diversification (branching) and enlargement of the scope of economic activities, in allotted space. Territorial concentration allows their mutual connection and encouragement through different mechanisms, as well as establishment of relations with other points of growth within the region (if any), and inclusion in the whole country’s economy, and even abroad.

As a second direction, we may mark incentives to investments that would result in geographical concentration of mutually related subjects [according to various bases, generation schedule-vertically or horizontally, with the technological support to the same SRD (scientific, research and development) basis, staff-related basis including the use of the appropriate profile of professional qualifications, and using the appropriate level of social infrastructure, primarily of professional education in the appropriate space] that thanks to the mutual relationship they would achieve the so-called external economies of scale, thus creating at the

same time a sort of clusters, which would provide them¹¹ with more influence on the basis of spatially close activities. In that case, they may be linked with other appropriate institutions that would themselves have positive influence on entrepreneurial activity and/or innovation. The approach outlined here may be questioned as the incentives focus only on some activities that fit into the cluster or are associated with it. Still, it may be stated that greater effects¹² may be achieved in this way and in a shorter term than those which would be achieved by spontaneous diversification of activities in the growth point, even before than in the situation when there is no territorial concentration. Therefore, we evaluate the economic rational regional specialization as a desirable direction of development at which these measures of regional policy are targeted, despite the fact that in this way a certain discrimination in the implementation of incentive mechanisms between economic entities that would locate in a particular area/growth point is made.

5.

It should be noted that in the literature, we find different evaluation of two different directions in which incentives exert their influence from the one that we have just elaborated. Of course, the assessment resulted from the observation of different experiences that these regions had in a rather long period of time so far, since the problems of specialization as a counter-part of diversification (the wider, complex development) have been discussed. Without questioning the effects in favor of specialization that we have elaborated above, there is a dilemma whether regional development directed in that way is stable enough in the long term or it may be fraught with problems, under certain conditions. Namely, if production orientation of one region is narrowly specialized, it uses the advantages as long as the generic power of a leading industry or some other economic activity is sufficiently great, and allows the rapid development that acts as a “locomotive” of all activities connected with it. During this period the “economies of agglomerations“ is achieved as well as positive changes in the technological maturity of products, productivity growth, purchasing power¹³ and on the basis of all this, a rapid growth and development of points on which they focus. Many economic analysts have discussed and pointed to the positive external effects of development achieved by the firms involved in the same line of business, having joint effects of spatial linkages, better access to the cases, more direct communication and transfer of knowledge (as they consider each other

¹¹ See in M. Porter. 1990, *The competitive advantage of nations*, Macmillan, London.

¹² Desrochers, P. & F. Sautet, 2004, *Cluster-based economic strategy: facilitation policy and the market process*, Review of Austrian Economics, 17 (2/3), p. 233–245.

¹³ Porter M., 2000, *Location, Competition, and Economic Development: Local Clusters in a Global Economy*, Economic Development Quarterly, 14 (1), 15–34.

directly), thus enjoying the trust and mutual “overflow” of knowledge that occurs due to direct connections¹⁴.

However, such a situation can be unfavorable at the time of drastic decrease in demand for products/services that make up a highly specialized base in that growth point, especially if a unilateral orientation is carried out, which in turn pulls by way of chain the entire unit into a depression. The situation will be different if the orientation of region is not made only in one direction, but if it focuses on a number of clusters (more lines of specialization where each with its generic forces will encourage economic and overall progress in the given territory, because it is less likely that for a number of directions there will be simultaneous reduction in demand and undermining of regional progress¹⁵.

6.

According to all that has been argued above, it follows that the political incentives to regional economic development are desirable and potentially contribute to faster economic and overall social progress of the region, especially in cases when these territorial units are at a lower general level of development. It is particularly important to emphasize the importance of incentives in the initial phase of selection and formation of growth points, and the period of their involvement in the already existing territorial network, because it entails more rational use of their own limited accumulation in the region and/or incentive funds that they receive from the outside. On the other hand, in order to achieve the greater overall effects in as short period of time as possible in these stages it is rational to make selection of priority branches and activities that are mutually connected, and directed to cooperate, at which regional incentives would be targeted, and mutual time tuning, coordination, security, tourist outlets and available economic and social infrastructure would be made. In other words, the available stimulation used by the regional policy would act in the formation of rounded areas (clusters) of interconnected commercial entities and activities that would for a certain period of time represent the backbone of regional specialization.

Of course, such determination does not mean long-term one-sidedness in any case, with all the dangers that in the long time interval can arise. On the contrary, we vote that the mechanism of incentives in the next development phase for the growth point spread to other economic entities, which would mean diversification of economic structure, and its complementing with economic elements and/or social infrastructure. So the incentives would gradually form the regional complex in which in addition to activities that are complementary to the branches

¹⁴ Marshall A., 1920, *Principles of Economics; 8th edition*, London, MacMillan, book IV, chapter VIII, paragraph 12, <http://www.econlib.org/library/Marshall/marP.html> (april 2009).

¹⁵ Marshall A., 1920, *Principles of Economics, op. cit.*, book IV, chapter VIII, paragraph 3.

of specialization, regional structure completes with those entities which are primarily oriented on the satisfaction of the needs of the local population. Besides, diversification incentives should be enabled in the structure of the economy at a given point of the growth, to open the process of creation and activities that would outline some future specialization of “new” clusters. As a mechanism that would support the territorial development it should be retained until the point becomes capable to attract new investments and ensure further sustainable growth/development by itself. In such a way, regional complex would be formed, so that in times of decreasing demand for products/services as a framework of specialization of the region, other units (clusters) could maintain a high level of economic activity. Of course, sometimes in the existing regional complex there is an embryo of a new cluster able to take a leading role and enough generic power for the future regional development.

Abstract

The paper deals with exploring the possibilities and limitations for the promotion of regional development measures of fiscal policy, and building economic and social infrastructure elements. We will provide an overview of the current literature on the appropriate topic, and particularly explore the use of different modalities in our actual economic reality and their combinations to achieve the greatest developmental effects.

MOMČILO DJORDJEVIĆ, SRDJAN ŠAPIĆ

The Concept of Corporate Social Responsibilities – the Impact on Practice

Introduction

The first organized activities of unsatisfied consumers (consumerism from word consumer) were launched 60 years ago as a result of raised consumers' sensitiveness and shift in the consumers' behavior and are mostly due to improved living standard, improved education of many consumers, consumers' better understanding of complex products, as well as the effects of mass communication on consumers.

Environmentalism represents activities of unsatisfied consumers which developed from the consumerism concept. The environmentalists have been mainly focusing on the impact of marketing on the environment and expenses of satisfying the needs and wants consumers.

They consider that the marketing objective has to be the best quality of life. However, the quality of life is not only represented by a certain quality of products and services, but also by the preservation by of the quality of environment ¹.

As a result of organized consumer activities in today's society, (e.g. consumerism and environmentalism) the concept of corporate social responsibilities has

¹ Kotler P., *Marketing Management*, The Sixth Edition, Prentice Hall International Editions 1988, p. 17.

seen a remarkable growth lately. Actually, after a certain period of time in which there were many unsatisfied consumers, the companies have understood what they need to do – they need to increase their social responsibility.

The concept of corporate social responsibilities means that corporations take care not only of their profit goals but also of their social goals and interests. By taking care of corporate social responsibilities, companies are in position to achieve the competitive advantage in the market and accomplish their profit goals more efficiently.

1. Concept of the Corporate Social Responsibility (CSR)

Main corporate business targets can be classified into two groups²:

1. Profit oriented (focus is on revenues, expenses, gains),
2. Focus on wider social targets.

Socially responsible corporation takes care to achieve not only business (profit) targets but also wider social targets and interests. Satisfying the needs in products and services represents the reason of human existence, but not the main reason of life. After satisfaction of basic needs, focus is on quality of life. Focus is on overall satisfaction of people not only as customers but also as social beings.

An enterprise is considered to be a good corporate citizen if it shows its commitment to serve the interests of groups through socially responsible practice and suitable business activities.

Socially responsible enterprise:

- takes care of environment protection,
- has positive attitude to its employees,
- offers financial and other sorts of help,
- employs persons with special needs,
- takes care of the community in which it operates.

A socially oriented corporation can achieve its profit goals more easily, from a long-term approach:

- raise sales,
- attract new customers,

² Milisavljevic M., *Marketing*, The Contemporary Administration, Belgrade, The Eleventh Editions, p. 76.

- reduce costs,
- motivate its employees and show commitment to them,
- improve goodwill,
- attract investors and business partners,
- government support, local community, media.

Concept of the corporate social responsibility coordinates business activities with social values. It includes interests of all groups on which company has influence. Concept of the social responsibility has in focus social, ecological and financial success of the enterprise.

The aim is to act positively on society and also to earn profit. Taking into consideration social, ecological and financial aspects of a company during estimation of its business activities is a guarantee for a long lasting approach.

It is necessary to make social responsibility an integral part of its business activities – corporations must include its social responsibilities into its business activities, not just to approach it as an additional function. Besides, interested groups demand it from the enterprise to do business in a responsible way and also to include responsibility and transparency standards.

In the past the value of corporation was measured strictly by its financial results. Interest groups now have better understanding of how behavior of an enterprise affects:

- social,
- political,
- natural environment.

Social and ecological results are considered side by side with financial results. They include: human rights, business ethics, environmental protection measures, corporate contribution, community development, corporate management, and questions associated with working conditions.

It is expected from a company to present information concerning its policy and practice that affects employees, community and life environment. Corporations which are able to react accordingly to demands of its interest groups, have better position for attaining sustainable financial success.

2. Positive Reputation and Corporate Social Responsibility

Reputation which a certain corporation possesses is invisible but very important element of its business strategy. Positive reputation is strategic factor that affects on trust and addresses all interested sides on certain corporate values.³

Positive reputation is a specific asset that includes more different values (elements of reputation):

- corporate products can have reputation of high quality,
- corporation can have excellent reputation for financial stability, although its products are seen as uninventive and below average quality,
- corporation can have a reputation as a socially responsible firm, if it
- cares about wider social purposes and interests.

Socially responsible company:

- takes care of environmental protection,
- has positive attitude to its employees,
- offers financial and other sorts of help,
- employs people with special needs,
- takes care of the community in which it operates.

Reputation is seen as a key resource. Reputation can be extremely valuable, scarce, hard to copy, irreplaceable, providing a corporation with unique competitive advantage.

Therefore, reputation can be an important source of profit. By showing its social responsibility in the long run, corporation can easily achieve its profit targets. Socially responsible corporation takes care of the fundamental rights of its consumers.

Focusing on accomplishing the basic rights of consumers according to the Law of consumer protection, corporation builds reputation of socially responsible subject by:

- satisfying basic needs,
- information,
- choice-possible choice between more products and services, at reasonable prices, are a guarantee of quality,

³ Roberts P., Dowling G., *Corporate Reputation and Sustained Superior Financial Performance*, „Strategic Management Journal” 2002, December, p. 1077–109.

- consumer voice,
- compensation,
- education of consumers,
- healthy environment.

3. Social Responsibility and ISO 26000

Work group ISO for social responsibility laid a foundation on its second meeting, in September 2005 in Bangkok – Thailand. ISO 26000 will give organizations harmonized, internationally agreed instruction for social responsibility based on the best practice and respect of relevant declarations and conventions of the UN.

One of the main contributions from Bangkok is a survey of the structure of ISO 26000⁴:

- Introduction, Subject, Normative references, expressions and definitions,
- Context of the social responsibility in which all organizations operate,
- Principles of the social responsibility from importance for the organizations,
- Instructions on the basic questions of social responsibility,
- Instructions for organizations on social responsibility,
- Appendices, Bibliography.

The result of the Bangkok meeting is the draft of plan for ISO 26000 project, which will be published in December 2007, final draft in September 2008 and final international standard in October 2008.

4. Benefit for Community and Corporation

Socially responsible corporations contribute to the accomplishment of interests of various subjects. The most important benefits for the organizations themselves are:

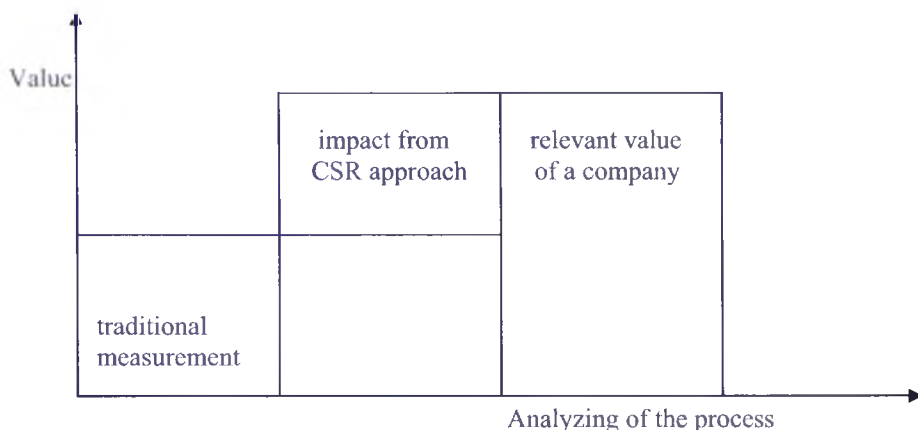
- reputation and trademark management,
- management of business risk,
- employment, motivation, and keeping employees,
- easy access to capital,
- learning and innovation,
- reduction of costs and greater business efficiency,
- competitiveness and market position,
- social license for work,
- better relationships with governing bodies,
- organizational transformation and constant improvement.

⁴ Council of Foreign Investors, Official Publication for 2006 year, p. 93.

Community can also benefit from a socially responsible enterprise. It is reflected by new work places and benefit from business based upon projects of CSR.

This way added value is created for all sides included. In certain cases such projects are called “unprofitable projects” whose goal is not only a profit but rational management of company’s costs. That is what makes one project a real one and represents help for the community.

Figure 1. Return on investment and real added value of a company, Council of Foreign Investors, Official Publication for 2006 year, p. 93.



The value of company only from traditional aspects (traditional measurement) is less then when the CSR approach has been included. The relevant value of a company is larger then.

5. Examples of Corporate Social Responsibility

Erste bank from France, which has subsidiaries all over the world, is an example of a socially responsible corporation. The bank donated 10000 Euros for the safe house project which is lead by the B92 TV, The purpose of this project is to accept all persons who experienced family violence.

A Serbian oil company invested around 250000 Euros during 2006 in environment protection, which proves that this company is socially responsible. The Medical factory “Zdravlje” from Leskovac, four years after privatization is an example of a successfully privatized and socially responsible company. Medi-

cal factory Zdravlje was bought in an auction held in May 2005 by the Farmako Company from Island for 3.5 million Euros and changed its name to “ACTIVIS”. Today the “Activis” company responded positively to 170 out of 300 requests for donation. The corporation helps national theater, basketball club, building of the sport center, primary school, donates reconstruction of maternity hospital in Leskovac.

Monsanto company is the leader in the US market in genetically modified food production. Attempts to place the GM products on the European market were unsuccessful, mainly due to the environmentalists, especially the Green Peace organization. Under its pressure even Monsanto in America had to modify its orientation in development of biotechnology and its application in the food industry. Green Peace activists and wider public in Europe whose voices influenced the American nation, were successful in their attempts to change the business orientation of Monsanto company which is now based on Health laws.

Pancevo with its petrochemical industry and pollution which it creates, forced citizens to organize themselves and make pressure on company’s management and the government to take protection measures.

In Sumadija region the “034 Company” is located with its foundry that pollutes environment with poison gases. By the way, the foundry is located in an inhabited part of town. When citizens got organized and exerted pressure on the government, the situation improved. The management, under public pressure, purchased and installed the necessary filters to prevent pollution of the environment.

This case opens many questions:

- Who gave permission to the “034” company for such production in the inhabited part of town?
- How many inhabitants died as a result of such production?
- Metal melting and export of beams is very, very profitable business, but is it more important than the health of inhabitants? What would happen if the citizens did not organize and pressurize the government?
- Who guarantees that installed filters are of good quality to prevent further pollution?
- Who inspects the installed filters and makes sure that they are working properly?
- Does the owner, who is by the way also a big donator, properly “wash his business” in such a manner?
- How do city authorities and other public pressure groups, including the church, approach this question?

The Law of consumer protection states that authorities are obliged to inform the inhabitants precisely about water and air control. Information must contain thorough and precise data about air pollution and polluters in order to protect health of the people.

Conclusion

The concept of corporate social responsibilities means that corporations take care not only of their profit goals but also of their the social goals and interests. By taking care of corporate social responsibilities, companies are in position to achieve the competitive advantage in the market and accomplish their profit goals more efficiently.

Reputation is seen as a key resource for achieving the total results. By showing its social responsibility in the long run, corporation can easily achieve its profit targets. Socially responsible corporation takes care of the fundamental rights of its consumers.

This way added value is created for all sides included. In certain cases such projects are called “unprofitable projects” whose goal is not only a profit but rational management of company’s costs. That is what makes one project a real one and represents help for the community.

The value of company only from traditional aspects (traditional measurement) is less then when the CSR approach has been included. The relevant value of a company is larger then.

Finally, in this paper some benefits, for the community and corporation have been stressed and several examples of corporate social responsibility have been presented.

Abstract

The corporate social responsibilities (CSR) are the focus of this article. The article itself consists of the following main points: organizational efforts of unsatisfied consumers (consumerism and environmentalism), concept of corporate social responsibilities, positive reputation and corporate social responsibilities, corporate social responsibilities and ISO 26,000. The article also includes some examples of corporate social responsibilities.

As a result of organized consumer activities in today’s society (e.g. consumerism and environmentalism) the concept of corporate social responsibilities has seen a remarkable growth lately. Actually, after a certain period of time in which there were many unsatisfied consumers, the companies have understood what they need to do they need to increase their social responsibility.

Literature

- Kotler P., *Marketing Management*, The Sixth Edition, Prentice Hall International Editions, 1988.
- Milislavljević M., *Marketing, The Contemporary Administration*, Belgrade, The Eleventh Editions, p. 76.
- Djordjević M., *International Marketing*, Faculty of Economics, Kragujevac, 2005.
- Tricker R., *Conformity Marking*, Butt–Heinemann, Oxford, 2005, p. 18.
- Roberts P., Dowling G., *Corporate Reputation and Sustained Superior Financial Performance*, „Strategic Management Journal”, December 2002, 1077–1093.
- The Law of Consumer Protection*, Official Publication, RS, 79/2005.
- Council of Foreign Investors*, Official Publication for 2006 year, p. 93.

TADEUSZ GRABIŃSKI

Benford's Law

Introduction

When we type into Google the phrase *Benford*, and when our search is limited to Polish, we obtain over 31 thousand hits (as of September 1st, 2008). The first 300 hits pertain mainly to construction machines (fully rotational road carriage), the science fiction writer Gregory Benford and the author of English text books Michael Benford.

The phrase *Frank Benford* in Polish results in merely 13 hits; 3 hits are references to the Scandinavian version of wikipedia, 2 are outdated links, and the remaining 8 contain information about Benford's Law obtained from scientific publications¹.

The term *Benford's Law* in Polish results in about 50 hits. Among them we can find links to several publications pertaining to Benford's Law as well as links to web sites that present and discuss the following issues: paranormal activity, math trivia, text book information, and teaching materials pertaining to Benford Law².

¹ Wołowik P., *Matematyka pomaga odkryć fałszerstwa w zeznaniu podatkowym*, Rzeczpospolita, 20.04.2005, http://www.huby.seo.pl/D3/index.php?option=com_content&task=view&id=40&Itemid=3; „Gazeta Wyborcza”, 05/04/23 http://www.kpk-ottawa.org/sip/bez_ogonkow/biuletyn/2005/0506.html; Karpiński M., *Prawo Benforda*, „Matematyka w Szkole”, No. 31, styczeń/luty /2008.

² Paulos J.A., *Matematyk gra na giełdzie*, Wydawnictwo CDW, Azymut-Book 2007. Wołowik P. *Prawo Benforda – testowanie i weryfikacja poprawności danych pomiarowych*, „Przegląd Telekomunikacyjny – Wiadomości Telekomunikacyjne”, 11/2005.

As can be expected, Google search provides a substantially greater number of links and references for similar phrases in English. The word *Benford* results in approximately 887 thousand hits. Among the first 300 hits, nearly half pertain to Benford's Law. The remaining hits pertain either to persons with that particular name, or to construction machines. The phrase *Frank Benford* results in 1800 hits while, in contrast, Benford's Law results in over 60 thousand hits³.

This brief analysis pertaining to the web search of a particular subject (i.e. Benford) reveals that the knowledge of Benford's Law in Poland is insignificant; meanwhile we are able to find numerous publications about this particular subject in English.

The first scholar who considered this interesting problem was Simon Newcomb, astronomer and mathematician. In the early 1880s he observed that volumes containing logarithmic tables had much dirtier pages in the front than in the back. Basically this meant that, for unexplained reasons, scholars who studied these tables utilized small numbers rather than large numbers. In his work Newcomb provides even a formula according to which we would be able to approximate the frequency of occurrence of first significant digits.

Newcomb's observation went unnoticed for 60 years. In 1938 the physicist, Frank Benford, empirically verified the correctness of Newcomb formula on 20 sets of numbers that contained over 20 thousand digits (among others rivers surface, city population, death rates). Nevertheless, Benford did not provide an explanation as to why we observe a decreasing frequency of occurrence of numbers, in given sets, which start with gradually increasing digits. Not until 1995 the mathematician Thomas Hill managed to prove the essence of this regularity and, in addition, presented its properties and conditions.

Hence it is uncertain whether the law pertaining to the frequency distribution of the first significant digits should be named after Benford, Hill or Newcomb, or possess a totally different definition. In reality there are serious doubts regarding the general functioning of this law; in other words, is it fully justifiable to use the term law, or should we use the term 'regularity' instead⁴.

³ Top links according to Google:

http://en.wikipedia.org/wiki/Benford%27s_law

<http://mathworld.wolfram.com/BenfordsLaw.html>

<http://www.intuitior.com/statistics/Benford%27s%20Law.html>

<http://www.mathpages.com/home/kmath302/kmath302.htm>

www.rexswain.com/benford.html

⁴ Among other interesting laws that possess a similar character are Estoup-Zips Law (frequency of words occurrence in texts), Heap's Law (which describes the interrelation between text size and the number of words used) and Lotka Law (pertaining to frequency of references in scientific publications depending on the number of articles for a given autor).

1. Benford Distribution

According to Benford's Law, the frequency (P) of occurrence of **first** significant digits D_1 in **multi-digit** numbers taken from **large** sets of numbers is given by the formula below:

$$(1) \quad P(D_1 = d_1) = \log\left(\frac{d_1 + 1}{d_1}\right) = \log(1 + 1/d_1) \quad (d_1 = 1, 2, \dots, 9)$$

Figure 1. Benford's Law – frequency distribution of first significant digits

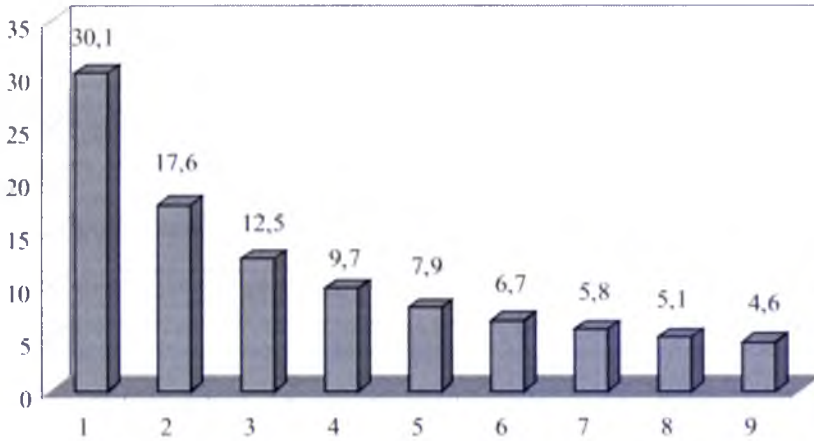
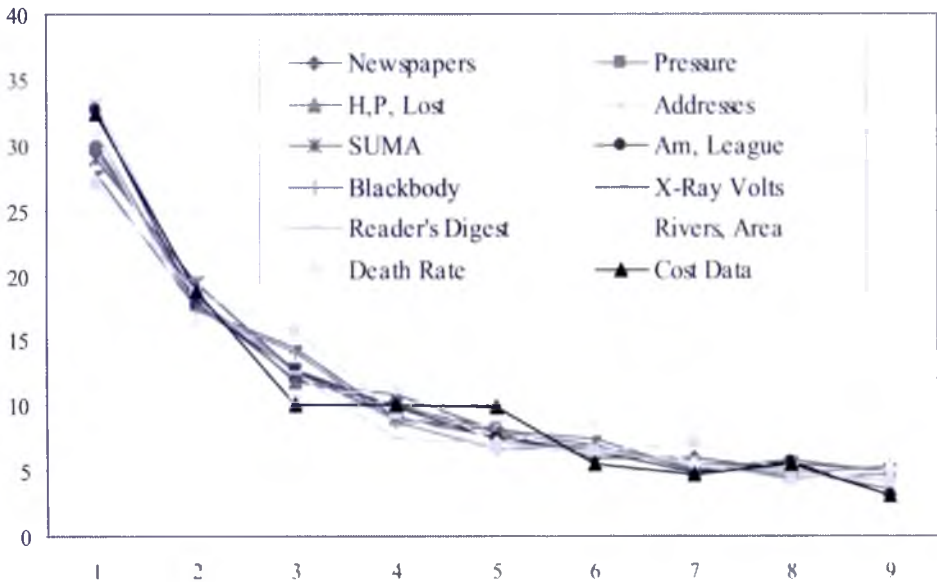


Figure 1 displays the distribution frequency of first significant digits. As can be seen, 1 occurs with a 30% frequency, and subsequent digits have a progressively decreasing frequency (i.e. 9 occurs only with 4,6% frequency).

Figure 2 displays the frequency of first significant digits for 12 separate datasets that have been analyzed by Frank Benford with the highest conformity between empirical and theoretical distributions.

Figure 2. Frequency distributions of first significant digits for 12 datasets analyzed by F. Benford



Benford's Law is precisely associated with the Fibonacci sequence and less familiar Lucas sequence. The above mentioned sequences can be expressed by a recurrent formula presented below:

$$F(n+1) = F(n) + F(n-1)$$

- Fibonacci sequence {1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...}
- Lukas sequence {1, 3, 4, 7, 11, 18, 29, 47, 76, 123, 199, ...}

Distribution analysis in these sequences, which comprised 1474 numbers, revealed that in both cases (i.e. sequences) the distributions of first significant digits are entirely consistent with Benford distribution (compare with table 1).

Table 1. Distributions for first significant digits in Fibonacci and Lukas sequences including Benford distribution n=1474

D	Benford	Fibonacci	Lukas
1	444	444	445
2	260	260	258
3	184	184	185
4	143	143	143
5	117	117	116
6	99	98	99

7	85	85	86
8	75	76	75
9	67	67	67
SUM	1474	1474	1474

2. Attempts to Explain Benford's Law

Scientific literature offers several examples that try to explain the causes of Benford's Law Formula as well as a description of frequency distributions of first significant digits. In this article we will briefly discuss 3 different interpretations of Benford Law.

The first interpretation can be derived from a proven theorem (Thomas Hill), which states that data which are a product of multiple numbers will always be subjected to Benford Law. In reality many types of information possess a product type character. For example, the transaction value of unitary prices to the volume of sales. Hill's theorem is related to the central limit theorem, which deals with sums of random variables and not quotients.

The second interpretation is related to a theorem according to which each sample of randomly mixed numbers from various datasets is subjected to Benford Law. Therefore, if we randomly select numbers from different tables of the statistical yearbook, their first significant digits will be subjected to Benford's Law even if the numbers from individual tables will fail to meet this condition. Based on the above-mentioned remarks, Benford's Law describes the analytical form of "distribution of distributions".

The third interpretation assumes that there exists a general law of nature, which pertains to first significant digits and subsequently reflects the harmonic nature of reality. It should be emphasized that the scale pertaining to sensitivity of sight and sound, as well as many other phenomena (i.e. seismic waves during an earthquake) are often better described by a logarithmic rather than a linear scale.

The intuitive nature of Benford's Law may be best illustrated when we take into account the fact that starting magnitudes possess a unitary level (1, 10, 100, 1000 etc.). If we want to switch to values starting with 2, 20, 200, etc, we have to double the base value (100% increment). Switching from 2, 20, 200,...to 3, 30, 300 requires that base value increase by only 50%. Subsequently switching from 8, 80, 800,... to 9, 90, 900,... increases base value by 12,5%, and from 9, 90, 900,... to 10,100,1000 by 11,1%. It should be noted that the aforementioned increment rates recur cyclically: 100%, 50%, 33%, 25%, 20% etc.

To sum up, in general there are more small and medium size enterprises than large corporations. In a similar fashion, there are more smaller than larger cities, and more small rivers and creeks than large rivers. However, we have to bear in

mind that it may not always be possible to attain subsequent orders of magnitude when starting from uniform magnitude.

3. Benford's Law Properties

Benford's Law possesses two essential properties:

- (1) Scale non-changeability .
- (2) Base non-changeability.

Scale non-changeability means that if we multiply, divide or raise data to n-th power by a non zero constant (data characterized by Benford distribution) we will obtain such a distribution that will still be subjected to Benford Law. Therefore, it is irrelevant if magnitudes are expressed in dollars, euro or any other types of units; Benford's Law will still apply to any type of unit. It should be noted that inverse numbers which are subjected to Benford's Law also meet this condition. For instance, the amount of turnover per single share and the amount of shares per 1 dollar worth of turnover.

Base non-changeability means that Benford's Law is applicable not just to numbers with a base of 10 but also to other types of number base systems. Thomas Hill proved that Benford's Law is unique since it is the **only** known distribution which possesses this property.

For any given calculation system base (B) the Benford Formula for first significant digits D_1 , is expressed in the following manner:

$$(2) \quad P(D_1 = d_1) = \frac{\log(1 + 1/d_1)}{\log(B)} \quad d_1 = (1, 2, \dots, B - 1)$$

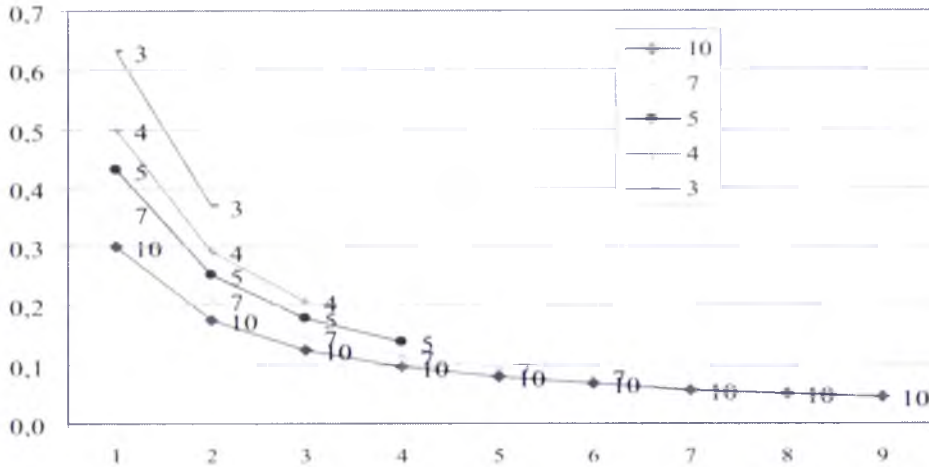
In table 2 and Figure 3 the frequency of occurrence of first significant digits for various number base systems are presented as follows:

Table 2. Frequencies of occurrence of first significant digits for various types of number base systems from B=10 to B=3

d	Number system base B							
	10	9	8	7	6	5	4	3
1	0.301	0.315	0.333	0.356	0.387	0.431	0.500	0.631
2	0.176	0.185	0.195	0.208	0.226	0.252	0.292	0.369
3	0.125	0.131	0.138	0.148	0.161	0.179	0.208	
4	0.097	0.102	0.107	0.115	0.125	0.139		
5	0.079	0.083	0.088	0.094	0.102			

6	0.067	0.070	0.074	0.079				
7	0.058	0.061	0.064					
8	0.051	0.054						
9	0.046							

Figure 3. Frequency distribution of first significant digits for various types of number base systems B=3 ,4, 5, ,10



Another property of Benford's Law is that it fulfils the differences between the sorted elements of a set of numbers (either ascending or descending) on condition that starting numbers behave according to Benford Law.

4. Benford's Law Conditions

Benford's Law functions best if data possess the following properties:

- **Sufficiently large variability**; the more diversified type of data the better, (length of mp3 tracks does not fall into this category, on the other hand the lengths of all files stored on your computer meet this condition).
- **Lack of determined maximum** or allowed variability limits.
- **Large sample**; the more data the better.
- **Positive distribution asymmetry** (i.e. arithmetic mean is greater than median).

In another words, it is better if there are smaller than larger units

- **Random selection of numerous populations** where data are derived.
- **Data result from measurement or count procedures.**
- **Data at transactional level**: for example stock exchange auctions, certificate of current expenses, sales invoice.

Benford's Law does not function in the following situations:

- **Existence of maximum and minimum** value thresholds, for example exam grades (2 to 5), IQ level (50 to 200), age of high school graduates (14 to 18), 400 meter race results, height and weight of persons.
- **Specified permissible value limits** such as the limit for weekly office expenses without management consent (100PLN).
- **Legal and formal restrictions** such as the necessity to pay tax for a sale or purchase above 1000 PLN.
- **Presence of psychological numbers** such as prices at everything below \$1,99⁵.
- **Data obtained from random number generators** i.e. lottery results.
- **Identification data:** numbers of vehicle registration plates, personal ID cards, phone numbers, post codes, product codes, bank account numbers, numbers pertaining to personal ID registration codes valid in Poland (NIP, REGON, ISBN, ISSN, ISMN, IACS).

5. Benford's Law Generalizations

Benford's Law can be generalized and subsequently it can be utilized for more sophisticated types of analyses, which employ the following types of tests:

- F1 – first significant digit
- F2 – first 2 significant digits
- F3 – first 3 significant digits
- L2 – last 2 significant digits
- D2 – exactly second significant digit

Formula 1 indicates the frequency for **first significant digits (test F1)**. This formula can be generalized for subsequent digits which occur in multi-digit numbers.

For the **second digit** in a sequence (**test D2**) the formula is expressed in the following manner:

$$(3) \quad P(D_2 = d_2) = \sum_{k=1}^9 \log\left[1 + \frac{1}{10k + d_2}\right] \quad (d_2 = 0,1,2,\dots,9)$$

Finally, for any given n-th digit combination the formula is expressed accordingly:

⁵ This slogan reflects the clients' perception that 1.99\$ is substantially lower than 2.00\$ and it will certainly encourage clients to purchase products. According to marketing analysis, such a slogan enables to increase turnover by 10–15%.

$$(4) \quad P(D_1 = d_1; D_2 = d_2; \dots, D_n = d_n) = \log \left[1 + \sum_{i=1}^n d_i 10^{n-1} \right]$$

From formula (4) we are able to determine the frequency of occurrence for any given two-element digit combination for first 2 significant decimal places (**test F2**):

$$(5) \quad P(D_1 = d_1; D_2 = d_2) = \log \left[1 + \frac{1}{10d_1 + d_2} \right]$$

This operation can be performed for the **first 3** significant decimal places (**test F3**)

$$(6) \quad P(D_1 = d_1; D_2 = d_2; D_3 = d_3) = \log \left[1 + \frac{1}{100d_1 + 10d_2 + d_3} \right]$$

The appearance of specific digits on specific decimal places within the numbers is not dependent on each other. The formula which expresses the conditional frequency of digit occurrence on the second place (d2) under the circumstance that the first place is occupied by digit (d1) is written as follows:

$$(7) \quad P(D_2 = d_2 | D_1 = d_1) = \frac{\log[(d_1 d_2 + 1) / d_1 d_2]}{\log[(d_1 + 1) / d_1]}$$

6. Applications of Benford Law

Benford's Law is utilized in different science and real life domains.

Economic studies:

- Detection of fraudulent data or unintentional errors in accountancy.
- Detection of tax fraud.
- Analysis of stock exchange data (price and turnover of bonds).
- Analysis of product prices which have been auctioned on the Internet.
- Analysis of the length of time clients feel they are associated with a company which offers services.

- Assessment which pertains to the correctness of compensation estimates in insurance companies.
- Assessment of credibility rates pertaining to fines and penalties ruled in legal proceedings.

Quantitative research:

- Testing the correctness of econometric models i.e. forecasting procedure (theoretical data should be subjected to Benford's Law to the same extent as empirical data).
- Optimalization of calculations in solving transport and logistics problems (Euclidean distances between different sites fulfil Benford Law).
- Verifying the correctness of statistical data.

Technical studies and information technology studies:

- Designing mass memory for computers⁶.
- Being able to distinguish real photography from computer generated graphics.
- Analysis of the capacity of files transferred via Internet, including the time of transfer.
- Benchmarking of digit algorithms.

Earth sciences:

- Assessment of clinical efficacy of drugs and medications.
- Analysis of data relevancy pertaining to the emission of toxic pollutants.

It should be pointed out that Benford's Law is not always used in scientific research. Sometimes a scientist will analyze the distribution of significant digits based on data which are relevant and indicate no flaws whatsoever. Subsequently the distribution of digits is performed, but not according to Benford's Law but based on a specific distribution which seems adequate for a particular dataset.

One of the most unique applications of Benford's Law is the analysis of the end of the world prophecy. In their study (1) authors present the frequencies of first significant digits pertaining to the numbers which determine the passage of years from the time when a prophecy is announced until the predicted time of the end of the world. In general the frequencies are consistent with Benford Law; excluding digits: 4, 5 and 7. It should be noted that 7 is the only digit which occurs nearly twice as often in the prophecies (refer to table 3). The fact that sum of numbers doest not add up to 100% in the empirical sequence is due to the unclear nature of prophecies (i.e. different dates for a given prophecy).

⁶ Among all number systems the 8 base system enables to save the most space on computer disc, by assuming that we effectively utilize Benford's Law properties. In addition to that, the construction of logarithmic computers which utilize information, comprising a greater frequency of numbers which began from small digits, enables to accelerate the time of variable comma calculations.

Table 3. Conformity of first significant digits distribution for dates of end of the world prediction according to Benford Law

I digit	1	2	3	4	5	6	7	8	9
Benford	30.1	17.6	12.5	9.7	7.9	6.7	5.8	5.1	4.6
Prophecies	28.8	16.7	12.1	6.1	3.0	6.1	10.6	4.5	4.5
Difference	1.3	0.9	0.4	3.6	4.9	0.6	-4.8	0.6	0.1

Another interesting example is that the number of hits in web search engines agrees with Benford law. Usually we have to type in, as key words, phrases containing several numbers starting with 1,2,3,...,9; for example: *1ddmmyy*, *2ddmmyy*, *3ddmmyy*....., where *ddmmyy* denotes date (day, month, year). It turns out that we will always obtain monotonic sequences which possess descending frequencies.

7. Proposition to Create a Portal that would Analyze Data in Terms of Conformity with Benford Law

The discussion presented in this paper indicates that Benford's Law may be applied only in certain situations; it should be noted that the strength of Benford's Law impact (measured by the degree of conformity with the Benford formula) is generally diversified. The number of analyses that have been performed so far regarding Benford's Law (even if its a large number) does not enable to conclude that this law is common in nature.

Therefore it is recommended to create a portal which would operate according to Web 2.0 principle. The goal of this portal would be to gather information pertaining to the results of conformity analysis with Benford's Law based on various sets of data. This portal should include the following components, and subsequently enable the accomplishment of the formulas mentioned below:

1. Articles containing a thorough description of the essence, properties and conditions of Benford's Law (Wikipedia).
2. On-line applications which enable performing statistical analysis on any given set of data, according to a standardized calculation scheme and range of parameters.
3. Possibility to post the results of such analysis on the portal including brief commentary.
4. Possibility to comment on the results that have been posted by other users (via blog).
5. Ranking of posted analyses from the standpoint of their uniqueness.

6. Generating classifications of analyses based on their context related field of applications.

The most important component of this portal is its analytical application, which would include various types of starting data formats as well as standard set of analysis results (chart type, result table, measures of conformity i.e. chi square test, approximation errors etc.)

This particular portal could be utilized as a didactical aid, for example during a seminar on the methods of quantitative data. One of the forms for completing such a course might be the requirement to perform a specific analysis procedure on a given set of data (obtained from real time database) by employing software tools available on this portal. Subsequently, a student would be obliged to post a description of obtained results.

Abstract

The paper presents Benford's Law, also called the first digit law, stating that in lists of numbers from many real-life sources of data the leading digit is distributed in a specific non-uniform way. The essence, properties, constraints as well as examples of Benford's Law practical uses have been shown. It has been proposed to build a Web 2.0 site (vertical portal) where results of different data set analyses could be reported and presented in a unified way, in the context of their agreement with Benford's Law.

Literature

- Benford F., *The law of anomalous numbers*, „Proceedings of the American Philosophical Society” 1938, No. 78.
- Frey B., *75 sposobów na statystykę. Jak zmierzyć świat i wygrać z prawdopodobieństwem*, Helion, Gliwice 2007.
- Hill T.P., *Benford's law*, *Encyclopedia of Mathematics. Supplement*, „Kluwer” 1997, No. 1.
- Hill T.P., *A statistical derivation of the significant digit law*, „Statistical Science” 1996, No. 10.
- Karpiński M., *Prawo Benforda*, „Matematyka w Szkole” 2008, No. 31.
- Newcomb S., *Note on the frequency of use of the different digits in natural numbers*, „American Journal of Mathematics” 1881, No. 4.
- Nigrini M., *A taxpayer compliance application of Benford's law*, „Journal of the American Taxation Association” 1996, No. 18.
- Paulos J.A., *Matematyk gra na giełdzie*, Wydawnictwo CDW, Azymut Book 2007.
- Weisstein E.W., *Benford's law*, <http://mathworld.wolfram.com/BenfordsLaw.html>.
- Wołowik P., *Prawo Benforda – testowanie i weryfikacja poprawności danych pomiarowych*, „Przegląd Telekomunikacyjny – Wiadomości Telekomunikacyjne” 2005, No. 11.

Web sites used

http://en.wikipedia.org/wiki/Benford%27s_law.

<http://mathworld.wolfram.com/BenfordsLaw.html>.

<http://www.intuitor.com/statistics/Benford%27s%20Law.html>.

<http://www.mathpages.com/home/kmath302/kmath302.htm>.

www.rexswain.com/benford.html.

BILJANA JOVANOVIĆ GAVRILOVIĆ

The Paradigm of Sustainable Development

Introduction

Ever since the famous report of the Brundtland Commission entitled “Our Common Future” was published – which was a milestone in dealing with sustainable development – this concept has been significantly improved, and serious steps have also been made regarding its implementation. The majority of national governments have started incorporating sustainable development in their plans and policies; dynamic private sector throughout the planet is also ever more appreciating the principles of sustainability in its business, and the same applies to local authorities, which are becoming aware of the advantages of this new development paradigm.

How the concept of sustainable development was created, how the very idea about sustainable development evolved over time, what makes the framework of the modern approach to sustainable development, how to measure results achieved according to the sustainable development plan, are some of the key issues occupying the attention of economists throughout the world that will also be made clear in short in this paper.

1. The Evolution of Development Thinking: From Economic Growth to Sustainable Development

Over the last fifty years the debate on sustainable development has passed a long way – from dealing with economic growth, through concerns about employment and income distribution, to the focus on basic needs and, lately, sustainable development. This was not just a mere succession of “trendy follies”, caprices and innovations, a replacement of one slogan with another, as it may sometimes seem, but a true evolution in conceiving development.

The traditional approach to development, which marked the fifties and the sixties of the last century, was characterised by a specific obsession with economic growth. At the height of the post-war expansion of production that affected both developed and developing countries, the growth rate came to the foreground as the main indicator of development performances. The increase of production became a major concern of the society, some kind of a goal *per se*, in which process the integrity of social goals was disrupted.

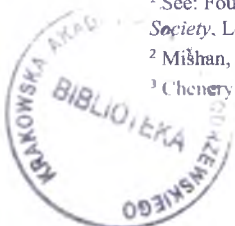
A certain number of authors drew attention back in the fifties to the undesirable effects of such understanding of economic growth.¹ These warnings, however, did not question the generally favourable impression of the growth. At the end of the sixties a feeling of satisfaction, created by post-war conjuncture, was gradually replaced by disappointment caused by socio-economic and environmental consequences of increased production. A very stimulating book by E. J. Mishan appeared in that period, where the author draws attention to costs of the economic growth, arguing against the increase of production as a goal *per se*. If we are primarily interested in improving human welfare, then only those forms of growth that make contribution to achievement of such goal are legitimate and acceptable, while others should be discarded.²

Failure of the economic growth to contribute to a tangible improvement of welfare of the general population, particularly in a developing country, made an impact on changing the very understanding of economic development at the beginning of the seventies. Development is redefined so as to include reduction or elimination of poverty, inequality and unemployment in growth conditions. “Redistribution with growth” became a usual slogan of that time that corresponded to the title of a book published in 1974 by a very influential group of authors headed by H. Chenery.³ It is worth mentioning that the same year another important work appeared which unjustifiably attracted far less attention. That was the article by L. Lefebvre, who also advocated a new

¹ See: Fourastié, *Mccanisme et bien – être*, Universitaires de France, Paris; J. K. Galbraith (1958), *The Affluent Society*, London 1951.

² Mishan, 1967, p. 37–38.

³ Chenery *et al.*, 1974.



approach to development.⁴ This author, however, does not insist that much on the need to balance income distribution between different social groups as a goal *per se*, but more on the need to sustain the very process of economic growth, which is particularly important bearing in mind the later flow of ideas on development.

At the end of the sixties and the beginning of the seventies environmental problems gained more interest, thus giving a new dimension to discussions on development. This was affected first of all by unfavourable state of the environment caused by economic growth, but also by the fear of shortages of basic natural resources the modern production is based on. The UN Conference on Human Environment was held in Stockholm in 1972 under the slogan “only one Earth”, which symbolically expresses interdependence of life cycles, i.e. common destiny on this planet. A study “The Limits to Growth” was published the same year, after which an animated debate took place in the scientific world on the possibility and desirability of a continuous expansion of production.⁵ Ones advocated stopping of the growth, while others asked for more account to be taken of environmental aspects of production increase. The prevailing belief is that the growth itself is not a problem. Quite the contrary, if understood correctly, it is a solution.

Since the middle of the seventies the literature was showing more and more a belief that redistribution with growth is not sufficient to guarantee better welfare of the part of population living in absolute poverty (in developing countries above all, but also in other areas of the world). This helped a new approach on development to be articulated, which was based on the basic needs. Orientation towards meeting the basic needs not only means a direct attack on the poverty, but at the same time contributes to the increase of labour productivity, which supports the process of economic growth.

During the eighties the impact of this development paradigm weakened and eventually, in the recent times, the approach to development relying on the basic needs was entirely abandoned. Although the term “basic needs” can hardly be found today, the idea itself still lives. This is witnessed by the modern concept of sustainable development in which the idea of basic needs holds its place.

2. Defining Sustainable Development

The idea of sustainable development originates from the concerns for environmental issues (overexploitation of natural resources and pollution of the environment), which, as it was already mentioned, has become more and more manifested since the end of the sixties. Early discussions about sustainability marked limitations imposed to the economic activity by physical environment

⁴ L. Lefebvre, *On the Paradigm for Economic Development*, in: *Economic Theory and Planning*, ed. A. Mitras, Oxford 1974, according to: Hunt 1989, p. 72–73.

⁵ See: D. H. Meadows *et al.* *The Limits to Growth*, Universe Books, New York 1972.

and took a view that available species (flora and fauna) and ecosystems should be used in such a way not to challenge their unlimited reproduction.

One of the first definitions of sustainable development was given by R. Repetto⁶. This author pointed out that the essence of this idea is a belief that decisions made today should not jeopardize perspectives for preservation or improvement of the future living standard. This implies that economic systems should be managed in such a way that we live from dividends on available resources, in which process the resource base should be preserved and improved so that the future generation could be able to live as well as, if not better than, today's generation.

The concept of sustainability is more closely determined by R. Solow⁷. This author explains that sustainability does not imply our obligation to leave the world exactly as we found it. What needs to be saved for the future generations is an opportunity to lead a good and worthy life. The fact that there is a possibility of substitution in manufacture and consumption implicitly means that we are obliged to leave to our posterity a legacy of general ability to create welfare and not some particular thing or a specific resource. This kind of approach to sustainability does not exclude the need to preserve specific resources in certain cases if they are of a special value or if there are no good substitutes for them.

The term sustainable development did not become widely used until publishing of the Report of the World Commission on Environment and Development (known as Brundtland Commission) in 1987, entitled "Our Common Future". Sustainable development is interpreted there as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs"⁸.

This definition was quite anthropocentric and oriented towards meeting people's needs in the present and in the future, and not towards environmental protection. Sustainable development, as seen in the Report of the Brundtland Commission, brings together two key concepts: (1) the concept of needs, in particular the essential needs of the poor, to which overriding priority should be given and (2) the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet the present and the future needs⁹.

Definition of the Brundtland Commission is often quoted and widely appreciated. Since the aforementioned Report saw the light, numerous countries of the world officially agreed that there was an urgent need to conduct policies that would

⁶ R. Repetto (ed.), *The Global Possible - Resources, Development and the New Century*, Yale University Press, New Haven 1985, p. 10, according to: Anand, S., and A. Sen, *Sustainable Human Development - Concepts and Priorities*, Occasional Paper, UNDP 1994.

⁷ R. Solow, *An Almost Practical Step Toward Sustainability*, Invited Lecture on the Occasion of the Fortieth Anniversary of Resources for the Future, Washington, D. C. 1992, p. 15 and R. Solow, *Sustainability: An Economist's Perspective*, The Eighteenth J. Seward Johnson Lecture, Wood Hole Oceanographic Institution, 1991, p. 13, according to: Anand, S., and A. Sen, *Sustainable Human Development - Concepts and Priorities*, Occasional Paper, UNDP 1994.

⁸ World Commission on Environment and Development, 1987, p. 43.

⁹ Atkinson, 1997, p. 1.

contribute to achieving more sustainable forms of development. The same applies to many international organisations, including specialised agencies UN and OECD, as well as a great number of large multinational corporations and other segments of private sector and civil society.

At the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, sustainable development was accepted as the goal of many countries of the world that signed the Agenda 21 – a comprehensive action plan to achieve sustainable development in the 21st century. It is worth mentioning that on that occasion agreements on global environmental problems, such as climate changes and biodiversity, were reached. Along with representatives of various governments, the Conference was also attended by numerous nongovernmental organisations. Owing to this the spirit of cooperation in solving environmental issues was manifested, as well as the increasing importance of “participation” in dealing with sustainable development. The aim of the Conference was to reach a consensus on how to harmonise economic development with the need to protect the environment at global level.

Other changes in approaching sustainable development have been noticed since the mid-nineties. The emphasis is now put on social not environmental issues, and a demand for simultaneous achievement of economic, social and environmental goals is manifested. The win-win-win approach, in which all three dimensions of the sustainable development are united and potential conflicts minimized, is gaining more and more support. Such a comprehensive approach to sustainable development has its origins in the Report of the Brundtland Commission, and was manifested at the Conference in Rio de Janeiro.

Further on, the three-dimensional concept of sustainable development gains a wider support. For instance, “Guidance in Preparing National Sustainable Development Strategy” adopted within United Nations in 2001, clearly indicates that sustainable development covers three key dimensions: economic growth, social justice and protection of the environment.¹⁰

Sustainable development concept was reaffirmed as an important issue of the international agenda of the World Summit on Sustainable Development in Johannesburg in 2002. The emphasis was moved from solving global environmental issues like climate changes and biodiversity to fighting poverty.

The key word for the economic dimension in this new three-dimensional approach is “efficiency”, for the environmental dimension it is “resilience” and for the social dimension “equity and pluralism”. Different dimensions of sustainable development are interdependent. Research confirms that these connections are strong, numerous and complex. Economic, social and environmental goals may develop synergy to a certain extent. But they do not always support each other; in certain circumstances they are even each other’s competition. In that case, the concept of sustainability demands establishment of adequate balance between the

¹⁰ *Commission on Sustainable Development*, 2001, p. 7.

goals mentioned. The undertaken measures related to one of them must provide respect of at least minimum standards that are relevant for the other two goals.

Sustainable development is not against growth, as it is sometimes wrongly perceived. On the contrary, growth is important from the point of view of sustainable development, but not any growth and not at all costs. The key value of sustainable development is contained in concerns for quality of economic growth, just as well as for its quantity. Sustainability concept opens the question of character of the economic growth, but does not impose physical or technological barriers to production increase. The solution for the problems of the environment is not to stop growth but to shape new sustainable models of economic expansion. Zero growth may also be fatal for the environment, as well as fast increase of production.

Sustainable development concept involves inter-generation and intra-generation justice. Inter-generation justice used to be a priority, but having moved the emphasis from environmental to social problems, intra-generation justice was made the centre of attention. Inter-generation justice instructs to allocate resources in such a way that welfare achieved today does not endanger the possibility of achieving welfare in the future. Future generations must have sufficient stocks of capital available that would help them create at least the same level of welfare we have today. Intra-generation justice basically means that all people should be given a chance (provided access to resources) to achieve at least the minimum level of welfare that is considered acceptable in given social circumstances.

Sustainable development is related to stocks of capital – natural, human and produced. The potential to meet the needs of current and future generations depends primarily on the availability of capital. One condition for sustainability is to preserve the total stocks of capital, with the presumption that there is neither technological progress nor population growth. The key question is to what extent different components of the total stocks of capital are replaceable by each other. That is the context where a difference between “weak” and “strong sustainability” is made. According to the concept of weak sustainability, the total stocks are important, and substitution between certain components of these stocks is possible and desirable. Strong sustainability, however, relies on a conviction that there is no substitute for some types of natural capital, so these stocks need to be managed with caution.

Beside the essence of sustainable development that was previously discussed, the procedural side of this concept is attracting more attention. The procedural aspect of sustainable development refers to the manner of creating policy (how it is reached, not what the observed policy *per se* is like). This assumes respecting experts’ opinion, but also broad participation of the public. The procedural aspect is oriented towards demystifying scientific-technological paradigm of “experts know it all”.

3. Measuring Sustainable Development

Undoubtedly, measuring sustainable development is one of the biggest challenges the advocates of this concept face. In order to monitor progress made by some countries towards sustainable development, appropriate indicators of that process have to be defined. In the Agenda 21, which was adopted at the abovementioned summit in Rio de Janeiro in 1992, a request was made to initiate a broad activity at national and international level to establish indicators of sustainable development. In this matter, attention had to be paid to particularities of individual countries i.e. their distinctive specific conditions, activities and priorities, on one hand, and on the other, to international comparability, which requires the use of standardised concepts, definitions and classifications of development indicators.

Three pillars the sustainable development measurement is based on are: economic, social and environmental indicators. Lately, institutional indicators have joined them, which measure achievements in building institutional framework to achieve sustainable development.

The lack of adequate information is not the main problem in monitoring performances at the level of sustainable development, as one might suppose, but the selection of the appropriate conceptual framework within which different data and information would be organised and linked. Two characteristic types are available: one, which is based on the model "Pressure – State – Response" (P-S-R), and the other, which rests on national accounts.

The "P-S-R" model was originally developed within OECD for the purpose of measuring environmentally sustainable development. In this approach, the selected indicators should reflect pressures to the environment, the state of the very environment and the response of society to the environmental problems observed. This model can be broadened so as to take into account social-economic consequences of disturbance of the environment. This information is important for decision-makers for it enables them to assess the importance of environmental damage. Conceptual framework for measurement of environmentally sustainable development in this case has a form of "pressure – state – impact – response", where "impact", that is social-economic consequences of environmental damages, is expressed through corresponding indicators of health, loss in production, social costs etc.¹¹

The "P-S-R" model can be adjusted to take into account not only the environmental but also other dimensions of sustainability (economic, social, even institutional). In that case, the concept of "pressure" is replaced by the concept "driving force", so the "P-S-R" model becomes a "D-S-R" model ("Driving Force – State – Response"). Driving force indicators point to human activities, phenomena and processes that affect sustainable development, "state" indicators reflect the "state" of sustainable development, and "response" indicators reveal political op-

¹¹ Atkinson G. et al., 1997, p. 27–29.

tions and other reactions to changes in the “state” of sustainable development.¹² Hence, in this broader approach, sustainable development is measured through a set of indicators that are grouped into appropriate categories (depending on which aspect of sustainable development they cover – economic, social, environmental, institutional) and organised according to the “D-S-R” model.

Lately, instead of the D-S-R framework, the so-called thematic framework is recommended for monitoring of sustainable development results, which expresses the connection between different dimensions of sustainable development (economic, social, environmental, institutional) and themes, i.e. sub-themes typical for each one of them. Individual indicators of sustainable development are defined as sub-themes, which are grouped in themes and classified into corresponding dimensions of sustainable development. Thematic framework is directly derived from the D-S-R framework, so it can be reduced to it, if needed. The second type of the “conceptual framework”, which is used to measure sustainable development, is of the accounting nature i.e. rests on national accounts. Accounting framework is a powerful instrument to cover and link diversified data expressed in monetary or physical units.

The idea of expanding national accounts so as to also cover the problems of natural ambient i.e. the environment and natural resources, has been present for a long time (since the beginning of the seventies). After the Second World War, building ruined economy and restoring the economic growth were the main economic goals in many countries. The System of National Accounts (SNA) – which was developed in the UN at that time (with the aim to serve as a basis to develop national accounts throughout the world) – was quite understandably focused on measuring economic growth i.e. the production of goods and services for the market, which could be valued at the corresponding prices. Few were those who thought about the need to include natural resources and the environment in national accounts in an adequate manner; a prevailing belief was that resources were abundant and the absorption capacity of the environment unlimited.

This situation changed dramatically over time. World population and world economy enlarged significantly, putting a great pressure on the natural environment. Accordingly, concerns for the “faith” of natural capital and environmental aspects of economic development increased as well. In response to this problem many countries started developing specific “green” accounts. Work on green national accounting developed in two directions. One resulted in the appearance of resource and environmental accounts which cover three characteristic types: natural resources accounts, accounts of resource flows and pollutants and accounts of environmental protection expenditure. The second direction of research led to development of alternative aggregates such as the “green” NDP (Net Domestic Product) or expanded measures of saving and wealth, which have a special im-

¹² See: *United Nations*, 1995.

portance for monitoring of progress towards sustainable development, as it will be seen later.

The United Nations tried to introduce some order in that field by publishing in 1993 a manual for development of an integrated System of Environmental and Economic Accounts (SEEA), which includes elements of both approaches to green accounting mentioned. This manual was of a temporary nature and has changed over time in accordance with acquired experience and new knowledge related to numerous unsolved issues concerning valuation and recording of flows in an extended set of accounts¹³. This new integrated System of Environmental and Economic Accounts – SEEA was designed to be a satellite account in relation to the standard system of national accounts – SNA, which means that it is treated as a supplement to these accounts and not as their modification. Therefore, the main difference between SNA and SEEA is that the second system of accounts contains a more detailed classification of property /resources, as well as evaluation and imputation, which refer to the areas out of the market's range (depletion of resources, degradation of the environment), while SNA still focuses on income and property/resources, which can be valued at market prices.

Joining the environmental and economic accounting is undoubtedly a very complex task that requires a lot of time in order to solve numerous conceptual and empirical questions raised. This is not surprising having in mind the fact that development of the existing system of national accounts (SNA) also took many years, despite this system being based on easily accessible market information, while data on physical values for natural resources and the environment are incomplete, and the problems of valuation very complex.

Sustainable development indicators can be classified in four categories according to their coverage. Each category corresponds to one level in the indicator pyramid, which was made to give a symbolic picture of sustainability indicators.¹⁴ At the bottom of this “construction” are sectoral indicators, which cover the key aspects of sustainable development at sectoral level (in agriculture, energetics, transport). They are accompanied by sub-national (territorial) indicators, which refer to spatial unities within a given country.

The second level belongs to resource indicators, which give an insight into accumulation and depletion of various types of capital (produced, natural, human and social). These indicators inform us about how the current behavioural patterns and activities affect the availability of the future opportunities.

The next level in the indicator pyramid is reserved for indicators of results (outcomes) in different domains, through which direction and quality of the observed developmental flow can be considered.

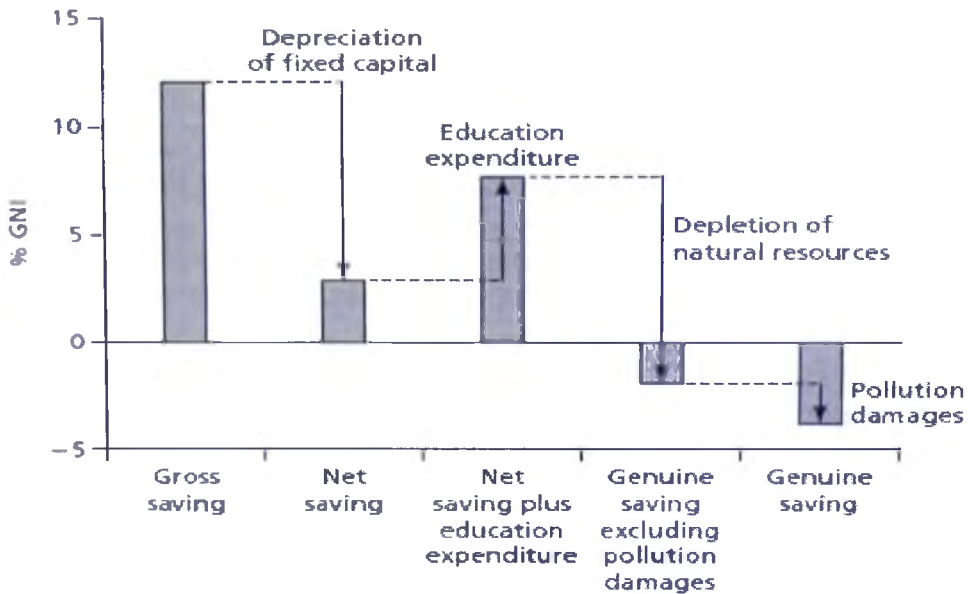
¹³ See: *United Nations*, 2003.

¹⁴ See: *OECD*, 1999, p. 78–79.

At the top of the pyramid are the aggregate indicators, which deserve special attention because they concentrate information to the highest extent, so a general assessment of progress achieved in the direction of sustainable development based on them can be given. This category comprises complex indicators, such as Human Development Index (HDI), devised by the United Nations Development Programme, which combines health indicators (expected longevity), education (literacy, percentage of enrolled in schools and faculties) and living standard (GDP *per capita*). As many authors assess, HDI is probably the most successful measure of modern development, which attracted great attention of policy-makers. Unlike the narrowly defined indicators, such as GDP, this indicator also covers the social dimension of development. However, from the viewpoint of measuring sustainability of developmental process, there is a disturbing fact that the current definition of HDI lacks environmental component. To be fair, there were proposals to include some of the environmental indicators in this aggregate measure. As the most serious candidates for “green” HDI indicators, indicators of carbon dioxide emission *per capita* (this gas participates in creation of the “greenhouse effect” i.e. global warming), biodiversity indicators, and indicators of the size of the protected spaces were mentioned. Unfortunately, these indicators are also followed by serious problems and dilemmas that make them difficult and postpone their inclusion into HDI.

Among the aggregate indicators of sustainable development “genuine saving” is also counted, which represents one of the key aggregates of green national accounting. Accounting of genuine saving starts from a broader understanding of national wealth that, along with produced capital, also includes natural and human capital. Procedure to establish genuine saving can be explained in four steps. First, depreciation of produced capital is deducted from gross saving to obtain net saving. Then the current education expenditures, which are treated as an investment into human capital, are added to the net saving (in standard national accounts, these expenditures appear as consumption). In the next step the estimated amount of depletion of natural resources (primarily of mineral deposits, land and forest fund) is deducted. Finally, when the estimated value of environmental degradation is separated, what remains is the so-called “adjusted net saving” or “genuine saving”.

Figure 1. How to calculate adjusted net saving



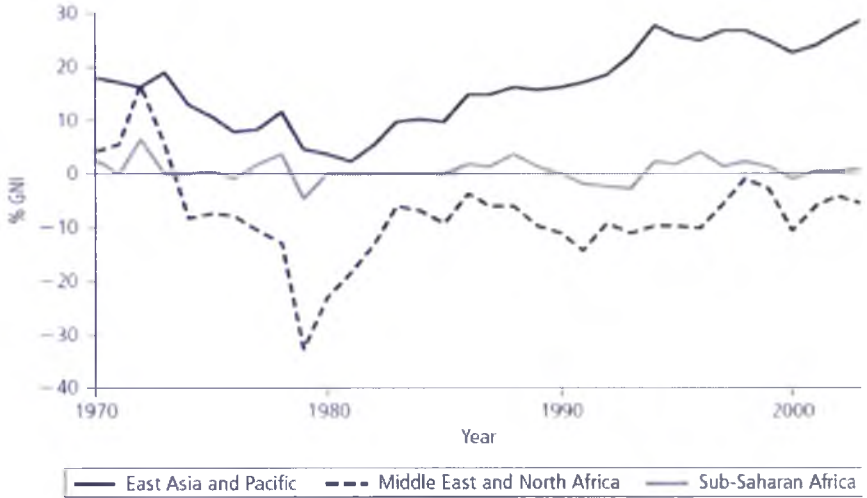
Source: *World Bank*, 2006, p. 40.

Measuring of genuine saving offers useful information to policy-makers. Permanently negative saving clearly shows that the economy does not follow the path of sustainable development. However, this is not valid in the opposite case. Non-negative saving may be, but not necessarily, a signal of sustainability of the developmental process. Due to this asymmetry, genuine saving is qualified as a unilateral indicator of sustainable development.¹⁵

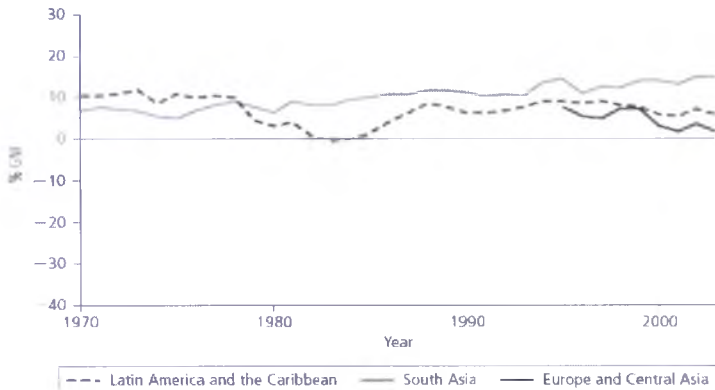
Calculation of genuine saving rates for the period 1970-2004 performed by the World Bank shows that there are marked differences between certain regions of the world. The Middle East and North Africa record a constantly negative saving rate, which to a large extent depends on oil extraction. An exception to this are some countries of this region like Jordan, Morocco and Tunis, where genuine saving rate is constantly positive and exceeding 15% of GNI.

¹⁵ Atkinson G. *et al.*, 1997, p. 62-63.

Figure 2. Genuine saving rates by region



Unlike Middle East and North Africa, the region of East Asia and the Pacific have lately created an aggregate rate of genuine saving of almost 30%, thanks to China above all. In Sub-Saharan Africa, the poorest region of the world, the genuine saving rate is around zero. Big differences among individual countries hide behind this aggregate data. Countries like Kenya, Tanzania and South Africa have positive rates of genuine saving, while countries dependant on natural resources such as Nigeria and Angola have very high negative rates of genuine saving. In South Asia, the genuine saving rate flows between 10 and 15% since 1985 and it is crucially affected by India. In this region, Nepal has been lately standing out with its high genuine saving rate (which in 2003 reached almost 30%). Latin America had a quite constant rate of genuine saving in the nineties of around 5%.



Source: World Bank, 2006, p. 41.

Data on the regional rate of genuine saving in East Europe and Central Asia is available only from 1995. The value of this indicator decreased from 7.7% in 1995 to 1.7% in 2003. Out of 23 countries of the observed region for which there is appropriate data, 17 had a positive saving rate, which on average amounted to around 10%. Constantly negative genuine saving rate is typical for the remaining countries, including Russia.

However, these results should be taken with a qualified acceptance. Without going into a more detailed methodological explanation, we will conclude only that regarding valuation of natural resources depletion and degradation of the environment, a significant progress has been made so far, but there are many conceptual and practical issues still open.

There have been suggestions to integrate the genuine saving indicator with HDI into one joint measure of sustainable development.¹⁶ Still, the prevailing belief is that both measures would be lost if integrated into one indicator, so it would be better if they were used in parallel when measuring sustainable development.

An objection made regarding genuine saving is that it is only the indicator of “weak” sustainability. In response to this objection, it is usually pointed out that the countries that do not respect the “rule of saving” i.e. record constantly negative genuine saving, probably also fail to meet the criterion of “strong” sustainability, i.e. they deplete “critical” resources of natural capital. Anyway, if critical resources must be preserved in order to satisfy the criterion of strong sustainability, there is still a need for the rule of saving, which will apply to the remaining resources if a sustainable development of the economy is to be ensured.

Beside the “genuine saving”, aggregate indicators of sustainability also include another aggregate of “green” national accounting, and that is the wealth of a country. The concept of wealth is broadly defined so as to include different types of capital: produced, natural and intangible capital (raw labour, human capital, social capital, and the quality of institutions).

There is a tight link between indicators of national wealth and sustainable development. The process of sustainable development is basically the process of creating and maintaining wealth i.e. managing that wealth. Putting the emphasis on wealth resources suggests a new approach to the economic development. Unlike traditional understanding of development, which has building of infrastructure in the foreground, development is now understood as a “portfolio management” i.e. a process of managing portfolio of different types of capital in order to preserve and multiply opportunities available to people¹⁷.

Wealth, like “genuine saving”, offers useful information to policy-makers. Decrease of the total wealth per person is a clear sign that development of a country is not sustainable. However, preserving wealth resources or their increase does not necessarily guarantee sustainability of developmental process. Hence, wealth is

¹⁶ See: Atkinson G. *et al.*, 1997, p. 151.

¹⁷ *World Bank*, 1997, p. 20 and 28.

a unilateral indicator of sustainable development, just like the “genuine saving”. This fact is not surprising, because these two indicators are closely interrelated – saving is, in fact, a measure of changes in a country’s wealth.

Within the abovementioned research of the World Bank, which resulted in the evaluation of “genuine saving”, an additional effort was made to measure wealth that certain countries and regions of the world had in 2000. The analysis covers three basic wealth components: produced capital, natural capital and intangible capital. Intangible capital proved to be a dominant form of wealth in most of 120 developed countries and developing countries that were included in this research.

In the list of countries, grouped according to the amount of estimated wealth in 2000, first places are taken by Switzerland, Denmark, Sweden, The USA and Germany. They are followed by Japan, Austria, Norway and France, while the tenth place is shared by Belgium and Luxemburg. At the very bottom of this list are Burundi, Nigeria and Ethiopia.¹⁸

Comparisons by regions also show that intangible capital has a dominant share in the total wealth, which goes from 42% (Europe and Central Asia) to 72% (Latin America and the Caribbean). Produced capital is second important in three out of six observed regions of the world, and the same applies to the natural capital. Yet, produced capital forms 18% of the total world wealth, while natural capital only 5%¹⁹.

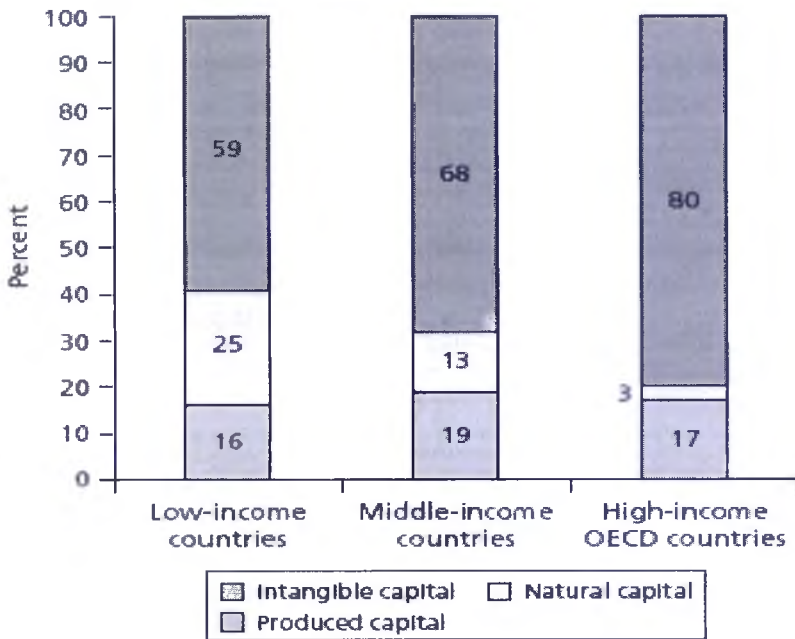
Composition of world wealth varies significantly depending on the level of countries’ development measured by the amount of their gross domestic product *per capita*.

Low share of natural capital, which was registered in the majority of developed regions, does not mean that natural capital is irrelevant in those countries; it is just that intangible and produced capital prevail in the structure of their wealth.

¹⁸ *World Bank*, 2006, p. 20–21.

¹⁹ *Idem.*, p. 26.

Figure 3. The composition of wealth across income groups



Source: *World Bank*, 2006, p. 4.

Measuring wealth of different countries, totally and by individual components, is motivated by the concern for sustainable development i.e. preserving and increasing of opportunities available to people. Having that in mind, experts of the World Bank suggest that the estimations once given should be re-examined periodically, for instance, every five years, in order to observe changes in size and structure of wealth. In the meantime, for the purpose of portfolio management of different types of capital, flow measures could be used, such as the aforementioned “genuine saving”.²⁰

Conclusion

There is no doubt that sustainable development is a complex and attractive concept, but its realisation is a true challenge for each country. Relations between different dimensions of sustainable development – economic, social and environmental – include complex synergies and inevitable trade-offs. Synergies point to a conclusion that there is some space for interventions, which enable simultaneous realisation of various goals. But trade-offs sometimes cannot be avoided, because goals are in conflict, so implementation of one means sacrificing the other.

²⁰ *World Bank*, 1997, p. 28–29.

Sustainable development requires an integrated set of policies to jointly work towards improvement of human welfare. This way conditions will be created for the interaction between the key dimensions of sustainable development to be taken into account in the phase of designing different political interventions. Measures undertaken with the aim to affect one of the three dimensions (economic, social or environmental), can cause unforeseen consequences and costs without a good study of their effect on the other two.

Responsibility to achieve sustainable development lies to a great extent in the hands of state, but other institutions, from the domain of private sector and civil society, should also become active partners in that process. Each of these management holders has a unique and important role in promotion of sustainable development.

Abstract

Sustainable development has recently been attracting great attention at the national and global level. This is a new approach to development, which is significantly different from the still dominant, conventional paradigm of development. The paper will, first, present the genesis of the sustainable development idea during the post-war period. Then it will explain the essence of the concept, and show the interdependence of its three key dimensions: economic, social and environmental. To track the progress that countries have made on the path of sustainable development, it is necessary to define the indicators of this process. The measurement of sustainable development is a task of particular complexity. So far a number of sustainability indicators have been defined, and we will point to aggregate measures such as human development index, genuine saving and national wealth.

Literature

Anand S., Sen A., *Sustainable Human Development – Concepts and Priorities*, Occasional Paper, UNDP 1994.

Atkinson G. et al., *Measuring Sustainable Development – Macroeconomics and the Environment*, Edward Elgar, Cheltenham 1997.

Chenery et al., *Redistribution with Growth*, Oxford University Press 1974, Oxford Commission on Sustainable Development (2001), *Guidance in Preparing National Sustainable Development Strategy: Managing Sustainable Development in the New Millennium*, Division of Sustainable Development, UNDESA.

Hunt D., *Economic Theories of Development: An Analysis of Competing Paradigms*, Harvester Wheatsheaf, New York 1989.

Mishan E. J., *The Costs of Economic Growth*, Stapples Press 1967, London OECD (1999), *Interim Report on the OECD Three-Year Project on Sustainable Development*, OECD.

OECD, Sustainable Development Studies, *Institutionalizing Sustainable Development*, OECD, Paris 2007, p. 162.

Soubbotina T., *Beyond Economic Growth: Meeting the Challenges of Global Development*, IBRD/The World Bank, Washington D.C. 2000.

Strange T., Bayley A. (2008), *Sustainable Development: Linking economy, society, environment*, OECD.

United Nations, *Development Watch – Monitoring Progress on Sustainable Development*, United Nations, New York 1995.

United Nations, *Handbook of National Accounting: Integrating Environmental and Economic Accounting 2003*, United Nations, New York.

World Bank, *Expanding the Measure of Wealth*, „ESD Studies and Monographs” 1997, 17.

World Bank, *Where is the Wealth of Nations?*, IBRD/The World Bank, Washington, D.C. 2006.

World Commission on Environment and Development, *Our Common Future*, Oxford University Press, Oxford 1987.

VLASTIMIR LEKOVIC

Objective Dependence Cooperation Between the Economy and the State

Introduction

Mutual relationship between the state and economy, or in other words – the state and market – is usually discussed in terms of interventionism and liberalism, although it covers these terms in different contexts and depth. Thus, the relationship between the state and economy could be observed from the point of their mutual cooperation, taking into account the existence of state with its regulation and coordination mechanisms, as well as from the point of their confrontation, while discussing the state intervention as a “disturbing” factor in market mechanism functioning. However, despite the divergent attitudes on this issue, there are undoubtedly numerous arguments in favour of the state intervention which is fully justified under conditions of market economy.

The influence of state on economic activities within a community is commonly seen as the relationship between the state and its economic system. Since the efficiency of an economic entity depends on the level of engagement of the available potentials, the efficiency of an economic system as an objective condition of social-economic development depends on the same factors. Actually, the key issue is how to organize the economy and society in order to use their potentials as well as possible. In most cases, this requirement could be dependent on establishing the relationship between the state and market elements while making economic

decisions. Taking market as the most efficient mechanism in making economic decisions and allocation of factors of production – for granted, contemporary states are found functioning as a combination of the market and state regulations. However, in spite of reality, in both economic theory and practice there are still dilemmas about the character and extent of the state participation in economy and its intervention in the market.

1. A Need for State Functioning in Contemporary Market Economy

The concept of market economy and private ownership being an efficient self-regulated mechanism is a basic argument in favour of significant reduction of the state economic and social functions. This economic paradigm, derived from the concepts of Smith, Mises, Hayek, Friedman and new classicists, is based on the idea of instability of market economy exclusively caused by the economy mismanagement performed by the state. Economic growth is there seen increasing, provided public sector grows more slowly compared with the whole economy. Then private ownership and free market are taken as basic attributes of economic freedom and economic growth. Since, in accordance with the foundation of free economic activity, economic freedom for market participants is limited by the state, general rule of economic policy could be formulated as the following: the less the state goes in for the economy, the better for the economy. However, economics has found control and market regulation necessary in order to avoid or diminish negative effects of sudden market changes, which should not be neglected. That way preserves free market performance and independent decisions made by economic subjects in macro-economic policy and state regulation. Nevertheless, in the last decades of XX century domestic product growth rates were higher in the countries with regulated markets compared with the countries of dominating neoliberal markets. The World Bank report shows gross national product growth rates for 28 developed and 127 developing countries. The data show falling and stagnation tendencies in developed countries, while the growth rates in developing countries are significantly higher.

Gross National Product growth rates by the World Bank¹

	1979–1986	1987–1994	1995–1998	1999–2002
28 developed countries	2.6	2.7	2.7	2.2
127 developing countries	4.1	5.4	6.4	5.5

XX century brought gradual but essential state role strengthening, evident when discussing state expenditures related to GNP. The state expenditures in OECD

¹ Čećez M., 2006, p. 200.

countries rose from 12% in 1913 to over 45% in the end of XX century. Such a rise of the state expenditures resulted from both economic and political factors.² A general aim of expanding an economic role of the state, based on Keynesian concept, was in creating the economy incurring less cyclical fluctuations, supposing this is feasible within a powerful public sector.

An economic role of the state and its influence on market economy functioning is usually associated with imperfections and disadvantages of the market, which is why the state is expected to compensate them. An actual situation in contemporary economies points out market imperfection for present externalities, public goods, transaction costs and asymmetric information. Anyway, should market be perfect, the state would not be needed in economy; its role would be subject to cancellation. So, the more perfect the market, the less important the role of the state. State intervention would reduce to the extent the market model would approach to an ideal model. Besides, market imperfection is not a sufficient reason for state intervention. The state must prove its capabilities to correct market failures and lead economy to Pareto optimal resource allocation.

However, the state is also susceptible to imperfection, which could be extremely dangerous. But, it is not enough to simply render the state ineffective and leave all to the market. It is necessary to establish a mutual correlation between the market and the state in order to establish a harmonic relationship in both economy and society. Equilibrium between the state and the market is specific for every country; that is why countries ought to determine the best state-market relation for them. Greater economic efficiency and higher growth rates depend on this mutual relationship.

Searching for a solution, it is unavoidable to take functioning present market economies into account, showing a significantly more complex situation in reality. Different circumstances and factors do not allow the state to act as a pure “compensator” of market imperfection. On the contrary, some functions are exclusively in the domain of state. This is also caused by the fact that society is an extremely complex structure and not an atomistic assembly of individuals and economic subjects. Then equilibrium between the state and market is a must. As J. Stiglitz³, while discussing the situations when market does not provide Pareto optimality, emphasizes that Adam Smith’s “invisible hand” is invisible since it does not exist. Actually, markets cannot always allocate resources on their own. Following their own benefit, individuals would not contribute to their society for asymmetric information. Since some market participants gain information not available to others, they can perform some actions which are harmful but not beneficial (principal-agent problem). That is why the state regulation is necessary. However, the state should not simply make corrections to the market imperfection, but contribute to the protection of public interest and greater social

² Cim M., 2003, p. 118.

³ Stiglitz J. E., 2004, p.76.

justice. In economic reality with domineering large corporations, market forces – left to themselves – do not act for general welfare but in favour of the powerful. In that sense, state intervention in order to protect public interests, and trade union activity in order to protect labourers' rights have become unbearable obstacles to expansionism and free global operation of multinational corporations and international financial capital. Simultaneously, unrestrained functioning of the market forces unavoidably lead to unjustified inequality in income distribution. The question arises whether economic growth should contribute to general welfare or just individuals. This is why the state is necessary to regulate macroeconomic parameters, since only that way may harmful effects of "deformed market" be neutralized.

A significant state economic function is surely its irreplaceable role in making and discussing long-term strategic decisions, determining general courses and priorities of social-economic development. The state is immediately responsible for stability and efficiency of the national economy, for creating and undisturbed functioning of institutions and mechanisms providing the system integrity. Then, the state is generally oriented towards macroeconomic regulation and equal conditions for all the subjects of the national economy, affecting necessarily a microeconomic level as well.

Stiglitz considers an asymmetric information theory an argument against a free market mechanism. When relevant information is not complete or not equally available to all the market participants, free market cannot function successfully as a regulator and corrector. This author finds state to have an essential role in elimination market mechanism imperfection, manifesting through occasional recessions and crises, great unemployment and socially unacceptable differences in income distribution. Besides, it has been shown that a self-regulated market mechanism does not provide offer-demand equilibrium, macroeconomic stability and full employment as supposed in classic economics. On the other hand, thanking to intensive cooperation with economy, the state has become not only an economic subject, but also an ingredient of a market system. It resulted in forming true partner relationships between private and public sectors in modern market economies, and not the imposed conflict relationships between the state and the market.

2. Main Reasons and Scope of State Intervention

Modern market economy cannot function successfully without the efficient mechanism of relationship with the state, and its legislative and executive bodies. Such a mechanism has become an essential feature of highly-developed democratic society. Normal and effective market economy assumes favourable social, organizational, and legislative environment, political stability and rules acceptable for all the parties interested, which is provided and supported by power and authority of the state. Almost everyone agrees that activities of the

economic subjects and the whole economy will be determined by general politics and particularly by the type of institution creating⁴.

Among basic state functions within an economic field there are elaboration and realization of complex measures supporting the national economy. These measures are: creation and support of infrastructure of the economic system; realization and support of science-research activities; state procurement of private companies' products; information collecting, forwarding and protection. The state is responsible for providing legislative framework and social climate favourable for an efficient market economy; competitiveness protection; redistribution of income; correction of allocation of resources for national product restructuring; stabilization of economy; control of employment and inflation; economic growth support.

Basic state function is to provide fundamental conditions of functioning and development in society, particularly while creating and supporting infrastructure of the whole economic system, as well as separate economic subjects. In most industrially developed countries there are numerous state agencies and official bodies to regulate national production, financial and social infrastructure.

In market economy based on the rule of law, domination of private ownership, liberalization and deregulation, state ought to protect the institutions and rules accepted in the economic game, minimizing uncertainty and resulting in economic activities performed more easily and lower transaction costs⁵. The aims quoted may be defined as normative goods, being taken as valuable and desired, but at the same time they are functional goods, for their continual lack necessarily produces crises in both economic and political system. A principle of sovereignty makes a normative base of modern statehood. D. Nort points out that the state, through instruments and institutions, gains its inner strength to be supplemented by external legitimacy⁶. The history of mankind shows that the state as an institution could realize since external sovereignty, internal autonomy and orientation towards public welfare joined, even when it was partial or did not always realize. In a liberal-democratic state orientation towards public welfare is also linked with some democratic procedures in decision making, while the welfare state provides social rights for its members. So, the basic state role in the economy is to determine, arbitrate and apply the game rules, for which market itself is not capable. Proponents of the state intervention in the economy do not at the same time deny the irreplaceable role of free market. On the contrary, free market is a general frame for a successful state intervention in it. Then deregulation as well as regulation projects should be taken as political

⁴ Madžar Lj., 2006, p. 35.

⁵ Олсиник А., 2003, p. 16.

⁶ North D., 2002, p. 91.

programmes, i.e. they very often result from ideology rather than real economic analysis⁷.

Economic development results from encouraging individual economic subjects to realize their business ideas and to find sources to finance their ideas. This is not direct interventionism over the economic outcomes, but indirect influence through a change of the institutional frame encouraging economic subjects to willingly participate in exchange transactions in order to realize their own interests. In other words, development results from the institutional frame promoting economic freedom, i.e. stimulating economic subjects to act freely and willingly participate in exchange transactions, being aware and responsible for the effects of their actions, whether profit or loss.

Free competitiveness is a measure of economic freedom of producers and customer's freedom of choice. To provide free and equal conditions in the market, it is necessary to provide real enterprises' independence as free manufacturers. To realize this, the state role of the guarantor of competitive environment is – irreplaceable. One of the important tasks is that the state promotes the principle of free competition. For that purpose, laws laid down against disloyal competition should guarantee the principle mentioned. In other words, since competition is an efficient coordinator and stimulator of economic activity, state acts in a way to protect the competitive environment. Anti-monopolistic legislation is the major tool there. Anti-monopolistic policy is a complex of legislative and other measurements to protect and strengthen competition by preventing monopolistic power, its exposing and protection. The aim is no to put limitations but to provide economic competition.

Applying anti-monopolistic policy and legislation in developed market economies assumes variety of mechanisms. In the USA, lots of the state bodies deal with the issue – Department of Justice, Federal Trade Commission and others controlling particular fields in the economy. Anti-monopolistic policy in European Union is regulated by Treaty of Rome, and every member state has its own characteristics. Anti-monopolistic policy in Germany is elaborated and implemented through the Ministry of Economy and German Federal Cartel Office, both taking care of particular cases of violation of the principle of free competition, Anti-monopoly Committee, etc. In Great Britain these functions are in competence of the Department of Trade and Industry, the Monopolies and Mergers Commission and the Free Trade Committee. Similar bodies exist in most other countries of developed market economy.

Key factors for promoting any competitive environment of a national economy are stable macroeconomic conditions and liberalization of trade flows, greatly depending on the character of the state economic policy. By establishing macroeconomic stability, favourable conditions for the economy and economic development are provided. On the other hand, by liberalization of economic flows within an economy, the barriers in both domestic market and international exchange are eliminated.

⁷ Radovanovic V., 2006, p. 15.

It is about withdrawal of tariff protection measures, regulation of monopolistic and oligopolistic structures as obstacles to competitiveness of the national economy and national enterprises. Competitiveness of national companies is surely achieved through the state support – better organization and financial support.

It is expected that the state performs its role in the institutional field through enabling and supporting well-defined economic strategies at both company and national levels. Then, instead of withdrawal from the economy, the state will strengthen and provide conditions for economic growth based on the market. With that mission, the state will establish foundations for the “economy for all”⁸. Behaving that way, the state will be able to contribute to impressive advantages, achievable by the national companies in market competition as well. This is inevitable, since positive economic effects may be expected only in open economies, ready to accept logic of market and international relationships and to adapt their structure and institutions to those processes. “Under new circumstances, growing liberalization of trade and investment regimes based on market incentives and export-oriented programmes is a key frame while building compatibility with the world economic environment, i.e. global world market”.⁹

In transitional economies liberal model of development along with private initiative and active role of the state should create necessary environment to enhance the competitiveness. Such a necessary and desirable competitive environment assumes the most favourable business conditions and trust relationship between business and authorities. Anti-bureaucracy measures have not thoroughly done away with corruption. Entrepreneurship initiative has not developed within legal business, but has very often been functioning out of the state control. Thus “bad unequilibrium” was established – imperfect market and weak state – and standard receipts for “healing” the economy appeared inefficient. The climate of distrust was created not only towards the state, but also towards business partners.

There is also another serious factor affecting the selective state support for private business, predominantly in transitional countries. Since it is about the sector in establishing phase in these countries, it is obvious that private business is not viable without adequate measures of the state support.

An inevitable condition of entrepreneurship development is economic freedom enabling an economic subject to act in accordance with their own initiative, fully responsible for success or failure of the enterprise. Private ownership is a major pre-requisite for such freedom. It is required for entrepreneurship – as an ingredient of market economy and its driving force – to create competitive environment within the economy. The world experience shows that entrepreneurship activity is not limited by private ownership. On the contrary, in some cases socially-owned

⁸ Шахмалов Ф., 2005, p. 58.

⁹ Jovic M., 2003, p. 120.

and state-owned companies may successfully realize entrepreneurship initiatives. But, this is possible only in conditions of highly developed independent private enterprises acting as transformers in socially-owned and state-owned companies. Experiences of developed market economies and upturn of small enterprises (particularly in crises) have proved the importance and the way of support given to such businesses. State support creates conditions for small enterprises to consolidate their position in the economy, beginning to develop independently and induce social-economic indicators in their environment and the whole country. For instance, in the USA there were 25 million SMEs granted different privileges, special loans, state procurements, free marketing services, staff training etc. In that sense, state supports franchising, leasing and special small business funds¹⁰. Support provided by the local authorities is also important.

State support in the field of small enterprises involves creating favorable entrepreneurial environment; eliminating normative-legislative, administrative and organizational barriers; enabling small entrepreneurship to reach financial resources; leasing, equipment and technology development; system infrastructure development for integral financial, material, informative, consulting and organizational support to small entrepreneurs.

New economic-systemic solutions in transitional countries, taking into account requirements of modern market economy, are oriented towards entrepreneurship development and ought to stimulate set-up of SMEs as major subjects of entrepreneurial spirit. As the experiences of developed market economies witness, quick and noticeable changes appeared only in the countries where macro and micro changes were joined. In addition, large, technological and economically efficient systems are preconditions of optimal structure of the economic subjects. However, entrepreneurship must be their basic manufacturing philosophy, too. So, profitable investment will rise, as well as employment and productivity, and their competitiveness in the international market will improve. Under conditions of such an economic structure, state will be able to stimulate development priorities and to contribute to overall economic growth.

When about the state influence over economic processes, what is most important is that government is efficient, meaning state intervention in economic activities to minimize, and competitive environment should be created predominantly by economic subjects. The state is expected to provide enterprises conditions related to external risk reduction by creating macroeconomic and social climate. Its efficiency should be manifested firstly in formulating and executing economic policy. The state is also expected to contribute to the development of financial sector as an important factor of competitiveness among the economic subjects and the overall economy. At the same time, the state is due to create and continually develop the institutions, being important while respecting ownership rights and

¹⁰ Menard C. 1995, p. 73.

meeting contractual and other legislative obligations. The importance of monetary and fiscal policy must not be neglected, for their forming macroeconomic frame for short-term and middle-term economic dynamics assuming long-term economic growth.

Conclusion

Creation of necessary conditions for greater efficiency in economy assumes to clearly define the appropriate role of state, i.e. to determine the suitable form of its functioning in order to best supplement and correct market functioning. This is, at the same time, the way to establish a model of the efficient state, which is of essential importance for successful social-economic development of the country. On the other hand, good institutional quality is inevitable while determining the environment for market functioning. Under conditions of poor institutional quality, arbitrariness of state formations and officials – increases. To put limitations to arbitrariness and corruption of state bodies and individuals, what is necessary is independent judicial system and institutional guarantees based on responsible authorities and efficient control. This is particularly important for societies establishing open market economies, since shift to market economy is not pure liberalization and private ownership, but, first of all, establishing suitable market institutions¹¹.

The World Bank, so to say, emphasizes that state brings harmony into economic development, and its role is realized in accordance with its institutional capabilities. Three mutually connected institutional blocks are considered to fortify state's inventiveness: meeting rules and imposing limitations to society and within the state; providing competition in both country and abroad; participating in partner relationships forming in both country and abroad¹².

Economy wholeheartedly accepted institutional protection by modern state, since because of this support, it could devote to its continual power increase. That way, partnership between the state and the economy is established, resulting from necessity rather than crucial linkage. However, the great economic crisis and the world economy depression of 30s in XX century were caused by market failure to develop further spontaneously, independently from any non-market regulation. Thus symbiosis between state and economy was established, in which they were sometimes allies and sometimes opponents.

In contemporary circumstances, economy and state are neither allies nor enemies. In both cases the principle of their separateness and diversity would be violated. Partnership should be established between the state and economic subjects, enabling everyone to assert themselves by what they have done. State is expected to

¹¹ Kornai J., 2001, p. 68.

¹² *The State in a Changing World*, 1997.

provide the institutional frame and maximal safety for market functioning most efficiently. On the other hand, economy is expected to, due to its efficiency and the results achieved, support state for its services on the grounds of taxes collected. "Provided everyone does his share of job – the whole system will be in equilibrium. Should anyone interfere with other's field, the concept of sustainable development would be threatened and there would be chaos and anarchy here". Searching for optimal state intervention in economic activities, the efficiency of state is particularly emphasized. Regarding inefficiency of the state apparatus produces additional non-manufacturing costs, an administration reform is important in increasing efficiency of the economy itself. This reform is to establish new and good quality relationships between state and economy. This is one of the basic preconditions for state to fulfill its functions of providing game rules for all the economic subjects and to contribute to creating and developing a real market environment. In a word, state and economy are connected by network of interdependencies and interactions containing not only components of conflict and substitutability, but elements of complementarities as well¹³.

Abstract

The concept of market economy and private property being self-regulated is the starting point and key argument for crucial reduction in both economic and social functions of the state in contemporary economy. On this ground, only active private entrepreneurship enables economic prosperity, considering economic growth directly dependent on the level of freedom of the enterprise. Being market economy, private entrepreneurship and economic freedom found of undoubtful importance, this paper deals with an objective dependence of contemporary economic systems under conditions of full cooperation between the economy and the state. This is not only related to the experiences of mixed economies, but also to the general experiences of economic systems. Actually, economic history has offered enough arguments in favour of the state as an irreplaceable factor of economic development. Some experiences of the most developed countries support the aforesaid, since proper symbiosis between the state and market has existed there enabling the goals scheduled to be reached. Two predominant economic models nowadays – Anglo-Saxon and German-Japanese – featuring maximal efficiency while allocate resources and market economy as a basic regulatory instrument – prove continual state intervention, not only for market defections to be corrected but also for providing outer conditions for its functioning. Straightforwardly, with growing cooperation between the state and economy, the state has become not only the economic subject but also an inevitable element of the market system. Thus, no imposed conflict between the state and market did result, but proper partnership between the private and public sector in contemporary market economies.

¹³ Madžar Lj., p. 43.

Literature

- Ćirić M., *Upravljanje sa one strane nacionalne države*, Filip Višnjić, Beograd 2003.
- Горохов А., *Реконструкция или демонтаж?*, Москва 2003.
- Ćećez M., *Neoliberalizam, ekonomski razvoj i država*, „Biznis i država”, Institut društvenih nauka, Beograd 2006.
- Jović M., *Ključni faktori konkurentnosti i tranzicija*, „Economist”, No. 1, Beograd 2003.
- Kornai J., *The Role of the State in a Post-socialist Economy*, „Distinguished Lectures Series” 2001, No. 6. Leon Kozminski Akademy of Entrepership and Management, Warsaw.
- Madžar L., *U potrazi za modernom državom*, „Biznis i država”, Institut društvenih nauka, Beograd 2006.
- Menard C., *Markets as Institutions versus Organizations as Markets? Disentangling Some Fundamental Concepts*, „Jurnal of Economic Behavior and Organization” 1995, Vol. 28, No. 2.
- North D., *The Contribution of the New Institutional economics to an Understanding of the Transition Problem*, „WIDER Annual Lectures” 1997, No. 1.
- North D., *Understanding Economic Change and Economic Growth*. „Distinguished Lectures Series” 2002, No. 7.
- Олейник А., *Роль государства в установлении прав собственности*, „Мировая Экономика и Международные Отношения” 2003, No. 7. Москва.
- Radovanovic V., *Spontani poredak ili aktivna uloga države u izboru strategije i politike regionalnog razvoja*, „Biznis i država”, Institut društvenih nauka, Beograd 2006.
- Stiglitz J. E., *Ekonomija javnog sektora*, Ekonomski fakultet, Beograd 2004.
- The State in a Changing World*, World development Report 1997.
- Шахмалов Ф., *Государство и экономика власть и бизнес*, Экономика, Москва 2005.

MAREK LISIŃSKI

An Organic Model of Strategic Management

Introduction

Recently, a lot of interest, not only among strategic management theoreticians, is being paid to the organic perspective. It is becoming an interesting research approach which is used to analyze contemporary concept of strategic management¹.

The aim of the article is to analyze an organic model of strategic management. The research aim as stated will be carried out in the form of some fragmentary aims. The first one will be a description of the mechanistic and organic perspective in strategic management. It will enable us to present static structuralization (components and relations between them) as well as dynamic (process as a sequence of actions) of strategic management. Such an approach towards the organic model of strategic management will allow, in our opinion, to present basic aspects of this important approach to a contemporary concept of management.

¹ See i.g. J. Jęzak, *Zarządzanie strategiczne – rosnące znaczenie podejścia organicznego*, „Organizacja i Kierowanie”, No 3 (117), 2004.

1. Description of the Mechanistic and Organic Perspective in Strategic Management

M. Farjoun², while analyzing the mechanistic perspective in strategic management, points out three paradigms.

The first one is a model called the Structure – Conduct – Performance paradigm (SCP), historically the oldest one, which was suggested by J.S. Bain and E.S. Mason³ and developed by M.E. Porter⁴. The main determinant of firm's strategy and performance is the environment, mostly competition. A branch, especially its structure, determines the manner of managing a firm. Therefore, it is the structure that sets a whole sequence of decisions taken from the perspective of strategy, thus implying the content of the strategy as a vision of the firm development in the future and determining the manner of its formulation.

The second paradigm called the Strategy – Structure – Performance paradigm (SSP), referring to A.D.Chandler's⁵ ideas, claims that the underlying determinant of a strategy is complementariness of strategy and structure as well as their total influence on firm performance. By defining the scope of strategic management the model delineates a currently established belief that "under the circumstances of market economy, an enterprise can be successful only when it can work out a specific strategy, only for itself, and performs certain organizational adjustment"⁶⁷ Strategic management becomes a tool to accomplish such defined measures.

A continuation of the previously described the SCP and SSC paradigms is the Resource – Based View (RBV). It utilizes a classical statement of E. Penrose⁸ that a firm is not only products and markets but also certain internal resources. Further explication of this thought for the use of strategic management carried out by B. Wernerfelt⁹, and especially C.K. Prahalad and G. Hammel[□] has shown a new dimension of resources, both material and immaterial as well as their role among other firm components. The analysis has also determined a qualitatively new structure of strategic management.

² M. Farjoun, *Towards an organic perspective on strategy*, "Strategic Management Journal", 2002/23.

³ J.S. Bain, *Barriers to New Competition*, Harvard University Press, Cambridge, Massachusetts, 1956, E.S. Mason, *Price and Production Policies on Large Enterprises*, "American Economic Review" 1939, 29, p. 61–74.

⁴ M.E.Porter, *Competitive Strategy. Techniques for Analyzing Industries and Competitors*, Tree Press, New York London 1980.

⁵ A.D.Chandler, Jr., *Strategy and Structure*, The M.I.T.Press, Cambridge, Massachusetts 1962.

⁶ See J.Jeżak, *Zarządzanie strategiczne – rosnące znaczenie podejścia organicznego*, p. 7.

⁷ E.Penrose, *The Theory of the Growth of the Firm*, Basic Blackwell, London 1959.

⁸ W.Wernerfelt, *A resource based view of the firm*, "Strategic Management Journal", 1984,5(2), p.171–180.

⁹ C.K.Prahalad, G. Hammel, *The core competence of the corporation*, „Harvard Business Review” 1990, 90(3), p.79–91.

A very thorough description of the mechanistic perspective on strategic management is presented in Table 1 (see Table 1). It has been achieved by highlighting the context of the mechanistic perspective and the main influence of other scientific disciplines. The features of this approach are presented as a section of two dimensions. The first one is the basic aspects of analysis (it covers the issue of strategy, paradigms and a model of a process of strategic management). The second dimension presents epistemological principles such as time, relations and areas of analysis.

The analysis of the content of Table 1 allows us to point out the basic of strategy and strategic management and complements the description of these categories as far as the mechanistic perspective is concerned.

The organic perspective, described by M. Faurjon, crystallizes in one paradigm – the OESP model. The model distinguishes four mutually connected areas of analysis – the Organization-Environment-Strategy-Performance. It represents dynamics, interactivity, cohesion and continuity of the process of formulating and implementing the strategy. Its special feature, mentioned above, results not only from mutual relationships between emphasized areas and identified phenomenon of synergy but also from exceptional defining of individual elements of the model.

The organic perspective on strategic management is presented in Table 2.

The style and form of the description of this perspective of strategic management, from the formal point of view, is identical with the mechanistic perspective, described above.

The analysis of the informational content of Table 2 leads to a conclusion that the features of both strategy as well as strategic management are different than those of the mechanistic perspective. The difference becomes even more obvious if one compares the categories and dimensions of these two approaches.

Table 1. Features of the mechanistic perspective on strategic management

	Strategic management			
	Mechanistic perspective			
	Context: relatively stable, predictable environment, early views on strategy and the process of formulating and implementing the strategy			
	Main influence: Newtonian mechanics logic , classical ideas in social and economical studies concerning formulating and implementing the strategy			
	Epistemological assumptions			
Underlying aspects of analysis	Time: defined, mechanisms are perceived in a static manner (flow of time is not taken into consideration)		Relations: orientated, characterized by: linearity, determinism, sequentiality and causality	The areas of analysis: varied, narrowly defined, poorly integrated
The essence of strategy	A plan and posture model – posture and scheme	It's a static configuration	It responds to constrains	It expresses a restricted, fragmentaric view
Paradigms	SCP SSP RBV	The areas of analysis are presented: statically, by using the rules of reductionism, variance models and appealing to historical context	They are characterized by linear flow, determinism Single causes are also considered	They take advantage of scientific theories based on classical rules, methodological concepts poorly specified and connected
Model of the strategic management process	Models take on the nature of design models (they consist of unrelated and consequent methods and techniques of the strategic management) The SWOT analysis is used, the activity is based on rationalness and linearity; the leader carries out the enterprise	The areas of analysis are presented statically, the process of formulation and implementation of the strategy is one-time	Actions of formulation and implementation of the strategy are carried out sequentially	Strategy formulation and implementation are separated processes Only the internal aspects of change management are taken into consideration

Source: own elaboration based on: M. Farjoun, *Towards an organic...*, op.cit., p. 567.

Table 2. Features of the organic perspective on strategic management

Strategic management					
Organic perspective					
Context: turbulent environment, early views on strategy and the process of formulating and implementing the strategy					
Main influence: new ideas in social and economical sciences, organic development in management sciences (evolutionary and process models, interactive and integrative research) and selected key mechanistic ideas					
Epistemological assumptions					
Underlying aspects of analysis	Time: incessant time, mechanisms are perceived in a dynamic manner (flow of time is taken into consideration), the analysis is characterized by sequentiality, evolution, voluntarism and the creation of new entities		Relations: interactive, characterized by: interdisciplinarity, intergrativeness, relevance and feedback	The areas of analysis: integration in and within the areas	
The essence of strategy	Co-aligning planned or systematical coordination of goals and actions	It includes the trajectory of development and comes down to constant co-alignment and dynamic balance	It takes into account adaptation through influencing the environment	It contains classical and contemporary models, emphasizes multiple coordination sequence, includes internal and external actions	
Paradigm	OESP	It uses the analysis of historical context and its evolution paths, process models and imperfect adaptation	It is characterized by multi-causality, co-evolution, the influence of strategy on environment and treating performance as independent variable	It includes consolidated and integrated areas of analysis theories based on synthesis of separate scientific disciplines and new links between the existing ones	

Model of the strategic	The organic model of strategic management	It is characterized by a constant process of strategy formulation and implementation, a continuous aspiration to improve the rules of the strategic management verified in the course of constant use It also exploits the ability to learn	It includes informational feedback, emergent strategies, the ability to learn, dialectics between formulation and implementation of the strategy as well as behavioral aspects of decision-making	It emphasizes linkages and integrates the process of formulation and implementation of the strategy Moreover, it includes interactions between subprocesses of the strategic management and the elements of environment It also uses change management based on internal and external aspects
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Source: own elaboration based on: M. Farjoun, *Towards an organic...*, *op.cit.* p. 567.

The features of both the mechanistic and organic perspective presented above seem to be an efficient ground for another analysis – an attempt to structurize the organic perspective on strategic management.

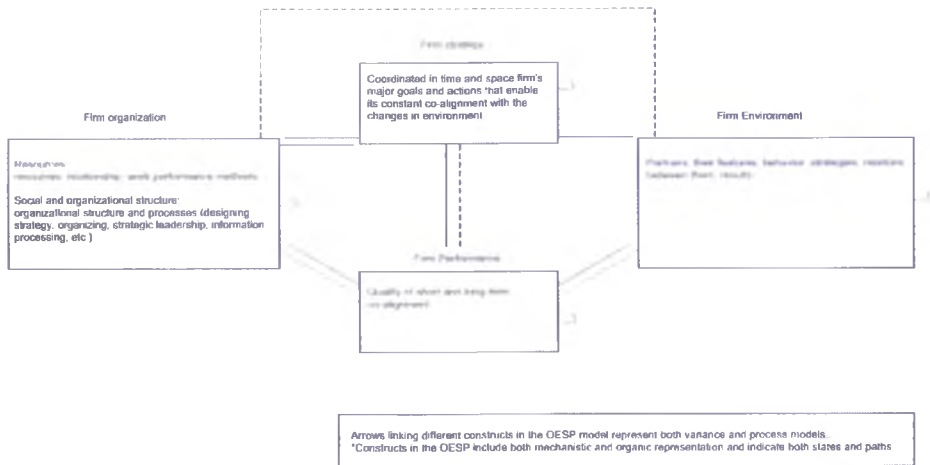
2. Static Structuralization of the Organic Perspective on Strategic Management

This part is devoted to the issue of static structuralization of the organic perspective on strategic management. Static structuralization will be understood as a process of dividing the examined entirety into elements¹⁰. The concept of strategic management will constitute the entirety whereas the relationships between the areas included in the OESP paradigm will be the elements. Using such a description will portray the static dimension of strategic management, mostly displaying the connections among the elements of this management perspective.

The OESP paradigm, structurised by M. Farjoun¹¹, contains four basic components. Their list and inter-reactions between them are included in Figure 1 (see Figure 1). Following, there is a brief description of these elements.

¹⁰ K. Mręła, *Złożoność problematyki struktur organizacyjnych*, „Problemy Organizacji” 1980, No. 2, p. 47.

¹¹ M. Farjoun, *Towards an organic*, p. 572 and further.



The first component of this model is **firm organization**. It contains actual and potential resources as well as the mechanisms creating the relationships among them, enabling the modification of the strategy and ensuring its implementation. Resources are perceived not only as internal means but also as unique competences ensuring its development. Such resources include financial, material, informational, human (abilities, experience, motivation, types of behavior between personnel) resources, relations (formal and informal contacts) which tie the company with its partners as well as the methods of work performance – activities, operations and manners of task performance. Such perceived resources are not only the instruments of strategic management but, above all, elements of an open system. They are characterized by organic features such as: dynamics (they are a force changing strategy and structure), informal relationships and indeterminacy (strategy comes out from the structure and leads to its modification). The resources cooperate with the elements of environment through the exchange of information, communication and other co-dependence. Firm organization appeals to history as a development factor in the areas of strategic planning. The historical context is treated as a determinant of a strategy.

Social and administrative structure is generally perceived through functional relationships, mostly operational and informational ones, among the resources. Its fundamental aim is to regulate the relationships between the members of organization. Particular emphasis is paid to the processes such as formulating and emerging the strategy, creating, implementing strategy, changes management but also processing the information, its transmission and communication.

Both resources as well as the social and administrative structure are consistent with and enlarge the scope of analysis concerning firm organization. They reflect

the influence of new ideas, economy and social studies. Furthermore, they do not omit the relationships between them.

J. Jeżak¹², while elaborating on the organization as an element of the OESP paradigm, points out that it is associated with such entirety which does not only recognize signals from the environment but, above all, originates from external conditions by means of which influences further development of environment. Therefore, the organization also contributes to development.

Firm environment is another element of the OESP model. It should be identified as a system of real and potential members and their actions. Individuals, groups of people, organizations and their associations but also their resources, technologies, strategies, relationships, cooperation, results or development can be the actors. The description of actors applies to their former, present and future status. The elements of environment can represent different, if one considers their influence on the company, levels of analysis.

This component of the model is analyzed both in a static (as a state) and dynamic (as a path of development) manner. Moreover, as a system it influences its own development.

Here, the environment is definitely perceived in a more complex and dynamic manner than in the mechanistic perspective. It is marked by multi-causality, co-evolution and accuracy. Facing these demands is possible by using informational feedback, ability to learn, rules of dialectic and behavioral aspects of taking a decision. While integrating different social and economical academic ideas, such an understanding of environment develops and improves the scope and the character of the research concerned with formulating and implementing a strategy.

Firm performance signifies the quality of firm's co-alignment with the environment. The level of co-alignment can be shown by the growth, profitability and other standard and non-standard indicators. Although revealing development or a change can require taking a certain time scale, the results usually apply to individual moments at a given time. Therefore, the outcome describes dynamic effectiveness in the long run. Yet, at the same time, it sometimes opposes the effectiveness understood statically and applying to a short period of time. The indicators should also show the quality of firm's available resources as well as the ability to generate new ones.

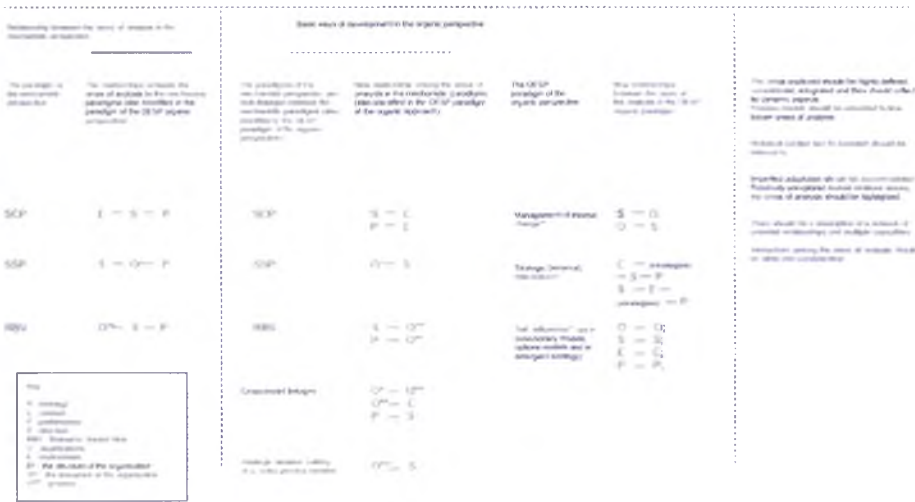
Such a treatment of this area of analysis undoubtedly follows the organic approach. Here, firm performance is treated as an operand. Consequently, it becomes a very uncommon measure of firm functioning.

¹²J. Jeżak, *Zarządzanie strategiczne – rosnące znaczenie*, p.15.

Firm's strategy is a very special area of analysis. It is defined as "the planned or actual coordination of the firm's major goals and actions, in time and space, that continuously co-align the firm with its environment"¹³. Thus, the strategy constitutes a plane but, at the same time, through coordination in time and space it becomes an instrument that merges the other components. This coordination takes a form of an adaptational one and is undertaken both in the inside of a firm and its environment. It also attempts to counterbalance the influence of different factors while providing the organic development of the object.

Taking into consideration the aspect of analysis accepted here, it becomes crucial to point out relationships between the components of a model. In case of all elements they are classic relationships of feedback plus intercomponential linkages.

The set of relationships between the components of the OESP paradigm is provided by Figure 2. The draft contains a detailed description of relationships present in the organic perspective on strategic management.



Without in-depth analysis of this issue, only a few, the most crucial strands will be mentioned here. Firstly, it should not escape one's notice that in the organic perspective paradigm we have a case of identifying certain relationships among the areas of analysis, which have already existed in the mechanistic perspective paradigms. Secondly, development of the organic paradigm creates new link-

¹³ M. Farjoun, *Towards an organic*, p. 570.

ages between the areas of analysis in the mechanistic paradigms, which have already been observed in the OESP one (connections amid models as well as using process models). Thirdly, new relationships among various areas of analysis in the organic paradigm are the consequence of qualitatively new elements of the model (organization – environment – results – strategy).

To sum up, it should be stated that according to the organic perspective, the static dimension of strategic management does not leave aside the achievements of mechanistic approach. Moreover, this very approach is utilized and it becomes a more precise methodological platform of analysis.

The static aspect of strategic management will be supplemented with its dynamic description, mainly the dynamic structuralization of strategic management.

3. The Dynamic Structuralization of an Organic Model of Strategic Management

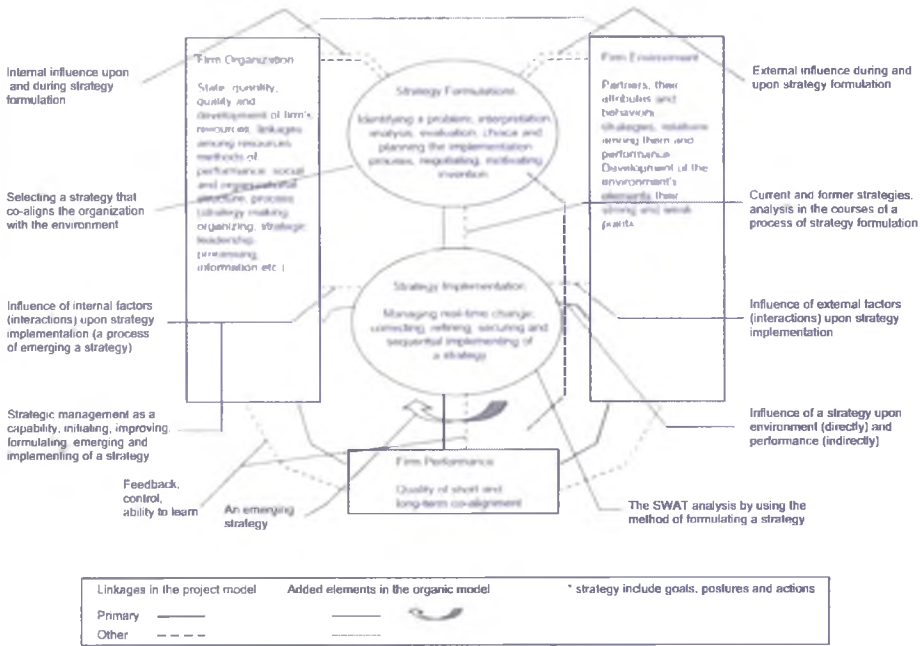
Overall description of the organic perspective on strategic management will be possible by presenting dynamic structure of this idea of management. Such perception of the problem will be associated with structuralization of actions, which according to K. Mręła¹⁴, will be understood as methods of interactions among the elements and the entirety they constitute.

In case of strategic management the structuralization of actions will include the analysis of the model of the process of strategic management. Such a model, based on the organic approach, will define separate sequences of actions and the relationships between them. From methodology of science of management's point of view it corresponds to the general method presented by Z. Martyniak¹⁵ in his typology of methods. The general method orients the practical activity during individual phases of research, often entailing use of certain methods and detailed techniques.

Such a model of the organic perspective on strategic management is presented in Figure 3.

¹⁴ K. Mręła, *Złożoność problematyki struktur organizacyjnych*, p. 47.

¹⁵ Z. Martyniak, *Metody organizacji i zarządzania*. Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 1999, p. 9.



Its analysis will begin with a definition of strategic management, This concept of management, according to M. F. Farjuon will be regarded as „the superordinate and continuous organizational process for maintaining and improving the firm’s performance by managing, that is, enabling, formulating, and realizing, its strategies”¹⁶. Such a definition of strategic management equates it with an informational and decisive process, which is either a one-time mode (a separate strategy and, connected with it, a sequence of decisions) or takes a form of repeated actions (a recurrent mode – a continuous sequence of strategies and a series of strategic decisions).

Strategic management includes two interdependent fragmentary processes: formulation of the strategy and its implementation.

Formulating strategy in accordance with the organic perspective extends a traditional, known form the mechanistic perspective, manner of understanding the process. The process of strategy formulation displays alternative paths of development and implies necessity of evaluating the compatibility of a current strategy and strategic alternatives. Moreover, it stresses the importance of using a planned implementation of a strategy. Through peculiar, untypical, while compared with

¹⁶ M. Farjuon. *Towards an organic*, p. 578.

the mechanistic perspective, understanding of the elements of the OESP paradigm, planning a strategy does not only include analysis and synthesis, but also invention, intuition, persuasion and negotiating, not necessarily accomplished in a typical defined sequence of research stages.

While preparing a strategic plan or the level of organizational hierarchy of a firm, basic actions, which make up a process of formulating a strategy, after taking into account situational factors, should be carried out regardless of the level of preciseness. It is crucial that implementation planning becomes an integrated part of the whole activity and, in the course of a decision - making process, takes into consideration all necessary premises, aspects and additional information needed to introduce a strategy.

Strategy implementation includes accomplishment of adopted, and included in the strategy, aims, postures and actions. It also contains actions aiming at preparing a firm for changes included in the strategy. Such changes concern all hierarchical levels of a firm.

Therefore, strategy implementation does not only include, known from the mechanistic approach, manners of proceedings such as change management which only takes into consideration internal aspects. Moreover, it also contains actions concerning managing the external context, realization of strategic trajectory or absorption of strategy into the firm's external context.

All in all, it should be pointed out that the process of the organic perspective on strategic management, while compared with the mechanistic one, displays certain attributes.

The first one is the rule that a chosen strategy results in accomplishing the goals included in it. Thus, it has a direct or indirect influence on firm performance.

The second attribute claims that the incremental strategy becomes an alternative for the process of strategy formulation¹⁷. This type of strategy can be included in the process of creating a firm strategy or it can be omitted completely. It can also complete the direction of firm development. One should remember that it does not have to be in a complete accordance with the formulated strategy¹⁸. However, the strategy agreed for implementation is always a coherent element (in the OESP paradigm) with other elements of the model.

¹⁷ Mintzberg H., *Opening up the Definitions of Strategy*, in: Quinn J., B. Minzberg H., James R., M., *The Strategy Process - Concepts, Contexts and Cases*, Prentice Hall, Englewood Cliffs 1998, p. 12.

¹⁸ Rokita J., *Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej*, PWE, Warszawa 2005, p. 39-40; Obój K., *Strategia organizacji*. PWE, Warszawa 2007, p. 87-88.

The third attribute stresses out that the relationships that take place among firm performance, its organization, environment and accepted strategy bear certain resemblance to feedback and they lead to creating qualitatively new information, which are relevant from the point of strategy formulation. This process, continuous and complementing, enriched with control, taking advantage of the ability to learn and possessing additional data resulting either from the incremental strategy or strategic experiments, makes the strategic management a highly effective instrument of management.

To sum up, it can be noticed that the organic perspective on strategic management is not, beforehand, a definite informational decision - making process, which should be taken up by a firm, then maintained and occasionally modified. It is a constant process, which accomplishment results from a need to develop the firm and the enhancement of the need supports organizational solutions as well as the instruments of management. These actions concentrate on three basic tasks. The first one is to take all the steps to formulate a strategy (e.g. by including external subjects in the process of creating a strategy, thus encouraging employees to its independent formulating; employing independent consultants or establishing a level of desirable decision- making conflict between the management and the board). The second task is to support the process of emerging the strategy by motivating lower level employees to contribute the strategy. It implies accepting a model of organizational culture which would support such actions or reorganization the system of communication so that information would be varied. The third task is to increase the effectiveness of strategy implementation by encouraging everyone concerned to take part in this process, delegating responsibilities to the staff to carry out the process effectively or enhancing organizational potential of a company to introduce changes.

Conclusion

The organic model of strategic management presented above does not fully and thoroughly describe the issue. It is rather an attempt of a static and dynamic account of this interesting approach towards strategic management. The description illustrates its vital aspects, attempting to present them in a style that results from the analysis of basic specialist literature.

The article does not introduce all the aspects of the organic approach. What needs to be a subject of farther scientific investigation is the issue of methods and techniques providing the accomplishment of all the principles and rules describing the organic model of strategic management. The typology of these instruments that takes into consideration recommendations for its practical use in the organic model becomes an important challenge for both theoreticians as well as practitioners of management.

Abstract

The main aim of the paper is to analyze the organic model of strategic management. The paper includes a presentation of a concept of the mechanistic and organic perspective. Based on that, the static (elements and their interactions) and dynamic (process as a sequence of actions) structures of strategic management have been analyzed. Such a form of presentation of the organic model of strategic management enables the author to shed the light on the main aspects of this contemporary management approach.

Literature

- Bain J.S., *Barriers to New Competition*, Harvard University Press, Cambridge, Massachusetts 1956.
- Bums T., Stalker G., M., *The Management of Innovation*, Tavistock, London 1961.
- Chandler A.D., Jr., *Strategy and Structure*, The M.I.T.Press, Cambridge, Massachusetts 1962.
- Farjoun M., *Towards an organic perspective on strategy*, "Strategic Management Journal" 2002, No. 23.
- Jęzak J., *Zarządzanie strategiczne – rosnące znaczenie podejścia organicznego*, „Organizacja i Kierowanie” 2004, No. 3 (117).
- Martyniak Z., *Metody organizacji i zarządzania*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 1999.
- Mason E.S., *Price and Production Policies on Large Enterprises*, "American Economic Review" 1939, No. 29.
- Mintzberg H., *Opening up the Definitions of Strategy*, in: Quinn J., B. Minzberg H., James R., M., *The Strategy Process – Concepts, Contexts and Cases*, Prentice Hall, Englewood Cliffs 1998.
- Mreła K., *Złożoność problematyki struktur organizacyjnych*, „Problemy Organizacji” 1980, No. 2.
- Obłój K., *Strategia organizacji*, PWE, Warszawa 2007.
- Penrose E., *The Theory of the Growth of the Firm*, Basic Blackwell, London 1959.
- Porter M.E., *Competitive Strategy. Techniques for Analyzing Industries and Competitors*, Tree Press, New York London, 1980.
- Prahalad C.K., G. Hammel, *The core competence of the corporation*, „Harvard Business Review” 1990, No. 90 (3).
- Rokita J., *Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej*, PWE, Warszawa 2005.
- Wernerfelt W., *A resource – based view of the firm*, "Strategic Management Journal" 1984, No. 5 (2).

NIKOLA MAKOJEVIĆ

Alternative Sources of Financing Economic Development

Introduction

The current position of the Serbian economy is characterized by enormous problems coming from a very painful transition process. After 10 years of transition we are still living in “half-state” economy with very low level of competitiveness and poor growth possibilities.

These days Serbia is facing a global challenge of how to finance future economic development knowing the scarcity of own resources and very expensive bank loans. The aim of this paper is to point out the main problems in the Serbian economy such as unemployment, foreign trade deficit and low level of domestic GDP. This paper will also suggest that Venture capital funds are a possible solution for financing Serbian economic development.

1. Movements of Unemployment in 2001–2008 Period

The first problem appeared in Serbia at the very beginning of the transition process. It was unemployment. The new government wanted to conduct the transition process through its basic phases (Rosic, Veselinovic, 2006): liberalization, macroeconomic stability, restructuring and privatization, and, at the very end,

changes in political and economic system. Although there is some order, these phases of transition are conducted simultaneously as a necessary steps to a modern, market oriented society.

The liberalization and privatization (along with restructuring) was a clear signal that there would be changes in economic thinking. These phases had a primary task of “cleaning” the economy from nonprofit, state budget financed companies. Through the process of privatization and restructuring, every company without profit would be closed and employees dismissed in order to increase productivity in the economy as a whole. This was a difficult task because the government was risking social riots, but it was conducted. By taking this step, the government became very unpopular among people but every economist agreed with this decision which led to the increase in the unemployment rate.

The table below shows the percentages of unemployed people during the past seven years, according to the State Statistical Center:

Table 1. Unemployment (percentage) in Serbia 2001–2008

	2001	2002	2003	2004	2005	2006	2007	2008
Unemployment (%)	24.1	27.1	27.8	28.0	29.2	21.6	18.8	19.8

Source: State statistical Center Annual reports for 2001–2008.

The presented facts lead to the unique conclusion that unemployment is a very big problem in the Serbian economy at this point of time and that it will be necessary to take a very strong action in order to solve it.

The reasons for having a high level of unemployment are numerous and some of them are not new. They appeared in the economy in the 60-ties of the last century and until now they haven't been reconsidered and analyzed in a way to find a solution to them (Rosic, 2004). Others are new and they are the consequence of the transition process.

So the reasons for the dramatic increase of the unemployment rate in Serbia can be classified in two groups: traditional and current. This distinguishing between traditional and current reasons is important because some economists (closed to the former regime) are willing to say that the transition brought the problem of unemployment.

Traditional reasons incorporate:

- spontaneous and mass movement from the countryside to cities among young people;
- lack of human resource planning;
- restrictive investment policy.

On the other hand, we have current reasons for unemployment:

- beginning of the transition process;
- old way of thinking that somebody needs to find a job for us;
- very low level of education.

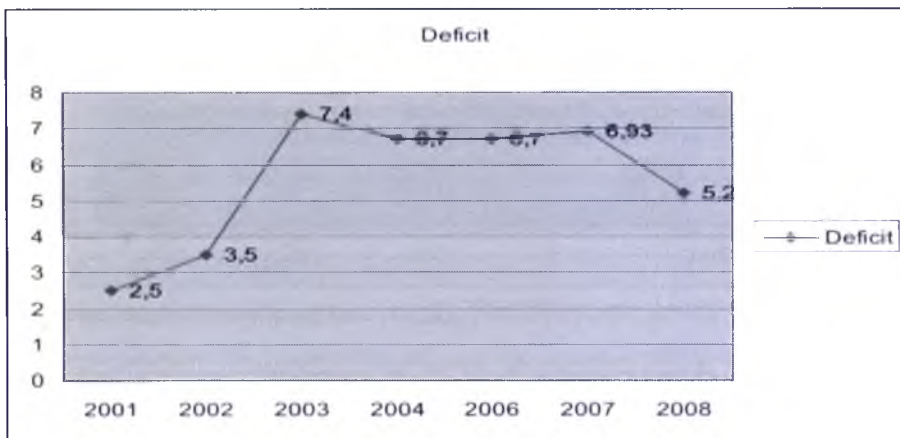
All this leads to the conclusion that the future carries a huge challenge for Serbian authorities and economic experts, not just in solving the problem of current unemployment but also in creating a system that will help in overcoming this problem in the future.

2. Level and Structure of National Foreign Trade

After ten years of isolation Serbia became a full member of the world economy and started on active participation in the world trading system. This was a very difficult situation for the Serbian economy because it was facing developed economies with production at a very high level, making impossible for Serbian companies to compete at equal basis. On the other hand, the demand for material, resources but also for commodities was high and it was not possible to satisfy it with the domestic production, regarding neither quality nor quantity.

We need everything, from materials and capital for production to commodities, to fulfill the needs of the numerous households. Therefore, from the beginning of the transition process Serbia started making deficit in foreign exchange as we can see in the graph below:

Graph 1. Deficit of Serbian foreign exchange



Source: State statistical Center Annual reports for 2001–2007, for 2008 it is a half-year survey.

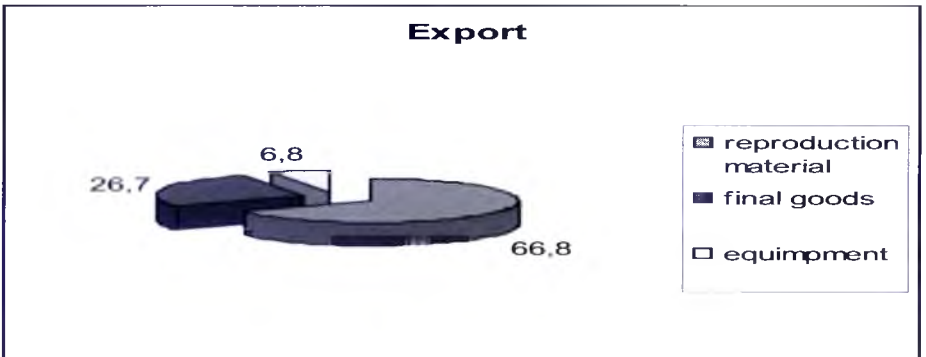
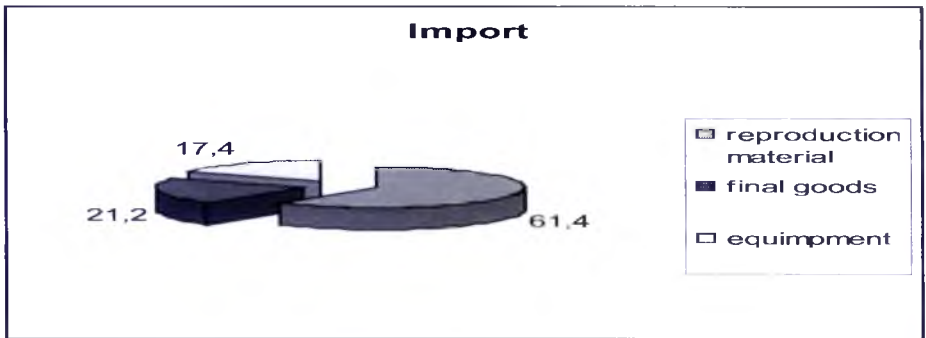
As we can see, after 2001 Serbia started to import heavily, making big steps in the deficit of foreign exchange from 2,5 billion of US dollars in 2001 to the re-

cord of 7,4 US\$ in 2003. Today, the deficit is still a problem because in 2008 our economy made a deficit of nearly 6,16 billion US dollars.

The current foreign trade structure also leads to the conclusion that the Serbian economy is still underdeveloped. This can be said because we export mainly raw materials, unfinished products, half products and products used for production of final goods. On the other hand the analysis of import shows that we import final goods which are used for fulfilling our needs. A part of the imported good are resources because we are forced to import gas, oil and electricity.

This can be shown graphically:

Graph 2. Structure of Serbian foreign exchange for 2007



Source: State Statistical Center Annual reports for 2007.

This graph clearly shows import with 61.8% of reproduction material and export with only 26.7% of final goods and 6.8% of equipment. In export, reproduction materials with 66.8% a hold prime position.

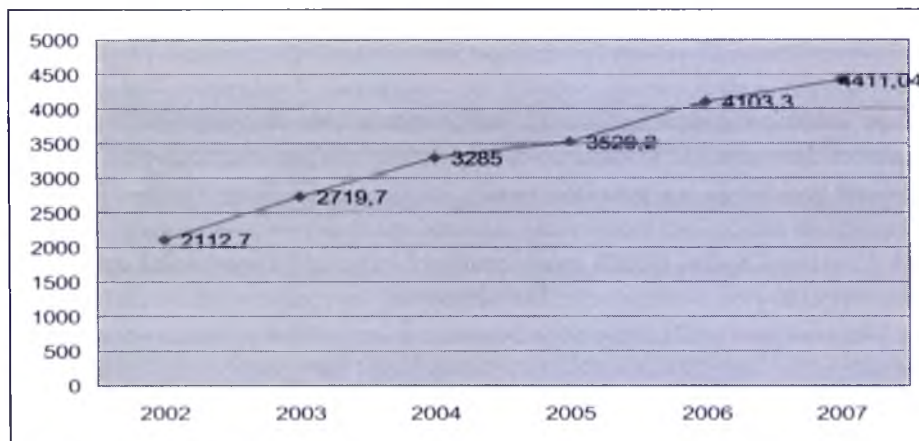
3. National GDP as a Synthetic Economic Indicator

The level of GDP means that GDP is the value of all final goods and services produced in one country during the course of the year. This means that purchases of goods produced in the past as well as the production of the intermediate goods are not counted separately as a part of GDP.

The information about the level of GDP lead to the conclusion that GDP in Serbia was constantly growing from 15840.7 million in 2002, 26193.4 million in 2005 to 32693.1 million in 2007. This is a good sign if it is not compared with the situation in the 80-ties during which GDP was 20% higher then it is now (Rosic, Lekovic, 2007). The situation is far worse when compared with the average EU-27 GDP. Serbian GDP is one third of the EU-27 average, it is three times lower than Slovenian, a little smaller than Romanian and Bulgarian, but a little bigger than Macedonian. Therefore, the level of production of final goods and services in Serbia is not big enough in order to compete with average EU countries and this will be the main task of the policy makers in the future.

The situation with the GDP movement can be presented through GDP per capita as an indicator widely used in economic theory and practice

Graph 3. GDP per capita in thousand of US dollars



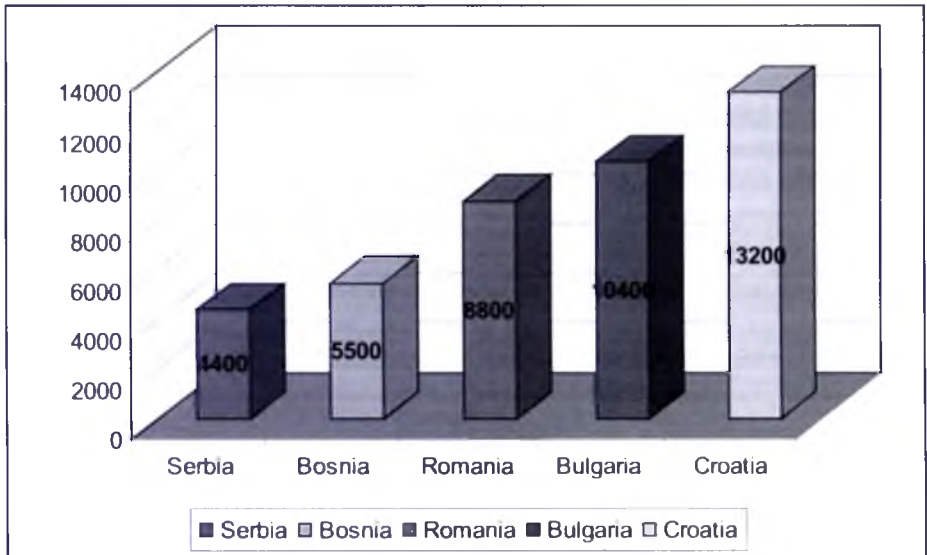
Source: State statistical Center Annual reports for 2002-2007.

The data from the graph shows an increase in GDP per capita from 2112.7 US dollars to 4411.04 US \$ in 2007. This positive movement is a good signal but we must still be aware the fact that we had a low level as a starting point and that our neighbors are much ahead of us.

The situation with GDP per capita is far clearer if we compare it among the countries in Serbia's surrounding because some of these countries are already in the EU. The others were members of former Yugoslavia along with Serbia. Next

graphic shows 2007 GDP per capita for the following countries: Serbia, Bosnia, Romania, Bulgaria and Croatia.

Graphic 4. GDP per capita 2007



Source: www.photius.com/rankings/economy/gdp_per_capita_2007_0.html.

As we can see the situation is quite different when we compare GDP among the countries that were at the same level 18 years ago. It is clear that Serbia falls behind and it will take a great effort to close the gap in GDP per capita.

4. Venture Capital Funds – Alternative Sources of Financing Economic Development

The main problem for the Serbian economy in the future will be the lack of fresh capital in the form of direct investments in the economy. The Serbian economy needs capital, but even more it needs technology, modern management, know-how, etc. Simply, the Serbian economy needs improvements in various areas of conducting business and this emphasizes the question of how to solve this problem. One of the possible solutions is to create a favourable environment to attract venture capital funds (VCFs). One of the aims of this paper is to point out venture capital funds as alternative capital resources and to analyze their current position in the Serbian economy as well.

New conditions for every national economy functioning during the time of crisis exert great pressure on increasing productivity and creativity. This crisis will force economies to become more aggressive while acting like a large entrepre-

neur: in attracting capital, improving organization, developing new technology and human resources, creating new products and so on. Having this in mind, it is clear that one of the most significant things in the years to come for every economy is to attract venture capital and private equity funds as capital resources and as a prerequisite for improving entrepreneurship.

As we can find in literature, private equity market can be divided into two parts (Landstrom, 2007):

- venture capital, which is primarily devoted to equity or equity-linked investments in young growth-oriented ventures and
- private equity, which is devoted to investments that go beyond venture capital – covering a range of other stages and established businesses including management buy-outs, replacement capital and turnarounds.

Venture capital can be organized by private (individual) or institutional investors.

Private investors are wealthy individuals, known as business angels (often designated as 'informal venture capital'), ready to invest their own money in different stages of business. They are often former executives investing in the known field of business, using contacts and experience in building up the business project. They try to select a non-listed company, with great growth opportunities and scarce funding sources in which they invest and later sell its share through IPO at the financial market.

Institutional venture capital firms are intermediaries between financial institutions and unquoted companies (Landstrom, 2007), they raise funds from the former to the latter. Their primary task is to find interesting business projects with growing opportunities and then to convince financial institutions to invest their money. Financial institutions are pension funds, insurance companies, wealthy families, etc. The organizational forms of the institutional venture capital can be different, depending on the ownership structure (Landstrom, 2007).

The analysis of the venture capital market in Serbia provide very disappointing information when it is known that a single venture capital firm conducts its business in Serbia, suggesting the conclusion of the underdeveloped venture capital industry, low level of entrepreneurship, lack of good investment opportunities, reduced exit chances for venture capitalists and so on.

At this moment, the only representative of VCFs industry in Serbia is Private Equity Fund called SEAF South Balkan fund which is a part of the bigger SEAF as global VCF.

In Serbia SEAF South Balkan Fund (later called: SEAF) conducts the business as a foreign company's office and it is not registered as a private equity or venture capital investment fund. According to the available information, there are several procedural problems to be solved for the registration of VCFs.

Firstly, private equity and venture capital investment funds are not recognized by the investment funds law. Secondly, during the investment process it is hard to

explain to the authorities the role of a venture or private equity investment fund as a new partner in the company, its rights and obligations. These are some of the reasons causing the low level of attractiveness to venture capital investment funds.

Furthermore, there are some other problems that are not the result of the legal procedure but the result of the internal SEAF research:

- very low level of business know-how among the entrepreneurs, such as basic knowledge about finance, market, marketing and company development strategy,
- very low level of transparency about the financial results of companies,
- misunderstanding of the role of a private equity or venture capital investment fund in the company development,
- misunderstanding of the market value of the company; several investment deals were cancelled because of the non-realistic company value assessment made by its owners; the wishes are one thing but the reality is something completely different.

Despite the numerous restraints the SEAF concluded three investment deals in Serbia during its two-year existence using standard procedures to choose a prospective investment. As a company with American experience in the field of venture capital, they are using traditional tools in order to make a good investment project.

The situation in Serbia is clear, there is not enough capital and there are some prospective sectors where venture investors can make profit. Yet, the state must make several steps if it wants to attract global players in the field of the venture and private equity investment.

The first crucial steps needed are changes in the legal framework concerning investing through investment funds. The big problem for private equity and venture capital investors is that no single law recognizes them as economic units. At this moment they are registered in Serbia as offices or branches conducting their business as intermediaries. This is a serious problem because during the investment process several laws must be met and it is quite difficult to close the deal since it must be registered with the state office and the state office does not recognize this kind of investment. This procedure is long and expensive, so in the future efforts must be made in passing the set of laws that recognize and regulate the field of private equity and venture capital investment. This should help with the registration of investment funds, with their investing process and with protection of investment projects.

The second step is concerns tax rules, because this is one of the most significant issues associated with attracting foreign investors. Investors look for the country where they can earn but they also pay low or no taxes. This is a field where all the battles are led in order to attract capital. Future period dedicated to the attraction

of capital, must bring changes in the tax policy. Most investment funds are interested in small and medium companies with growing opportunities and thus, they are not involved in the 'state' projects. Since investment funds bring money to business projects, the state must change the tax rule for them. One of the suggestions is to make a distinction between the 'green-field' investments and investing in the existing business.

Green-field projects are financed from the initial idea to the realisation and they must be tax-free within a reasonable period of time (c.g. 10 years), having in mind that they are ready to support the idea and that they are ready to take the great amount of risk.

Another type of investment – investment in the existing business – should also be tax-free within a reasonable period of time, although this period should be shorter than with the previous one. This kind of tax rules would send the message to the investors that the state is ready to support them by taking the risk along with them. The state is taking risk by not collecting taxes immediately, hoping that the deferment will promote higher tax collection in the future.

The third step should be addressed to the creation of the state investment fund as a support to the investment opportunities, but also as a partner to the venture and private equity investors.

It is not odd that states are creating the so-called sovereign investments funds as a tool to invest money in profitable projects. The money from such funds often comes from energy exports (Norway, Russia, China, UAE) or as a result of the successful trading strategy (Singapore). These funds are sources of cash and states are looking for domestic or foreign projects that can bring profits in the future years.

Conclusion

The current position of the Serbian economy is characterized by the low level of capital, very old technology, lack of know-how management, but, on the other hand, Serbia is a country with a great opportunity for investing, taking into account the natural resources, skilled and rather cheap workforce and its central position in the Balkan Peninsula.

In the future, Serbia can become the leader of the region if its economic policy is defined in such a way that will attract venture capital investment funds by offering profit making opportunities and adjusting the institutional framework. Serbia needs to encourage formal and informal investors by sending a clear message that it is a safe place for capital through Greenfield investment or any other form of long-term investment in the real sector of economy. This is a difficult task considering the current situation in the global financial markets and the image of Serbia.

Abstract

The main goal of the economic policy in the future is to provide alternative sources for financing economic growth and development. The current situation leaves no options for economic subject but to obtain financing through the banking sector. In the coming years, an institutional framework for attracting venture capital financing the coming be developed, creating alternatives for economic subjects in financing.

Literature

- Benjamin G., Margulis J., *The Angel Investor's Handbook*, Bloomberg Press, Princeton, New Jersey 2001.
- Gladstone D., Gladstone L., *Venture Capital Investing*, FT Prentice Hall, New Jersey 2004.
- Gompers P., Lerner J., *The Venture Capital Cycle*, The MIT Press, London 2004,
- Landstrom H., *Handbook of Research on Venture Capital*, Edward Elgar Publishing Limited, Cheltenham, UK 2007.
- Rosić I., *National macro economy – growth, structure and economic system, Faculty for tourism and hotel management*, University of Singidunum, Belgrade 2004.
- Rosić I., Veselinović P., *National Economy*, Faculty of economics, Kragujevac 2006.
- Rosić I., Leković V., *Institutional changes as a precondition for economic development of Serbia*, Faculty of Economics, University of Kragujevac, Kragujevac 2007.
- Metrić A., *Venture Capital and Finance of Innovation*, Couriere/Westford, New Jersey 2007.
- Schertler A., *The Venture Capital Industry in Europe*, Palgrave Macmillan, London 2006.
- <http://www.seaf.com/funds.htm>
- “Wall Street Journal”, Europe edition, Dow Jones News Corporation, Brussels, February 28th, March 4th, 5th, 7th, 8th, 9th. 2008.

LJILJANA MAKSIMOVIĆ

On Serbian Economic Competitiveness in Transitional Conditions

Introduction

This paper analyses the nature of competition and the key factors determining a national economic competitiveness, beginning with the concept of global competitiveness index. In that sense, the factors that diminish the Serbian economic competitiveness which is still in decelerated transition, are pointed out here. The nature of macroeconomic stability, process of privatization, institutional reforms and de-industrialization are also analysed. Emphasizing problems in these particular domains presents the touchstone to overcome them and to enhance the competitiveness of the Serbian economy in crisis conditions.

1. Theoretical and Empirical Framework for Measuring Competitiveness

The competitiveness indexes used by the World Economic Forum as indicators of economic growth and development evolved in the years 1979–2007. A large number of researchers and scientists in the World Economic Forum were engaged in the evaluation of economic and business potential worldwide. Thus, they synthesized microeconomic and macroeconomic indicators of competitiveness, taking into account and applying suggestions of growth and development theories,

contemporary institutional economics and applied business economics. The outcome appeared in the Global Competitiveness Index (GCI) based on 12 pillars of competitiveness classified into three groups (Basic Requirements, Efficiency Enhancers and Innovation & Sophistication Factors) (7, p. 3).

The Global Competitiveness Index is widely based on the concepts of national competitiveness and competitive advantage shaped by Michael Porter. He built up strategic aspects of business competitiveness that are both theoretically and pragmatically grounded between an organisation and its environment in the sector and in the whole economy.

Porter emphasized productivity as the only significant concept of competitiveness at the national level. The utmost goal of a country is to provide a high standard of living to the citizens and its continual growth, and it depends on labour and capital productivity in a particular country (4, p. 164).

National competitiveness may be defined in different ways. It is generally defined as the ability of a country to reach sustainable high rates of GDP per capita growth. Some theoreticians point out a country's share of the world market for its products as an indicator of national competitiveness (5, p. 52). A comprehensive definition of national competitiveness suggests the ability of a country to provide favourable environment (institutions and policies) for growth of productivity, efficiency and profitability in manufacturing goods that will be assessed at the world market in order to provide continual growth of the standard of living (8, p. 208).

A competitive country is surely not the one in which all the companies are competitive, but a competitive country enables its companies in certain industries and industrial segments to achieve and to keep their competitive advantages.

The Global Competitiveness Report 2009–2010 covers 133 countries ranked by the Global Competitiveness Index. They are all classified into three groups representing three stages of growth depending on the GDP per capita. In the first stage (GDPpc up to \$2.000) the growth primarily depends on quantity and quality of the factors of production and general economic conditions. They are at the factor-driven stage and their economic development predominantly depends on basic requirements (institutions, infrastructure, macroeconomic stability, health and primary education). In the second stage (GDPpc \$3.000–\$9.000) there are efficiency-driven economies. Factors of efficiency gain on importance at this stage (higher education training, goods market efficiency, labour market efficiency, financial market sophistication, technological readiness, market size). At this stage, weight of efficiency enhancers rises to 50%, and weight of basic requirements falls from 60% to 40%. Finally, in the third stage of economic development (GDPpc over \$17.000) there are innovation-driven economies. The key factors in this stage are business sophistication and innovation, and their weight rises to 30% (7, p. 3–9).

Table 1. GCI for selected transitional countries (2009–2010)

Country – GDP/pc (US\$) 2008		Overall index		Basic requirements		Efficiency enhancers		Innovation factors	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score
Czech Republic	21027	31	4.7	45	4.8	24	4.8	26	4.4
Estonia	17299	35	4.6	34	5.1	27	4.7	42	4.0
Slovenia	27149	37	4.6	29	5.2	37	4.5	30	4.2
Poland	13799	46	4.3	71	4.3	31	4.6	46	3.8
Slovak Republic	17630	47	4.3	54	4.6	34	4.5	57	3.7
Azerbaijan	5349	51	4.3	50	4.6	71	4.0	56	3.7
Lithuania	14086	53	4.3	47	4.7	47	4.3	53	3.8
Hungary	15542	58	4.2	58	4.5	45	4.4	61	3.7
Montenegro	6509	62	4.2	65	4.4	65	4.1	68	3.6
Russia	11807	63	4.2	64	4.4	52	4.2	73	3.5
Romania	9292	64	4.1	86	4.1	49	4.3	75	3.4
Kazakhstan	8502	67	4.1	74	4.3	69	4.0	78	3.4
Latvia	14997	68	4.1	60	4.5	51	4.2	86	3.4
Croatia	15628	72	4.0	52	4.6	67	4.1	72	3.5
Bulgaria	6857	76	4.0	80	4.1	62	4.1	89	3.3
Ukraine	3920	82	4.0	94	4.0	68	4.0	80	3.4
Macedonia	4657	84	3.9	73	4.3	85	3.8	93	3.2
Georgia	2925	90	3.8	85	4.1	89	3.7		2.9
Serbia	6782	93	3.8	97	3.9	86	3.8	94	3.2
Albania	4074	96	3.7	90	4.0	93	3.6		2.9
Armenia	3360	97	3.7	81	4.1	99	3.5		3.0
Bosnia and Herzegovina	4625		3.5		3.7		3.5		2.8
Tajikistan	795		3.4	116	3.5		3.2		3.1
Kyrgyz Republic	950		3.4		3.4		3.4		2.8

Source: The Global Competitiveness Report 2009–2010.

Table 1 shows ranking of transitional countries by GCI. According to its GDP/pc of \$6.782 Serbia is in the second stage of economic development in which

efficiency-enhancers are of a prevailing importance. However, although Serbian GDPpc is higher when compared with Georgia, Macedonia, Ukraine, Montenegro and Azerbaijan, the Serbian competitiveness ranking is lower. Serbia occupied 85th position out of 134 countries in 2008 and this year its ranking is even lower – 93rd place out of 133 countries.

Table 2 shows that basic requirements have been worse (institutions, infrastructure, and macroeconomic stability), but goods market efficiency and business sophistication are also lower.

Table 2. GCI – Serbia

Population (million), 2008	9.9
GDP (US\$ billion), 2008	50.1
GDP per capita (US\$), 2008	6,781.9

	Rank	Score
GCI 2009–2010 (out of 133)	93	3.8
GCI 2008–2009 (out of 134)	85	3.9
GCI 2007–2008 (out of 131)	91	3.8
Basic requirements	97	3.9
Institutions	110	3.2
Infrastructure	107	2.8
Macroeconomic stability	111	3.9
Health and primary education	46	5.7
Efficiency enhancers	86	3.8
Higher education and training	76	3.8
Goods market efficiency	112	3.7
Labour market efficiency	85	4.2
Financial market sophistication	92	3.9
Technological readiness	78	3.4
Market size	67	3.7
Innovation & Sophistications Factors	94	3.2
Business sophistication	102	3.4
Innovation	80	3.0

Source: The Global Competitiveness Report 2009–2010

Serbia's low position according to GCI resulted from the crisis of its economy. Many experts agree that Serbia is in the stage of slowed transition caused by eco-

conomic, political, historical and other factors. In the course of two decades of the transitional process Serbia reached only 70% of the level of GDP of 1989 – thus, the indicator of the completion of transitional process – pre-transitional level of GDP of 1989 – has not been reached yet. This means that the transition program activities have not been efficiently carried out and are the main causes of uncompetitiveness of the Serbian economy in the way of achievement of macroeconomic stability, in the program of privatization which significantly contributed to deindustrialization of the country and in the institutional inefficiency.

2. Macroeconomic Stability

Many economists think that uncompetitiveness of the Serbian economy may be attributed to the nature of macroeconomic stabilization. Price stability and currency stability in a transitional process are inevitable beyond any doubt. Every transition program includes a vast array of activities and maintaining macroeconomic stability is the first condition for transition and the first activity in the realisation of the transition. However, the problem is in the way of realisation and maintaining macroeconomic stability in Serbia in the long run. Relative price stability has not been achieved by increased production which is efficient, profitable and validated in the world market, but by a restrictive monetary and credit policy involving its own weaknesses.

Namely, the exchange rate was used to anchor macroeconomic stability in Serbia beyond the year 2000. Consequently, in the conditions of abrupt inflow of capital – money supply is under control. Capital inflows into Serbia in the forms of remittances from abroad, privatization of domestic companies and bank borrowings from abroad. The rise in the capital inflow and credit boom grounded in foreign resources increase domestic currency demand and face appreciation pressure. The rise in liquidity impels the Central Bank to take measures of monetary sterilization as the central monetary authority. Thus, the percentage of required reserves is greater and the open-market measures are introduced (REPO operations). The cost of monetary sterilization is in the higher cost of capital, producing higher interest rates in Serbia when compared with the interest rates in the EU and most of the transitional countries. The higher financing costs affect prices and diminish profitability and competitiveness of industry.

Since monetary reserves make a starting point for the exchange rate, the issue of their sustainability arises and, consequently, the issue of maintaining a relatively stable exchange rate in the long run. A substantial part of monetary reserves in Serbia makes the gains from privatization and the required reserves of commercial banks. The gains from privatization will be significantly lower in the future, and commercial banks (i.e. some of them) may cease to operate in Serbia generat-

ing a substantial loss of the monetary reserves. The quality of monetary reserves is primarily determined by the balance of payments, i.e. by its components – the balance of trade and the balance of capital. The balance of Serbia's foreign trade is negative, which means that the quality of the foreign exchange reserves will be primarily affected by the foreign direct investment.

Failures in the implementation of transition strategies, and above all – deindustrialization of the Serbian economy (to be discussed further), affected its competitiveness. The trade deficit is an indicator of uncompetitiveness (Table 3).

Table 3. Foreign trade operation in Serbia

Export / Import movement
2000 – June 2009

	Export	Import	Balance
2000	1558	3330	-1772
2001	1721	4261	-2540
2002	2075	5614	-3539
2003	2755	7473	-4718
2004	3523	10753	-7230
2005	4482	10462	-5980
2006	6428	13172	-6744
2007	8825	18554	-9729
2008	10972.8	22999.2	-12026.4
I-VI 2009	3753.6	7190.8	-3437.2

Source: Pregled - Republika Srbija, NI/2009, p. 140

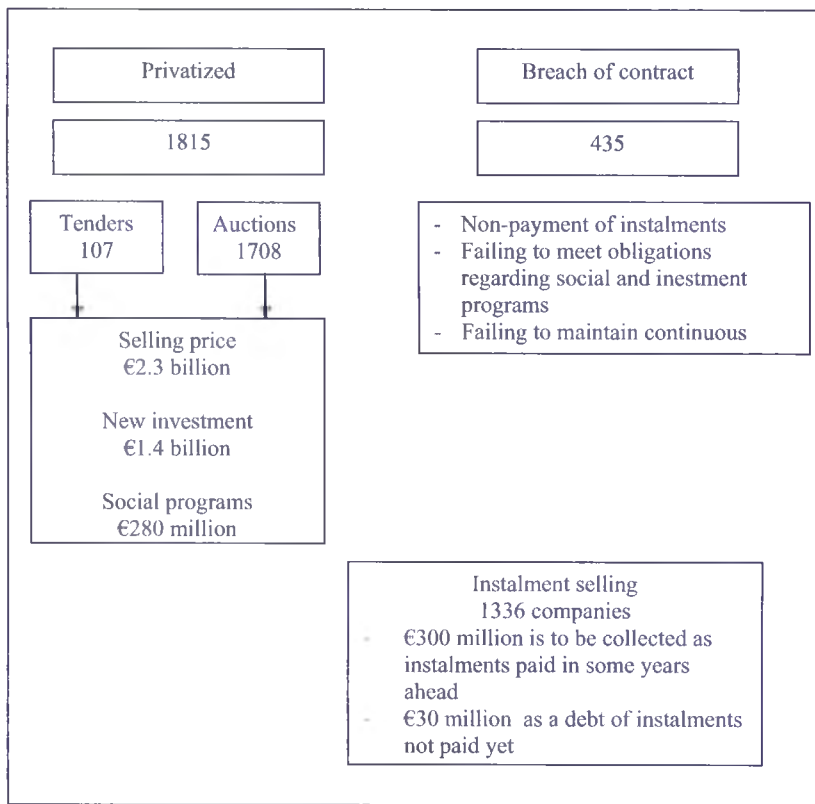
In the period of 2001–2008 trade deficit exceeds export. The Serbian economy is likely to bear the burden of trade deficit for long even if, by an optimistic scenario – reindustrialization begins. Accordingly, macroeconomic stability is maintainable by the steady inflow of capital, which, if the foreign direct investment is at a modest level, assumes further borrowing.

Macroeconomic stability, as an indicator of general economic conditions within the composite performance index GCI, ranks Serbia 111th out of 133 countries. This and other indicators of bad performance of the Serbian economy (political and business risk, corruption, and unfavourable business environment) may have a destimulating effect on the inflow of FDI, which – of course – diminishes the quality of monetary reserves and threatens the maintaining of the relatively stable currency.

3. Privatization

The realisation of the program of transition in former Yugoslavia began in 1989 when the Social Capital Act was passed and the Property Transformation Act as well. The disintegration of the federal state and the sanctions imposed to the Federal Republic of Yugoslavia by the international community brought about the process of privatization under conditions of a closed economy. The privatization was neither compulsory nor term-limited and was to apply to social enterprises in the real sector. The general model of privatisation was recapitalization, i.e. issuing shares on the grounds of the accounting value of a company's capital and selling shares to employees under privileged conditions. After the political changes in the year 2000, the new Privatization Act was passed in 2001 which prescribed privatization as compulsory, term-limited and comprehensive. Since the actual privatization started in 2001, a declarative statement of its deadline does not determine its real completion date.

Figure 1. Privatization outcomes



The privatization outcomes are moderate and discouraging (Figure 1). The financial performance of privatization is modest (€2.3 billion), the new contracted investments are uncertain, and the number of breached contracts amounts to approx. 25% of all the privatized companies with a tendency of growing in the number of failed privatization deals.

The actual volume of privatization cannot be estimated exclusively by the number of privatized companies, since they make only a sharing part of the total assets available for privatization. It is estimated that a significant capital share (30–40%) is concentrated in public and other companies with major or substantial state ownership.

What can be seen now is that managing the privatization has not been effective. In addition, a significant part of the economy has remained protected from privatization. Namely, along with the so-called autonomous privatization, the Property Transformation Act of 1997 supposed the privatization of public companies encouraged by a special government program. It dealt with 75 large companies of strategic republic importance with 35% of the whole socially-owned capital. The government of 2001 almost followed suit and listed 70 companies to be restructured. However, since 1997 there has been a disagreement about what ought to be the first – restructuring or privatization of the companies – and whether they should be privatized at all. The epilogue of the perennial struggle over the issue has been the return of the state ownership.

At the end of the year 2009 there were two groups of companies in which the process of privatization did not begin. These are some public and state companies and there is also a group of remaining companies which all together make a substantial capital share in the economy of Serbia.

Since the privatization process in Serbia is limited to the end of 2009, it may be said that privatization of the public sector and its restructuring (or vice versa) has greatly lagged behind. The general concept of privatization of public companies has not been defined yet and, consequently, even the preparation for privatisation of these companies has not commenced.

The group remaining for privatization is made up of unattractive companies and the ones of repeatedly unsuccessful privatization. Such companies and those in which the breach of contract occurred will be privatized through bankruptcy. Even in the stage of designing the program of privatization, it was supposed that some companies might not be sold and would go bankrupt. However, a large number of such companies and the unreadiness of the institutions (Commercial Courts above all!) to end the privatization through bankruptcy have

raised doubts about the completion of the process of privatization before the deadline.

Numerous economists state that the ill-designed and slowly progressing process of privatization along with no significant institutional support has destroyed productive resources of the Serbian economy, generating various 'dead' assets and undermining the competitiveness and growth prospects.

4. Institutions

The importance of institutions for contemporary economies is beyond a shadow of a doubt. The theory of economic growth implies that countries may achieve successful economic growth and be competitive in the world market if they manage to establish the institutions adjusted to the current development of society, techniques and technology. The quality and efficiency of institutions largely determine the abilities of national economies to successfully compete in the world market.

The very concept of institution includes, first of all, laws, regulations and programs applied to particular fields of economic and social life; secondly, operating bodies which are supposed to implement the laws and regulations and, thirdly, creating a favourable business and investment environment for both domestic and foreign companies.

There are numerous failures in the institutional system in Serbia and as such affecting the competitiveness of the Serbian economy. The point is in imprecise and unadjusted laws, conflicting regulations, and underdeveloped and non-transparent procedures. Numerous deficiencies and inconsistencies in the laws have been identified, and some laws have been changed *ad hoc* under pressure from lobbies or as a result of the current economic circumstances. The Law of Privatization and *ad hoc* changes made in the course of 2003 which were supposed to review the original privatization program make a proper example of it. The point is in the level and method of (lower) pricing for less attractive companies and their (lower) upset price or particularly favourable bidding price for purchase of a company's shares. In the latter case, the transparency of privatization provided by the original legislation has been eliminated, since the state portfolio shares are not traded in the stock exchange but they are traded through bids for the purchase of shares. A huge problem is also in the legislation allowing the same individual (investor) to buy even more than 10 companies. In addition, there is no mechanism enabling the Privatization Agency to have an insight into genuine buyers, their money origin and their intentions regarding the companies they have bought.

By the methodology of the World Economic Forum (WEF) institutions make the first of 12 pillars of competitiveness and include 19 indicators of competitiveness. Within public institutions the following factors are assessed: property rights, intellectual property protection, diversion of public funds, public trust in politicians, judicial independence, favouritism in decisions of government officials, wastefulness of government spending, burden of government regulation, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, transparency of government policy making, business costs of terrorism, business costs of crime and violence, organized crime, and reliability of police services. For private institutions the following are assessed: ethical behaviour of firms, strength of auditing and reporting standards, efficacy of corporate boards, and protection of minority shareholders' interests (6).

On the grounds of the basic requirements related to institutions, Serbia is ranked 110th out of 133 countries. This position is held particularly due to the burden of government regulation (129th position), inefficiency of legal framework in settling disputes (124th position), and ineffective protection of minority shareholders' interests (128th position). Serbia is ranked 109th in the organized crime and 120th in the efficacy of corporate boards.

Table 4. Key factors inhibiting business performance

Country	Corruption	Tax regulation	Access to finance	Excessive bureaucracy	Undeveloped infrastructure	Tax rates	Restrictive labour legislation	Political instability	Inadequately skilled labour force	Crime and theft	Inflation	Labour indiscipline	Government instability
Czech Republic	***		**	.				***					
Estonia		****	.	***					**				
Slovenia		****	.	***			**						
Poland	.	**	***	***			***						

Bulgaria	*		*	**	**														
Ukraine	**	**	*					*											
Macedo- nia			*	**				**									**		
Georgia			*					**	**										
Serbia	*		**	**				**											
Albania	*	**		**				**											
Armenia	*	**	**	**															
Bosnia and Her- zegovina				**			**	**	*										
Tajikistan	*	**	*					*											
Kyrgyz Republic	*	**	*					**											

Source: *The Global Competitiveness Report 2009–2010*.

A particularly important problem in Serbia is the overall corruption. By methodology established in WEF it is judged by the first pillar of competitiveness, i.e. institutions, through diversion of public funds and public trust in politicians. Corruption is the main hindrance to business activities in Serbia (Table 4). Four main reasons which inhibit investors in transitional countries may be seen in Table 4. Corruption is the main drawback factor for business operations in Serbia, Azerbaijan, Russia, Kazakhstan, Albania, Armenia and the Kyrgyz Republic.

5. Reindustrialization

It is well-known that the initial phase of transition is followed by inflation growth, fall of employment and production, budget deficit and balance of payment deficit. However, after the transitional crisis and ownership and organisational restructuring, the industrial sector stabilizes and even employment in manufacturing increases.

Yet, a slow recovery of the Serbian industry has resulted from the long-lasting devastation of the economy and privatization. The tendency of decrease in industrial employment has not had a ground to a halt. The highest decrease of employment is in textile, food processing, metal processing and chemical industry. Besides economic consequences, the fall in industrial manufacturing has also produced some social and demographic outcomes. Even 34 industrial centres with more than 1.000 workers employed have been wiped out from the regional map of industry. It is estimated that there are 250.000 fewer workers or 35% in the Serbian industry in comparison to the year 1990 (2, p. 79).

The processing industry participates in the export of Serbia with 95%, out of which 60% is exported to the EU countries. On the other hand, performances of the Serbian industry are a limitation factor in the export of industrial goods. This means structural mismatch, obsolete technology, low investment, high production costs, poor environmental standards, discrepancy with the EU industry, etc. The structure of exported goods is unfavourable: primary products, labour-intensive products and resource-intensive products all of which are low-value-added products. The Serbian industry needs to be reindustrialized since the cumulative industrial growth of 16% in the period of 2000–2007 is extremely low when compared with other transitional economies (Poland's cumulative industrial growth in the same period was 84%, Bulgaria achieved 76%, the Slovak Republic 61%, Romania 41%, Bosnia and Herzegovina 81%, Hungary 55%, Croatia 40%). Without revitalisation of the processing industry it is impossible to increase the export and to attract FDI, since the processing industry participates with 15% in GDP and with 95% in the overall export structure (2, pp.78–79).

In the European transitional economies (excluding South-East Europe) the structure of industrial production has significantly changed. The industries based on up-to-date technologies and economy of scale achieved a strong dynamic growth:

electrical industry, precision equipment industry, motor vehicles industry, etc. Persistent implementation of market reforms in most transitional countries of Central and Eastern Europe, inflow of FDI and structural changes in production and export all contributed to their better export performance. The growth of the industrial sector in the transitional countries of Central and Eastern Europe greatly affect the growth of GDP and their competitiveness.

In the EBRD transition report for 2008 Serbia was warned to improve its outcomes in privatization, restructuring of companies and providing a favourable business environment. The EBRD found Serbia facing a serious task of building the infrastructure and restructuring in energy, transport and telecommunications.

Conclusion

Serbia is currently in a slow transition, and the reasons for its lagging behind considering the implementation of reforms, is of the economic nature such as: the chosen path to macroeconomic stability, the ill-designed and badly carried out privatization program, inefficient institutions and deindustrialization of the economy. The other countries' experiences show how macroeconomic stability is obtainable in the long run, how privatization programs are carried out (particularly in public companies), how the institutional efficiency is achieved and how the structural changes in industry are supported and encouraged by the state and its competitiveness – strengthened. Economic theory may offer the answers for all the challenges mentioned above, and practice has shown positive outcomes. Thus, social agreement and competence of the authorities responsible for carrying out the reforms remain of utmost importance.

Abstract

This paper analyses the nature of competition and the key factors determining a national economic competitiveness, beginning with the concept of the global competitiveness index.

Serbia is currently in a slow transition, and the reason for its lagging behind, considering the implementation of reforms, is of the economic nature such as: the closed path to macroeconomic stability, the ill-designed and badly carried out privatization program, inefficient institutions and deindustrialization of the economy. Economic theory may offer the answers for all the challenges mentioned above, and practice has shown positive outcomes. Thus, social agreement and competence of the authorities responsible for carrying out the reforms remain of utmost importance.

Literature

„Ekonom: east magazin”, No. 489.

Jakopin E., Bajec J., *Izazovi industrijskog razvoja Srbije: makroekonomski kontekst*, Kopaonik biznis forum 2009.

„Pregled – Republika Srbija”, No. 1/2009.

Porter M., *O konkurenciji*, 2008, FEFA.

Porter M., *The Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index*, The Global Competitiveness Report 2007–2008, WEF.

The Global Competitiveness Report 2009–2010.

Xavier Sala - I - Martin and alt., *The Global Competitiveness Index: Measuring the Productive Potential of Nations*, The Global Competitiveness Report 2007–2008, WEF.

Vujović D., *Konkurentnost države: prednosti i izazovi novog modela aktivnog podržavanja konkurentnosti nacionalne privrede*, Ekonomika preduzeća, October 2005.

SLOBODAN D. MALINIĆ

Economic Crisis and Crisis in Serbian Enterprises –
*New Challenges for the Government, Managers
and Accountants*

Introduction

Constant changes in current business surrounding, conditioned by numerous factors of “new economics”, global recession and financial crisis; undoubtedly influence the conditions of earning money in enterprises all over the world, therefore in Serbia as well. Such conditions made enterprises not only show symptoms of serious crisis, but also do some multifaceted attempts to overcome the crisis during last two years. However, this resulted in many fruitless readjustments and dying out of our enterprises. The fact is that our systematic economic environment goes through certain operating crisis.

Discovering, preventing and especially overcoming the crisis is the domain of the company’s management activities. In such circumstances company’s management takes the role of crisis management as a specific form of enterprise management. Symptoms, causes and ways of overcoming the enterprise crisis in transition circumstances, have certain specificities which adds to additional importance to the crisis management.

Accounting reports with suitable information represent one of important and most confident instruments of crisis management for recognizing, preventing and selecting measures for overcoming the enterprise crisis. According to their form, structure, background, comprehensiveness and direction accounting reports can be numerous and diverse. Still, basic accounting reports of financial and managerial accounting, as well as accounting reports of the segments of enterprise operation in managerial accounting, represent irreplaceable informational source for analysis and evaluation of profitable and financial short term and long term enterprise position, that is, they take the role of control and/or dispositive instruments in overcoming the enterprise crisis.

1. Current World Economic Crisis – Causes, Measures and Consequences

Global economic and financial crises, as a result of periodical disturbances, can be caused by the influence of different factors such as: fluctuations of economic cycles, imperfection of the market mechanism, inadequate legal and professional regulation, poor or inadequate government measures in the real and the banking sector, etc. ¹Special attention is to be given to three world crisis – crisis in the 1930s, economic crisis in 1987 and, by all means, current global recession and financial crisis.

Current economic and financial crisis started as the crisis of the Mortgage Market in 2007 in the USA, to be more specific this occurred when some buyers of securities based on mortgages could not cash them, so that their value constantly grew. Therefore, crisis started with problems of only one part of financial sector and three sources are given as the reason for this:

- a) State interference in the housing market with a basic question – why does the state save investment banks and insurance companies tied to mortgage markets,
- b) Policies of the Federal Reserve with a basic question – why did the Federal Reserve and monetary authority not conduct a restrictive policy before the crisis but a policy of mild monetary expansion, because it is cheap money to further help the expansion of mortgages based on their securities.
- c) Conducting banking business with a basic question – why did the state wrongly encourage bankers to wrong decisions and behavior, overseeing the fact that the prices of houses and apartments cannot continually grow. Namely, this il-

¹ More about the crisis of the thirties see: Higgs, R., *Depression, war, and cold war: Studies in political Philosophy*, Oxford University Press 2006.

lusion proved wrong when, in 2005–2006, prices of houses and apartments in the USA, Ireland, Spain and some other countries started, after nearly 15 years of growth, to fall².

When prices started falling, financial institutions – commercial banks and insurance companies wrongly considered this tendency as a temporary one, so they covered momentary losses by taking the money from their own funds. However, in the meantime personal incomes decreased as well, so the price of real-estate started falling and the increasing offer led to decreased demand and decreased real-estate, securities and enterprise value. In such circumstances, unjustifiably the country enters the scene with their state intervention measures - prohibition of short-term trading in stock; the announcement of possible purchase of the securities of their respective owners.

All in all, a kind of confusion in the conception of state intervention appeared. Two banks, two mortgage and one insurance company became the property of the state, with the idea that the number of interventions should increase and expand, for example, to the car industry and others. On the other hand, no doubt, if the state intervenes, then it basically shows a willingness not to appreciate the fact that some companies operate successfully, and some less successfully or completely unsuccessfully, which leads to failure of market discipline as the company losses become socialized. However, although noticeable that the essential characteristics and the very nature of the "package" of state intervention and support has been a significant change, still, state intervention will not solve the open questions of economic crisis, but it will increase them, while at the same time it will encourage others to non-market oriented and irresponsible behavior. This happens precisely because the state, taking the prerogatives of the market, pardons the responsible for the crisis and lives in the illusion that the costs of the crisis can be avoided, and thus strengthens and encourages the economic crisis, recession, followed by inflation and further negative implications.

Therefore, the state should not interfere and by investing big funds recover the pre-crisis period, simply because that which was the cause of the crisis cannot be its solution. What the state should do is to create suitable market circumstances as a pre condition for successful business.

² See more about: Prokopijević M., *Economic crisis in the world and its impact on Serbia, article in the monograph – The transition in Serbia and the global economic crisis*, NDE and AEN with Belgrade Faculty of Economics, 2009. 139-156.

2. The Reflection of the Economic Crisis in Serbia

The economy in Serbia is marked by its own specific multi-economic problems. In almost total transition period which has lasted for over a decade and a half, the basic internal problem of Serbia is economically unrealistic existing high level of personal income and living standards, which cannot be held long term, and that is artificially created through insubstantial exchange rate of RSD, the exorbitance of national currencies, and economic closeness of the country in the period after the year 2000.

Other economic problems of Serbia are related to the increase in liquidity from various sources, but mainly caused by the wrong measures in the field of credit - monetary policy and inadequate business and financial decisions of subjects from credit and real sectors, such as: credit debit in anticipation of the expansion of markets, and was followed by a crisis and reducing demand and sales, decrease the value of RSD and the consequences of delayed receivables claims, inadequate assessment of business risks by banks when granting loans to customers and others.

Lasting consequences of illiquidity are reduced to the scope of activities, the fall of sales, bankrupt companies, and dismissal of employees with further implications for the banking and public sector and the state in socio-humanistic spheres. So, although in the initial phase of major crisis it was more psychological in nature, the established current and domestic economic problems began to come more to the fore through a decrease in economic activity, decrease of production, foreign investment, exports, employees, public revenues, personal income and finally the national income.

However, external economic and financial crisis is not decisive for the economic problems and economic situation of Serbia, but it has a negative impact in terms of expansion, deepening and strengthening economic problems and the ones in the functioning of Serbia. The influence of external crisis is transmitted to the existing economic problems of Serbia in two ways: 1) through higher prices and more expensive borrowing money from abroad and 2) significant decline in exports, which, because of our uncompetitiveness, and otherwise has been significantly hampered. It is about reduction of the export market of the countries of the European Union, precisely because of the present recession in these countries.

Finally, internal economic troubles are even more complicated and increase the external crisis, with more pronounced possible negative consequences, synthesized in the negative results of almost all global indicators of economic performance and economic situation in Serbia.

3. The Crisis of Companies and Specific Causes of the Crisis Enterprises in Serbia

The notion of the crisis of companies, like understanding the crisis in other scientific fields, is primarily associated with the development of the situation in which the company reached „critical point” with certain characteristics. In a somewhat narrower sense, the crisis of the company should be understood as the process in which the realization of goals of set portfolio companies is, unplanned and unwanted, jeopardized; particularly the basic economic goals of the company - the preservation of invested capital, earning abilities (breakeven, success) and the goal of preserving the liquidity and solvency³.

From the point of time, the crisis the company is “a critical point or moment” in a series of unsuccessful management-business activities, which led to the situation in which the company is existentially threatened. Defining the crisis of the company, done in this manner, is certainly to be distinguished from the concepts which are often used in everyday business and ordinary speech, such as conflicts, disturbances, agony, and similar disasters, which cannot be considered synonyms.

On the aspect of vulnerability, realization of basic economic goals of the company, particularly bearing in mind the order of discovery, the crisis the company is usually classified in: the crisis of liquidity, success and the strategic crisis of the company.

- *Company liquidity crisis* is a business and financial situation of companies in which it is unable to meet its outstanding financial obligations in the established terms of their maturity, or to settle in general, which spreads the crisis to the area of the solvency crisis. Liquidity crisis is first manifested as an unplanned and unwanted situation, and the result of inadequate planning and ineffective control of cash flows, or lack of synchronous inflows and outflows. Reasons for the crisis of liquidity are mainly attributable to inadequate financial structure and to the appearance of the loss in the enterprise.
- *Crisis of company success* appears in the conditions when a company can realize the goal of preserving invested capital and a profit target, or a business-financial situation of enterprises in which the question of the companies' ability to earn is challenged. While the liquidity crisis refers to undesirable, unfavorable, liquidate position, insofar as the crisis of success relates to the unfavorable profitable position of the company; therefore the occurrence of loss or insufficient profits in business. The recognition of the crisis of success is more difficult in relation to the crisis of liquidity, especially in the unstable, inflationary economic conditions.

³ See more about: Malinic S., *Managerial Accounting*, Economic Faculty, University of Kragujevac, Kragujevac 2008, 6 -12.

- *Strategic crisis of the company* the business and financial situation of companies in which, because of missed or inadequately selected and realized strategies for achieving the mission and goals of the Company, the basis is lastingly jeopardized for achieving success - goal to preserve invested capital and profitability targets. For example, these could be missed or inadequate strategies related to strengthening the technological advantage, reducing costs, winning new markets and the like.

Symptoms and causes of the company crisis are, due to their natural connection, impossible to distinguish and analyze separately. Symptoms of the crisis are in fact only indications with appropriate characteristics on the basis of which it is possible to recognize the existence of a crisis of the company. Symptoms of the crisis may be different, numerous, variable and changing external events. In terms of accounting-financial information support to company crisis management, it is possible to identify many symptoms of the company crisis, which manifest themselves individually or in combination with different intensity.

The symptoms of the crisis of liquidity may manifest through the constant lack of free cash assets, cash flow decline, the need to increase the level of debt, increased costs of financing, creditor demands for advance payments, and increase on the basis of cash equivalents (securities).

The symptoms of the company success crisis generally manifest falling profitability and deterioration of the earning capabilities of enterprise, which is generally accompanied by features: reduction of business income, increased costs of the company, dissatisfaction and concern of the top and middle management, hints and / or resignations of some managers and experts from the company.

The symptoms of the strategic crisis of enterprises can be identified as symptoms of the crisis of success, but with stronger intensity, and beside them in this group of symptoms may be included: debt, falling sales, loss of markets, weakening the competitive position, decrease the quality of performance, obsolescence of technology, global decline in activity, negative signals from the environment and others.

The causes of the crisis are the specific factors or factors that lead to the emergence of the company crisis. There may be numerous, varied, multi-layered. They come from the company and / or the environment.

The theoretical and methodological approach is a generally accepted classification of the global crisis on the basis of the company's internal and external causes. External causes of the crisis originate from systemic economic environment in which the company operates. The most important causes of this origin may be: unfavorable trends in the market inputs, oscillations, measures of competition,

currency changes, foreign means of payment, tax measures and social policy, the policy of subsidizing the measures of environmental and other external causes of uneconomical nature – wars, social upheavals, natural disasters and the like.

Internal causes of the crisis are – from the aspect of representation, the possibility of influence and importance - important in relation to the external ones. It is the causes that result and do in the enterprise, and may be numerous and systematized in different ways⁴.

Internal causes of the crisis mainly originate from the incompetence of management, as well as management structures for decision-making levels and functional areas of business activities of enterprises, as well as from the accounting information system.

The causes of the crisis management activities in the field of management may be caused by inadequate: setting goals, selecting appropriate strategies, financial and project planning, adapting technical and technological progress, organizational adjustments, motivational system companies, functioning control system, and inadequate solutions in the uniform and communications.

The causes of the crisis can be located in certain functional areas such as in the area of procurement functions in the production of functional areas, sales areas and within the financial function.

The causes of the crisis may come from the accounting and *accounting information systems*. It is specific, the information causes of the crisis are most often caused by inappropriate organizers - the manager of the accounting information system to timely and adequately inform internal users of information, especially the top and middle management, the relevant indicators of the symptoms and causes of the crisis.

Crisis in Serbian companies lasts longer than one and a half decades and it has its own peculiarities. It is caused by the factors of external and internal nature, which are numerous and specifically manifested. They are more numerous due to the characteristics and weaknesses of previous economic systematic solutions, and specific characteristics are due to transition characteristics of our economy and well-known consequence of the disintegration of former Yugoslavia, and the impact of current global recession and financial crisis. These specifics are caused by the significant influence of external factors of the crisis of our company.

In the group of *external causes of the crisis*, certainly in the first place is the loss of markets in our company, which is due to difficult availability to markets of the

⁴ See further: Senic R., *Crisis management, BGM*, Beograd 1996, p. 93 108, and the article Malinic S., *Accounting informational support to managing enterprise crisis*, Economics topics 6/2002, Faculty of Economics in Nis, p. 139–153.

former Yugoslav Republic for Serbian companies, difficult accessibility to foreign market, especially to the market of European Union countries. Furthermore, the offer of our enterprises is significantly reduced as a result of the consequences of the war in former Yugoslavia, especially the consequences of the bombing of a large number of big companies which had resulted in significant technical and technological backwardness, and more.

Within the group of *internal causes* of the crisis of enterprises in Serbia, can be clearly seen causes that indicate: lack and loss of its own capital, increasing the degree of indebtedness, under-use of capacity, the decline of business income, the existence and growth trend of loss, increase in short-term obligations in relation to short-term claims, wear and obsolescence of property, which all have reflections with profitable deterioration of the financial position of our company and the Serbian economy⁵.

Recognition and identification of symptoms of the crisis, and disclosure of relevant causes of the crisis of the company in general, and in our particular conditions, preconditions for the introduction of specific forms of enterprise management in crisis.

4. Enterprise Crisis Management

Adequate control activities of management companies in the „normal” conditions and circumstances of business are prerequisite for successful implementation of the mission and goals of the company, or to avoid the crisis. However, the crisis companies are sometimes inevitable, and sometimes the result of multiple and simultaneous causes. Understandably, the company should operate in crisis situations, but then a management company takes the slightly different characteristics, characteristics of crisis management.

Crisis management, understood as a process management activity, also takes place through these five phases – planning, organizing, motivation, control and communication, but with the basic aim to overcome the crisis and make the company fit for long-term survival in a competitive market scene.

Crisis management, understood as an institution, means the holders of crisis management and appropriate experts, who are engaged as agents of capital, manages the company in crisis for its sanction. So, crisis management should be understood as „a special form of management of the company of the highest priorities, whose task is to avoid or overcome all the processes in the company, which

⁵ Rankovic J. and Ilić G., *The Analysis of rehabilitative nad financial position of the Serbian economy in 200*. Accounting, No. 7/8, p. 6–32.

would otherwise have been able to threaten substantial or even disable the further survival of the company”⁶.

According to accepted and considered classification of symptoms and causes of the crisis, the partition in crisis management is accepted: strategic, operational and financial crisis management, which can be further divided into crisis management for overcoming the crisis of liquidity and crisis management for overcoming the crisis of solvency.

Strategic Crisis Management, from the aspect of prevention, should protect the existing potentials and prerequisites for the realization of basic economic objectives and the success of the company that is to notice and remove obstacles in the way of the future success of companies. Strategic crisis management generally has three possible courses of action through a synthesized strategy: withdrawal (divestiture), consolidation (investment) and restructuring (offensive strategy).

Operational Crisis Management has a duty to eliminate the danger of the crisis of company success, the risk for achieving target sales, operating income and profitability of business. This kind of crisis management involves individual and synthesized adequate measures to increase demand, production, sales and revenue from the sale on one side and measures calculated to decrease costs, adequate techniques for cost management of the company.

Financial Crisis Management may refer to short-term deterioration of the financial position of enterprises and state enterprises and illiquidity in the wrong long-term property position of the company or the state of insolvency.

Crisis management for improving the liquidity status of the company has the task of appropriate measures to eliminate the causes of the current illiquidity. Financial measures are taken related to the acceleration of debt collection, planning, coordinated cash outflow of funds, conversion and / or disposal of certain loans, possibly obtaining new favorable credits, postponing payments due debts, the conversion obligations in the capital.

Crisis management for improving the solvency condition has a duty to the company after the crisis of liquidity and / or indebtedness, and the threat of bankruptcy and disappearance of companies due to the inability to creditors and shareholders in general payments; to ensure the preservation of the company or at least its organized units (segments). Appropriate measures that Crisis management can take refer to measures in the process of settlement and rehabilitation. Understandably, the assumption is that the company has a certain perspective, the corresponding potential and possibility of its activation to achieve successful companies in the near and distant future.

⁶ Senić R., again quotation, p. 149.

Prevention of the given and other crisis in companies is within the scope of work or regular activities, entrepreneurial of marked management companies.

Crisis prevention essentially means the application of appropriate measures and management activities in order to prevent, not to allow the processes of business and financial activities that are critical for survival of companies, which is leading company to the crisis. Prevention of company crisis gets a special place through appropriate strategies and instruments that are applied to achieve this and set a special goal - to prevent the crisis in enterprises.

Overcoming the crisis is related to all measures and crisis management activities that aim to reorganize the company successfully and continue more successful business, or forced shutdown through bankruptcy proceedings. There is no doubt that the advantage, because of the interests of stakeholders, provides repair of companies. Repair primarily means making business financial decisions related to: determining the objectives of reconstruction, selection and implementation of appropriate strategies, taking appropriate measures to repair the implementation of programs and repair projects. Depending on which functional area is the source and what kind of crisis is observed, appropriate strategies will be selected, as well as rehabilitation programs, projects and rehabilitation measures, particularly measures of sanction-oriented measures of success and financial relief, which requires special accounting and information support.

The crisis in Serbian companies has its own additional specifics that primarily come from the privatization process of social and state enterprises, or originate from the process of transition of the economy and the consequences of the impact of the global economic crisis. Successful enterprises are subjected to the privatization as well as companies in crisis, but the basic setting is that, for successful companies simultaneously are done measures that will result in the prevention of crisis, and the unsuccessful, the measures for overcoming the crisis of the company. Both companies in the privatization process are obliged to develop a program of privatization, the capital evaluation and program for restructuring. Irreplaceable role in the implementation of the privatization process, particularly in the development program of privatization and restructuring of companies has the supreme and operational management, which in those activities still take on the characteristics of crisis management. The important role that managers have is the financial and accounting functions of the company. The importance of their role stems from the fact of their responsibility for the preparation, use and analysis of accounting statements, and responsibility for the competence of proposed measures, decisions and activities in the privatization and transformation of enterprises in general.

Thus, preventing and overcoming the enterprises crisis in Serbia in general, especially in our current economic conditions, assumes the use of basic and special, control and dispositive, accounting reports by the management company. Sources of accounting information support to crisis management in our company, as well as companies in general, among others, make the totality of the accounting information system.

5. Accounting Information System and Accounting Statements in the Crisis Management

Accounting information system (AIS) can regulate the organization as an independent entity (system) or as part of another, broader information system (sub-system), for example, management information systems, business information systems and it can be understood as an organizational unit organized with inter-related and conditioned components necessary for quality and successful implementation of activities of the accounting functions.

Accounting information, understood as a transmission accounting data and indicators that have meaningful content and form that reports specifically aimed at serving customers and using them to realize some tasks in the field of management and / or business activities of enterprises, by its narrow, accounting and organizational origin may come from: financial accounting, cost accounting, management accounting and analytical accounting.

The basic assumption of the use of accounting reports for management, particularly crisis management, their quality is determined by relevance, reliability, understanding and right timing, which is essentially conditioned by adequate organization and management of AIS. Crisis companies require additional attention in the AIS organization and compilation of various and numerous accounting reports that adequately demonstrate pre accounting flows, accounting values and cash flows of the company.

Understandably, for a given aspect of consideration, of particular importance to the financial statements are accounting reports intended for management and crisis management firms. Accounting reports intended for management and crisis management company for business and financial decision-making may be different in form, content and purpose of submission deadlines.⁷ They may come from different segments of the AIS – financial accounting, cost accounting, manage-

⁷ See further: Malinic S., *Management accounting information as a basis for effective management of the enterprise*, Proceedings of the Symposium Association of Accountants and Auditors of Serbia XXIX, Beograd – Zlatibor 1998, p. 143–164.

ment accounting, Strategic management accounting, competitive accounting and accounting responsibilities.

Basic *accounting reports* from the financial accounting – basic balance sheet, cash flow report, consolidated, and specials tax balances, the need for management, particularly crisis management, mainly additional preparations and, as the object of analysis, especially interpreted in *Managerial accounting*.

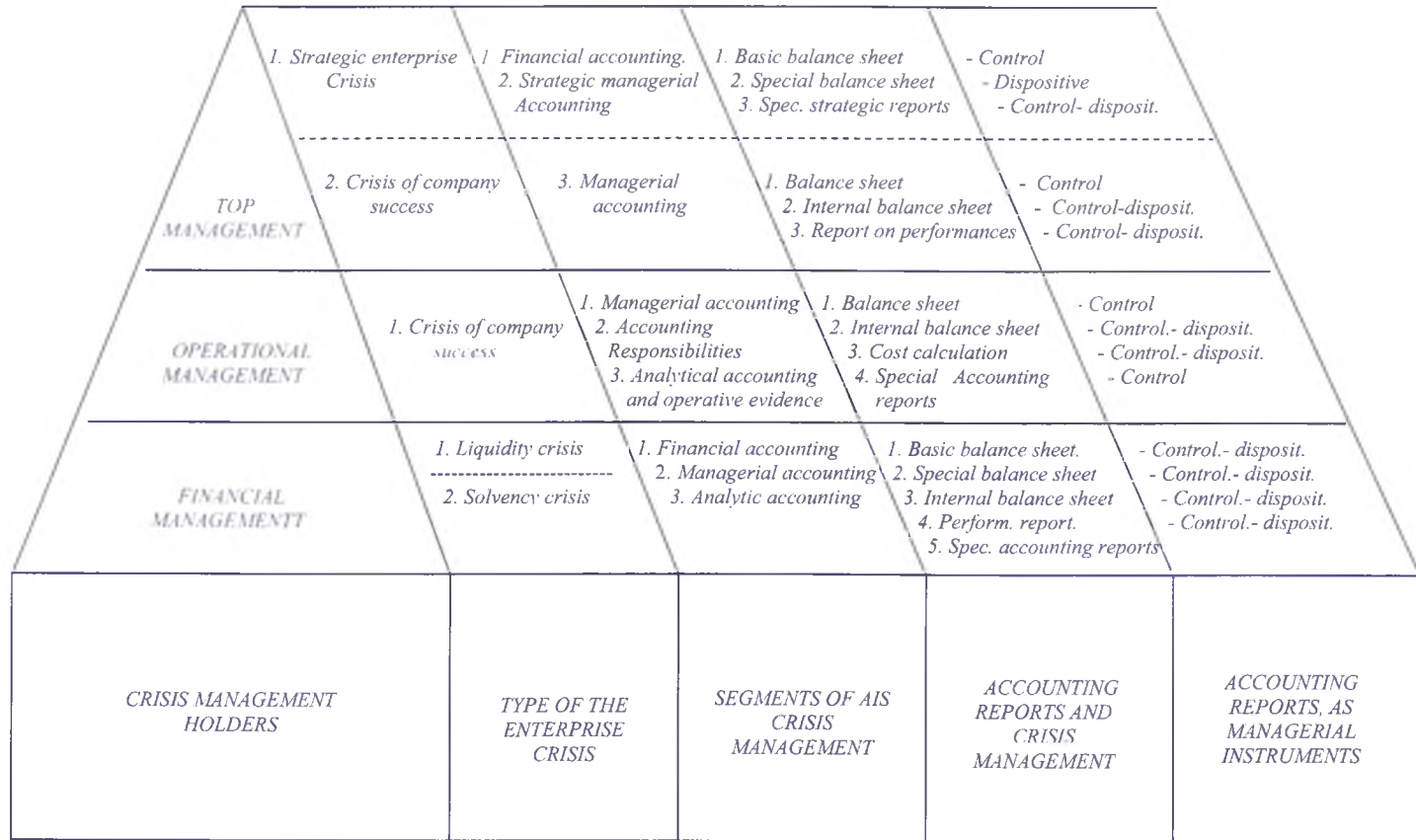
Managerial accounting, strategic management accounting, responsibility accounting and cost accounting and preparing several other accounting reports intended for enterprise management, such as a special balance sheet, special strategic accounting report, internal balance sheet, various types of reports on performance and especially the different types of calculations of cost effectiveness.

All these accounting reports, the aspect of management control activities can have *control, control dispositive and dispositive role*. The accounting report based on information contents really caused flows of the company; mainly have the *role of the control instrument* in the assessment to achieve objectives of the company or planning tasks in general. Accounting reports contain projected, planned developments of the company value and / or its segments take on the *role dispositive instrument* controlling managerial activities.

Finally, the accounting reports which have control role can notice **symptoms of the crisis**, which can be tested with a number of other pieces of information. Furthermore, the financial statements with the control features – dispositive instruments, are important source of data and information necessary to identify the **causes of the crisis** of the company, and accounting reports, particularly the basic and special balances, with the dominant dispositive directing information content; information may be eligible as dispositive instruments and indispensable information **for overcoming the crisis** of the company.

Generally, schematic representation of the relationship between the type of crisis, companies and sources of accounting information support to crisis management is given to the following scheme:

Image 1. Hierarchical view of the crisis of companies and sources of accounting information support to the holders of crisis management



Understandably, overcoming the crisis of the company means taking on the basis of this synthesized displayed accounting reports, a whole range of systematic control (control-dispositive) analysis procedures and measures depending on the type of crisis, the origin of the crisis areas – external and / or internal, in one or more functional areas-and other factors, with the aim of revealing the symptoms and causes of the crisis of the company primarily for overcoming the crisis or permanent repair of companies.

Conclusion

The global recession and financial crisis further complicated and the increase in the current economic difficulties in Serbia, which encourages and strengthens our economy crisis and the crisis of our company. Company Crisis management in our economic conditions takes some specifics in terms of symptoms and causes, and in terms of overcoming the crisis and the reconstruction of our company.

Accounting information system receives an additional, specific role and importance in the period of the company crisis. The particularity is reflected in the fact that accounting reports with the relevant information content take on the role of control and / or dispositive instruments in company crisis management, particularly a crisis of success and financial crisis. In addition to other information sources, they should provide, in part or in whole, recognizing the symptoms and causes of the crisis, the type of crisis and, in particular, preventing and overcoming company crisis.

Crisis management is a particular form of enterprise management with the aim of eliminating the causes of the crisis, and overcoming the company crisis through the process of rehabilitation. Rehabilitation measures include bringing more business and financial decisions calculated to prevent and overcome the crisis of the company, not its liquidation. Accounting reports from the financial accounting, particularly accounting reports with dispositive character from management accounting, strategic management accounting and accounting responsibilities, have the irreplaceable role of information in it.

The symptoms and causes of the crisis enterprises in Serbia have their own specific characteristics, which puts additional duties or crisis management in our environment, especially in the transitional changes and reconstruction of our big companies.

Abstract

Current world economic crisis has additional adverse impact on the crisis in Serbian economics and enterprises. Generally, enterprise crisis can be understood as a process in the time in which entire realization of enterprise purpose and objects is jeopardized in an unplanned, unwanted, however sometimes inevitable manner. In the relevant literature, starting from the symptoms of the crisis, an option about classification on liquidity crisis, crisis of success or ability to earn and strategic crisis dominates. Causes of the crisis can be numerous and diverse. They can be manifested as specific factors which lead to crisis arrival. They are grouped most often as internal and external causes of crisis.

Literature

- Drury C., *Management Accounting for Business Decisions*, Thomson Learning, London 2001.
- Hall A.J., *Accounting Information System*, Cengage Learning, South-Western, Mason 2008.
- Higgs R., *Depression, war, cold war, Studies in political philosophy*, Oxford University Press 2006.
- Malinić S., *Informacije upravljačkog računovodstva kao osnova za efikasno upravljanje preduzećem*, Zbornik radova sa XXIX Simpozijuma SRR Srbije, Zlatibor 1998.
- Malinić S., *Računovodstvena informaciona podrška upravljanju krizom preduzeća*, Ekonomske teme 6/2002, Ekonomski fakultet u Nišu, 2002.
- Malinić dr S., *Upravljačko računovodstvo*, Ekonomski fakultet Univerziteta u Kragujevcu, 2008.
- Malinić S., *Dalji razvoj računovodstvenog informacionog sistema – odgovor na izazove promena preduzeća i menadžmenta*, članak u monografiji “Kuda ide Srbija – dometi i ostvarenja reformi” NDE i AEN sa Ekonomskim fakultetom u Beogradu, 2008, p. 205–221.
- Prokopijević M., *Ekonomska kriza u svetu i njen uticaj na Srbiju*, članak u monografiji – “Tranzicija u Srbiji i globalna ekonomska kriza”, NDE i AEN sa Ekonomskim fakultetom u Beogradu, 2009, p. 139–156.
- Mecintosh B.N., *Management Accounting and Control System*, Joh Wiley & Sons, Chichester 1996.
- Ranković J., Ilić G., *Analiza rentabilitetnog finansijskog položaja privrede Srbije u 2000*, Računovodstvo, br. 7 8, Savez RR Srbije, Beograd.
- Ranković J., *Specijalni bilansi*, “Proinkom”, Beograd 1996.
- Romney M.B., Steinbart, J.P., *Accounting Information Systems*, Prentice Hall, Pearsons Education Int., New Jersey 2009.
- Ryan B., *Strategic Accounting for Management*, The Dryden Press, London 1995.
- Senić R., *Krizni menadžment*, BMG, Beograd 1996.
- Škarić-Jovanović K., *Korisnost finansijskih izveštaja za potrebe sanacionog menadžmenta*, Zbornik radova sa XXXII Simpozijuma SRR Srbije, Zlatibor 2001.

DRAGANA MARKOVIĆ, SRĐAN FURTULA

Results Achieved in Meeting Convergence Criteria in Serbia as a Necessary Condition for Joining EMU

Introduction

When we speak of the necessity of integrating Serbia into the European Economic and Monetary Union, as an important prerequisite prosperous development of the economy, the question does not concern the justification of its accession. Serbian accession to the European economic and monetary union imposes itself as the basic purpose and necessity. Adoption of decisions on integration of our monetary system in the European Monetary Union demands investigation into at least two directions: firstly, it is necessary to conduct a comprehensive and objective analysis of the state of our economy by all key parameters provided by Maastricht Treaty, and secondly, it is necessary to determine advantages and disadvantages of monetary integration. This work is dedicated to the achieved level of convergence criteria in Serbia in order to grade the achieved degree of harmonization with the EMU.

The monetary union is characterized by six elements:

- single monetary policy conducted by an independent ECB,
- Eurosystem consisting of the ECB and the NCB of the Member States,
- the single currency euro and the elimination of margins in determining parity between national currencies of Member States,
- the free circulation of capital,
- integration of banking and financial markets.

Establishing the European Monetary Union, whose primary institution makes an independent central bank with a single monetary policy and currency, reached a higher level of macroeconomic stability and increased the degree of financial market integration and the EU member states.

The Maastricht agreement, signed on 7th February 1992, proposed the introduction of the an European Monetary Union in three steps, with respect to two basic principles. The first principle implies gradualism and gradual process of transition towards monetary unification. Placing principles gradualism aimed to create opportunities for a gradual adjustment of key economic parameters in the process of connecting member countries of the European Union to the European Monetary Union. Considering the existence of a significant difference in the level of economic development, the basic objectives of economic policy, and thus a difference in the objectives of monetary policy of the future member countries, principle gradualism proved to be the best solution. The second principle is focused on meeting the convergence criteria with the aim of reducing the sustainable difference between the present EU member states. The question is asked why the meeting of convergence criteria is requested.

1. Differences in the objectives of monetary policy:

- reduce inflation,
- increase employment.

2. Differences in key economic parameters:

- inflation rate,
- volume of public spending,
- interest rates (large gains or losses),
- exchange rates.

The process of convergence is described in detail in the Agreement. The Agreement includes basic «convergence criteria» [1, p. 213]. They consist of the following conditions to be met before countries join the European Monetary Union:

1. The inflation rate must not be higher than 1.5% of the average inflationary rate of the three lowest states in the group of candidates;
2. Long-term interest rate must not be higher than the average of 2% which was recorded in three countries with the lowest inflation rate;
3. The potential members must accept the exchange rate mechanism (ERM) of the European Monetary System two years before entering the union should not make devaluation of currencies;
4. The budget deficit can not be greater than 3% of GDP (if this is the case, the deficit should fall continuously to close at a rate of 3%) or on the other hand, if the deviation from the reference values (3%) is extremely temporal, and to still remains close enough to the reference value;
5. Public debt should not exceed 60% of GDP (if so, it should significantly reduce debt and be closer to the reference values (60%) of the appropriate pace.

Experience of countries that joined the European Monetary Union, show that

a large number of current members had many problems in meeting the convergence criteria. The biggest problem for most countries was the fulfillment of conditions that affect the budget deficit and public debt. Reasons should be sought in the way of covering the budget deficit. Candidate countries for EU budget deficit usually cover from real fiscal revenues - taxes, which directly affects the level of living standards of the population and that can cause severe social upheavals. Also, reduction of budget deficit to a level of about 3% of GDP, includes measures of savings, which directly reflects the flexibility and efficiency of fiscal policy and employment opportunities.

Serbia in transition to join the EU has made significant changes in the sphere of legislation which has achieved a significant level of harmonization with European Union legislation. The question is what results Serbia has achieved in fulfilling the criteria of convergence, as well as the compulsory requirements to join the European Monetary Union.

1. Achieved Level of Convergence Criteria in Serbia

The fact that the fulfillment of all five criteria of convergence of minimum requirement that the country could access the Monetary Union, talks about their equal importance. However, it is not a coincidence that the requirement for achieving the inflation rate, which can not be higher than 1.5% of the average inflationary rate of the three lowest states in the group of candidates, listed under the ordinal number one. The European Monetary Union as its priority goal to price stability. This is the main and only objective of monetary policy of the European Central Bank. The realization of other objectives such as reducing unemployment, increasing economic growth rates, growth of wages and equilibrium in balance of payments, is of second-rate importance. ECB has no obligation to its monetary policy instruments defined in the direction of realization of these goals. Their achievement is possible only if time is not compromised of the basic objective – price stability.

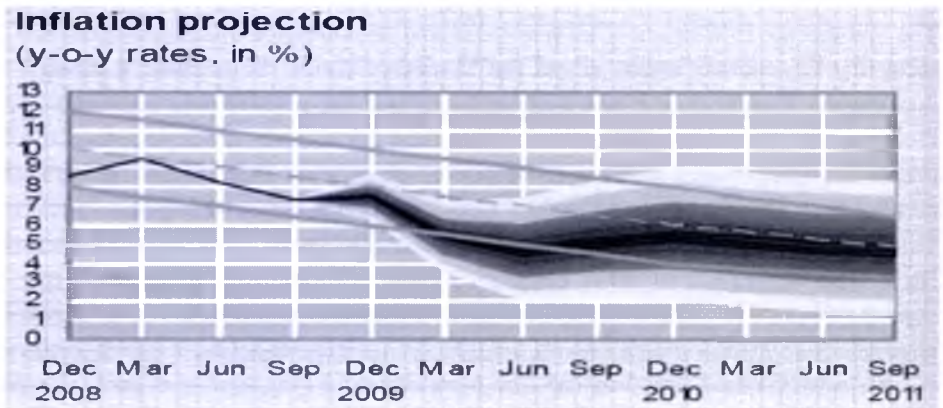
The insistence on price stability is the result of the fact that the ECB was designed on the principles by which Bundesbank it functioned. Also, the attitudes of classical monetarism, the neutrality of money on real income and employment level in the long run have a dominant influence on ECB policy. In the long term, because changes in money supply, the central bank can not influence the rate of economic growth. Experiences of countries with high rates of inflation have shown that it is in direct correlation with the high rate of monetary growth. On the other hand, extensive theoretical and empirical research confirms the correctness of the position that price stability in the long run creates conditions for increasing the rate of economic growth and employment. Price stability affects the reduction of uncertainty in making business decisions, precludes the need for hedging activities, stabilizing interest rates and reduces the risk of inflation, which directly affect

the improvement of investment conditions, their growth and increase employment. Price stability affects the growth of savings, which is an important factor in increasing investment.

Price stability contributes to attracting foreign investors and is of paramount importance for the economy of the country that does not have its own accumulation. All told indicates that if the central bank and its monetary policy provide price stability it indirectly creates the conditions for achieving other macroeconomic goals.

In the purpose of fulfilling the convergence criteria relating to achievement given the rate of inflation, the National Bank of Serbia in Article 3 Law on the National Bank of Serbia, as the primary goal of achieving and maintaining defined price stability. Thanks to the measures of monetary policy, inflation of 17.7% in 2005, reduced to 6.6% in 2006, and at the end of 2009 – it will amount to 7.5%. Figure 1 shows inflation projection for 2010 and 2011.

Figure 1. Inflation projection



How restrictive monetary policy of the NBS starting from 2000 contributed to lowering inflation and to what extent is now closer to a given price increase between 2–3% as it was in the EMU, can be seen from the comparative examination inflation in the EU, EMU and Serbia.

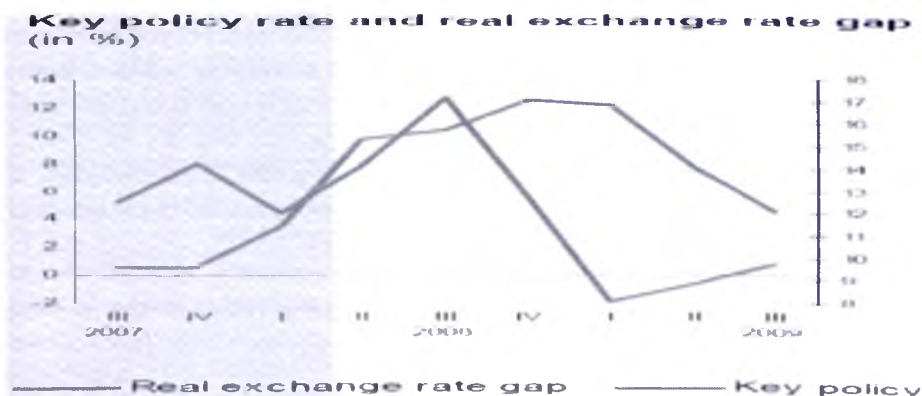
Table 1. The inflation rate in EU, EMU and Serbia in %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 ¹
EMU countries	1.9	2.2	2.1	2.0	2.0	2.2	2.2	2.3	2.2	0.5
EU countries	2.1	2.2	2.1	2.0	2.0	2.2	2.2	2.1	1.6	-0.1
Serbia	111.9	40.7	14.8	7.8	13.7	17.7	6.6	5.4	10.1	5.2

Source: Eurostat and NBS.

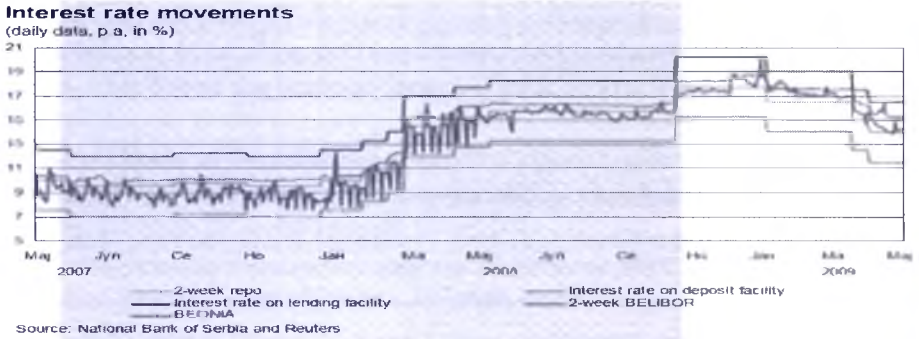
Maintenance of core inflation within the projected influenced the decision to reduce the NBS key policy rate by 18% in 2006 to 9.5% in 2007. In 2008 it increased again to 17.75%, in order to mitigate inflationary pressures. In 2009 reference interest rate was reduced to 10%. The National Bank of Serbia conducts auctions in No-Limit the amount two times a week. Due to such ways of conducting monetary policy, the NBS was transferred to the regime of inflation targeting. The main instrument of monetary policy, aimed at achieving a relatively low and declining core inflation, the two-week repo rate which is defined solely on the Monetary Policy Committee meetings, which maintains the pre-famous calendar. Policy of lowering the reference interest rate of the National Bank of Serbia shows intention of harmonization with the ECB monetary policy. It is expected that these measures lead to a fall in interbank interest rates and financial markets and interest rates on bank loans and thus affect lowering the cost of financing.

Figure 2. Moving the reference interest rate and real exchange rate



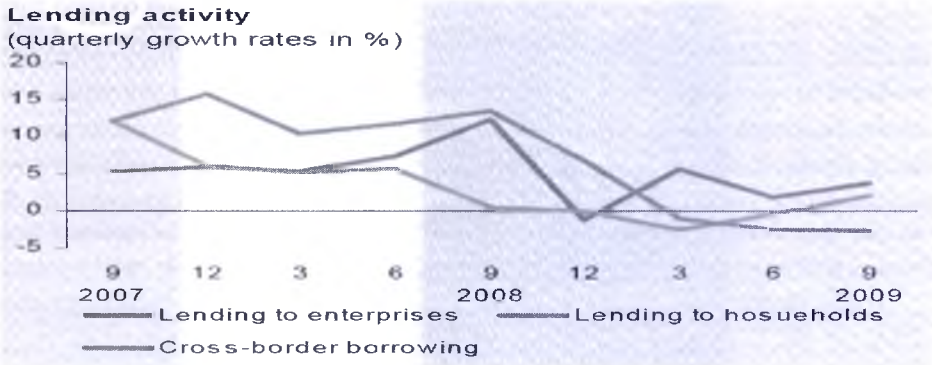
Although there was a decrease in the reference interest rate, which is in accordance with the intention of equalizing interest rates in the European countries, the high level of liquidity in the banks causes a permanent increase in the purchase of securities by banks and reduction of the real sector loans.

Figure 3. Moving interest rates of NBS



Given the decline in the level of lending of the real sector by sector banks in 2009, which is among other systemic factors affect the reduction of all forms of demand and especially investment, the government adopted a package of measures to encourage credit lending of the real sector. Direct interest rate subsidized by the government reduced the financing costs on the condition that users keep their loans current number of employees. Subsidized interest rates apply to loans intended for the purchase of domestic products. In order to encourage credit activity of banks, the National Bank of Serbia is the institution for calculation of reserve deposits intended to exclude loans that banks approve companies for investment and population for the purchase of durable goods produced in Serbia. The above measures are aimed not only at mitigating the degree of restrictiveness of monetary policy, but also at preventing absurdity of keeping inflation within the planned fall in terms of economic activity and widespread economic insolvency. Considering that, it makes sense to ask a question whether the Central Bank has implemented too sharp restrictive monetary policy to price stability, if it is known that the greatest impact on inflation in Serbia has increased prices of products which are under state control.

Figure 4. Quarterly growth rates of lending



If we start from the fact that countries in transition have time limit of ten years to achieve convergence criteria, the pace at which Serbia realizes lowering inflation can be regarded as satisfactory. Although the reduction of annual inflation rate can be accepted as satisfactory, core inflation is still quite high. Core inflation is equal to the increase in retail prices – energy, basic food and agricultural products, housing utilities, drugs, tobacco, public transportation, TV subscription, social protection and insurance. The Monetary Policy Committee warned of the effects of increasing energy prices, particularly oil. To keep inflation in the planned act, it is necessary to prevent the growth of public spending as well as the adjustment of real wage growth to productivity growth. Unlike previous years when real wages in the public sector had a tendency of growth, in 2009 personal incomes were frozen in the public sector. This eliminated the negative impact on inflation.

When we speak about the reduction of growth of public spending the fact of election the way to achieve it is not insignificant. The latest government proposals to achieve reduction of public spending by freezing the salaries in the budget sector, it is not solution good enough. It is not good because it is a personal income of employees in institutions that are crucial for the current (health, judiciary, police, army), and especially the future functioning of society (education, science, culture). Public demand reduction could be achieved with fewer adverse effects, reducing the number of employees in public administration and in particular reducing the scope of privileges of employees in public administration, governing boards of public companies. The growth of personal consumption in previous years to a great extent was generated by increasing the volume of cash loans of banks. Every third employee in Serbia in 2007 used cash loans that were 37% of total loans.

Figure 5. The structure of retail loans

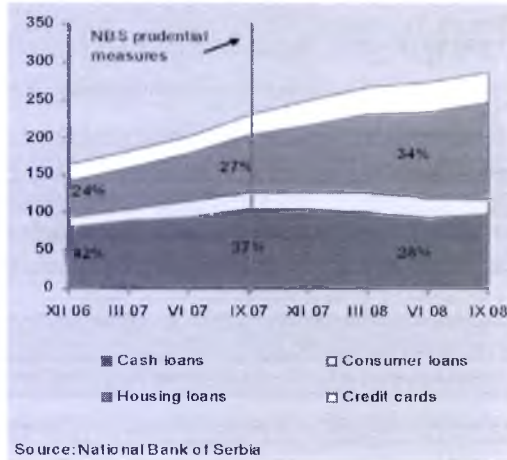
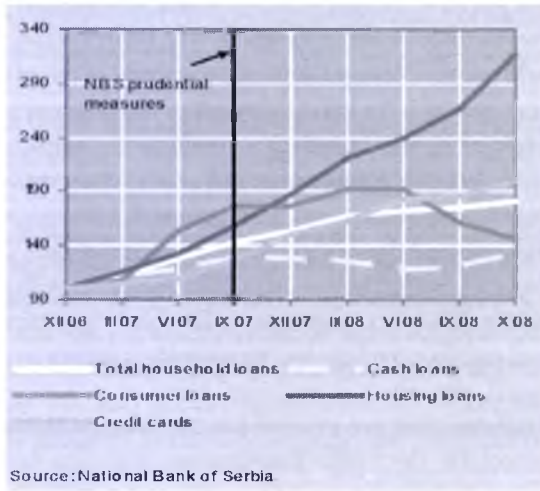


Figure 6. The structure of retail loans

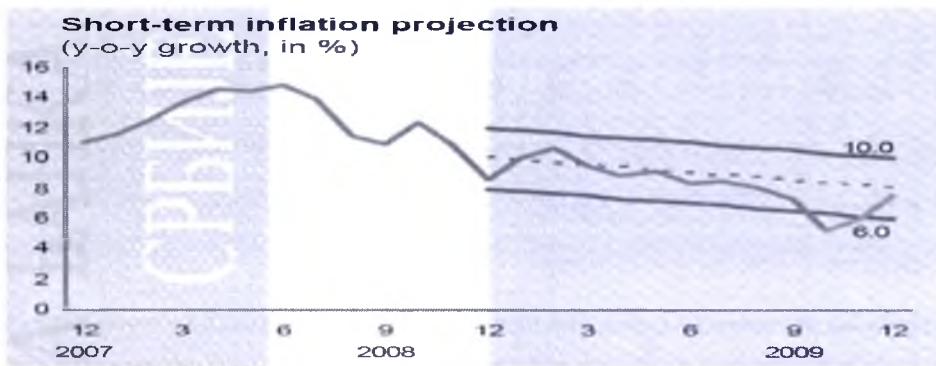


Cash loans with a duration longer than one year have negative effects on price stability. The 2007 faster growth in retail loans of savings in this sector was recorded, which was an extremely negative tendency.

Seen in the long term, the growth of personal spending, especially based on consumer credit and rising personal incomes above productivity, has led to price instability and the reduction of real resources to finance investment in the long term, and thus has decreased the rate of economic growth. These were the reasons for the restriction of cash loans in 2008 as a term of two years.

In the short term, this movement of domestic aggregate demand, with the increase in exports were the main generators of economic growth in 2006 and the first half of 2007. Since late 2007 and especially in 2008 there has been a drastic fall in especially private investment demand, as well as debt reduction credit the real sector and the National Bank of Serbia adopted in 2009 package of measures to encourage credit activity of banks. In order to mitigate the degree of restrictiveness of monetary policy in February 2009, NBS has adopted measures aimed at encouraging banks credit activities. Loans approved companies for investment and population for the purchase of durable goods produced in Serbia are exempted from the base for required reserve. All these measures have had a result in a significant drop in inflation since the beginning of transition until today.

Figure 7. Projection of in the short term inflation



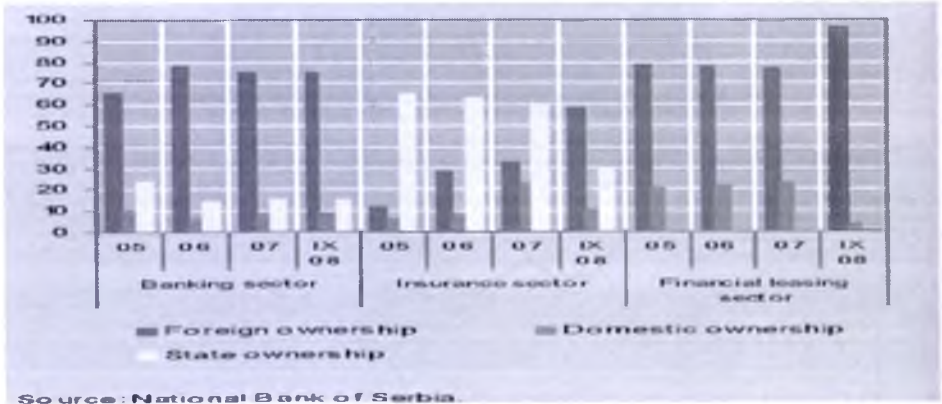
Realization of the other convergence criteria, which refers to achieving a given level of long-term interest rates is a big challenge for monetary authorities and the monetary policy of the NBS. Although the reduction in interest rates directly depending on the pace at which the rate of inflation lowers, it is necessary to achieve a number of other conditions essential to achieve the desired level of interest rates. The basic condition is certainly creating a healthy competition between banks. It was achieved through the measures of central banks that have resulted in:

- closure of insolvent and pyramid banks which constituted 66% of the banking sector,
- privatization of state-owned banks,
- creating conditions for attracting foreign banks,
- strengthening the financial markets.

The first significant result of the measures of the central bank is a positive change in the ownership structure of banks. At the end of 2008, the banking sector in Serbia had a total of 34 banks. The largest number of banks operating in the terri-

tory of Serbia are the banks in majority-owned by foreign shareholders – total of 20. The majority ownership of domestic natural and legal persons is 6, and only 8 banks in majority ownership of the Republic of Serbia. Change of ownership structure reflect the change in their participation in the balance sheet amount of the banking sector. The participation of banks in majority ownership of foreign persons is 78.4%, the bank with privately owned domestic entities participate in 6.6% and state-owned banks participate with 15.0%.

Figure 8. Ownership structure of financial sector



Abolition of insolvent banks and merging of the banking sector has resulted in a significant increase in the participation of banks with a greater balance amounts which created conditions for lowering interest rates. Results enlarging process can be seen from the data given in Table 2.

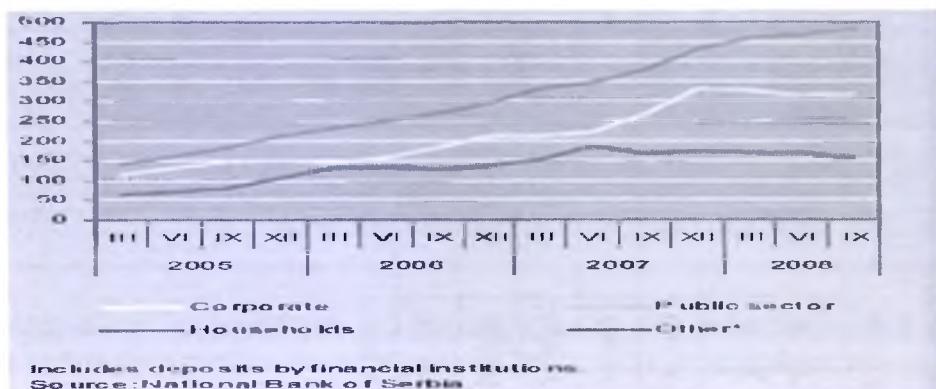
Table 2. Participation of banks grouped according to the balance sheet amount [4, p .4]

Balance amount in billion. din	31.12.20005.			31.12.2006.			31.12.2007.			31.12.2008.		
	Number of banks	in mil. din.	% Share	Number of banks	in mil. din.	% Share	Number of banks	in mil. din.	% Share	Number of banks	in mil. din.	% Share
over 100	1	119.423	15.4	4	507.169	40.1	4	507.169	40.1	5	820.385	46.1
50-100	3	225.073	29.0	4	248.795	19.7	4	248.795	19.7	7	516.903	29.0
10-50	17	326.953	42.2	17	434.820	34.4	17	434.820	34.4	15	404.170	22.7
do 10	19	103.964	13.4	15	96.775	8.3	13	72.713	5.8	7	35.461	1.9
Total	40	775.413	100	37	1.169.271	100	38	1.263.497	100	34	1.776.919	100

The data in the table show that the biggest change occurred in banks with balance amount of over 100 billion. Participation of banks with the balance amount of 15.4% in 2005, increased to 46.1% in 2008. From one bank in 2005 that number had risen to five in 2008.

Restrictive monetary policy in recent years resulted in a significant decrease in inflation and stabilizing the financial sector. This had a direct reflection on the return of confidence in the banking sector, which last year affected the growth level of deposits in banks. Growth of total deposit potential in the first quarter of 2007 amounted to 50.6 billion din. or 7.6%, of which foreign currency deposits increased by 9.1% and 4.7% RSD. Observed by sectors, most deposits have increased by 11.8%.

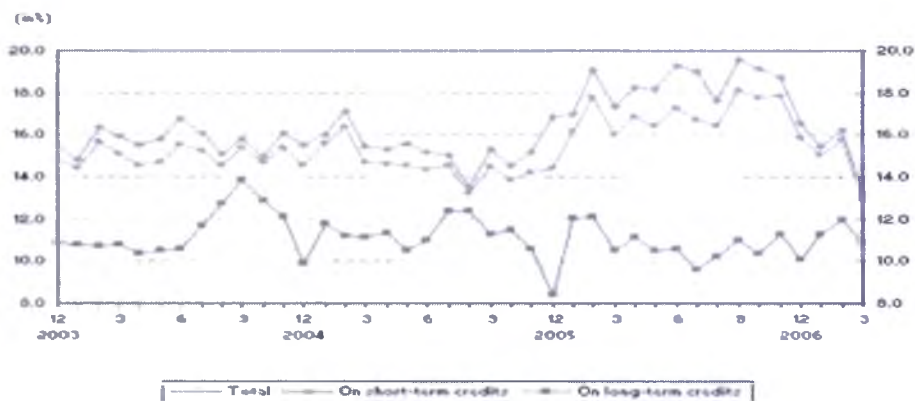
Figure 9. Moving non-bank sector deposits in banks



The growth of deposits, merging banks and intensifying competition, have influenced the reduction in interest rates, but they are still well above the interest in EMU countries and countries in the region. Thus, for example, in the first half of 2007 the unconditional interest on loans range from 11.3% up to 30% annually, while in the surrounding countries such as Croatia, Bulgaria and Romania the average amount is 6.46%. These data show that the interest rate in Serbia is still the highest in Europe.

In the 2008 and 2009, the movement of interest rates was conditioned by the financial global crisis, while the moving of average rate on loans between banks from 2005 to 2007 is shown in Figure 9.

Figure 10. Active and passive interest rates of commercial banks



Still high interest rates in Serbia, despite the growth of deposits in banks can be explained by:

- High level of domestic demand;
- Relatively high fixed costs of banks. The amount of fixed costs significantly affect a large number of reports that the banks are obliged to submit to the NBS. After six years of transition and reaching the level of development of the banking sector there is an urgent need for revision of the entire framework of the NBS. First of all, there is the need to report the number of banks that are obliged to submit the NBS certain information. Regulation and supervision of the NBS should be limited solely to the monitoring of liquidity and solvency of banks. This would create conditions for increasing the degree of autonomy of banks in assessing the degree of business risk, which is in accordance with the Basel 2 standards [5, p. 37]. Reducing the cost of reporting will affect the correction of active interest rates down and increase rates on deposits;
- The frequent absence of adequate assessment of the credit bonity of customer loans: bank knowingly make mistakes, as a response to the presence of increasing competition in the market of banking services. On the other hand, in order to assure the possible risks of returning the loan, the bank increased interest rates;
- The fact that the banks are still the main source of external funding sources, despite the existence of capital markets and efforts to develop it as quickly as possible: if we observe the traffic on the Belgrade Stock Exchange in 2006 and the first half of 2007 following conclusions can be made:

- Total number of transactions for the first six months in 2007 was 28,923 higher than the number of transactions for the twelve months in 2006. If we compare the value of transactions conducted it in 2006 it has increased by 3,222,684,555 dinars, which is the minimum difference with respect to the time interval of observation. [7, p. 1];

- subject to trading the bonds of Serbia and the small number of shares of the company.
- emergence of the global financial crisis influence on the withdrawal of foreign investors from the capital market, so to affect the reduction in the volume of trading.

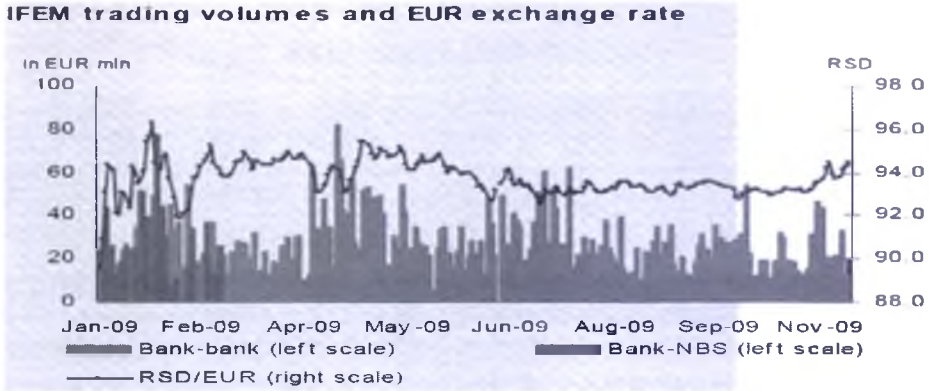
Further development of capital markets largely depends on the state, which should help the broadcast and sale of shares or bonds of public companies, and municipal bonds of municipalities and cities. This would contribute to deepening the domestic capital market and impact on attracting a larger number of foreign investors.

Although banks still have a dominant role in raising the net financial surplus accumulation, in recent years a positive tendency of a number of other financial intermediaries appearing has been present insurance and leasing companies, private pension funds and investment funds. This will lead to intensifying competition in the market of financial resources and will inevitably affect the further lowering of active interest rates on bank loans.

The third convergence criterion refers to the requirement that a country, the future member of EMU, can not make the national currency devaluation rate of at least two years before joining the monetary union. The National Bank of Serbia shall take measures that will result in the formation of the dinar exchange rate solely on market principles. Its main goal in the sphere of foreign policy comes down to creating the conditions that formed the basis of course supply and demand of foreign exchange between banks in the interbank foreign exchange market (FEM) or outside of FEM. Therefore, its presence in the foreign exchange market is reduced to a minimum. It intervenes only if necessary to eliminate the higher daily rate fluctuations. With the same goal are the efforts of central banks to exchange operations fully transferred to the Bank, by gradually reducing commissions paid exchange offices.

In one part of the public present expert opinion is that the dinar exchange rate is unrealistically high in relation to the euro. Its level is conditioned by a wide range of euros due to foreign inflows of funds based on privatization, as well as higher interest rates in Serbia in relation to the environment until the outbreak of the global financial crisis. The Central Bank does not want to affect the amount of foreign exchange rate, buying foreign currency, because it would thereby increase the level of amounts of money in circulation which would be reflected in the increase in demand and inflation. The result of this policy is a great deepening foreign exchange markets between commercial banks, especially in the last quarter of 2006 and the first half of 2007. Large transactions between banks indicate that the exchange rate, since it is freely formed on the basis of supply and demand of foreign exchange is real. Since February 2009 the National Bank of Serbia has not intervened in the foreign exchange market.

Figure 11. The participation of banks and the NBS in the creation of the dinar exchange rate

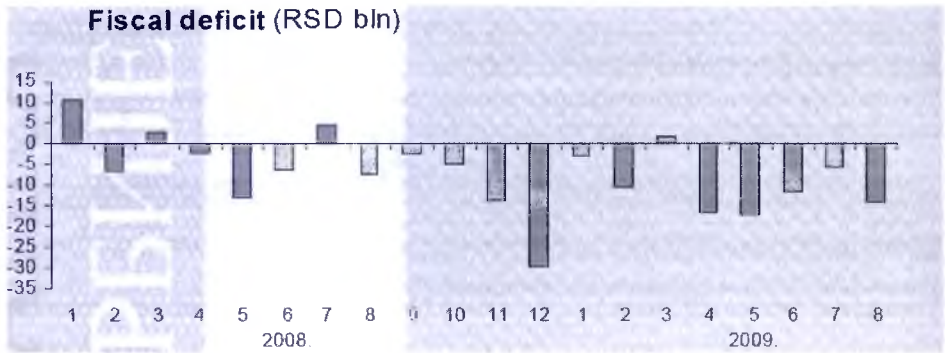


Changing role of the exchange rate, which becomes an indicator rather than an instrument of monetary policy, also was conducted with the aim of harmonizing with the policy of the ECB. Reduced presence of the central bank in the foreign exchange market is aimed at strengthening and increasing the efficiency of the basic instrument of monetary policy – a reference interest rate. Contribution of the NBS on FEM starting from 2003 was significantly reduced to from 69% in 2003 to 14% in 2006. The last meeting of the interbank foreign exchange market was organized on 1th June 2007, and since then the exchange rate has been established on the basis of direct trading between banks. Such ways of conducting monetary policy, the NBS was transferred to the regime of inflation targeting. Moving to a new system of rare intervention in the FEM, the central bank implemented only when necessary to prevent major daily exchange rate fluctuations, in the case of any threat to financial and price stability, or security needs of a safe level of foreign reserves.

If we observe the movement of the height rate of the dinar to the euro we may notice starting from 2005 until the first half of 2007 its relative stabilization. Unfavorable balance of payments developments, political instability and psychological factors has an affect on the foreign exchange rat fluctuations. Negative psychological effects are the result of negative trends inherited from the past, and manifested in the withdrawal of foreign savings and increasing demand for foreign currency in terms of increased risk and crisis. As a result, the end of 2008, during the global financial crisis, the negative impacts of exchange rate movements had a domino effect, leading to a weakening dinars for more than 30%. If we exclude the effects of the global financial crisis, it can be concluded that the exchange rate in Serbia has not fluctuated significantly, and given that Serbia did not make devaluation of the dinar, is fulfilled the exchange rate criteria of Maastricht.

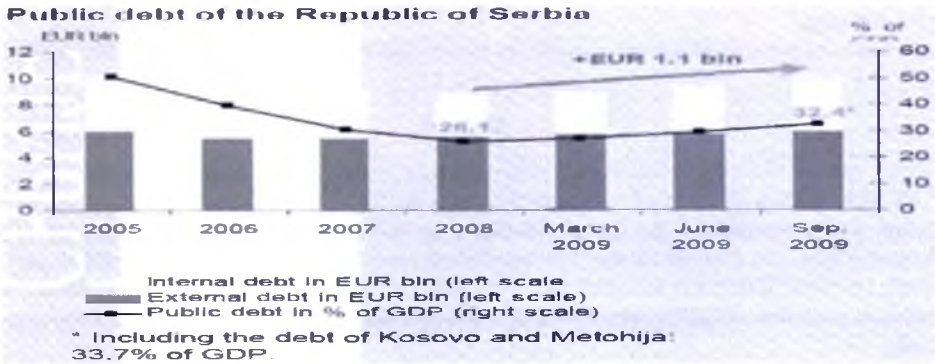
Since the beginning of the transition process in 2000, the budget deficit was continuously reduced by the volume of public spending. The state of public revenues and expenditures and their participation in the GDP is shown in Figure 12.

Figure 12. Budget deficit of RS



Consolidated deficit in 2008, according to the methodology of the IMF, amounted to about 2.5% of GDP. In the second half of 2008 there was an increasing expansiveness of fiscal policy, which resulted in the emergence of deficit. The increase in the deficit, in addition to the growth of social welfare, influenced and slowed economic activity and foreign trade and the global financial crisis. In 2009 budget took development character with increase a participation of intervention in the economy and reduce a spending budget users. The amount of the project budget deficit for 2010 was influenced by the recession movement in the world economy. In agreement with the mission of the IMF the budget deficit from 4.5% in 2009, must not be greater than 4% of GDP in 2010 or roughly 100 billion dinars, which is below the average budget deficit in the EMU, which is 5.9%. The amount of budget deficit, in 2009 was, influenced by a reduction in GDP by 3%, while in 2010 expected increase in GDP of 1.5%.

Figure 13. Public debt of RS



In addition to the successful reduction of inflation and reducing interest rates Serbia has managed to achieve the fifth convergence criterion, related to the amount of public debt (see Figure 13). Public debt in 2009 is about 9.5 billion euros, of which 5 billion is related to external debt and 4.5 billion euros on internal debt. The total GDP is 30 billion, and is easy to conclude that the overall public debt is below 30% of Serbian GDP, i.e. that satisfied the fifth convergence criteria. What is worrying is the fact that Serbia only in 2009 commissioned for more than a billion euros, but the encouraging fact is that most of the charges due to the NBS foreign exchange reserves, which amounted to about 9.5 billion euros, which guaranteed macroeconomic stability.

Conclusion

The analysis of the results achieved in the process of transformation of the banking and overall financial system in Serbia showed that it reached a significant level of harmonization with the Maastricht convergence criteria defined by Agreement. Sector banks was the largest generator of economic growth in Serbia on the basis of domestic deposits. Although the changes in ownership structure of banks and other financial intermediaries resulted in reducing the rate of inflation, interest rates and market formation of exchange rate, and changed the role and behavior of the state led to the reduction of budget deficit and the extent of its indebtedness, it is only the beginning but no end of restructuring. NBS has already done a lot of that and uses the same instruments and the objectives like monetary policy of ECB, but finer tuning of the NBS monetary policy with the policy of the ECB will be in future. Although the results achieved in meeting the Maastricht convergence criteria in Serbia are positive and nominally achieve convergence criteria, it is the first and easier phase in the process of joining the EU and EMU. The second phase, which is difficult to achieve, is the real convergence. It includes

the harmonization of labor market, regulation of foreign direct investment, fiscal policy, ie. includes proper transformation and homogenization of the real sphere of economy.

Abstract

This paper deals with achieved convergence criteria according to the Maastricht agreement. Key parameters were analyzed: the rate of inflation, long interest rate, currency, country's debt rate, budget deficit. The analysis showed that transitional process of Serbian economy could be positively evaluated. Restrictive monetary policy obtained the following results: reduction of the rate of inflation, reduction of interest rates, reduction of budget deficit, market criteria influence exchange rate.

Literature

Grauwe P. (2004) *Economy of Monetary Union*, Publishing Library Zoran Stojanovic, Sremski Karlovci.

RS Official Gazette, No. 72/03 and 55/04.

NBS, Annual Report 2006, 2007, 2008.

NBS (2009) Division for the control and supervision of banks and DFO.

NBS (2009) Inflation Report – November.

NBS (2009) Presentation of Vicegovernor Bojan Marković, Inflation Report November.

NBS (2009) Press Conference of Governor Radovan Jelašić, November.

Jelašić R. (2007) "How further", *Economist magazine*, special edition, June.

<http://www.nbs.rs>.

<http://www.belex.co.rs>.

JERZY MIKUŁOWSKI POMORSKI

A dispute over the Existence of the Intelligentsia

Introduction

The intelligentsia is a specific social phenomenon. Here, I am not using a very precise definition because sometimes it is presented as a class, sometimes as a circle and, last but not the least, as a social group.

Individual nature of this creation results from its impermanence and dissimilarity of its indications, appearing in various countries and different times. It means its indications are variant, influenced by specific social conditions.

The intelligentsia is known to be characterized by higher than average education. Its members share a belief of their social dissimilarity and a sense of mission they have to fulfill in a society.

Since in a well-organized society well-educated people should professionally perform tasks matching their qualifications, the awareness that the society, for its own well-functioning, requires people with mission, proves the society's disability or special challenges it is facing at that time. Hence, in the name of the nation's success and confirmation of the level of being civilized reached by the very nation, it happens quite often that when the intelligentsia exists, its twilight is foreshadowed, thus leading to its early end. Ludwik Haas will write: The intel-

ligentsia „, a word used to mark a social community, functioning in the countries with belated development of capitalism”¹.

And thus, in Poland, which is a specific bastion of the Central European intelligentsia, soon after the transformation process started, “Wprost”² magazine announced its end, and a few years later Ryszard Legutko demonstrated the arguments for its inevitability.

The intelligentsia is disappearing due to:

- regaining sovereignty. Therefore, there is no demand for a group of special teachers.
- a new society which is going to become more individualistic; along with this process most of collective ideas as well as responsibilities will collapse
- a free market system which will make the intellectuals an occupational category, similar to other groups
- processes of homogenization of the world which will result with Poland conforming to other countries³.

Soon, these opinions were confirmed by another Wprost publicist, Bronisław Wildstein. However, shortly after that Law and Justice (PiS), a political party both authors associate themselves with and which Wprost supported, announced it represented the best, because originating from Żoliborz (Żoliborz being one of the northern boroughs of Warsaw), fraction of the Polish intelligentsia. This group was facing a huge national task – building foundations for the Fourth Polish Republic. What’s important, the authors who had previously foretold its fall, did not protest against it. Speaking not only on his own behalf but also reflecting the views of his political party (PiS), the President of the Polish Parliament of that time (a trained sociologist) introduced an insulting term: *wykształciuchy*⁴, which, as it later turned out, applied only to the part of the intelligentsia which usurped their position, not the real one.

However, it can’t be argued that the intelligentsia has become a subject of a political game only because the political party first advocated its sudden death and then resuscitation.

Being an intellectual is flattering, which, in the course of developing individualism and, connected with it, narcissism, becomes more and more important.

¹ L. Haas, *Pokolenia inteligencji polskiej*, Mazowiecka Wyższa Szkoła Humanistyczno-Pedagogiczna w Łowiczu, Łowicz 1997, p. 87.

² „Wprost” 1998.

³ R. Legutko, *O tak zwanym końcu inteligencji* [from:] *Inteligencja. Tradycja i nowe czasy*, ed. by H. Kowalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2001, p. 33–39.

⁴ A contemptuous term, originally used by Aleksandr Solzhenitsyn – in Russian it is called “inteligencziestwo”.

Needless to say, being an intellectual is desirable and stylish, it constitutes a special brand in both public life as well as politics. However, not many people share this view, believing that contemporary intellectuals are in fact romantic losers who are modeled after Socrates, whose destiny was a suicide.

Hardly had the end of the intelligentsia been announced when the voices for its further existence appeared.

It is said the intelligentsia should vanish. However, its existence is vital for an accomplishment of important social aims.

A demand for the intelligentsia is a kind of a proof that civilization processes which were supposed to lead to its disappearance and start the phenomenon of professionalization, have slumped.

Also, such a demand for the intelligentsia is reported by the leaders of the countries that have never experienced it.

Nowadays, such voices can be heard in Ukraine and, what's really interesting, in Kazakhstan, where the President Nursultan Nazarbayev is calling for a formation of a group called *pasjonaci*, who will give some meaning to the social changes and the nation's identity⁵.

Nevertheless, some critical analysts of the problem perceive the intelligentsia only in few selected types.

In the middle of the seventies last century Aleksander Gella distinguished seven basic types of the intelligentsia.

1. The historical classical intelligentsia of Russia and Poland.
2. The social groups during the interwar period in Hungary and Czechoslovakia.
3. A part of the better-educated and humanistically-oriented middle class of the West together with professional intellectuals.
4. The intelligentsia working in the socialist countries.
5. The educated strata in new African and Asian nations which compete with the native bourgeoisie for national leadership.
6. Groups of dissident and, in part, revolutionary intelligentsia which during the last 20 years, have begun to appear in the affluent societies.
7. The small groups of dissidents in the Soviet Union and Eastern Europe which resemble the classical intelligentsia of the nineteenth century⁶.

It seems that as for contemporary time it was an incomplete catalogue. However, the direction for further research was well-defined.

⁵ A fragment of a speech by President of Kazakhstan Nursultan Nazarbayev in the Assembly of Nations of Kazakhstan in April, 1997.

⁶ A. Gella, *The Intelligentsia and the Intellectuals*, Sage, Beverly Hills 1976, p. 23.

1. The Intelligentsia is Something More than Educated People

Undoubtedly, the demand for well-educated people present in social structures results from the openness and dynamics of the society. An American sociologist Don Martindale reminds us that the absorption of people educated by the system expresses the demand for innovativeness⁷.

What happens with them when the absorption does not happen? Then, they enter the intelligentsia, an educated group which is not taken advantage of by the system. It is a community, which, all by itself, is looking for a place in a social life, thus completing the existing gaps or attempting to transform the system.

The intelligentsia occurs in the societies experiencing stagnation: ossification of norms and rules of behavior. Such a society requires a change. Well-informed people who are curious about the world around and bored with monotony, people who are creative and, therefore, willing to offer a change are needed as destructors of the old order and creators of a new one. A strong factor contributing to a change is strengthening of this innovative passion through knowledge and the ability to use it. If it fails to happen, educated people may be rejected by the system.

A Norwegian scientist, Stein Rokkan⁸, paid particular attention to the intelligentsia of educated Norwegians in the 19th century. Then, the country belonged to Sweden and educated Norwegians were excluded from Swedish plutocracy. Also, at that time, Bolesław Prus was writing about hyperproduction of the intelligentsia.

A classic example of creating unnecessary people in the pre-revolutionary France is given by Alexis de Tocqueville⁹.

Contemporary arguments over the existence of the intelligentsia must take into account the fact that a number of well-educated people, who do not have suitable conditions for their full absorption in a social system, still remains.

⁷D. Martindale. *The Sociology of Intellectual Creativity* [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, New York: Greenwood Press 1987.

⁸See Rokkan Stein, a lecture on European Party System, London School of Economics 1974.

⁹A. de Tocqueville, J. Bonner, *The old Regime and the Revolution*, Harper and Brothers Publishers Franklin Square, New York 1856, p. 197–200.

2. Notion Problems

A debate over the intelligentsia faces difficulties resulting from the lack of its recognized definition.

Aleksander Gella focuses on three approaches in defining the intelligentsia:

- the first one relating to the function of this social stratum
- the second one relating to the individual features of its members
- the third one relating to the historical events accompanying its existence

A functional definition describes the intellectuals as persons who participate in creating, distributing or managing cultural goods. An attributive definition identifies the intellectuals according to the level of education, profession, income and social relations. A historical definition treats the intelligentsia as a unique phenomenon which happened at a given time and place¹⁰.

Joanna Kurczewska (1998) lists possible definitions:

- a community of people who are highly intellectual, artistic or who share moral values;
- a community of people who are professionally engaged into artistic work or headwork;
- a community of people who base their existence on headwork and, as a result of their performance, find themselves in a particular place of social structure and perform certain functions in both the society and the country;
- a community which is favoured due to a particular type of an axiological orientation resulting from intellectual competence.

All these approaches relate to Karol Libelt's¹¹ conceptualization. He was the first one who, in the notion of the intelligentsia, included everyone who, after having received a thorough background, led (the nation, the people) due to their higher education¹².

This phenomenon can be perceived in a different manner, using the concept of habitus – a sum of accepted, quite often subconsciously, certain assumptions. Therefore, it will allow us to distinguish their characteristic features. The further it is analyzed, the more the intelligentsia of a particular country, in this case Poland, is characterized.

¹⁰ A. Gella, *A Structural Definition of the Intelligentsia Against the Background of Three Historical Periods*. [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987, p. 23.

¹¹ K. Libelt, *O miłości ojczyzny. Rok 1844 pod względem oświaty, przemysłu i wypadków czasowych*, Poznań, 1844, p. 53.

¹² J. Kurczewska, *Inteligencja* [in:] *Encyklopedia socjologii*, Vol. 1, Oficyna Naukowa, Warszawa 1998, p. 337–43.

Adam Bartoszek¹³ distinguishes among the following typological elements of this habitus:

- recognizing education as an essential life value and perceiving the need for self-education as a basic feature of an intellectual;
- aspiring for a cultural and social promotion; aiming at higher education and creative work, enabling intellectual self-realization, promotion and professional prestige;
- a domination of dignity attitudes over the pragmatic ones, advancement of values higher than the material benefits, rejection of enrichment at the expense of violating moral values or friendship as the example of ruthless materialism and business-like egoism;
- an acknowledgement that culture and cultural aspirations are the main values the intelligentsia orientates on;
- an attachment to behavior and symbols manifesting the support of the standards belonging to the circle of higher artistic culture, conscious resistance against the expansion of mass culture;
- a creation of exclusive social groups and ideological circles, referring to the achievement of intellectual elites; the concentration of a social activity on ideas and works advocated by intellectual and moral authorities;
- a sense of mission or vocation connected with conveying these standards to other groups and younger generations; an aspiration to be an authority or a moral guide for one's charges or subordinates;
- sensitivity towards human injustice and the indigence of socially disadvantaged strata, being manifested by public-spirited activity or the imperative of charity work; organizational activity being expressed by establishment of associations and organizations aiming at supporting social progress.

Ludwik Haas also provides with another example of such an approach:

- a concern about freedom and independence of the home country, sensitivity towards existing threats and readiness to sacrifice in order to improve the chances of development of the home country.

The intelligentsia can also be described as:

- the people, whose basic but not necessarily a sole source of income, was payment for qualified brain work, performed both for one's own account as well as mercenarily;
- a gathering of different non-formalized but specific circles – social groups
- good manners were the characteristic feature of affiliation to such circles. The affiliation is connected with a sense of betterness;

¹³ A. Bartoszek, *Habitus polskiej inteligencji w społeczeństwach realnego socjalizmu i rynkowej transformacji* [in:] *Inteligencja między tradycją a wyzwaniem współczesności*, ed. by: J. Mikułowski Pomorski, Akademia Ekonomiczna, Kraków 2005.

- people who did not belong to these circles were not treated as the intelligentsia (e.g. the half-intelligentsia);
- since the middle of the 20th century this term has applied only to the circles which incline towards liberalism, the left wing, liberality or rationalism;
- the youth, which was prolonged due to the period of studying, and the experience gained during that time was considered to have been a crucial factor contributing to the formation of intelligentsia-like approach;
- relationships between peers played a more important role than a family
- the importance of moral values systems – imponderabilia, of more importance than beliefs;
- the generation of the intelligentsia is a community of burden of aspirations¹⁴.

3. International Comparisons

A problem of intellectuals

A common belief that the intelligentsia applies only to Central Europe and does not occur in the Western countries is a far-fetched simplification. On the contrary, each one of Western Europe countries experiences the existence of the intelligentsia. However, it is not a constant phenomenon.

In the western literature the problem of the intelligentsia is investigated among the issues of social functioning of creative people or people with a degree. The place of such people in the society has both cultural and social foundations. In different societies these people play different roles, however, they always oscillate among a thinker, a teacher, a priest and a clerk. Don Martindale, who ponders over this issue in a comparative manner, finds a place for them in the ancient societies of China, among educated clerks and itinerant teachers, in India among ascetics, in Palestine among prophets and in Greece among philosophers.

Such people generally have a status of intellectuals, in other words professionals, who have a place in the society due to their higher skills. Therefore, in ancient Greece Dan Martindale sees among them:

- a politician,
- a lawyer,
- a sect founder,
- a teacher,
- a doctor¹⁵.

Intellectuals are the very professionals who, in their roles, are absorbed by the system, which means they are accepted by the authority.

¹⁴L. Haas, *Pokolenia inteligencji polskiej*, Mazowiecka Wyższa Szkoła Humanistyczno-Pedagogiczna w Łowiczu, Łowicz 1997, p. 87.

¹⁵D. Martindale. *The Sociology of Intellectual Creativity* [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987, p. 12.

Robert K. Merton distinguishes among bureaucratic and independent intellectuals.

“The clients of an intellectual related to public administration are the very people who make decisions in the institutions he/she works for; the clientele of an independent intellectual is the society”¹⁶.

As a matter of fact independent intellectuals resemble the intelligentsia. Bureaucratic intellectuals respond to the authority’s orders whereas independent intellectuals voice the public opinion, the independent one.

In 1929 Julian Benda started a dispute over the treason of the clerks. The dispute concerned a discrepancy between the attitude by these two categories of creative and educated people. The phenomenon described applied to the western, mainly French and German intellectuals.

France

The example of the intelligentsia can be seen in France, during the period before the French Revolution. A careful observer of those times, Alexis de Tocqueville, characterized its appearance and the role it played during the period of change.

„France had long been the most literary nation of Europe, but her men of letters had never exhibited the mental peculiarities, or occupied the rank which distinguished them in the eighteenth century. Nothing of the kind had ever been witnessed either here or abroad”¹⁷.

Alexis de Tocqueville highlights this basic for the intelligentsia lack of social absorption.

„They took no part in public business, as English authors did; on the contrary, they had never lived so much out of the world. They held no public office, and, though society teemed with functionaries, they had no public functions to discharge.”

“They unceasingly dealt with the issues related to governing; to tell the truth it was their only activity.”

„These writers are naturally tempted to indulge unreservedly in abstract and general theories of government”¹⁸.

Here appears a critical approach towards the intelligentsia, present in every country.

¹⁶ R. M. Merton, *Teoria socjalistyczna i struktura społeczna*, PWN, Warszawa 1982, p. 271.

¹⁷ A. de Tocqueville, J. Bonner, *The old Regime and the Revolution*, Harper and Brothers Publishers Franklin Square, New York 1856, p. 170.

¹⁸ *Ibidem*, p. 172.

The very intelligentsia, which lacked political practice, was the leaven of the French Revolutions in the 18th and 19th centuries. Not until the decline of the 19th century that it transformed into clerks, thus being absorbed by the system and having its swan song in Emil Zola's manifestation concerning the Dreyfus affair. The First World War brought the intelligentsia closer to the state and its aims, but left some traces resulting in strong intellectual pacifism of the mid-war years. The outcome was devastating because it led to weakness of the national spirit at the time of the outburst of World War II.

Edgar Morin, an outstanding French humanist describes this period as follows: The intelligentsia was divided among different groups. Each one of them regarded itself as a carrier of civilization which must be protected – and it was groundless. Senseless death of millions resulted with a huge wave of pacifism. It seemed there was nothing more horrible than a war. During II World War in France lots of my fiends – pacifists, who had not intended to be more than just passive observers, due to a hardly noticeable shift, became Vichy collaborators. It all started with a statement that France needed to be rescued, that Hitler wanted socialism but he did not use the right means. They were sure the German hegemony was going to last long and it must have been accepted. Also, they were influenced by a Simone Weil text, printed just before the outburst of the War. The text compared Nazi Germany to the Roman Empire, which committed so many crimes before it gave rise to the Mediterranean culture. Weil wrote that the German hegemony would be defeated by the virtue of its own victory and its outcome would be European socialism with a human face. For a young French person, brought up on the ideals of the French Revolution, a belief that every revolution requires victims was not so difficult to accept.

Only after the battle of Stalingrad did they enroll in the communist party¹⁹. Stalin became the incarnation of History, they did not want to be left out²⁰.

However, there has been no successful attempt to settle accounts with the Vichy collaboration²¹. The crisis of the French intelligentsia still remains. Here's how another critic and sociologist Michel Crozier characterizes it:

“The crisis we are experiencing right now is mainly moral and intellectual. We are worried because we no longer trust our elites and the extent to which we trust

¹⁹ These two examples of engagement of the French intellectuals in pacifism and the support of the Soviet communism were taken advantaged by the latter to organize international movement of the peace supporters during the Cold War years. Some outstanding French intellectuals (such as J. P. Sartre, Pablo Picasso) took part in its activity e.g. during congresses such as World Congress of Intellectuals for Peace in Wrocław, in September 1948. It was to result with undermining the stability of the French government during the years of the Fourth Republic. It was not until the Soviet intervention in Hungary that this successful propagandist manoeuvre lasted. See Grzybowska Zuzanna: *Obraz polityki wewnętrznej imperialistycznego rządu francuskiego w 1951 w świetle Trybuny Ludu*. <http://www.intempore.umk.pl>.

²⁰ E. Morin, *Odznaczyć i rozstrzelać w rozmowie z Anną Bikont*, „Gazeta Wyborcza”, 1999 Sept. 29, p. 14–15.

²¹ See J. Jackson, *The Dark Years 1940–1944*, Oxford University Press 2001.

ourselves is constantly diminishing. We have lost all our benchmarks and our elites are useless because no matter which option they support, they speak in such a manner their co-citizens perceive as empty technocratic language"²².

The society is changing and adapting quite well. However, it is being paralyzed by high-level organizations.

„the problem lies in so called l'intelligentsia française. We consider ourselves to be intelligent but in reality we are completely ill-adapted to the world we live in. Or, rather, we continue appreciation and acknowledgement of not only useless but also previous forms of intelligence"²³.

The USA

English language lacks the native expression to describe this group and, therefore, it uses the term of the intelligentsia to highlight its distinctiveness. It does not prevent the authors from talking about the American intelligentsia. However, the meaning is slightly different than the one in our part of Europe²⁴. Also, one can find other similar expressions such as thinking class or the public – a group which is an active substrate of public opinion, influencing the authorities.

However, the thinking class of the East Coast before and during the revolution was very anglophilic and conservative. It can be proven by the fact that printers, brewers, land owners and some intellectuals fought for the independence and they carried out an important masonic project.

Similarly, English literature mostly treats the intelligentsia as active public, a subject of public opinion but only in certain historical periods. The English intelligentsia of the mid-war period is described in such a way, but the emphasis is also focused on lack of adaptation of this phenomenon to the tradition present in the English society²⁵. There, the intelligentsia is a phenomenon occurring in the margin of history.

Regarding contemporary times, the intelligentsia appears as „the cultural masses"²⁶. Bell assumes that cultural masses appeared in the West and mainly in the States due to the advancement of the masses. This intelligentsia identified

²² M. Crozier, *Kryzys inteligencji. Szkic o niezdolności elit do zmian*, Poltex, Warszawa 1996.

²³ *Ibidem*, p. 11.

²⁴ In the 40ies there was also a term "intelligence". See H.D. Lasswell, *The relation of ideological intelligence to public policy* Ethics, 1942.

²⁵ For example Premier Stanley Baldwin described people who did not oppose the marriage between King Edward and Ms Simpson as the intelligentsia, "that is wrong in every area". See G. Popiel and R. P. Mohan *Intellectuals and Powers*, S.M. Lipset, J. Brenda, K. Manheim [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987, p. 39.

²⁶ D. Bell, *The Cultural Contradictions of Capitalism*, Basic Books, New York 1976.

cultural masses with mass culture and was dependent on it. The New American intelligentsia is a product of mass culture which, in turn, has lost its low level and has accompanied the intellectual advancement of the middle class.

As far as Bell is concerned, the intelligentsia is a market for new ideas. It was especially reflected in the opposition to the Vietnam War in the sixties of the previous century.

Russia

Arnold Toynbee wrote: „The intelligentsia (a Russian word) was a new class brought into existence by Peter the Great’s policy of inducting Russia into Western society. The Russian intelligentsia consisted of Westernized Russians whose function was to enable the nation to participate in the life of Western society. They were an unhappy class because their conversion to the Western way of life cut them off from their fellow Russians without making them fully at home in the West. Their Western education alienated the intelligentsia from the autocratic native Russian regime that had called them into existence”²⁷.

The Russian intelligentsia has its own habitat where the service for the country plays an important role. Thus, it differs from the Polish intelligentsia whose focus is not on the country but on the citizens and the approach towards the very country is based on the review of its actions.

A currently popular term „obrazowszczyzna”²⁸, created by Aleksandr Solzhenitsyn indicates educated people, who are not traditional intellectuals serving the authorities.

Poland

The individuality of the Polish intelligentsia dates back to the social history of noble class which the intelligentsia developed from.

In the medieval Europe Poland had the most democratic system of accession to the noble class. The reason for that, as Jan Karol Korwin-Kochanowski²⁹ and later Andrzej Zajączkowski³⁰ wrote, was the law of inheritance. In Western Europe the heir was the oldest son, whereas in Poland the successors were all the descendants, including married women. It led to fragmentation in property but it did result with the establishment of a civil society involving 8% of the whole population. The phenomenon of younger brothers, Western indygenats, people who had to choose military, church or clerical careers did not exist in Poland. It

²⁷ A. Toynbee, D. Ikeda, *Choose life. A dialog*, I.B. Tauris & Co Ltd, London 2007, p. 66.

²⁸ In Polish, a term “wykształciuchy” applies to this group of people.

²⁹ J. K. Korwin-Kochanowski, *Nad Renem i nad Wisłą. Antyteza dziejowa*, Warszawa 1913.

³⁰ A. Zajączkowski, *Szlachta polska: kultura i struktura*, 1993.

was also a reason why the clerks recruited from foreigners. Unless, of course, a young noble man devoted himself to the public service.

It was not until the 19th century that the process of forming professional stratum of clerks accelerated. It went hand in hand with a dominating degradation of a noble class.

A historian Stefan Kieniewicz wrote:

„Years 1815–1830 accelerated a process that started at the end of 18th century – the process of shaping the Polish intelligentsia. In Congress Poland and, to a lesser extend, in other districts, there was a growing demand for clerks, technicians and people of learned professions. Not only clerical but also literary and journalistic career could provide a living, at least for more talented individuals. The youth belonging to the declassing nobles started to follow this path. The youth was separated from the gentry or the aristocracy by the lack of property, from the bourgeoisie – by higher education. Then, the intelligentsia became a closed stratum, young and energetic, with the sense of value and importance, however, without an impact on the fate of the country.”³¹

A widely – known history of the Polish intelligentsia during the partition of Poland matches the pattern outlined by Stein Rokkan for the Norwegian intelligentsia. And though the invading countries started the process of self – liberalization, the children of the Polish noble class entered their plutocracy, sometimes even performing important functions.

However, this overproduction of educated people, degradation of the noble class, its engagement in independence movement and, finally, commonly shared a civil sense of responsibility for the fate of the country, shaped the Polish intelligentsia of the 19th century. Its apotheosis is expressed in Jerzy Jedliniecki’s opinion.

„The peculiarity of the phenomenon is that here, in the Eastern Europe, the intelligentsia took shape of a separate stratum. Only here, in the East the idea of the intelligentsia as a constant service, mission and sacrifice could spring up and then bear fruit. The intelligentsia performed some of the tasks which in other countries were conducted by various institutions of a modern country, local and professional governments, specialized institutions, companies, contractor associations.”³²
The intelligentsia of the 19th century was an after noble class stratum, united by the sense of national and pro-developmental mission, well – brought up and, generally, educated. What these people shared was only partial absorption to state

³¹ S. Kieniewicz, *Historia Polski 1795 – 1918*, PAW, Warszawa 1983, p. 96.

³² J. Jedlicki, *Wiek dziewiętnasty: inteligencja w pojęciu polskim* [in:] *Inteligencja polska XIX i XX wieku* GSW Zachęta, Warszawa 1995.

structures, along with a tendency to create their own specific middle class. This last point was precisely grasped by Rychliński. The intelligentsia was torn among an averse state, the nation to which they played important functions and the society for which they accepted the role of an educator and set examples.

In social consciousness such an image of the intelligentsia was combined with the idea of the Polish intelligentsia. It should have had a sense of mission, responsibility for the fate of the country and readiness to sacrifice. Such a vision remains till now and these are requirements the intelligentsia has to face³³.

And if someone failed to meet all the requirements, they faced accusations³⁴. The independence, regained in 1918 should have put an end to maladjustment of educated people in the social structure.

The process of reconstruction of a new form of the intelligentsia, brain workers engaged in public affairs was a necessity for a new country. However, it lasted a long time. According to GUS Annual Report in 1931 along with their families brain workers constituted 4,3% of the society³⁵.

Stanisław Rychliński, who studied the Polish social structure, while describing multistrata system of a Polish society found a place for the intelligentsia, including it in the same class along with the gentry and middle class. His social structure of Poland consists of five strata³⁶.

World War II is a period of extermination of the Polish intelligentsia. Before German invaders started their program for the destruction of the Jews, their full impetus had focused against the intelligentsia. Even more firm steps were undertaken by Soviet invaders. Edmund Mokrzycki contemplated if the Polish intelligentsia could have survived in cohabitation with the invaders if they had not focused on its extermination. Such assumptions were proclaimed in the name of protecting „national substance”.³⁷ Nevertheless, the intelligentsia was deprived of this choice. Poland, a land without Quisling, did not have collaborating politicians, not because such people could not have been found but due to the fact that German invaders did not need them, surely expecting their disloyalty.

The loss among the intelligentsia was enormous. Alexander Gella described it as extermination.³⁸ The rest was liquidated by the new authorities.

³³ See A. Podgórecki, *Spółczesność polskie*, Wyższa Szkoła Pedagogiczna, Rzeszów 1995.

³⁴ See M. Kempny, *Between Tradition and Politics: Intellectuals after Communism* [in:] *Intellectuals and Politics in Central Europe*, ed. by A. Bozoki, Central European University, Budapest 1999, p. 152.

³⁵ GUS Annual Report, Warszawa 1939.

³⁶ See S. Rychliński, *Zależność procesów demokracji kultury od dynamiki społecznej*. [in:] S. Rychliński, *Wybór pism*, PWN, Warszawa 1976, p. 110.

³⁷ M. Mokrzycki, *Kapitalizm oswojony*, „Gazeta Świąteczna” 2001, Aug. 11–12, 10–13.

³⁸ A. Gella, *A Structural Definition of the Intelligentsia Against the Background of Three Historical Periods*,

Józef Chałasiński shared the same belief in 1947, when he declared his famous pamphlet „Social genealogy of the Polish intelligentsia”, known, by the title of his works, as „Past and future of the Polish intelligentsia”. The past was after nobility, the future was supposed to be after the peasantry. The peasantry intelligentsia was supposed to replace the gentry one.³⁹

Gella believed the revival of the intelligentsia was possible due to the influence of communist intellectuals. Each one of the diagnoses turned out to be unsuccessful. Despite the lack of determined leaders, the intelligentsia has survived. Why did it happen? - it worth to consider. The easiest explanation would be the vitality of its habitus. Being an intellectual is still alluring.

Władysław Gomułka fails to see it, but cannot deny its existence. In his latter policy the role of intelligentsia is played by the Jews he later expels from the country. Along with Gierek coming into power in the seventies, „Przegląd Kulturalny” – a weekly magazine - initiates a discussion over the existence of the intelligentsia. It would be useful if it were technical, not humanistic intelligentsia.

At the same time a sociologist Jan Szczepański studied brain workers who were to represent educated and creative members of a new middle class. Was it supposed to be a new Polish obrazowszczyzna? – now it is hard to pass a judgment. A pro – intellectual policy conducted by Gierek led it to it. This policy turned out to be beaten by the humanistic intelligentsia represented by KOR. The civil rights of workers were a subject of an argument.

Throughout a whole period since the outburst of the War the Polish intelligentsia has been acknowledged and faced with different tasks:

- armed action – fighting with the invaders – the 40ies;
- a drastic change, contradictive to its hitherto existing tradition, readiness for a change in accordance with, advocated by ideologists, the spirit of time;
- a supporting policy – advocating socialistic reformers – 1956 Polish reformed socialism;
- a change from the humanistic tradition to the technocratic one⁴⁰;
- national resistance – answering back the oppressors – late 70ies and 80ies;
- a participation in political class – just after the changes of 1989;
- an engagement in managerial functions – participation in new enterprise – it’s a new motto expressing with the ideology of intellectual enterprise – contemporarily;

[in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan. Greenwood Press, New York 1987, p. 27.

³⁹ J. Chałasiński, *Przeszłość i przyszłość inteligencji polskiej*, Świat Książki, Warszawa 1997.

⁴⁰ Under this motto a weekly magazine called „Przegląd Kulturowy” initiated a discussion concerning the twilight of the old intelligentsia.

- giving way to a stratum of entrepreneurs, creating or imitating new universal global reality – contemporarily;
- support of a political party which calls itself as „truly intellectual” – an idea of the Fourth Republic of Poland.

4. Present State of the Polish *Intelligentsia*

The transformation faced the Polish *intelligentsia* with new challenges.

The first one is – can education be the key to welfare? When the reforms carried out by Leszek Balcerowicz started to show their fruits, there was an influx into educational facilities. The outcome was an increase in the number of people with higher education. In 1995 it was 5,2% and in 2007 – 11%. Also, the problem concerning the number of workplaces for all these people re – appeared. Huge exodus for work, mainly to Western Europe and the USA, was a migration of educated people. Were they the *intelligentsia*? Surely, they were. Those, who succeeded as far as this new labor – related migration is concerned – are people who are on the make due to their professional skills, working in administration, with the knowledge of language. Not before 2007 did we start to experience the shortage of qualified labor force. Luckily, it happened at the very moment when the economies of the immigration countries began to experience a crisis.

The second challenge – what can a person educated in new times do? The relation between education, especially humanistic, and the adaptation to the conditions of market economy at the beginning of the transformation period seemed ambiguous. A required *modus operandi* was far from the beginnings of big industry, it rather resembled a humanist’s workplace⁴¹.

The third one – is the *intelligentsia* heading towards the liberal or etatistic orientation? It is a specific Eastern European example. Russian intellectuals were etatists, in case of Polish intellectuals it depended on the character of the country, if it was their own or foreign. It contrasted with Western intellectuals, who, as Amitai Etzioni wrote, had no institutional attachment⁴².

While during the mid-war years Poland was liberal and the relation between the intellectuals did not imply socialistic thinking. Nowadays, during a present transformation the *intelligentsia* is not a simple construction. Rather, it can be assumed that it bears the burden of protective socialistic structure. Resistant to privatization and tax reduction, protective of public medical service, flattening salaries,

⁴¹ J. Mikułowski Pomorski, *Inteligencja wobec nowych czasów* [in:] *Inteligencja. Tradycja i nowe czasy*, ed. by Hanna Kowalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2001, p. 233–266.

⁴² A. Etzioni, *The Active Society*, Collier Macmillian, London 1968, p. 182–186.

favoring excessive employment over effective management, if one were to list present political problems.

The intelligentsia, until recently quite an ideologically homogeneous formation, due to its involvement in political disputes, has divided into two trends: liberal and pro- socialistic.

Pro-socialistic opposition became, against its tradition, an advocate of freedom and truth. Of course, they are not understood in an abstractive manner. They serve not only to instrumentally restrain transformation but also to fight social authorities. The latter, due to strenuousness of the Institute of National Remembrance, are faced with mistakes of youth, made in concert with communists. It is a background for a dispute concerning the issue of „real intellectuals”. Who are they? As their examples, people devoted real intellectual features, without prestige are proposed.

This state allows us to return to the question concerning contemporary shape of the Polish intelligentsia. Nobody asks if it does exist but who it is represented by. The process of the destruction of the intellectual authorities is not compensated by the occurrence of the new ones. The intelligentsia is losing its leaders, but it does not mean it is losing its forms of existence, well described as intellectual habitus.

The history of the Polish intelligentsia proves that it can survive without a clearly – defined leadership and last because of its way of thinking, taste and style of life.

Abstract

Nowadays contemporary societies face the following challenge: How to take advantage of creative and educated people, referred to as the intelligentsia? Proper social development should put an end to its existence due to full absorption into a social system. Despite similarities, since the end of the 18th century the intelligentsia has developed in various countries separately. The author describes the process of development of the intelligentsia in France, the USA, Russia and Poland. The final part of the article is also an attempt to characterize the current situation of Polish intelligentsia.

Literature

Bartoszek A., *Habitus polskiej inteligencji w społeczeństwach realnego socjalizmu i rynkowej transformacji*, [in:] *Inteligencja między tradycją a wyzwaniem współczesności*, ed. by: J. Mikułowski Pomorski, Akademia Ekonomiczna, Kraków 2005.

Bell D., *The Cultural Contradictions of Capitalism*, Basic Books, New York 1976.

Chałasiński J., *Przeszłość i przyszłość inteligencji polskiej*, Świat Książki, Warszawa 1997.

Crozier M., *Kryzys inteligencji. Szkic o niezdolności elit do zmian*, Poltex, Warszawa 1996.

Etzioni A., *The Active Society*, Collier–Macmillian, London 1968.

Gella A., *The Intelligentsia and the Intellectuals*, Sage, Beverly Hills 1976.

Gella A., *A Structural Definition of the Intelligentsia Against the Background of Three Historical Periods*, [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987.

Haas L., *Pokolenia inteligencji polskiej*. Mazowiecka Wyższa Szkoła Humanistyczno-Pedagogiczna w Łowiczu, Łowicz 1997.

Jackson J., *The Dark Years 1940–1944*, Oxford University Press 2001.

Jedlicki J., *Wiek dziewiętnasty: inteligencja w pojęciu polskim* [in:] *Inteligencja polska XIX i XX wieku*, GSW Zachęta, Warszawa 1995.

Kempny M., *Between Tradition and Politics: Intellectuals after Communism* [in:] *Intellectuals and Politics in Central Europe*, ed. by A. Bozoki, Central European University, Budapest 1999.

Kieniewicz S., *Historia Polski 1795–1918*, PAW, Warszawa 1983.

Korwin-Kochanowski J. K., *Nad Renem i nad Wisłą. Antyteza dziejowa*, Warszawa 1913.

Kurczewska J., *Inteligencja* [in:] *Encyklopedia socjologii*, Vol. 1, Oficyna Naukowa, Warszawa 1998.

Kula L. M., *Rola zastępcza*. W cyklu: *Przekleństwa zwichniętej struktura społecznej*, „Rzeczpospolita” 2001, Plus Minus, 17–8 Febr., p. 5.

Lasswell H. D., *The relation of ideological intelligence to public policy*, Ethics 1942.

Libelt K., *O miłości ojczyzny. Rok 1844 pod względem oświaty, przemysłu i wypadków czasowych*, Poznań 1844.

Legutko R., *O tak zwanym końcu inteligencji*, [in:] *Inteligencja. Tradycja i nowe czasy*, ed. by H. Kowalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2001.

Markowski S., *Potrzebni romantyczni pozytywiści*, „Rzeczpospolita” 2001, Plus Minus, 17–18 Febr., p. 5.

Merton R. K., *Teoria socjalistyczna i struktura społeczna*, PWN, Warszawa 1982.

Martindale D., *The Sociology of Intellectual Creativity*, [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987.

Mikułowski Pomorski J., *The Polish Intelligentsia and the Challenge of the New Economy*, „Argumenta Oeconomica Cracoviensia” 2001, No. 1, p. 157–174.

Mikułowski Pomorski J., *Inteligencja wobec nowych czasów*, [in:] *Inteligencja. Tradycja i nowe czasy*, ed. by H. Kowalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2001.

Mokrzycki E., *Kapitalizm oswojony*, „Gazeta Świąteczna” 2001, Aug. 11–12.

Morin E., *Odnaczyć i rozstrzelać w rozmowie z Anną Bikont*, „Gazeta Wyborcza” 1999, Sept. 29.

Paxton R. O., *Old Guard and New Order 1940–1944*, Morningside.

Podgórecki A., *Spoleczeństwo polskie*, Wyższa Szkoła Pedagogiczna, Rzeszów 1995.

Popiel G., Mohan R. P., *Intellectuals and Powers: S.M. Lipset, Julien Brenda and Karl Mannheim* [in:] *The Mythmakers. Intellectuals and the Intelligentsia in Perspective*, ed. by R. P. Mohan, Greenwood Press, New York 1987.

Toynbee A., Ikeda D., *Choose life. A dialog*, I.B. Tauris & Co Ltd, London 2007.

Tocqueville de A., Bonner J., *The old Regime and the Revolution*, Harper and Brothers Publishers Frankin Square, New York 1856.

Rychliński S., *Zależność procesów demokracji kultury od dynamiki społecznej*, S. Rychliński, Wybór pism, PWN, Warszawa 1976.

Zajączkowski A., *Szlachta polska: kultura i struktura*.

VESNA MILOVANOVIC

Internal Audit Analysis on the Example of Joint Stock Company Variant from Cracow

Introduction

The subject of this article has been chosen as a result of constantly growing importance of internal audit in companies and other types of organizations. Nowadays, more and more institutions develop internal audit department as a part of their organisational structure.

The article begins with a description of internal audit appearance and historical background, as well as the role it plays in the modern world. Its aim is to present the internal audit procedure used in the Joint Stock Company Variant in Cracow, as well as to evaluate it by comparing with the procedures used elsewhere, taking into consideration the Company's needs and characteristics.

Finally, the article presents the assessment of internal audit procedure used in the company Variant and offers some recommendations, which can contribute to the improvements of the internal audit department effectiveness.

The information contained in this article may be beneficial to the company Variant, as well as to any company having established the internal audit department.

1. The Idea of Internal Audit

The word audit comes from the Latin word “auditus”, which means to listen, to hear, to research. In English language, the word “audit” stands for the system of economic revision and economic advising.

There are some indicators showing that several kinds of auditing were present even in 3500 BC. This refers to the records of Mesopotamian civilisation, which displayed a range of markings concerning the financial transactions. Those signs are understood as a system of verification. It is believed that by the same time the internal control arose, as well as the separation of tasks. There are also the records of other early civilisations, such as Egyptian, Greek, Chinese, Persian and Hebrew, that show analogous systems¹.

What is interesting to mention, is that ancient Rome were using a process called “Hearing of accounts”, which is based on comparing records and results between two officials. This implies to the process nowadays called “verification”. It is supposed that this process had actually led to the creation of auditing. Unfortunately, many of the financial systems disappeared altogether with the fall of the Roman Empire. Nevertheless, after the dark ages, when the level of financial activity improved, such systems appeared again.

However, it took a long time for auditing to obtain the characteristics it has nowadays. Just after the Industrial Revolution in Europe, auditing went further than hearing of accounts to comprise the verification of accounting records and related supporting documents. It is said, that afterwards, Europeans brought such practices to the North-American colonies.

The institution of internal audit exists officially from XIX century. At the beginning audit has had just an external character, but altogether with the economic development of subjects active on the market – growing of organisations, their increasing complicatedness, but also with technological specialisation of operations, there was a need for the internal audit creation.

Emergence of the first internal auditing cells appears after the II World War. Originally, internal audit was concentrated on financing and accounting activities, and just later, it started with including wholeness of problems connected with the organisations’ functioning, fulfilling assurance and advisory services. Initially, internal audit implemented in the private organisations, but along with the time, it started to appear also in the frame of public administration organisations.

It was discovered that the main factor permitting illegal activities was indeed the weak internal control system of companies and institutions. It is not claimed that efficient control systems will resolve all company’s problems, but inefficient ones can provoke serious problems in the organisation². There is an important

¹ L.B. Sayer, M.A. Dittenhofer, J.H. Scheinor, *The Practice of Modern Internal Auditing*, The Institute of Internal Auditors, Florida 2002, p. 4.

² I. Rosić, *Institucionalne promene kao determinanta privrednog razvoja Srbije*, Izdavač Ekonomski fakultet

thing to understand – internal control is just a part of the management process, and therefore, even the most appropriate control techniques cannot correct the bad decisions, inefficient management, or unexpected external events. However, a good management and efficient control system can ensure that company reacts rapidly in bad conditions, and can help limiting the negative consequences of such hardships for the company. As each internal control system is getting old and inappropriate after the certain period, there is a need for periodical checking of control adequacy. Therefore, internal audit appears as a very helpful mean serving for control system evaluation and advancement, forming with the internal control an integrated assurance system.

As firms started to expand geographically, or into other product lines or functions, and this process created a big complexity, managers faced efficiency and effectiveness problems, since their capabilities were stretched. In such situations, internal auditors appeared and they were recognised as the means of assisting overburdened managers. Namely, while expanded into other business, companies became vertically integrated and very hard to be handled. With an aim to resolve this problem, companies were decentralised, having one general office and many divisions. As general office executives were isolated from the divisions, and therefore, could not directly supervise their functioning, internal audit played a crucial role in evaluating the divisional performance. This was done by assessing the financial and operating controls of those divisions.

It has been realised that internal control, which by the way exists in each company, is not enough anymore. This is because, as said above, company implements new practices, so such control system, although very good functioning some time before, is no longer effective. Such a situation has created the need for internal audit, which aim is to check whether internal control system functions well, and if not, to give recommendations on how to improve the control system. It means that internal auditor indicates strong and weak sides, as well as determines the reasons and consequences of those weak ones³. As it will be presented later in more details, the mission of internal audit is to increase effectiveness of company's functioning and improve the management system, so as to decrease the risk of failures, fraud and other undesirable situations.

What can be concluded is that internal audit has existed for a longer time, but not in the form it has today. Evident is that it changes in response to the environmental conditions, needs and provisions of committees and other relevant bodies. By taking into account the modern practices, we can say that, no matter what exactly the shape of auditor's responsibilities is, internal audit is constantly gaining on importance, and in the near future it will probably be the part of many companies, even the smaller ones.

Univerzitetu u Kragujevcu, 2004, p. 171.

³ J. Stępniewski, *Audyt i diagnostyka firmy*, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, Wrocław 2001, p. 11.

2. The Characteristics of the Joint Stock Company Variant

The public stock company VARIANT was established on December 29, 1994, as a result of the transformation of a civil joint venture called "The Office of Technical Promotion VARIANT", which functioned on Polish market from January 3, 1991. The company provides productive – commercial economic activity. It acts as a specialised distributor of goods from the range of clamps, bands, quick couplings and metal fastenings, cosmetics and motorisation chemicals, as well as glues and sealants for motorisation and industry, car services equipment, car accessories as well as glues and lubricants. It conducts also production of cosmetics and motorisation chemicals and metal clamps⁴. The significant event for enterprise VARIANT was the appearance at the Warsaw Stock Exchange in July 2005. However, the major investors still are the current supervisory body directors, president and vice-president.

Domestic, Polish, market of the Company is divided into four segments, with one chief assigned to each region, while international market is divided into two parts:

- Export East – to the republics of the former Soviet Union: Lithuania, Latvia, Estonia, Belarus, Russia, Moldova, Georgia;
- Export South – West: Sweden, Holland, Germany, Austria, Spain, Italy, Croatia, Slovenia, Hungary, Rumania, and Bulgaria.

There are several international dependent joint ventures which are subordinated to export manager:

- Ukraine, Kiev, East, VARIANT has 100% ownership;
- Czech Republic, Brno, South, VARIANT has 100% ownership;
- Slovakia, Trnava, South, VARIANT has 100% ownership;
- Serbia, Mladenovac, South, VARIANT has 51% ownership.

Recently, export is dealing with currency appreciation, what makes it difficult to keep the margin and the level of sale, as well as to compete with American and Western European companies, where the dollar and euro depreciate. In the last four years, euro depreciated by 25% (from 4.5 to 3.6). This poses obstacles for the export department, but the firm in general is net importer, so it has no problems with the appreciation, even more, such movement is good for the company as a whole.

When it comes to the commerce, the stock company is divided into 2 areas:

- Motorisation – dealing with large regional distributors, warehouses – oil for motorisation, accessories, glues and sealants, etc.
- Industry – all kinds of industrial applications, factories, mines – industrial oils, glues for industrial application, glues and sealants, clamps for fast-connections, and all other products that can be sold to industries.

⁴ Information obtained from Company's management personnel.

Regarding the industry, structure is changing, so VARIANT has a small organisational problem. Namely, it faces the tradeoffs between having the trade structure independent of motorisation and having incorporated in the internal structure of motorisation. Both options were experienced and both have advantages and disadvantages. When the industry is separated, that does not impede the motorisation system and human resources of motorisation. However, the costs rise because there is the need for creation of new job positions, namely management positions. On the other hand, when the industry is combined with motorisation, those on management functions are much impeded. Industrial line is different and specific. There is the direct contact with end users, no relations with distributors. Greater technical knowledge is required from dealers – sellers, and trade is done with more specialist products, advanced, for concrete application (glues). The Company is composed of departments, namely, the commercial, administrative, financial, production, stock and logistic, as well as sales department⁵.

3. Audit Description in the Company Variant

The joint stock company Variant has internal audit department since 2003, what is already 5 years. Such experience has contributed to the development of many kinds of audit in the Company, as well as to its improvement. Below are presented the main types of internal audit used in the company Variant, according to criteria described in the first chapter.

Characterising internal audit in the company Variant according to activity functions, we can subscribe it to following audit types, which were presented also in the first chapter.

Logistic Audit is the one done in warehouse. It analyses compliance between accepted standards and real performances, and proposes activities in order to increase the effectiveness of the logistic system functioning.

Marketing Audit includes audit of sales department, export managers and region chiefs. Its aim is the estimation of company's marketing strategy, efficiency of marketing tasks realisation, identification of threats and opportunities for development, as well as formulating plans concerning marketing improvements of a company.

Personnel Audit is used in company Variant to analyse and assess used personnel policy, as well as to recommend activities that could optimise the personnel management process.

Organisational Audit in company Variant includes audit of quality management system, as well as of company's directory. It researches the organisational system of the company, what is represents the static aspect, while the verification of processes in production and management represents the dynamic aspect of the organisational system which is audited. From the static point of view, organisa-

⁵ Information is taken from Company's Organisational Statute.

tional audit assesses the method of management function realisation, information system, organisation, the elements of decision-making process, while from dynamic perspective it analyses the functional dependence, coordination mechanisms and formalisation of the organisational structure.

Internal Audit procedure in the Company Variant

This procedure is described in the internal document of the Company, which explains the audit objective, scope, competitiveness, responsibilities, as well as the particular stages of internal audit process. It also exposes the form of documents used and related to the internal audit process.

1. The objective and subject of the procedure.
2. The aim of the procedure is confirmation whether the existing quality management system is effectively implemented, reliable and stable.
3. The scope.
4. Procedure applies to all employees of the Joint Stock Company VARIANT.
5. Competitiveness and responsibility.

Management:

- Hiring the internal auditors.

Quality Management Representative:

- making the internal audit plans,
- distribution of the internal audit plans,
- choosing the leader auditor as well as auditors for the realisation of internal audit,
- supervising the program of preventive and corrective actions,
- verifying the efficiency of the implementation of preventive and corrective actions.

Internal auditors:

- informing the audited unit about the time and scope of audit,
- preparing the list of questions and audit plan,
- holding the introductory meeting,
- realization of the internal audit,
- making and delivering the audit report,
- holding the closing meeting.

Managers of particular organisational units being audited:

- help in audit realization,
- help in preparation of preventive and corrective actions program,
- determining the time and implementation of corrective actions program,
- informing about the implementation of corrective actions.

4. Description of Activity

Internal audit planning

- a) Internal audit takes place with the aim to indicate whether the activities that have the influence on quality and whether their results are in compliance with planned ones, whether planned tasks are realised fluently and efficiently, as well as whether they fully protect the quality targets.
- b) Quality Management Representative makes the annual “Internal Audit Plan” form F01 and informs electronically the leader auditors.
- c) Planning and managing the audit is realised through application ISO 9001 Variant, which emit the document “Internal Audit” form F02.
- d) The form “Internal Audit” contains:
 - the time of audit and responsible persons,
 - audit plan – list of controlling questions,
 - audit report.
- e) Internal audit is done for each evaluated area at least once in 12 months. Representative can order the introduction of audit beyond the plan according to his own estimation, on client’s request or on the employees’ opinion.

Internal audit preparation

- a) Quality Management Representative forms the internal auditors team. Auditor must be independent (he cannot be the manager or employee of the unit being audited). Representative chooses auditors from the “Auditors list” – attachment Z01 confirmed by the management director.
- b) Auditors should possess the relevant knowledge, experience and preparation in the area of subject being audited and in the quality management system.
- c) Quality Management Representative the latest 3 days before the audit sends to the leader auditor the information about the audit on the form F02 “Internal Audit”, in which he supplies:
 - area being audited,
 - the scope of audit (planned, non-planned, checking the corrective actions, etc.),
 - the date and the hour of the beginning of audit,
 - the names of auditors and persons being audited, and supplies him with the necessary documentation for audit realisation (reports from previous audits, statements from corrective actions, necessary procedures, instructions, etc.).
- d) The leader auditor may change the composition of audit team.
- e) Internal auditor prepares the audit plan and list of controlling questions (in cooperation with the representative) on the form F02 and sends such information to audit teams and those being audited.

Realisation of internal audit

- a) On the opening meeting at which present are the chief of auditing area and persons determined by him, leader auditor presents the scope, subject and plan of the audit.
- b) Internal auditors during the audit realisation tend to find objective proofs of system functioning. Helpful in this process might be the list of questions set by the leader auditor together with Quality Management Representative.
- c) Internal audit is done with the presence of the unit being audited or persons indicated by him, so as to minimally disturb the work of the team, and information collected by the team to be complete, credible, and documented in such way, as to give the objective picture of audited area's work.
- d) During the audit it is checked if the corrective actions from the previous audit are completely realised.
- e) Personnel of the unit being audited is obliged to provide auditors with complete and credible information, as well as to make available, on their request, the documentation connected with activities of the audited unit.
- f) After finishing the audit, the leader auditor organises the closing meeting with the participation of auditing team and the chief of audited unit, during which he informs of audit plan realisation and presents to chiefs of audited units the information about non-compliances, gives explanations and remarks to the representative of audited unit

Internal audit report

- a) Leader auditor makes the audit report on form F02 "Internal Audit", in which he includes:
 - discovered non-compliances,
 - the information, whether corrective actions from the previous audit were implemented,
 - additional remarks.
- b) To indicated non-compliances described in audit report, leader auditor generates the card of corrective/preventive actions - form F01/P-6.2 to procedure P-6.2 "Corrective and preventive actions".
- c) The leader auditor sends audit report together with attached cards of corrective and preventive actions in period of 7 days to the chief of audited cell.
- d) After the chief gives his opinion, report is automatically transferred to Quality Management Representative in order to be confirmed.
- e) On the base of the report, the Representative supervises corrective and preventive actions.
- f) All documents are saved in the application ISO 9001 Variant.

As we could observe from the above, the Joint Stock Company Variant has very precisely defined the internal audit procedure, which consists of internal audit

planning and management, internal audit realisation, the assessment and report from internal audit process, as well as the storage of audit documents.

Conclusion

There is one interesting point regarding the rest of audit kinds mentioned earlier in the work. Financial and operational audit, presented as ones with high importance, do not actually have much attention in the company Variant. Operational audit is present from the viewpoint of estimating the methods of the production management, how it plans its activity, and how further controls it. Internal audit in this company is much more oriented to the quality management system; how to check the products characteristics, how to deal with reclamations, who is responsible for what, where is the beginning and the end of the process, are standard preoccupations for auditors. However, audit is not much concerned with checking the thriftiness, productivity, and the efficiency of production process. It does not compare results with costs, the time of work with the schedule, but whether employees act according to established rules.

Another point is with regard to financial audit. In the Company, financial audit is not developed; internal auditors are not concerned with checking the correctness of financial statements. Of course, there is a checking of financial reports, they have to be credible and contain real data for internal as well as external users, but this process does not fall in the scope of the Company's internal audit.

Evaluating the audit procedure used in the Joint Stock Company Variant, we may conclude that it complies with the standard form of internal audit procedure, described in the theory. However, it can be improved by adding few missing elements.

The recommendations for the improvement of internal audit procedure in the Joint Stock Company Variant consist of more detailed, practical proposal, which suggests widening the research techniques for diagrams and reliability tests, since they could help improving the research and obtaining more complete result from the internal audit process. Of course, it would be valuable if the Company develops the financial audit, as well.

Abstract

This article has presented the issue of internal audit analysis, based on the research undertaken in the joint stock company Variant, situated in Cracow. Its goal was to explain the role internal audit plays in business, especially in the time of increasing globalization, emerging markets, and higher mobility of capital, investments, and especially the reliance on information. It was also pointed out why internal audit is needed and which utilities it provides.

The core of this article was to encompass all collected information and find out whether the procedure used is well functioning. On that base, a new, modified form of internal audit has been proposed, the one that suits the best to the company's organizational structure.

Literature

- Brzóska M., Gajos B., Mońka M., *Srodki unijne przedmiotem badania biegłego rewidenta*, KIBR, Warszawa 2005.
- Chrostowski A., Szczepaniowski P., *Planowanie i Zarządzanie – teoria i praktyka*, praca ed. A.K. Koźmiński, W. Piotrowski, PWN, Warszawa 1998.
- Czerwiński K., Grocholski H., *Podstawy audytu wewnętrznego*, Szczecin 2003.
- Gut P., *Kreatywna księgowość a falszowanie sprawozdań finansowych*, Wydawnictwo C.H.Beck, Warszawa, 2006.
- Henriksen E.A., Breda M.F., *Teoria rachunkowości*, Wydawnictwo Naukowe PWN, Warszawa 2002.
- Hołda A., Pocięcha J., *Rewizja finansowa*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Krakow 2004.
- Ignatowski R., *Bilans skonsolidowany jednostki samorządu terytorialnego*, ODDK, Gdańsk 2004.
- Jagielski J., *Audyt wewnętrzny – miejsce w systemie kontroli i organizacja*, Kontrola Państwowa 2003, No. 3.
- Janicki K., *Ryzyko jako przedmiot działań audytu wewnętrznego*, Nasz Rynek Kapitałowy 2004, No. 8.
- Jendra M., *Czy audyt to więcej niż kontrola?*, „Gazeta Samorządu i Administracji” 2002, No. 22.
- Kaczmarek T., *Zarządzanie ryzykiem*, ODDK, Gdańsk 2002.
- Kałużny S., *Nadzór i kontrola w przedsiębiorstwie*, Kwantum, Warszawa 1997.
- Kałużny S., *Zarządzanie przez kontrolowanie*, Ekonomika i Organizacja Przesiębiorstwa, 2001, No. 12.
- Kerna J., Warland P., *Zarządzanie ryzykiem operacyjnym a adekwatność kapitałowa dla zarządzających inwestycjami*, „Rynek terminowy” 2003, No. 21.
- Kisiel P.W., *Audyt funduszy unijnych*, InfoAudit, Warszawa 2005.
- Kiziukiewicz T., *Organizacja rachunkowości w przedsiębiorstwie*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2002.
- Kudłacz T., Lachiewicz W., Lisiński M., Paszek Z., Surówka K., Wiktor J.W., *Słownik podstawowych terminów samorządu terytorialnego*, ed. M. Lisiński, Wyższa Szkoła Biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza 2007.
- Moczydłowska W., *Standardy audytu wewnętrznego*, „Gazeta Prawna” 2004, No. 204.
- Nadolna B., *Wybrane aspekty audytu i kontroli wewnętrznej w jednostkach sektora finansów publicznych* [in:] *Controlling i audyt wewnętrzny w usprawnianiu zarządzania*, red. K. Winiarska, Uniwersytet Szczeciński, Szczecin 2005.
- Naksym D., *Czy audyt ocenia ryzyko*, „Gazeta Prawna” 2005, No. 213.
- Nowak E., Kaszuba-Perz A., *Rachunkowość a zintegrowane zarządzanie przedsiębiorstwem*, WSIZ, Rzeszów 2005.
- Olczowicz I., Tłaczała A., *Sprawozdawczość finansowa*, Difin, Warszawa, 2002.
- Podręcznik audytu wewnętrznego w administracji publicznej*, Ministerstwo Finansów, Warszawa 2003.
- Piaszczyk A., *System zarządzania i kontroli środków z funduszy wspólnotowych. Rachunkowość*, „Auditor” 2006, No. 3.

Rola Z., *Kontrola wewnętrzna w jednostkach samorządowych*, Materiały szkoleniowe, RIO w Lublinie, Lublin 2002.

Rola Z., *Kontrola wewnętrzna, kontrola finansowa i audyt*, Alpha Pro, Ostrołęka 2003.

Rosić I., *Institucionalne promene kao determinanta privrednog razvoja Srbije*, Izdavač Ekonomski fakultet Univerziteta u Kragujevcu, 2004.

Sawicki K., Winiarska K., *Badanie sprawozdań finansowych w warunkach funkcjonowania audytu i kontroli wewnętrznej*, Krajowa Izba Biegłych Rewidentów, Warszawa 2006.

Sayer L.B., M. A. Dittenhofer, J. H. Scheiner, *The Practice of Modern Internal Auditing*, The Institute of Internal Auditors, Florida 2002.

ROMAN NIESTRÓJ

Marketing in Poland in the Twentieth Year of Political Transformation

Introduction

Twenty years ago some major political changes were initiated in Poland which enabled rebuilding or rather creating from scratch modern market economy. Its inseparable component is marketing understood both as a defined concept of business management, an enterprising function, and as a field of knowledge and the subject of scientific cognition. In the early years of transformation, a dramatic lack of marketing in its all possible incarnations constituted the most visible indication of Poland not being adjusted to the requirements of modern market economy. It resulted in a sudden interest in education in the field of marketing followed by a rapid growth of supply of appropriate services and specialists in this field. However, after a few years it was observed that marketing is not a panacea for all drawbacks of postsocialist economy. Interest in this sphere of business activity started to subside before marketing settled in Poland for good.

The consequence of insufficient knowledge and often wrong perception of the essence of marketing is a great instability of opinions concerning its usefulness and attractiveness, both as a sphere of enterprise activity, and as a subject of professional specialization. It results in e.g. considerable differences in the number of students choosing marketing as a subject of specialization. The status of marketing subjects also decreases systematically in the teaching standards in the fields

of economics. Meanwhile, market economy requires a constant influx of specialists in this field. Marketing as well as sales belong to the most popular business professions. In order to provide high educational standards it is necessary to create in the eyes of society an image of marketing corresponding to its actual role in the modern economy. The starting point for taking well-thought out steps in this direction is identifying the real image of marketing in society.

In 2008 at the Department of Marketing of Cracow University of Economics the research on the image of marketing in society was carried out¹. The aim of the article is presentation of some major results of this research. They may prove useful for comparative purposes in similar analyses and estimations in other countries which underwent a political transformation.

The research shows that the perception of marketing was evaluated on the basis of a number of hypothetical opinions referring to both positive as well as negative aspects of marketing concerning e.g. issues such as: the importance of marketing activities to customers, usefulness of marketing in business, the relations of concepts: marketing – advertising – sales promotion; marketing as an art of market manipulation, the field of professional career, as a field of science and also self-evaluation of the respondents' knowledge on marketing.

In order to achieve a complete image of marketing on general level the respondents were divided into homogeneous groups characterized by the common perception of marketing².

According to the data presented in Table 1 a 'statistical Pole' believes that marketing is, most of all, a number of different techniques of increasing sales and a vital component of contemporary business. The majority of respondents are aware of the positive influence of marketing on the possibility of choice of products by the customers, but they are also convinced that marketing is an art of manipulating the customer. Similarly, a great number of the interviewed believes that marketing is an interesting field for professional career. Slightly lower percentage of the respondents do not understand the essence of marketing and agree with the opinion that marketing is the same as advertising and sales promotion. However, they also claim that it is a field of knowledge having strong scientific bases and the philosophy of company activities taking into consideration customer needs.

¹ The research was carried out in 2008 among 1021 representatives of Polish society aged 18-75 in the form of computer-aided telephone interviews (CATI). The representative group was chosen by means of randomly layered method taking into consideration sex and age. The research of the enterprises was carried out by means of an internet survey on a group of 1128 companies functioning on the Polish market. The group of respondents consisted of people working in marketing departments of the interviewed companies or people responsible for this sphere of enterprise activity.

² The segmentation was carried out by dr Mariusz Kuziak and dr Krzysztof Kapera on the basis of the k-average method. The number of cases qualified is different from the starting one as the answers 'hard to say' were excluded.

Table 1. Opinions of the representatives of society concerning marketing (data in percentage)

Opinions concerning marketing	Absolutely Yes	Rather Yes	Neither Yes, nor No	Rather No	Absolutely No	Hard to say
Marketing is the same as advertising and promotion	17.3	47.9	6.2	22.3	5.8	0.5
Marketing is the art of manipulating the customer	31.8	43.6	7.0	13.3	4.0	0.3
Marketing is a vital element of business	50.6	39.6	2.7	4.7	1.5	0.9
Marketing is an interesting field for professional career	26.7	47.2	9.9	10.8	4.0	1.4
Marketing unnecessarily increases the prices of goods	15.3	35.4	13.5	26.2	7.5	2.2
Marketing is a number of techniques increasing company sales	51.7	42.7	1.4	2.7	1.0	0.5
Marketing results in greater possibilities of choice for the customers	22.2	53.3	8.5	11.7	3.2	1.1
Marketing is the philosophy of company activities taking into consideration customer needs	17.8	43.1	10.8	20.5	6.8	1.1
Marketing is a field of knowledge having strong scientific bases	17.1	46.0	10.3	20.0	4.5	2.1
Nobody really knows what marketing is about	11.9	35.7	12.1	26.3	13.6	0.5

Source: Personal research, n = 1 021.

Every second respondent agrees with the statement that marketing is responsible for unnecessary increase in the prices of goods. Nearly half of the interviewed assess their knowledge of marketing self-critically claiming that 'nobody really knows what marketing is about'. A great majority of the respondents have positive attitude to marketing and only every eighth of the interviewed has a negative one.

The respondents were divided into relatively homogeneous groups in order to acquire more precise knowledge concerning the opinions of Polish society on marketing. As a result of implementing an analytical procedure three homogeneous groups of respondents were created (defined respectively as group A, B and C).

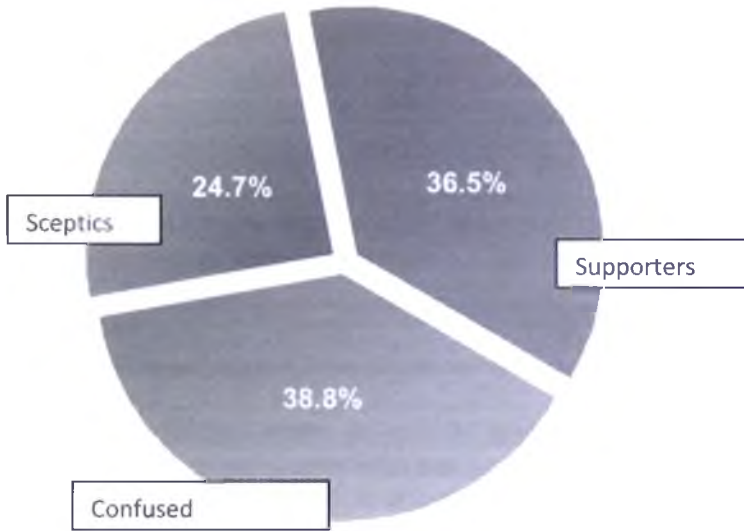
Table 2. presents average answers of particular groups rated on a five-point scale, from 1 (absolutely Yes) to 5 (absolutely No) with a neutral option 3 (neither Yes, nor No). In further section, the profile of particular groups was presented taking into account socio-demographical characteristics of the respondents their views and also attitude to marketing.

Table 2. Characteristics of particular groups of respondents chosen from among the representatives of society

Opinions concerning marketing	Population	Group A	Group B	Group C
Marketing is the same as advertising and promotion	2.5	1.9	2.3	3.3
Marketing is the art of manipulating the customer	2.2	1.8	1.8	2.8
Marketing is vital in business	1.6	1.6	2.0	1.5
Marketing is an interesting fields for a professional career	2.2	1.9	2.9	2.0
Marketing unnecessarily increases the prices of goods	2.8	2.3	2.2	3.7
Marketing is a number of techniques of increasing company sales	1.6	1.5	1.7	1.6
Marketing results in a greater possibility of choice for the customers	2.2	1.9	2.9	2.0
Marketing is a philosophy of company activities taking into consideration customer needs	2.5	1.9	3.8	2.4
Marketing is a field of knowledge having strong scientific bases	2.5	2.4	3.1	2.1
Nobody really knows what marketing is about	3.0	2.2	2.8	3.9

Source: Personal research. n = 938.

Graph 1. Segmentation of Polish society taking into account attitude to marketing.



Group A – ‘Supporters’

This group is characterized by a very high percentage of people (78.3%) claiming that they lack knowledge on marketing, do not understand it and do not know what it is about. However, they did not develop a negative attitude. As a result of that there are many contradictions in the opinions of this group as a great majority answers the following questions positively not being able to take a stance on them. This group constitutes 38.8% of the interviewed. They are mostly women (63%), people relatively not so well educated (68% of them with vocational or secondary education, and only 20% with higher education), people inhabiting smaller towns (41% of them live in the country, and 10% in cities having population of more than 200 people).

Group B – ‘Sceptics’

Contrary to two previous groups this group is most critical as far as marketing is concerned. It comprises the majority of all respondents (64.6%) who have negative attitude to marketing. Scepticism of this group most of all manifests itself in a general lack of belief that marketing provides better fulfillment of customer needs and blaming marketing for the unnecessary increase in the prices of goods. In comparison to other groups a considerably lower number of the respondents believe that marketing gives the customers better possibilities of choice. The number of people who claim that marketing is vital in business is also significantly lower than in other groups and only every second respondent believes that marketing is an interesting field of professional involvement.

The group of 'Sceptics' comprises nearly one quarter of the interviewed. The socio-demographic characteristics of those people is very similar to that of the whole Polish population.

Group C – 'Confused'

This group is characterized by belief in positive effects of marketing activities and concepts both to companies and customers. Members of this group to the highest extent (94.2%) have a positive attitude to marketing, which is according to them vital in business (94.7%) and at the same time is an interesting field for professional career (80.1%). Similarly to other groups also in this one marketing is associated with various techniques of increasing sales. However, at the same time great majority of the respondents believe that marketing takes into consideration customer needs and results in a greater possibilities of choice. This attitude is proved by the highest percentage of the interviewed who understand the essence of marketing. Most of the respondents in this group do not associate marketing with advertising and sales promotion and do not blame marketing for the increase in the prices of goods. A great majority of them (79.5%) believe that marketing is a field of knowledge having strong scientific bases.

'Supporters' constitute 36.5% of the people interviewed. This group consists of younger (51% of them is under 40) and relatively better educated people (42% of the respondents with higher education) more often inhabiting bigger towns (29% of them live in cities of more than 100 people). This group consists of students (54%) and people running their own companies (46%).

Summing up, marketing in Poland, as every relatively new phenomenon evokes mixed feelings and reactions. Segmentation of the population interviewed presents the profiles and quantitative proportions of the distinguished relatively homogeneous groups of respondents. The results of the research show that in the past nearly twenty years of market, economy in Poland marketing were ingrained in the social awareness. However, the group of the 'Confused' is still relatively numerous (40% of the respondents) although it is impossible that it will ever disappear completely. It proves that propagating basic knowledge on marketing is still a serious educational challenge. However, it is important to notice that in Polish society the number of people having positive attitude to marketing is considerably higher than those who are sceptical or even hostile.

Abstract

The political changes that were initiated in Poland twenty years ago allowed the reconstruction of market economy. This led to a sudden interest in marketing studies. However, after a few years interest in this area of business began to decline. Yet, the economy needs a steady supply of specialists trained in this field. Establishment of an appropriate standard of education requires projection of such image of marketing to the society that would reflect its real role in modern economy. A starting point for taking well thought steps in this direction is the recognition of the real image of marketing as perceived by the society. This paper presents the results of a survey of the image of marketing perceived by the Polish society. They may be useful for comparative purposes in similar analysis and evaluations conducted in other countries that have undergone a system transformation.

TADEUSZ POMIANEK, ANDRZEJ ROZMUS

In Quest for the Right Way. Polish Science and Higher Education Against International Background

Introduction

In 1940 the world-famous Polish, then ‘Americanised’, philosopher and sociologist Florian Znaniecki reflected on the role of academics. He wrote: “How is it possible that academics – people who allow themselves to profess knowledge, rather than like everyone else pursue activity which would bring direct practical results – are not only tolerated by people of action, but even bestowed a social status by the community, which considers them to perform a desired social function?”¹. In the 21st century this question seems to be still up-to-date, yet the answers will most likely differ. Today’s knowledge is tested in practice, evaluated as to its practical use and whether it realises socioeconomic objectives. Knowledge should be a driving force of the innovation process. While we are at the innovation process, it is worth mentioning that there are two traditional models of the process: the model of innovation “pushed” by science – this is the so-called science/technology-push model, and the model of innovation “pulled” by the market, the so-called market-pull model. The first one does not offer immediate remedies for business enterprises, nevertheless carries potential to develop unique and unconventional solutions in the future. This model requires necessarily

¹ The Social role of the Man of knowledge.

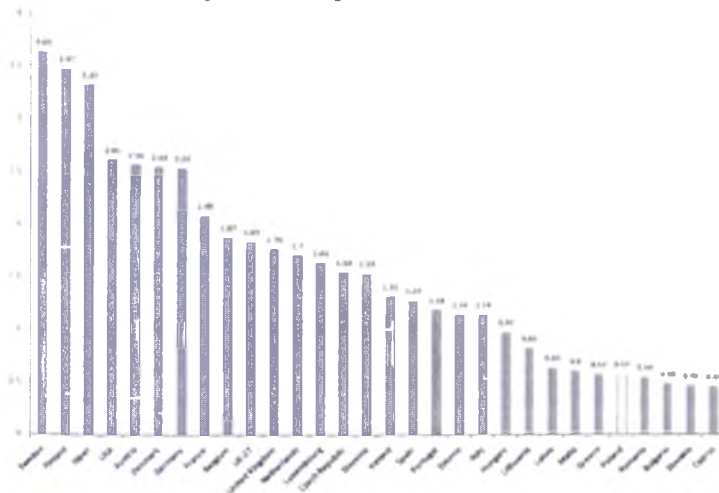
a complex R&D background, considerable expenditure and reasonable and far-sighted policy of the authorities. The second one - innovation model is enforced by companies' needs and assumes close relations between science and business. Admittedly, the solutions are not of a revolutionary character, but they do have an enormous practical value. Yet today the two linear innovation models above are spoken of less frequently than mixed, non-linear, push-and-pull models, and the accepted paradigm states that the effort of research is enrichment and creation of knowledge, and the effect of education – knowledge dissemination².

In this article, the Authors focus on describing the basic indices defining the innovative, scientific and educational potential of selected countries. In effect, on the one hand Poland's position on the map of the modernising world will be indicated, and on the other such analysis may be an inducement to generate possible solutions to improve that position.

1. Expenditure, Potential, Determination – International Context

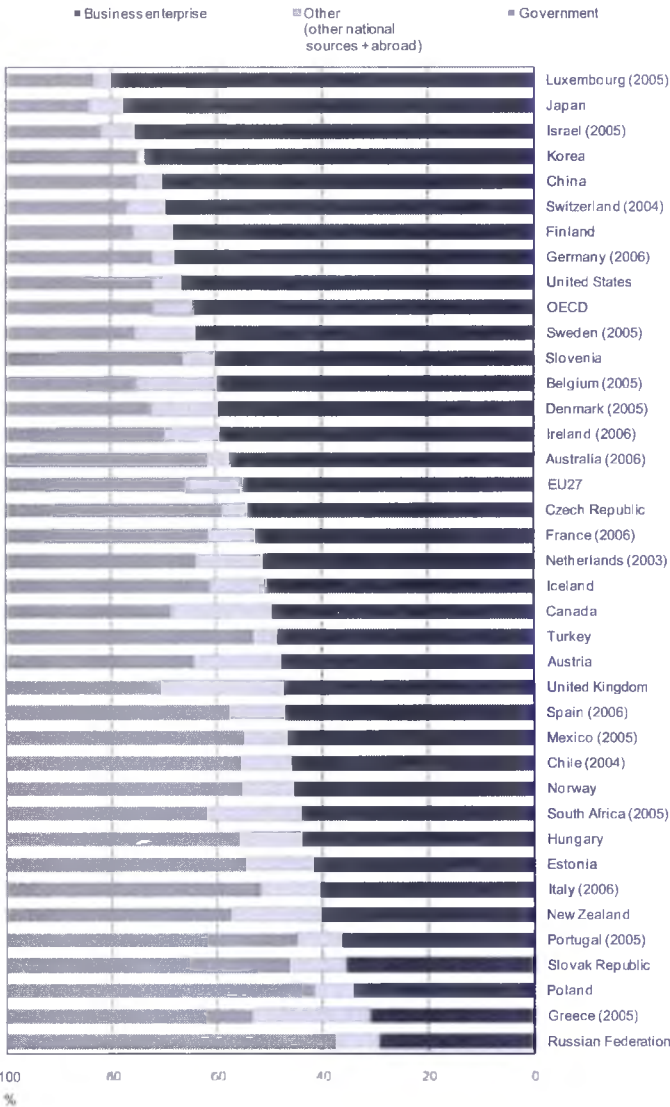
Due to its specific character, the R&D sphere requires high expenditure. As a matter of fact, one of the key factors characterising governmental regulations of scientific and technological development is R&D financing strategy.

Graph 1. R&D intensity (R&D expenditure as % of GDP), all sectors, EU-27



Analysing R&D financing sources, two of them seem most important: government grants and company investments. The key point in evaluating economy innovation is the proportion between those two sources. In Japan, South Korea or the USA – which are innovative economies – the company sector dominates, in Poland – the government sector.

Graph 2. R&D by source of financing, 2007 (As a percentage of the national

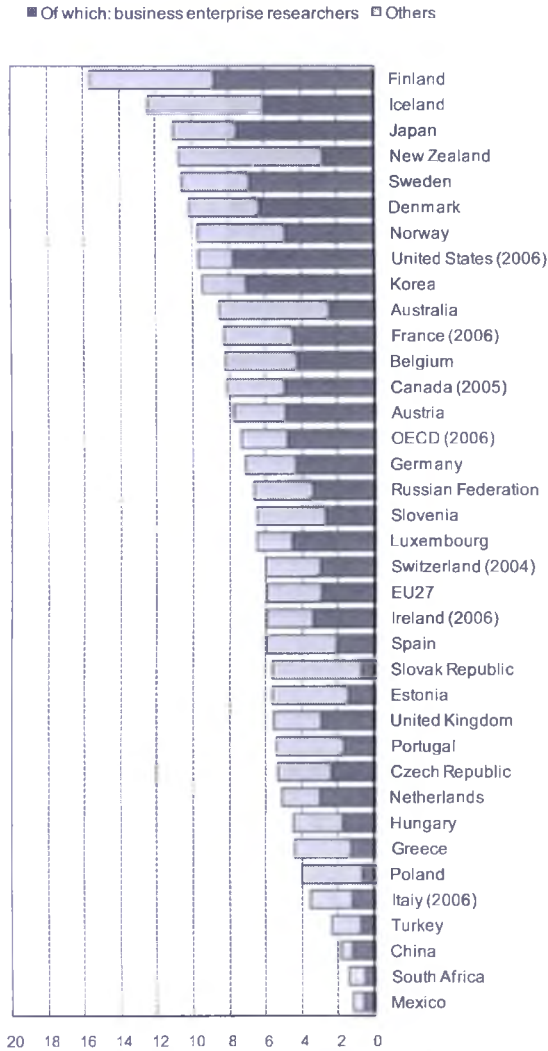


total)

Source: OECD Science, Technology and Industry Scoreboard 2009, http://www.oecdilibrary.org/content/book/sti_scoreboard-2009-en.

In highly developed countries, academics and researchers are employed mostly in business. In Poland – mostly outside of it! In our country, academics are mainly employed in higher education institutions. The academic career model in Poland is completely different (anachronistic) than in the USA, Korea or Japan. In Poland, the doctoral degree is a ‘pass’ to the academic world, and not – like in the above mentioned countries – to business.

Graph 3. Researchers, 2007 (Per 1000 total employment)



Source: *OECD Science, Technology and Industry Scoreboard 2009*, http://www.oecdilibrary.org/content/book/sti_scoreboard-2009-cn.

2. Innovativeness, Development, Effects – International Context

An important index of the closeness of market and science is the index which tells us the percentage of companies cooperating in the given country with higher education institutions in the area of innovation. In Finland nearly 60% of large companies and over 16% of small and medium enterprises cooperates with universities and colleges within the field of innovation. In Poland it is respectively 14.4 and 1.4%.

Graph 4. Firms collaborating on innovation with higher education institutions by size, 2004-06 (As a percentage of all firms)



Source: *OECD Science, Technology and Industry Scoreboard 2009*, http://www.oecdilibary.org/content/book/sti_scoreboard-2009-cn.

The influence of the academics of a given country is most often reflected in international rankings by the number of publications and quotation percentage. In the years 1999–2008 Polish academics have published over 134 thousand scientific articles and this located our country at the 19th position in the world, but the main problem is a very low percentage of quotations – 1.3. The ranking's leader, the United States, notes here over 31 percent of quotations.

Table 1. Top 20 countries as to number of publications and quotation percentage (1999–2008)

Ranking	Country	Number of publications 1999–2008	Quotation percentage 1999–2008
1	USA	2,999,344	31.8
2	Japan	806,008	8.5
3	Germany	775,787	8.2
4	Great Britain	687,778	7.3
5	China	586,664	6.2
6	France	555,113	5.9
7	Canada	420,636	4.5
8	Italy	400,229	4.2
9	Spain	296,892	3.1
10	Russia	279,904	3.0
11	Australia	271,311	2.9
12	India	242,222	2.6
13	Holland	234,947	2.5
14	South Korea	222,348	2.4
15	Sweden	176,642	1.9
16	Switzerland	170,842	1.8
17	Brazil	161,716	1.7
18	Taiwan	147,430	1.6
19	POLAND	134,068	1.4
20	Belgium	127,307	1.3

Source: Thomson Reuters's *Essential Science Indicators*SM database, January 1, 1999 through October 31, 2008.

<http://sciencewatch.com/dr/sci/09/feb15-09> 1D/.

An important indicator of a country's innovativeness is the number of registered patents. As showed by the data available, Polish patent initiative leaves much to be desired. All units of the R&D sphere are responsible only for about 44% of all inventions registered at the national patent office.

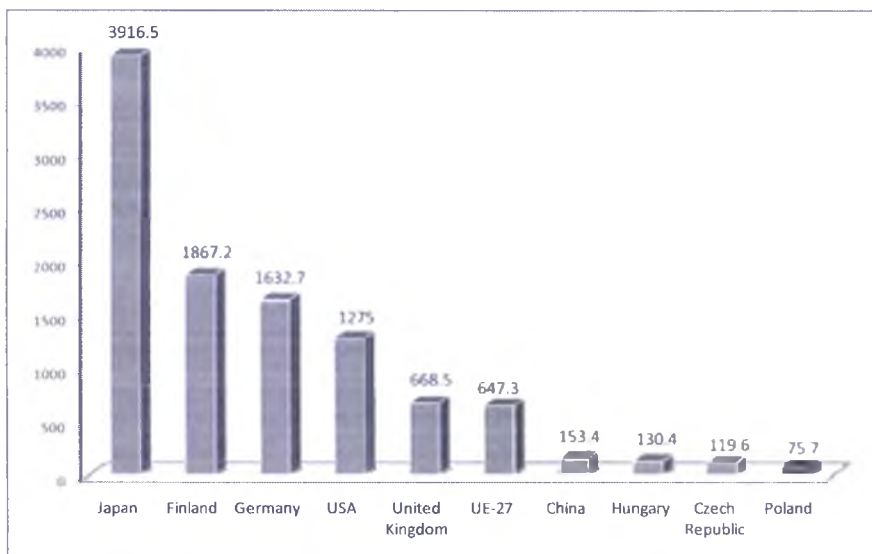
Table 2. Number of patents in selected countries by the Patent Office at which they are registered (2008)

Country	Patents in total	Number of patents registered at the European Patent Office	Number of patents registered at the United States Patent and Trademark Office	Number of patents registered at the Patent Office of the given country
Poland	2 886	167	133	2 488
Germany	134234	26 660	25 202	49 240
Czech Republic	1245	111	190	712
Hungary	1308	107	198	683
Finland	9897	1780	2621	1799
Great Britain	41079	5070	9771	16523
Japan	500034	23085	82396	330110
USA	389073	37370	231588	231588
China	203257	1510	4455	194579
EU -27 (sum)	322140			
Average for EU-27	11931			

Source: own study based on: *The World Intellectual Property Organization*, <http://www.wipo.int/ipstats/cn/statistics/patents/>.

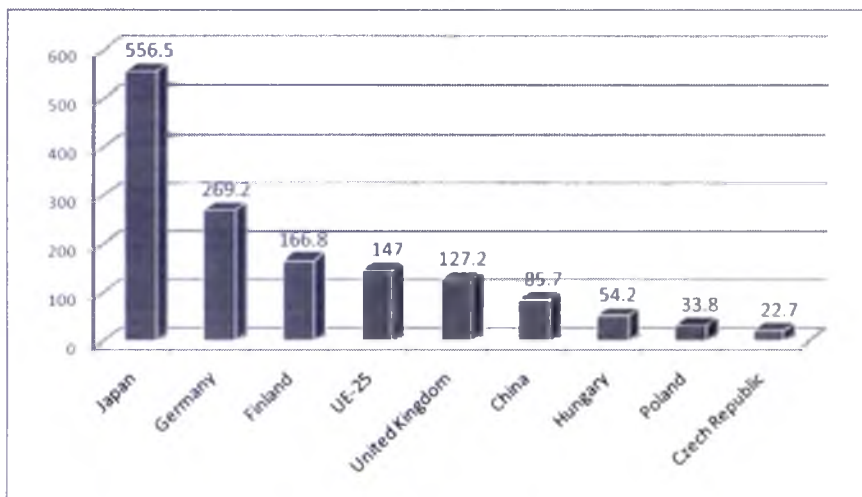
It is worth relating the number of registered patents to the number of inhabitants or of employees in the R&D sector. In 2008 Poland registered a little more than 75 patents per one million inhabitants, Japan over 50 times more in the same period, and Germany 24 times more!

Graph 5. Number of patents per one million inhabitants in selected countries (2008)



Source: own study based on: *The World Intellectual Property Organization*, <http://www.wipo.int/ipstats/cn/statistics/patents/> and *Rocznik Demograficzny 2009* (the Demographic Yearbook of Poland 2009), GUS.

Graph 6. Number of patents per 1000 employees of the R&D sector in selected countries (2006)



Source: own study based on: *The World Intellectual Property Organization*, <http://www.wipo.int/ipstats/cn/statistics/patents/> oraz *Science, technology and innovation in Europe*, Eurostat http://cpp.eurostat.cc.europa.eu/cache/ITY_OFFPUB/KS-30-09-148/EN/KS-30-09-148-EN.PDF.

As can be seen, our country should promptly restructure the economic strategy in the area of R&D activity. Stimulating such activity may be a basis for strengthening the position of Polish enterprises. It is connected with the need for considerable financing of the sphere, particularly by enterprises. It is necessary to introduce new financial and legal solutions which will induce private entrepreneurs to invest in research and development³. The more so for the fact that in *The Global Competitiveness Report 2009–2010* prepared by the World Economic Forum and published autumn 2009 Poland occupies 46th place (*Global Competitiveness Index*). In this ranking, our country is preceded by e.g.: Barbados, Puerto Rico and Malaysia⁴. Admittedly, Poland has advanced as compared to 2008 (in 2008 – place 53), yet in the innovativeness-related indices group – in the category of universities' cooperation with industry in research and development our country occupies the 76th position!

3. The Position of Polish Higher Education

Only two Polish universities – the Jagiellonian University and the Warsaw University – are included in the prestigious Shanghai ranking which since 2003 selects 500 world's best higher education institutions. Table 7 shows the positions of the Polish universities in six years on a global scale. The lowest position – as low as 400 – was taken by Poland in 2003, to then rise systematically in the three successive editions of the ranking (2004, 2005, 2006). Unfortunately, since 2007 the position of the Polish universities on the international arena is falling in comparison with the earlier years.

Table 3. The position of Polish universities in the Shanghai ranking in the years 2003-2009 – global scale

Year	2003	2004	2005	2006	2007	2008	2009
Position in the international ranking	401–500	302–403	301–400	301–400	305–402	303–401	303–401

Source: own study based on www.arwu.org

The situation is similar if we look at the regional scale, taken from the ranking from 2005 on. In the years 2006–2009 Polish universities have been shifting down by one position each year against other higher education institutions in Europe.

³ Financial Support for Research and Development Activity in Poland Folia Pomeranae Universitatis Technologiae Stetinensis 270, Oeconomica.

⁴ The Global Competitiveness Report 2009–2010.

Table 4. The position of the Polish universities in the Shanghai ranking in the years 2005–2009 – regional scale (Europe)

Year	2005	2006	2007	2008	2009
Position in the regional ranking	124–186	123–171	124–172	125–168	126–170

Source: own study based on www.arwu.org.

Other rankings are equally grim for us. In the *Academic Ranking of World Universities* or rankings of *Times Higher Education*, it's American, British and Asian universities that are in the lead.

As can be seen, a change in higher education financing structure is needed immediately because the allocated means do not translate into an international level of Polish universities. In recent years, we have witnessed substantial changes in financing systems in many countries. To cope with growing costs, the effect among others of a growing number of students, new technologies and differentiated specializations, European higher education institutions have two alternatives for maintaining or improving the way of financing them. They may request additional funds from their governments or gather funds from private entities. In relation to the latter, subsidies may take one of two forms. Firstly, these are the expenses of students and their families coming not only from the tuition fees, but also in the form of fees for auxiliary services, such as accommodation or catering. Secondly, funds come from private companies, non-profit organisations and labour organisations. All these expenses are the contribution of the private sector in financing higher education institutions. However, it needs to be noted that even when educational institutions receive funds from private entities it does not mean that they did not originally come from the government, e.g. as transfers or social benefits. When we look at expenses from the public budget, on the other hand, they are mainly allocated to: financing teaching costs, operations and investments, and for research and development, including investing in equipment. In the European Union studies are largely financed from the public sector – this concerns over 70% of students in the whole Community. Greece, Norway, France, Finland, Sweden, Ireland or Denmark are countries in which financing from public sources is nearly the only source of financing higher education. However, looking at the United States, Japan or South Korea, the situation there is quite the opposite – a majority of private expenses: in the United States – 1.9% GDP, in South Korea – 1.9% GDP⁵. We also need to remember that these are the leading countries with regard to economy innovativeness and teaching effectiveness.

⁵ Education at a Glance 2008.

4. Effective Models of Managing and Financing Higher Education and Science in the World

Below given are basic data concerning four countries: the USA, Japan, South Korea and Great Britain. The countries were selected because they are the leading ones with respect to many indices (e.g. modern and innovative economies, effectiveness and range of research, education quality and position of higher education institutions in international rankings).

USA

- the most renowned universities are private entities,
- compulsory tuition fees (includes both the public and the private sectors),
- private universities usually founded (e.g. the Stanford University) or sponsored (the Harvard University) by rich people or families,
- enormous selectivity in accepting students (e.g. only 7% of applications to Harvard were successful in 2008),
- important role of research universities,
- only state authorities responsible for public education,
- far-reaching autonomy of the organisation of studies and the university's operations – set by its authorities,
- studies largely financed from the private sector – 1.9% GDP,
- public expenditure for higher education is 1% GDP,
- the academic sector is the second largest one in the US with respect to R&D. Universities and colleges are the main executors of research (56% of basic research in 2008). The federal government is the main financing source for such research (57% of total support in 2008). American basic research is also subsidised by foundations (about 10%), universities and colleges (about 10%), and national and local authorities (about 3.5% through financing academic basic research),
- expenditure for applied and development research are about 86% of total expenditure⁶.

JAPAN

- limited public higher education sector controlled by national and local government units,
- dominating private higher education sector,
- very high competition among prestige universities, both public and private,
- very strong financing for higher education from private funds (particularly from individuals, so-called *family support for education* – 51.4%; from companies and other private sources – 16.4%),

⁶ National science board, Research and development: essential foundation for U.S. competitiveness in a global economy, A Companion to Science and Engineering Indicators – 2008, <http://www.nsf.gov/statistics/nsb0803/nsb0803.pdf>.

- main financing source: tuition fee,
- equal treatment of entities: subsidies granted by the government through the Promotion and Mutual Aid Corporation for Private Schools of Japan proportionally to current expenditure, mainly to maintain and improve the research situation, and also to support students financially,
- studies are largely financed from the private sector – 1% GDP,
- public expenditure for higher education is 0.5% GDP,
- expenditure for science and research in Japan is among world's highest and was 3.32% in 2007 GDP,
- strong connections of economy and science: applied and development research is financed mainly by industry,
- expenditure for research and development activities is financed mainly from private means (in 2006 they amounted to as much as 76%),
- the state finances basic research,
- change in the form of public means allocation to R&D: away from dividing the means basing on an algorithm towards allocating them by means of competition. It needs to be stressed that this principle applies to both public and private universities⁷.

SOUTH KOREA

- S. Korea is a country which invests a great part of the GDP (4.6%) in higher education. Korean expenditure for education in 2008 amounted to 35.5 billion dollars,
- in South Korea about 50% of people aged 24–35 have a university/college graduation diploma, and the Koreans are among the first in international rankings evaluating maths and natural sciences education quality,
- between 2000 and 2008, the number of students rose from 3.3 million to 3.5 million, and the number of institutions grew from 372 to 405 in that period,
- the dominating programme are undergraduate studies,
- all higher education institutions are subject to strict control of the Ministry of Education, Science and Technology,
- over 70% of primary and secondary school pupils go after their school classes to private education institutions (called *Hagwon*),
- the vast majority of higher education institutions are private ones – about 84%. All those institutions follow national provisions and use the same textbooks as public institutions. Beside the tuition fee, the main source of financing private higher education are the so-called *Chaebol* – huge Korean concerns. Companies like Samsung, Hyundai and LG often build whole fully-equipped establishments and grant them to universities by way of donation. Government loans are also offered to non-state universities for their further development.

⁷ Higher Education Finance and Cost-Sharing in Japan.

- higher education institutions in Korea include among others: colleges and universities with a 4-year undergraduate programme, and a 6-year one in medical schools; graduate schools, industrial universities, universities of education, 2- and 3-year post-secondary schools, junior colleges, technical colleges,
- most university students in Korea in 2006 studied Engineering⁸.

GREAT BRITAIN

- dominance of public institutions where studies are payable (there are also private institutions subsidised by the state),
- the universities/colleges may set different tuition fee rates up to 3 000 pounds annually,
- very broad autonomy, also in financial matters,
- means for supporting research infrastructure are divided selectively, with regard to a periodical research quality assessment,
- means for specific research projects are granted within competition procedures: the greatest part of the subsidies goes to higher education institutions which conduct the best research,
- the amount of a basic subsidy for research is calculated on the basis of a periodical research assessment conducted at the institutions,
- between the institutions and the government, “independent” bodies were created which are responsible for dividing and monitoring public funds to exclude direct political control over particular universities,
- gradual change towards more managerial management style at higher education institutions,
- the greater part of teaching subsidies is allocated according to an algorithm: effectiveness is the main factor in the financing algorithm,
- the tuition fee paid by the students is one of the most crucial and thus the broadest private source,
- considerable freedom in administering means from tuition fees in an institution’s own budget,
- household expenditure share in university budgets was about 20% ,
- the amount of means granted to higher education institutions depends mostly on their effectiveness, measured with the number of students completing the study year and with research quality⁹.

To summarise, in the subject of financing higher education and science in selected leading countries the following may be clearly noted:

⁸ Country education profile — South Korea.

⁹ Science, Technology and Innovation in Europe, edition 2009, <http://cpp.eurostat.ec.europa.eu/cache/ITY/OFFPUB/KS-30-09-148/EN/KS-30-09-148-EN.PDF>.

- a) considerable competition and diversity both in the area of education and science
- b) transparent operation conditions and a strong role of competition procedures
- c) emphasis on practical nature of the conducted research, their usefulness for economy
- d) stimulating strong connections of the institutions conducting R&D activity with business
- e) substantial diversification of higher education and research financing sources
- f) equal treatment of the subjects.

Conclusion

Can Poland go the way the USA, Japan or South Korea go? What does the phenomenon of East Asia consist in, generally? As late as in the 1960s Asian countries, Korea among them, were seen as underdeveloped and such as should focus mainly on food production (e.g. that of rice), possibly on developing foreign tourism. Such was the opinion not only of Western politicians, but also of experts. So how was the East Asian miracle possible, how did countries like Korea, Taiwan, Malaysia advance within less than 50 years to the elite of highly developed countries, leading in modern technology development, having a well prospering education and science sphere? Firstly, the governments of the East Asian countries selected the sectors to develop, meaning mostly investments in high technology ventures. Secondly, the authorities of those countries despite their belief in free market realised that the markets must be created and reasonably managed, creating regulations forcing to some extent private enterprises to participate in modernising the country. Thirdly, China, Malaysia, Singapore, South Korea or Japan while admitting foreign investors took care for the invited companies to transfer technologies and train local employees, thus participating in the efforts to modernise the given country¹⁰. Anyhow, the phenomenon of East Asia has a wider context. As J.E. Stiglitz – the Nobel Prize laureate in Economics in 2001 – wrote: “Globalisation helped East Asian countries to lift themselves up from poverty, allowing them export-driven growth. It gave them access to international markets and technologies allowing to reach a wide-scale productivity growth. But those countries steered globalisation: what largely contributed to their success was the ability to use the globalisation and disallowing globalisation to use them”.

Poland, similarly like it is with South Korea or other innovative countries, needs healthy competition both in science and education, and a rational government policy. These are the only things which will enforce effectiveness and economy – if only in managing the limited means for science and education in our country. Besides, the claim that competition is required for effective management neither is new nor was

¹⁰ Making Globalization Work.

constructed by the Authors of this article. Adam Smith argued as early as in the 18th century that despite objections, competition does not lead to deepening financial disparities, quite the contrary: it helps to level them, for it is the best tool to prevent monopolies rising, limit and eliminate them. It also induces the human to share his/her own discoveries with others, and generates general progress¹¹. However if competition is to be able to have positive influence on the particular areas of our lives, we need to create conditions for it to arise. This is the government's role. The government must be required to make the bold and often socially unpopular decisions. The governments not only in Poland are often entangled in political games, waste energy and time for unproductive, image-oriented work. A famous historian of economic thought, J. A. Schumpeter, thus described this phenomenon: "The fact that in democracy the government has to care mainly for the political value of a policy, law or administrative act – i.e. the same fact which strengthens the democratic principle of the government being dependent on the voting in parliament and on the electorate's attitude – has every chance to effectively pervert all pros and cons. In particular, it imposes a short-term perspective on the people at the helm and near it and makes it extremely difficult to serve the long-term interests of the nation, which may require consistent work for remote aims (...). It also makes it difficult to rationally dose the means used. The measure used by a government fixed on its political chances won't necessarily coincide with such as would give the most satisfactory result for the nation."¹²

It is not quite certain whether the new version of the Lisbon strategy will become a chance for our government – and those of other European countries – to catch the "reformatory and innovative wind". It seems that the EU countries have not learned their lessons from the failure of the previous strategy.

The Lisbon Strategy accepted at the meeting of the European Council in Lisbon in 2000 attempted to develop a uniform response to the global challenges the most important of which was competition from dynamically emerging extra-European economies which were gradually gaining in importance in the global scene. Such economies include in particular those of Asian countries and of the USA. Unfortunately, the most important assumptions (i.e. a 70% employment rate and allocating 3% of GDP to research and development) have not been achieved. Admittedly, the employment rate in the EU in 2008 reached 66% (which means a rise from 62% in 2000), yet the progressing crisis contributed to a renewed fall in the employment rate. The European Union didn't manage to reach the productivity growth level of the most industrialised countries, either: total expenses for R&D in the EU expressed in percentage of GDP showed only a marginal increase (from 1.82% in 2000 to 1.9% in 2008). Objections concerning the Lisbon strategy include also:

¹¹ Adam Smith (1723–1790). *Life and work of the Author of 'An Inquiry into the Nature and Causes of the Wealth of Nations'*.

¹² *Capitalism, Socialism and Democracy*.

- weak connections of the Lisbon strategy with other EU instruments and strategies, like the stability and growth pact, EU strategy for sustained development or the European social agenda,
- imprecisely stated role of the European Council and the European Parliament in directing the undertaken reforms,
- weak informational policy which caused the social awareness, citizen engagement and social support for the strategy's aims to remain low at the Union level, and at the national level it was not always sufficiently coordinated¹³.

The list of the sins should also include underestimating the importance and role of competition both in the fields of science and education. It would clearly be an overstatement to claim that the strategy has totally failed. It has led to changes in the area of joint actions to solve long-term problems in the EU and contributed to revaluing the aims of the common policy – the results were not as good, though. The European Union is currently working on transforming the present Lisbon strategy (planned originally for 10 years) for the next decade – its working name is: “UE 2020”. The Polish government has already taken part in European consultations concerning the new strategy. In *Stanowisko Rządu RP do dokumentu roboczego Komisji Europejskiej ws. konsultacji dotyczących przyszłości Strategii “UE 2020”* (Stand of the Polish government towards European Commission working document on consultations concerning the future of the “UE 2020” Strategy), accepted by the Committee of the Council of Ministers on 14th January 2010, we read: “The future Strategy should to a greater extent take the interests of the whole EU into consideration. The strategy is proposed to focus on three priorities:

- using the potential of innovativeness and creativity, which is connected with developing the intellectual capital in all its four aspects (human capital, structural capital, social capital and relationship capital),
- deepening the internal market,
- developing broadly understood infrastructure – of transport, energy and teleinformation.”

And further: “The Polish government (...) agrees with the opinion stated in the document that in order to rise to the challenges posed before enterprises by the global economy it is necessary to change the approach to innovation. The hitherto conceptions of supporting R&D as a source of creating competitive advantage are important, yet insufficient in the light of the necessity to build a knowledge-based economy. It is vital to broaden the way of thinking of innovations, considering new forms of creating innovation and of creating innovation policy which would be the answer to the global challenges. At the same time the government of the Republic of Poland calls attention to the fact that building a knowledge-based economy implies the necessity to develop cooperation skills and the ability to

¹³ Commission staff working document: *Lisbon Strategy evaluation document*, European Commission, Brussels 2010, http://ec.europa.eu/growthandjobs/pdf/lisbon_strategy_evaluation_pl.pdf.

transfer knowledge between various market actors (enterprises – scientific units – consumers)¹⁴.

Unfortunately, the preliminary analysis of the assumptions to the new strategy does not look optimistic. The European Union, and Poland with it, will not overtake the USA or Asian countries if the foundation of the basic solutions both in economy and in education and science is not formed by healthy competition, immanent competition system in accessing R&D financing sources and the conviction that knowledge-based economy is an economy based on freedom, creativity and equality.

Abstract

Today, knowledge is tested in action, with regard to its usefulness in practice and whether it fulfils socioeconomic aims. Knowledge is to be the driving force of the innovation process. Thus there appear new tasks for the contemporary scientists, there appear a new role and new competences – serving the knowledge-based economy. On the global scale, researchers cope variously with this task. Various are the results of their work and the degree to which it is useful to the business environment. In this article the Authors focus on describing the basic indices defining the innovative, scientific and educational potential of the selected countries. In consequence, on the one hand the paper shows Poland's position on the map of the modernising world, and on the other such analysis may be an inducement to generate possible solutions concerning improving that position.

¹⁴ Stand of the Government of the Republic of Poland towards European Commission working document on consultations concerning the future of the "UE 2020" Strategy, Warsaw 2010, <http://www.mg.gov.pl/NR/rdon-lyres/A3178536-D69F-4435-8518-A2776FAA36CF/59361/PolandspositiontowardsEU2020.pdf> (in Polish).

GORDANA RADOSAVLJEVIĆ

The Analysis of Business Success in Tourism

Introduction

The main goal of management is the realization of optimal effectiveness and efficiency of business performance, i.e. the satisfied profit level, so that all functions of management (planning, organization, managing and control) follow that goal. Planning, monitoring and measuring of business success is facilitated by the introduction of standard ratios in measuring of business performances which enables comparison of business success between firms on domestic and international markets.

Market conditions of an economy determine firms' business behaviour. It includes the acceptance of international work standards, behaviour, communication, and other standards that regulate firms' business. Apart from that, it includes the ways of monitoring business events and reporting about business results and successes of a firm. The main characteristic of business tourism is reflected in the structure of incomes (assets) and costs.

It is important to emphasize high level of fixed costs in the structure of overall costs. Tourism products cannot be stored and their usage cannot be postponed, so if a plane takes off with empty seats, or accommodation in a hotel is not sold in a hotel, lost income cannot be recovered. That is why the priority in tourism is maximization of consumers in order to achieve enough income to cover fixed costs. Air companies and hotel chains have developed and applied sophisticated

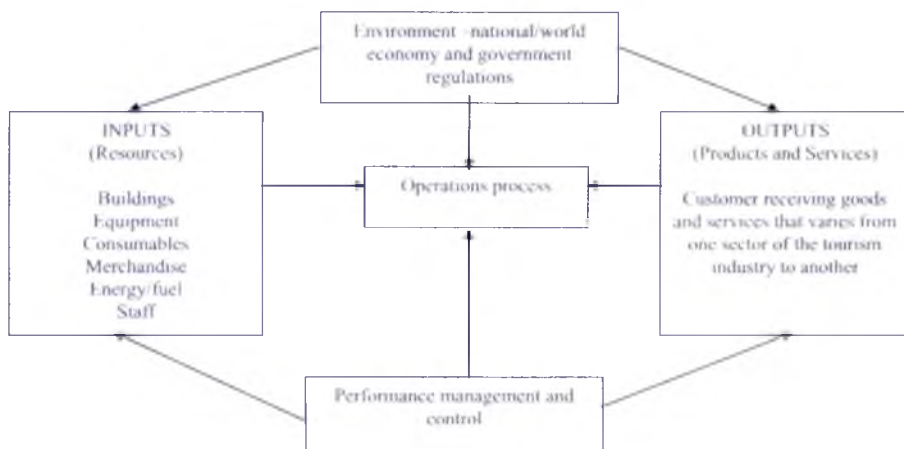
systems for realization of income maximization which is important for their business. The important characteristic of a tourism firm is the economy of size that gives more advantages to the larger companies than to the smaller ones. For the purpose of adequate monitoring of results in tourism firms, it is important to have the insight in both market and financial dimensions. Business in tourism is very complicated, because of the influence of internal and external factors, which demand a large number of different ratios for its evaluation. Therefore, there has been the analysis of evaluation of firm performance based on information from annual reports, through defining of financial indicators, emphasizing the problems that may appear.

1. The Measurements of Business Performances in Tourism

The financial activities are one of the most important dimensions of business management in tourism. The achievement of market goals means that the financial goals are realized. Profitability and financial growth are the outcomes of the successful management in tourism.

The business operating in tourism includes many activities which are oriented on satisfaction of customer needs. An overview of the operations process in an organization is given in Figure 1.

Figure 1. Overview of the operations process



Source: Becch J., Chadwick S., *The Business of Tourism Management*, Prentice Hall 2006, pp.228.

Performance measurement and monitoring of activities influence on quality of business management in tourism. The achievement of profitability is the main condition for a business.

Every firm wants to achieve a high level of profitability. The financial management includes making business decisions, which should enable free business activities, investing in current and fixed assets, planning financial activities in the future, cash flow managing in firms, etc.

Profit is one of the main financial measurements in defining business success. The income sheet shows the information about realization of sale during a given period of time and about costs, too. In tourism the revenue is generated in different ways, for example: travel agencies will gain revenue from selling package tours, tickets, insurance, renting car, etc. The hotels have revenue from selling rooms, food and beverage and apartments.

In the sale process a firm has some costs such as food costs, costs of retaining, airplane taxes, provisions, travel taxes, amortization, and label cost.

Profit presents the difference between revenue and costs for an account period. Financial reports present the financial results of accounting for a period of time (day, month, and year) and the important factor in preceding these results to internal and external decision makers.

Financial reports are the starting point in managing of business performances.

The most important financial reports are balance sheet, income sheet, reports of cash flow. (7, pp.56) They give financial information to owners, managers, investors and others. The income sheet gives answers to many questions about different sources of sale, revenue or profit (room, food beverage etc.) and operating costs (marketing, payments, etc.)

This report is also significant in comparing revenues with sales and costs in different periods of time (account period).

The reports of cash flow present cash inflow and outflow during a period of time.

Doing business in tourism is based on cash payments. Most guests, during their stay in hotels or restaurants, pay in cash or with credit cards. Reports of cash flow give information about cash inflow and use of money during a period of time, that are important for investors, creditors, managers and other users.

The financial measurements show business success in many segments of tourism management, such as: marketing, finance and operating business activities in tourism. The central point of tourism business is sale. The management tends to maximize sale which is to be enough for covering business costs (operating costs) and profit and dividends for shareholders. Efficient sale has influence on business profitability. The modern management in tourism tends to reduce investing and operating costs in order to achieve a more competitive position. Therefore, product innovations and the quality of services are the most important of all segments of tourism business.

The market competition begins to be much stronger, especially in conditions of regional integrations. Globalization of market and development of strategic alliances give many opportunities and threats for tourism firms in the future.

The business in tourism is successful when the scale of sale produces return on capital and return on assets in firm. Besides this, it is very important to satisfy customer expectations, to build good relationship with suppliers and to reward all managers and employees of a firm.

The strategic and operating decisions that have main role in achieving profitability are related to marketing, supply, profit margin, capital structure, using working capital, investment, etc. These decisions have to be adequate from the aspects of efficiency and effectiveness in business. There are vertical and horizontal analyses. On horizontal level it means investigation of changes in time (month, year changes). The vertical analysis is done on different levels in organizations and it depends on global and derivative financial measures.

The main indicators for measuring business success are productivity, liquidity, profitability, cash flow, debt, etc. Productivity presents efficiency of using capacity, employees, fixed and working capital. The indicators of liquidity include assets, cash flow and payment policy for suppliers and other stakeholders. Profitability is used in measuring efficiency of marketing and financial activities (based on return of capital, action capita etc.). Debt is related to the management's view of risks and returns, because it has influence on capital costs.

Cash flow is necessary for acquiring fixed assets and acquisitions in short and long run (time). Key ratios are important indicators of business success. They help managers in evaluating business performances.

Table 1. Key ratios

Main ratio Overall performance	ROCE (PBIT / capital employed (CE)*100)	Overall measure of performance; links profit generated to the value of assets employed to ram that profit. Excludes ginning because PBIT is profit prior to interest and long-term liabilities are excluded in CE
Subordinate ratios Profitability	Net profit % (PBIT / sale*100)	Key measure of performance; reflects all expenses and thus overall business performance. Shows what money is left to cover finance costs and fund growth. Expressed as a percentage.
	Gross profit % (GP / sales *100)	Reflects core profitability of product or service. Reflects pricing policy and basic cost control of prime costs. Expressed as a percentage.
	Expenses as % of sales (exp / sales *100)	Diagnostic ratio that can explain performance; can be calculated as total expenses or they can be broken down, for example: labour costs %, overhead %
Productivity	Asset utilization (sales / capital employed)	Shows how many sales are being generated from the assets. Indicates the intensity with which assets are being used. Expressed as time utilization, but can be interpreted as the value of sales generated per £ of assets.

	Sales to fixed assets and sale to current assets	Isolates the productivity by class of assets; usually only useful when reviewing a trend to see whether each class of assets is being managed effectively.
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Source: Bech J., Chadwick S., *The Business of Tourism Management*, Prentice Hall 2006, pp.168.

2. Estimating Business Performance

There are many methods and techniques in estimating business performances especially in analyzing financial information from financial reports which are based on accounting data.

The quality analysis is a base for making decisions on all management levels in the firm.

Reliability, comparison and importance are the elements of qualified information that help internal and external users (stakeholders) to make decisions.

Firms have to operate inside the financial barriers and control their costs. The process of planning is important for resource allocation and for measuring and comparing results in different periods of time. Cost control is the important aspect of management resources because it shows where and why the costs are high.

Many authors made estimation of business performances. Jones presented inputs and outputs. (2, pp.104–112) Philip includes elements such as inputs, process, outputs, market, and characteristics of environment in the model of measuring performances. (5, p. 359–365)

It is very significant to compare information from different aspects in order to identify the level of current business performances: (8)

- Comparing planning and current results;
- Comparing information in different intervals of time;
- Comparing with competitors.

Budget presents a business plan that in the best way presents business performance. Besides costs and profit, budget includes market instruments, too. Budget gives information about changing profit which depends on sale, price, label costs ,etc. (7, p. 575)

This planning aspect enables all firms in tourism to define profit goals. If they want to raise profit, they have to define measurements for goal achievement.

These have to be based on the analysis of competitiveness and market movements. The aspects of creating financial and marketing strategies are showed in Figure 2.

It is very important for planning process to make distinction between investments and results that are expected. Large number of measurements (qualitative or quantitative) can be grouped in the field of input-output analysis on the ways such as:

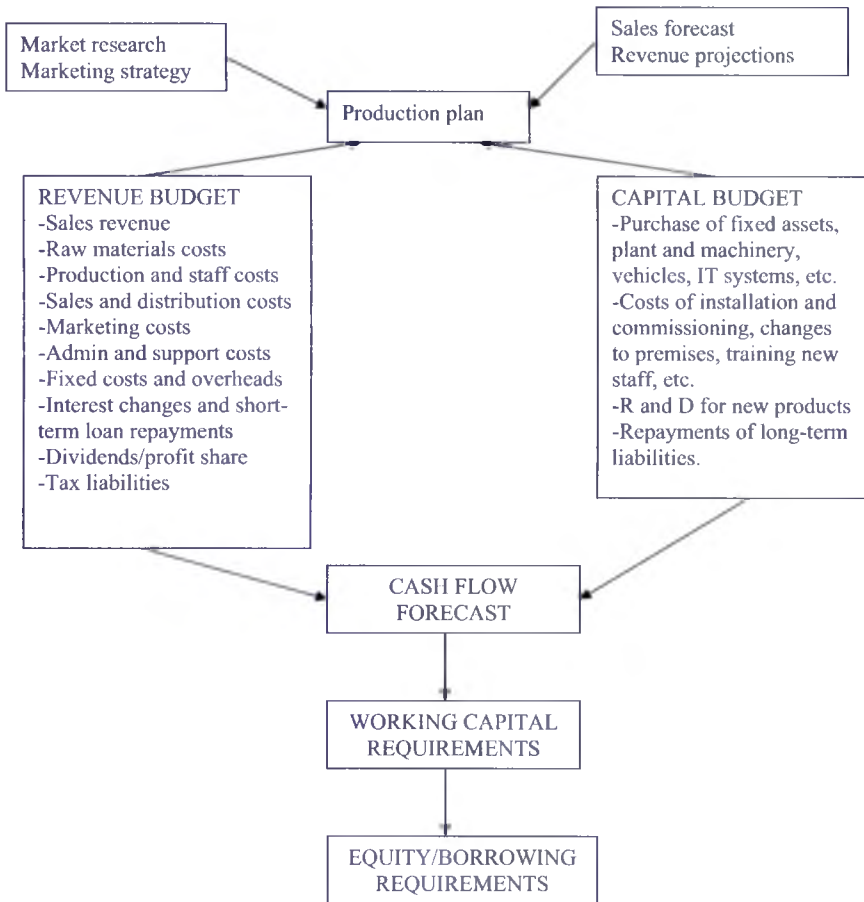
- Number of visiting and sleeping occupancy level
- Profit and loss (from accommodation, food beverage, etc.)
- Customer satisfaction
- Market share etc.

It is very significant for business strategy to define need for fixed capital and opportunities using different sources.

Whole capital includes fixed and working capital that is used to finance supply of raw materials, payment and other spending in business.

Before starting business, it is important to define expected profitability from investing capital.

Figure 2. Formulating a financial plan



3. The Effects of Internal and External Factors on Firm Performance

Firm profitability in the industry depends on two factors: internal and external. Internal factors present the source of competitive advantage and factors of differentiation of firms in tourism.

The unique resources in firm present the source of suitable competitive advantage. The problem that can appear in the firm is heterogeneity of resources and ability of the firm on which the strategy is based.

On the other side, inefficient allocation and using of resources indicates heterogeneity between all actors in economy. The resources are inevitable and viable assets that a firm owns, manages and controls (brand, technology, staff, etc.).

The organizational and managerial aspects are very important for a firm such as coordination, integration, learning, financial analysis etc.

Firm ability to use its resources in the right way analyzes external factors in unpredictable conditions, can have influence on firm profitability in tourism.

Besides internal factors, the competitions of destination can have influence on firm performance (especially hotels). Therefore the destination in which hotel operates has influence on firm profitability, competitions and performance.

There are few models in studying competitions of destination. The most significant model was developed by Rich and Crouch. Regardless to this model, the competitions of destination depends on: (6)

- global macro environment;
- micro competitive environment;
- core resources and attractions;
- destination policy of planning and development;
- destination management.

Global environment includes economic, geographic, social, political and other factors in the environment.

A competitive environment includes activities of different firms in tourism that have influence on realization of their goals. This environment includes supply, distribution, competitive destination, tourists, management and other stakeholders. The key resources and attractions represent attractiveness of tourism destination.

Core factors are policy of planning and development of destination and destination management. In the process of planning much information about the destination's suitability is very important to define mission and vision, to analyze marketing position and brand development. These factors and other economic and social factors may play a leading role in developing of tourism destination.

Management destination presents micro activities (operating activities) with the aim of realization of defined goals and strategy. There are many activities in focus of management destination that can improve the quality of destination and key

attractiveness. One of traditional activities is marketing (promotion activities, choice of target market, product development, price policy, distributive channels, etc.). Other activities improve quality, development of information systems, organization, human resource management, financial management, etc. The firm performance has influence on the competitiveness of destination where a firm operates.

4. Problems in Performance Analysis and Measuring

In spite of the importance of firm performances, there are many problems in their measuring and defining. In tourism, some explorers use the measurements of efficiency and productivity to evaluate performances in hotels or a tourist destination. As it was said, productivity presents ratio between output and input, and performances can be observed through three approaches: financial, financial and marketing approach, and organizational.

The important analysis of financial indicators is the analysis of sales growth rate, investment recovering rate, dividends, etc. This approach has a few disadvantages. Firms can refuse to give exact account data, or can use different criteria in calculating financial indicators. Financial and marketing approach presents a wider concept of performance analysis, because it also includes, market share, innovative products, quality of product, market effectiveness, value adding in the privatization process, etc. Organization effectiveness approach includes, apart from these indicators, the vision and the mission of a firm too, which is presented by the concept of Balance Scorecard – BSC. (3, pp.78–85)

According to this concept, performances are seen from the aspect of financial and marketing indicators that are defined based on primary data. The vision of the growth of a firm is the beginning of the definition of business strategy of concrete firms. Evaluation of realized performances, through one balanced approach, is the essence of the concept.

Performance identification for individual hotel firms in a region or a country is very difficult, which was confirmed by the study that dealt with the research of performances of hotel firms in Spain. It included hotel managers, representatives of hotel association and University professors. The research was done in the period between 2000 and 2004 in 221 hotel firms. Variables used in the analysis are filling of sleeping occupancy, gross profit margin, and gross profit per room. (4, pp.1–7)

Research results have shown an important influence of internal resources of a firm and factors of environment on firm performances. Competitive advantage and profitability of hotel firms do not depend on internal resources only, but on external factors in destination. It means that public institutions in tourism that are on a certain destination can have influence on competitiveness of tourism firms by the policy of innovations, quality and training, which can improve quality,

broaden innovations (through some institutions or technology centers), improve working force skills, or create brands. Regional or local institutions in cooperation with firms can create a favourable environment, which should provide technical and financial resources, necessary information, and know-how for achieving competitive advantage in the global tourist market. (4, pp.6)

It is important to emphasize that it is very difficult to evaluate objectively performances in tourism of Serbia, because statistics does not cover that sector in an appropriate way. There is not enough data about performances (business success, productivity, and efficiency) in tourism, performances are not followed adequately in accommodation, there is no adequate observation of number of arrivals, sleeping, assets, employees, etc.

However, there has been the research of efficiency of hotel business in Serbia. The key elements of the research were: sleeping occupancy level, the structure of sales channels, realized hotel assets per room, realized average price of spending nights, etc. The results have shown that the average annual usage of capacities is 28% that hotels have been oriented to individual guests that the process of privatization has not been finished, and the investment is not on appropriate level, etc.

Inclusion of hotel management in Serbia in the standard system of business results requires fast and efficient adjustment of the current conditions to new demands and needs that are required by international hotel standards. Prerequisites for this are: definition of the owners' structure, firms' reorganization, usage of international models for hotel managing, development of integrated information systems, continuous training of staff, etc.

Conclusion

Managing of firm performances and their continuous tracking and predicting are the means for realization of defined goals in business. Indicators must be true, complete and on time, so that a firm management could make adequate decisions, and the indicator analysis could be useful for both internal and external users. In achieving and maintaining of competitive advantage and the satisfied level of profitability of hotel firms, the internal firm resources have the key role. However, the role of external factors is important in achieving financial, technological, and market results. There are some problems in adequate observation of the internal and external factors, and in defining of their influence on firm performances.

Abstract

Tourism is one of the most significant activities in many developed countries. Finance presents the important aspect of management in tourism. The same financial reports and concepts are used in the business operations of small and multinational companies. The understanding and measuring business performances are the critical elements in defining the strategy of company.

In this paper, the different aspects of business performances in a tourism company such as profitability, productivity, liquidity, etc. are analyzed, The key area in researching and analyzing the ratios that are important in evaluating financial reports for internal and external users (stakeholders) are also identified. The main focus is on the internal and external factors, which have influences on business performances, and on the problems in analyzing and measuring performances, too.

Literature

1. Beech J., Chadwick, S., *The Business of Tourism Management*, Prentice Hall 2006.
2. Jones P., *Quality, Capacity and Productivity in Service Industries*, International 1998.
3. Kaplan R.S., Norton D., *Using the balanced scorecard as a strategic management system*, Harvard Business Review 1996, p. 78–8.
4. Molina-Azores F.J., Pereira-Moline J., Claver-Cortes E., *The importance of the firm and destination effects to explain firm performances*, Tourism Management, Elsevier 2009, p. 1–7.
5. Philips P., A. *Hotel Performance and Competitive Advantage: A Contingency Approach*, International Journal of Contemporary Hospitality Management, p. 359–365.
6. Ritch J.R., Crouch C. B., *The competitive destination. A sustainable tourism perspective*, Cambridge MA: CABI Publishing Journal of Hospitality Managing, p. 104–112.
7. Walker J., *Introduction to Hospitality*, Upper Saddle River, New Jersey 2009.
8. Wober K.W., *Benchmarking in Tourism and Hospitality Industry*: CAB International 2002.

PREDRAG STANČIĆ, VLADIMIR STANČIĆ

Financial Liquidity Management

Introduction

The core problem of financial liquidity management resulted from the fact that in usual circumstances a company may cover its maturing liabilities exclusively in cash. The cash needed is obtained either through selling and collection of goods, services and other cashable assets or through resources outside the business process. In addition, it is generally known that encashment of assets is a much slower and more complicated process than turning cash into assets. The reason is in fact that money, except in financial institutions, participates exclusively indirectly in a company – covering the maturing liabilities through goods and services and/or through collection on the grounds of business activity. Accordingly, cash and other liquid resources available at a given moment may not be in interference with the business activity of the company. On the other hand, practical experiences suggest an immediate correlation between the quantity, timing and certainty of business cash flow as well as the quantity and structure of liquid assets. The correlation reduces financial liquidity management to management of the quantity and dynamics of cash flow.

In theory, the ideal cash flow synchronization enables that time cash receipts coincide with cash requirements and thus enables the company to operate without any liquidity reserves. However economically rational it may be (immovable property minimized), practical experiences show that operation without any liquidity

reserves is rather an ideal than an actual situation. As a result, financial liquidity management means finding solutions of some crucial problems related to:

- maintaining liquidity levels to support solvency,
- form (structure) of liquidity portfolio.

1. Conceptual Framework of Financial Liquidity Management

The issue of definition of liquidity has been present for a long time in both company's economics and financial theory. One possible approach relates the issue of liquidity to convertibility of particular assets into cash. There cash is an absolutely liquid asset (high-powered asset), i.e. it is a liquidity measure in liquidity assessment of other assets. Practically, liquidity of any asset is related to ease and pace of its conversion into cash with no significant transaction cost and loss of value.¹ Among the numerous factors determining convertibility (liquidity) of a particular asset the following ones are of particular importance: generic characteristics of the asset (kind and divisibility), market conditions, price stability, distribution cost, etc. Thus, liquidity of a company as a whole equals the sum of liquidity of individual assets being at disposal of the company at any given moment. Liquidity of a company in the context of allowing quick reaction time while portfolio asset conversion is followed by small value losses is relatively consistent but short-term oriented concept, associating with discontinued activity.

Another approach to liquidity begins with the *going-concern* concept, assuming indefinite time period of a company's existence. Liquidity is here put into context of cash flow dynamics, i.e. the only reasonable test of a company's liquidity is its actual capacity for settlement of liabilities as they come due. Relatively cashable receivables or stocks have no much practical significance if liabilities are mature and the company is default. This concept points out gaining capacity and financial flexibility of the company as key factors of liquidity.

Stable financial structure of the company, high gaining capacity and stable cash flow make convertibility of assets into cash – secondary component of the company's liquidity. Financial flexibility (elasticity of financing), as company's ability to access an additional amount of its own or other capital when it is needed, is an important component of the company's total liquidity. Good financial standing and unused borrowing capacity enable the company to come up with the short-fall of cash immediately and at a reasonable price, either for liabilities due for payment or for taking chance of favourable investment and market conditions ("golden opportunities").

Maintaining the needed level of liquidity is a requirement imposed on the company from the outside – by the creditor or legislation. The liquidity requirement is a pragmatic issue imposed by the creditor since, under the same conditions, a liq-

¹ Van Home, *Financial Management And Policy*, twelfth edition, Prentice-Hall International 2002, p. 429–430.

uid company provides wider range of guarantees for covering liabilities in due time. The required liquidity level needed as a guarantee of solvency means splitting some assets off from the company's business activities. The explicit price of doing so is in loss of return which otherwise may be realized if the reserves of liquidity are employed. If widely observed, the liquidity requirement does not necessarily collide with the owners' or management's interests who are primarily effects-oriented. Namely, should the problem of solvency escalate, the company would face financial difficulties and may cease to exist.²

Some dilemmas arise along with the reserves of liquidity such as:

- level of the reserves of liquidity,
- structure (form) of the reserves of liquidity.

Although there is a variety of practical solutions, a reasonable approach must obey the law – high reserves of liquidity guarantee solvency (minimize the risk of insolvency), derogate the principle of cost-efficiency, i.e. minimal cash favours the principle of gain (all the assets are invested and gain the return) along with greater risk of insolvency. Excluding the extremes (high level of cash, minimal level of cash) as unlikely in normal business circumstances, financial management may be reduced to search for an optimal level of liquid resources simultaneously meeting the solvency capital requirement and gaining the maximal return (risk-return trade-off). Although the optimal liquidity level is beyond any doubt proven in theory, its practical operationalization is not simple at all.

One possible approach to the optimization issue involves analysis and quantification of the costs resulted from existence or non-existence of the reserves of liquidity in a company. A set of these costs known as relevant cash cost may be classified according to their occurrence and dynamics as follows:

- **Cost of holding cash** – results from the reserves of liquidity or open credit lines and is generally the opportunity cost resulted from cost of asset immobilization. Quantitatively, cost of holding cash equals liquid assets (LA) multiplied by cost of liquid assets by monetary unit (K_l). Factor K_l is obtained as spread between the rate of return on business assets and the rate of return on marketable securities, being relatively constant if expressed in monetary unit of liquid assets. Dynamically this factor is directly proportionate to the amount of liquid reserves, and financially it is approximate to the return likely to be obtained from the available cash put into business operation or the interest payable on debts which may be paid out of the cash reserves;
- **Cost of cash shortfall** – is related to the company's decision to operate without any or with minimal reserves of liquidity. Quantitatively, this cost is the product of the amount of liquid assets (LA), probability of insolvency (at a given volume of liquid assets) and cost of liquid assets shortfall by monetary

² Giroux, Wiggins, *Chapter Xi And Corporate Resuscitation*, Financial Executive 1983, p. 425.

unit (K_t) which tends to decline along as liquid assets increase. Cost of cash shortfall equals to lost opportunities in the market, cash before delivery, discounts, trade allowance, etc. Cost resulted from the loss of reputation and bad credit standing with suppliers which is hard-to-measure should be added to cost of cash shortfall. This cost is in inverse proportion to the amount of cash available;

- **Cash transaction cost** – is related to all the operations with the reserves of liquidity, to start with external financing and investment of cash surplus in other liquid assets and up to the conversion of short-term investment into cash. This cost involves information, administrative and handling charges and commissions following cash transactions.

Obviously, depending on the level of the reserves of liquidity some relevant costs are mutually exclusive – cost of holding cash excludes cost of cash shortfall or cost of obtaining cash and vice versa.³ Optimal cash level in the context of dynamics of relevant costs is shown in Figure 1 (Cash level and relevant costs):

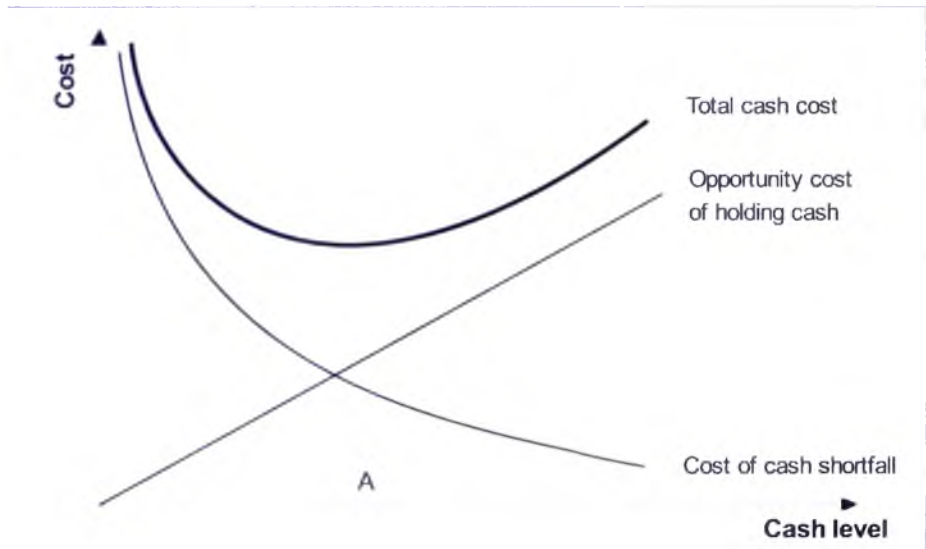


Figure 1 clearly shows that optimal cash (reserves of liquidity) of the company, according to the theory of cost dynamics, coincides with minimal amount of total cash cost (point A). Practical application of cost approach to optimal cash level faces a lot of hindrances embodied in limitations to accurate quantification of cash cost and difficult forecast of further cash flow.

³ Stančić P. (2006): *Savremeno upravljanje finansijama preduzeća*, Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac, s. 256–258.

Level of liquidity is closely related to the structure of liquid resources. Generally, liquid resources may be classified into primary (cash and marketable securities) and secondary liquid assets (receivables, stocks and unused credits). Because of the time needed for conversion into cash, use of receivables and stocks to provide liquidity also requires a relatively large portfolio of marketable securities which may be something longer-term than in primary collateral. Unused credit lines or active participation of the company in the commercial security market may be used as alternative secondary liquidity resource. Making choice between holding liquid reserves in the form of real liquid assets or open and unused credit lines seems like a dilemma of the purchasing department – to keep supplies of raw materials at the level needed or to establish partnership with suppliers who can guarantee delivery at any time.

Liquid reserves depend on company's size, management's view of liquidity risk and interest rates in financial markets. It is generally accepted that bigger companies have more available options in providing liquid reserves, i.e. they can settle their due liabilities sooner and more favourably if compared with small companies. Holding real assets in pledge of security is a more conservative approach to liquidity, preferring risk sensible management. Thus, management's hostility towards insolvency risk changes the structure of liquid reserves in favour of marketable securities and cash.

2. Approaches to Quantification of Liquidity

Analyzing and measuring liquidity search for the answer to a simple question; Does a company have enough cash and liquid resources at disposal to satisfy its liabilities falling due? – a wide array of approaches to quantification of liquidity may be roughly classified in two groups:

1. Asset-based liquidity measures,
2. 'Going-concern' measures.

2.1. Asset-Based Liquidity Measures

These measures are often considered traditional and in quantification of liquidity they are based on relationships between certain figures in financial reports of a company, particularly in balance sheet. Relative indicators (measures) of liquidity for a period of the financial report result from the ratios of different categories of liquid assets to current liabilities. In traditional accounting classification of assets, qualities of liquid assets are usually attributed to current assets of the company *en block*, which means that a relative measure of liquidity is the ratio of current assets to current liabilities. It is known as **Current Ratio (CR)** and is the most popular and most frequent indicator of current liquidity of the company.

Taking **Current Ratio** as a measure of liquidity beyond any doubt, a financially

based thought does not allow to generally equal current assets (stocks, receivables and cash) with liquid resources of the company. Namely, liquidity of an asset does not result from particular asset classification, but from velocity and ease of its conversion into cash. In such a context and from the aspect of liquidity, current assets make a set of heterogeneous qualities.

Cash is surely the most liquid current asset which makes the essence of prompt solvency of the company. Under usual circumstances, receivables also make an asset close to cash, i.e. an essential category of the company's solvency. From the aspect of convertibility into cash, stocks are potentially the most ambiguous category of current assets; they may be time-consuming and costly along the line of stocks – receivables – cash. From the aspect of satisfying liabilities in due time, holding such assets is irrelevant, and that is why stocks are even not included into liquid assets of the company very often, i.e. current liquidity is estimated from the ratio of cash and receivables to current liabilities. That ratio known as *Acid-test* or *Quick Ratio (QR)* is significantly stricter liquidity test if compared with *Current Ratio* because of excluding stocks from liquid resources.

Main characteristic of these traditional liquidity measures is in simplicity of calculation and interpretation of the results obtained. Some inherent issues must be taken into account while the results are estimated, and also in the course of pure application of *CR* and *QR* in liquidity quantification as the following:

- Classification of assets into current or liquid ones resulted from a conventional accounting classification of assets of the company according to liquidity and not according to an assessment of actual liquidity. Thus, some relatively illiquid assets may be treated as liquid if *CR* or *QR* are applied, which shows a more favourable liquidity position than it really is.
- Simplifying the assessment of liquidity to the ratio of current assets to current liabilities, the key components of liquidity which are not objectively presented in balance sheet – are neglected, e.g. unused credit capacity or net cash flow in given time.
- *CR* and *QR* as measures of liquidity are not applicable in periods of time longer than the ones covered by financial reports, being their starting point.
- Categories of current assets and current liabilities are sensible to the techniques of creative accounting and window dressing which may result in digression between *CR* and *QR* on the one side and the observed reality on the other.⁴
- The issues above mentioned have urged both financial theory and practice to look for alternative measures of liquidity of the company which ought to be more objective in quantification of current liquidity. Among such numerous measures the following are the most distinctive ones:
- *Net working capital ratio – NWCR*, as ratio of net current assets to total business assets of the company. This is generally a variant of *CR* and presents a percentage share of net current assets in total business assets. Since, from the

⁴ Hill, Sartoris (1995) *Short-Term Financial Management*, third edition, Prentice-Hall, Inc. p. 269.

traditional point of view, volume of net current assets determines the level of prospective liquidity of the company, it is preferable that *NWCR* is as greater as possible.

- **Net liquid balance – NLB**, as ratio of net liquid assets (current liabilities subtracted from the total sum of cash and marketable securities) to total business assets of the company. The core issue here is to exclude all the assets whose conversion into cash depends on financial performance of others (customers or debtors) from liquid assets, i.e. *NLB* tends to quantify the level of primary liquidity of the company. *NLB* shows percentage share of net liquid assets in total business assets and its increase points out to improvement in primary liquidity. Negative *NLB* points out to unfavourable primary liquidity, although it does not necessarily mean insufficient solvency which directly depends on convertibility of receivables and stocks into cash, i.e. on availability of additional financial resources.
- **Accounts receivable turnover – ARTO**, as ratio of net credit sales to average accounts receivable, which is a measure of how quickly customers pay their bills. Generally, *ARTO* measures liquidity (convertibility) of accounts receivable as a secondary liquidity asset. Increase in *ARTO* means improved liquidity and better financial standing (less investment in accounts receivable).
- **Inventory turnover ratio – ITO**, as ratio of cost of goods sold to average stocks; testing average convertibility of stocks into cash.
- **Comprehensive liquidity index – CLI**, is an adjusted **Current Ratio** and is based on adjustment of the volume of current assets and current liabilities, as shown in the balance, by correction factor obtained from turnover coefficient of categories calculated in **CR**. Adjusted values of current assets (accounts receivable and stocks) and current liabilities are obtained as the product of particular categories from the balance and the appropriate correction factor as follows:

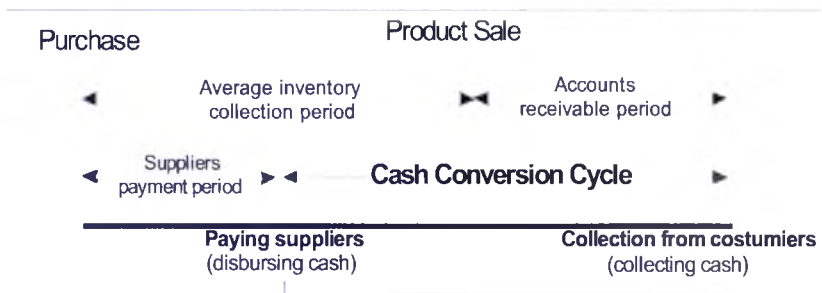
$$\left[1 - \left(\frac{1}{\text{turnover coefficient}} \right) \right]$$

Of course, the correction is not necessary for cash and marketable securities, since these two categories of current assets may be directly used for payments falling due. The point of correction of **CR** is in adjustment of balance amounts to values corresponding with efficiency of current assets and current liabilities (turnover coefficient). Practical experiences in applying *CLI* show that *ARTO* = 4 adjusts the value of accounts receivable to 75%, and *ARTO* = 12 adjusts the same value to 91.7% of the balance value of the accounts receivable. Adjusted value of current assets is the sum of cash and marketable securities and adjusted values of stocks and accounts receivable. The ratio of that value to adjusted value of current liabilities makes *CLI*, which is lower than **CR**, thus defining *CLI* as a stricter test of liquidity.

2.2. 'Going-Concern' Measures

Based on assumption of indefinite time period of a company's existence, these measures deal with liquidity in the context of dynamics of cash flows. By ignoring direct operations of convertibility of current assets into cash and pace of maturity of current liabilities, these measures neglect the level of primary liquid assets (cash and marketable securities) and all the current liabilities except the ones to suppliers. Quantification of differences in timing of business cash flows is in the core of liquidity measuring. The following measures of liquidity are most frequently used:

- **Cash conversion cycle – CCC**⁵ measures the difference between the time cash remains tied up in stocks and receivables and the time when current liabilities to suppliers are due. Generally, CCC is most easily explained by using cash flow time line to present points of time of particular important events of cash flow, as can be seen in *Figure 2 (Cash Conversion Cycle)*:



Mathematically, CCC may be calculated from the model:

$$CCC = \frac{\text{Inventory} \times 365}{\text{Cost of goods sold}} + \frac{\text{Receivables} \times 365}{\text{Net sale income}} - \frac{\text{Current liabilities} \times 365}{\text{Credit buying}}$$

I.e. CCC quantifies the following:

Cash		Average		Receivables		Payables
Conversion	=	Inventory	+	Processing	-	Period
Cycle		Collection		Period		
		Period				

The result obtained presents the time (number of days) needed between the acquisition of raw materials and the receipt of payment for the finished products or ser-

⁵ Richards, Laughlin, *A Cash Conversion Cycle Approach To Liquidity Analysis*, Financial Management 1980, p. 32–38.

vices in which acquisition value is included. The longer CCC, the slower turnover of current assets - that emphasizes strengthening of primary liquid assets.⁶

- **Weighted cash conversion cycle – WCCC** is a relatively new modification of CCC.⁷ In WCCC the category of inventory is broken down into raw materials inventory, working-in-process inventory and finished goods inventory. Time segments for each category of inventory are weighted by the profit margin of accounts receivable and raw material costs (for raw materials) or production costs (for working-in-process and finished goods). **WCCC** measures the weighted number of days funds are tied up in inventories and receivables unless the weighted number of days cash payments are deferred to suppliers. Of course, data on the structure of inventories and the volume of production costs are hardly available to analysts outside the firm, which aggravates the application of **WCCC** as a measure of liquidity.⁸

Regarding measures of liquidity, Emery's attempt is also worth attention. He tried to make a compromise between the approaches based on the liquidity of assets and concepts based on 'going-concern' principle.⁹ Emery designed a liquidity risk measure named **lambda**:

$$LAMBDA = \frac{\text{Liquid reserve} + \text{Expected cash flow}}{\text{Uncertainty about cash flow}}$$

Liquid reserve involves primary liquid assets (cash and marketable securities) and unused lines of credit. Expected cash flow is net cash flow from operations expected over the analysed period; if it is positive, it increases liquid reserve and if it is negative it decreases liquid reserve. Uncertainty about cash flow is expressed in standard deviation of the distribution of the company's expected cash flow operations. Should the distribution of the expected cash flow be even approximately known, **lambda** might be very useful in assessment whether the liquidity standing provides protection against a possible threat of insolvency. The higher **lambda** coefficient, the higher liquidity standing of the company is.

3. Is There an Ideal Measure of Liquidity?

The point of measuring liquidity is in information of solvency and financial flexibility of the company out of which the investment and financial decisions of both capital owners and possible investors and creditors – are made. Financial theory and practice have developed a variety of the measures of liquidity to support the need for information. All the measures previously mentioned in this paper tend to

⁶ Emery, Finnerty, Stowe, *Corporate Financial Management*, second edition, Prentice-Hall 2004, p. 683–685.

⁷ Emery, *Measuring Short-Term Liquidity*, Journal of cash management, July–August 1984, p. 90–99.

⁸ Gentry, Vaidyanathan, Lec, *A Weighted Cash Conversion Cycle*, Financial Management, Spring 1990, p. 94–99.

⁹ Emery, *Measuring Short-Term Liquidity*, Journal of cash management, July–August 1984, p. 25–32.

quantify actual liquidity standing in the time given. The volume and type of relevant information available and the purposes of liquidity analysis determine a suitable approach – asset-based liquidity measures or ‘*going-concern*’ measures.

Practical experiences in quantification of liquidity suggest that different measures and approaches may offer contradicting assessments of liquidity, i.e. some measures may be in conflict with each other. The priority of the criteria opened the issue of a ‘real’ measure (ideal measure) of liquidity in financial theory. According to empirical and theoretical research hitherto, six key conditions are to be satisfied by such an ‘ideal’ measure. The criteria are presented in Table 1 below:

1. applicability regardless of purpose and time horizon;
2. ability to comprise all the liquid assets available at the company in a given time. The assets involve readily convertible assets without interference with usual operations of the company, expected cash flow obtained through business operation, and open but unused credit lines;
3. selectivity, i.e. doing away with any assets which are actually unavailable in a given time;
4. feasibility of direct measuring the probability of insolvency in a given period;
5. ease of quantifying the liquidity on the grounds of data actually available to both inside and outside analysts;
6. comparability of the quantified scores of liquidity obtained in a given time and place.

Obviously, such complex requirements can hardly be met by any of the measures of liquidity discussed above. However, the more of the above requirements met, the closer the indicator to the ideal measure of actual liquidity of the company. Table 1 is to be used in assessment of particular measures. Criteria for an ideal measure of liquidity are given horizontally (1–6), and most often used measures of liquidity are given vertically. Each particular measure of liquidity in Table 1 is assessed following the criteria in a way that fully met criterion is marked ‘+’ and unsatisfied criterion is marked ‘-’. When it is not possible to determine the level of satisfying the criteria, the mark is ‘?’.

Table 1. Measures of liquidity - suitability assessment

Measurements of liquidity	Criteria					
	1	2	3	4	5	6
CR	-	-	-	?	+	-
QR	-	-	-	?	+	-
NWCR	-	-	-	?	+	-
NLB	+	-	-	?	+	-
ARTO	+	-	-	?	+	-
ITO	+	-	-	?	+	-
CLI	-	-	-	?	+	?
CCC	+	-	+	?	-	+
WCCC	+	-	+	?	-	+
Lambda	+	+	+	+	-	+

As presented, most measures do not satisfy the first criterion of applicability regardless of purpose and time horizon. **CR**, **QR**, **RNOK** and **PIL** are particularly imperfect, since they are restricted to a specific period of time covered by financial reports. Only **lambda** satisfies the second criterion related to comprising all liquid assets. Indeed, **CCC** and **WCCC** also deal with the amount and/or timing of cash flow, but they do not include unused credit lines. Only **CCC**, **WCCC** and **lambda** satisfy the criterion of selectivity, i.e. ability to do away with any assets from the calculation which are not actually available to cover due payments in a given time. **Lambda** is the only indicator which satisfies a particularly important requirement of direct measuring the probability of insolvency in a given time, which cannot be fully confirmed or denied for other indicators.

The principle of efficiency is of utmost importance in providing information of liquidity. In such a context, the remaining indicators of liquidity have the overwhelming advantage over **CCC**, **WCCC** and **lambda**, since they are obtainable without additional processing and assessment of information, i.e. on the grounds of the existing data (financial reports) which is available to both inside and outside analysts. The requirement of comparability of the quantified scores of liquidity in a given time and place is much easily satisfied by 'going-concern' indicators than by asset-based liquidity measures. Namely, direct ratio of current assets to short-term liabilities provide comparability within the same industry or, at least, among closely similar industries. This comparability is not possible among industries that essentially differ in duration of business cycle and cash flow variability. Time-based measures of liquidity (**CCC**, **WCCC**) enable the comparability of the results obtained among different companies through quantification of time of collecting and disbursing cash. From that point of view, indicator **lambda** is in considerable advantage over the others, since using estimates of uncertainty about cash flow and excluding inventory and receivables from liquid resources it may provide the necessary comparability of quantifications obtained among different industries.

It is absolutely clear from Table 1 that no indicators satisfy all the requirements needed to measure liquidity. Indicator *lambda* is closest to an ideal measure of liquidity, since it satisfies even five out of six criteria. The only problem with *lambda* is in its information basis which should be appropriately prepared for quantification of liquidity of the company.

Liquidity of the company should not be taken as equal to convertibility of its assets into cash. Financial theory estimates the liquidity of a 'living' company in the context of cash flow, i.e. liquidity is seen as ability to settle payments in due time. Possible discrepancies in cash flows require holding of liquidity reserves (cash, marketable securities, prompt access to financial resources) and they produce opportunity cost if not engaged in business operations (loss of income). Optimal liquidity of the company assumes the balance between opportunity cost and expected cost of insolvency. As a relatively abstract phenomenon, optimal (adequate) liquidity is embodied in attempts of quantification of liquidity. The complex issue of search for an 'ideal' measure of liquidity able to quantify the essential (actual) liquidity of the company, in spite of what has been done so far, is still – open.

Abstract

The concept of liquidity for firm differs from the liquidity of an asset. As ongoing economic entity, a liquid firm is one that has the ability to pay its bills as they become due. Providing for liquidity usually involves a cost because resources must be diverted from operating activities. Establishing the correct liquidity of a firm involves a tradeoff between the cost of providing for the liquidity and the liquidity and the economic cost of insufficient liquidity.

Because the concept of adequate liquidity is somewhat abstract, there exists a problem in attempting to measure a firm's liquidity. Liquidity measures appear to fall into three categories: measures of the relative balance of short-term assets and short-term liabilities, measures of the cash conversion cycle, and measures of the expected liquidity recourses relative to the uncertainty of the cash flow.

Literature

Brigham, Gapenski, *Intermediate Financial Management*, Dryden Press 1998.

Gentry, Vaidyanathan, Lee, *A Weighted Cash Conversion Cycle*, Financial Management, Spring 1990.

Emery, Finnerty, Stowe, *Corporate Financial Management*, second edition, Prentice-Hall 2004.

Emery, *Measuring Short-Term Liquidity*, Journal of Cash Management, July–August 1984.

Gentry, Vaidyanathan, Lee, *A Weighted Cash Conversion Cycle*, Financial Management Spring 1990.

- Giroux, Wiggins, *Chapter XI And Corporate Resuscitation*, Financial Executive, December 1983.
- Hill, Sartoris, *Short-Term Financial Management*, third edition, Prentice-Hall, Inc. 1995.
- Maness, Zeitlow, *Short-Term Financial Management*, Dryden Press. 1998.
- Richards, Laughlin, *A Cash Conversion Cycle Approach To Liquidity Analysis*, Financial Management, Spring 1980.
- Stančić P., *Savremeno Upravljanje Finanstjama Preduzeca*, Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac 2006.
- Stančić P., *Konceptualni Okvir Savremenog Kratkoročnog Finansijskog Menadžmenta*, XXXII Simpozijum Saveza računovođa i revizora Srbije, Beograd 2001.
- Van Horne, *Financial Management And Policy*, twelfth edition, Prentice Hall International, Inc. 2002.
- Vernimmen, Quiry, Dollochio, Le Fur, Salvi, *Corporate Finance*, second edition, John Wiley&Sons Ltd. 2009.

VESNA STOJANOVIĆ ALEKSIĆ, SRĐAN ŠAPIĆ

Characteristic of Effective Leader's Communication

1. Basic Channels and Forms of Communicating

In contemporary circumstances, communication represents by far more complex and important phenomenon than simple technical information exchange. It makes the absolute condition of entire human civilization survival and the key segment of our reality creation. Communication is conditioning *qua non* of each successful leaders process, primarily in the context of introducing the followers with the organizational vision, as well as in all other spheres of their motivating, inspiring and mobilizing to be engaged in its realization. In conditions of organizational changes, effective communication is one of the most important prerequisites of success in all phases of their performance and because of that it may be considered the vital dimension of leader's activity.

For vision distribution and other kinds of communication with the followers, leaders have a last number of communication channels, starting from their physical presence and discussion face to face, through interactive channels, such as electronic media and telephones, all the way to the static channels that can be personal (memoranda, letters), or impersonal (bulletins, reports, articles and the like). The channels differentiate among themselves by the capacity of information, transmitting which is determined by the following characteristics [Lengel, p. 225–232]:

- The ability to transmit a large number of information simultaneously;
- The ability to provide a swift, two-way feedback;
- The ability to provide personal focus in the process of communication.

Discussion face to face is, from that aspect, the richest communication channel because it makes possible the direct contact, a swift information flow, momentary feedback and the personal focus. This kind of communication is most desirable in conditions of organizational changes because they provide a better assimilation of a great deal of data, emotional comprehension and the support necessary for change acceptance. Besides, messages in connection with the changes are often ambiguous, nonstructural, unusual and always under some kind of pressure which may provoke resistance, which is the fact why a more often, immediate contact with the leader and interactive communication are necessary.

Although verbal constructions are primary, they are not the only messengers between the leader and the followers in the process of communicating. The message receiver almost never corresponds only to words he/she hears, but notices specific behavior, movements, intonation and other non-verbal expressions following verbal communication. Though, a significant part of nonverbal communication is being led subconsciously, it transmits an enormous number of messages we are sending to other people. This communication segment is especially significant for the emotional message component transmission, for which it is considered, to the largest extent, to communicate right non-verbally (many believe that a large number of emotions can hardly be expressed by words and that, because of this fact, even 90% of emotional contents is expressed nonverbally).

Some research have shown that in cases of verbal and non-verbal information conflicts, a person is rather prone to believe in a non-verbal piece of information, even if it is adopted at the level of intuition and subconsciousness. Nonverbal communication represents almost a universal form of human communicating which is developing and changing under influences of social belonging, culture and personality characteristics and beside the message information, it may represent a significant source of information to the one who is sending respective information.

2. Verbal And Non-Verbal Communication

Business organizations, like other social systems, require effective communication in order to operate efficiently and achieve their objectives. Communication takes place in two ways: through language (verbal), using words, and through nonverbal communication or so called "silent language".

Language is one of the most powerful methods for a vision to be expressed. Successful leaders use metaphors, style expressions, examples, anecdotes and stories in order to, in a convincing and interesting way, present the core and the basic values of a vision and of organizational changes. Language is the main messenger, no matter which channels of communication are used and in order to

make communication more convincing; it is recommended that leaders, during their verbal expression (both vocal and non-vocal) bear in mind the following [Du Brin, p. 261]:

- Use powerful and convincing expressions,
- Use emotion provoking expressions,
- Know exactly what is to be gained in the communication process,
- Minimize use of senseless words and phrases, as well as vocalized breaks,
- Avoid or minimize usual language and grammatical mistakes,
- Equip the message with strong and logical arguments,
- Adjust expressing to the listener,
- Point out the key idea in the beginning of communicating,
- Write a short and full reminder if necessary.

A language is a symbolic code of communication consisting of a set of sounds (phonemes) with understood meanings and set of rules (grammar) for constructing message. [Ferraro, p. 44]. Language consists of a series of arbitrary symbols with meanings which must be learned and, when put together according to certain grammatical rules, can convey complex messages. Cultures vary in terms of how explicitly they send and receive verbal messages. In some countries, and business organizations within, effective verbal communication is expected to be explicit, direct and unambiguous. Good communicators are supposed to say what they mean as precisely as possible. Speech Patterns in some other countries are considerably more ambiguous, inexact, and implicit. There are two different types of speech patterns. Restricted codes use short words, phrases, and sentences that don't rely on hidden, implicit, contextual cues (non-verbal behavior, social context, and the nature of interpersonal relationships). Restricted codes are a form of "shorthand" communication that does not rely on verbal elaboration or explication. Elaborative codes, on the other hand, emphasize elaborate verbal amplification and place little importance on non-verbal or other contextual cues. Edward Hall noted conceptualization of high-context cultures and low-context cultures [Hall, p. 79].

Low-context cultures, relying on elaborated verbal codes, demonstrate high value and positive attitudes towards a word. A primary function of speech is to express one's ideas and thoughts as clearly, and persuasively as possible. The speaker can be fully recognized for his or her individuality in influencing others. In high-context cultures, verbal messages are important, but only as a part of total communication context. The purpose of the holistic approach to communication is not to enhance the speaker's individuality through the articulation of words, but to promote harmony and social integration. One is expected to be sensitive to subtle contextual cues and not to assume that critical information will always be verbalized. It is not unusual to leave sentences unfinished or to tolerate intermittent periods of silence. Language also reveals culture's basic value structure. The extent, to which culture values the individual or group, is often reflected in its language style. The goal of

communication, in group-oriented cultures, is to achieve consensus and promote harmony, and language tends to be cooperative, and polite, while in individual-oriented cultures it is to demonstrate one's eloquence, and language tends to be competitive, adversarial, confrontational, and aims at making a point.

Successful communication requires not only an understanding of a language, but also the nonverbal aspects of communication. Nonverbal communication has been referred to silent language, and the hidden dimension of communication. It is equally important to the sending and receiving the messages, because it helps us to interpret the linguistic messages being sent. Nonverbal communication functions in several important ways regulating human interaction. It is an effective way of: sending messages about feelings and emotional states, elaborating on our verbal messages, and governing the timing and turn taking between communicators.

There are numerous aspects of non-verbal communication, out of which the following are the most important [Mandić, p. 84–103]: *vocal expression* – related to the height, dynamics and voice rhythm, breaks in speaking and the like, *facial expression* – related to the expression of the face and is considered by many to be the communication aspect by means of which the largest number of non-verbal messages are sent, *gesture expression* relates to the movement of the hands and movements in general, *postural expression* relates to the body pose that a person has while communicating, *special behavior* means orientation, movements in one's physical surroundings, and primarily awareness of one's own space which is manifested by keeping a certain physical distance while establishing the contact with some other person and *proxemic expression* related to the body contact, that is a touch.

The way that people hold their bodies communicates information about their social status, religious practices, feelings of submissiveness, desires to maintain a social distance, and sexual intentions etc. When communicating, people tend to orient their bodies toward others by assuming a certain stance of posture. A person can stand over another person or can kneel and in both cases something different would be communicated by the body posture. Body posture constitutes very corrective signs of a person's inner state as well as his/her behavioral expectations towards others.

The human hand is such a precise instrument so that there are vast arrays of alternative hand gestures to convey any given idea.

The face is the most important part of the body channeling nonverbal communication, and it is rich in potential for communicating emotional states. The face is so central to the process of communication that we speak of "face-to-face" communication. The face is capable of conveying emotional, attitudinal, and factual information in short periods of time.

So the eye contact is a very important mechanism of communicating nonverbally. In some societies the direct intense eye contact is a sign of attentiveness and respect while in others it is threaten and hostile.

How people use personal space (proxemics) in their interactions with others is regarded as "silent language" that must be understood to achieve clear communication. How close a person gets to another in a normal conversation will depend on the nature of the social interaction, but also will be dictated by cultural norms. Different societies have different definitions of how closely people should stand to one another in normal conversation. Bodily contact (touching) is perhaps the most personal form of nonverbal communication. Humans touch in a variety of ways and for a variety of purposes. Friendly gesture of touching someone with the left hand (during the handshaking) is considered a serious insult in certain parts of the world.

3. Characteristics of Effective Leader's Communication

Communicating between the leader and the followers is important in all stages of organizational changes process, but it is of exceptional importance for the new organizational vision distribution process. Acceptance of the vision by the organization members may be considered the key prerequisite for a successful change realization, but at the same time, it also represents significant intellectual and emotional challenge, connected to the necessity of giving answers to multiple questions that the change puts.

Effective communication of organizational vision understands respect of certain rules, out of which the following ones may be emphasized as the most important [Du Brin, pp.261]:

- Simplicity,
- The use of metaphors, analogies and examples,
- The use of various communication media,
- Frequent repeating,
- Giving one's own example,
- Explaining insufficiently clear points,
- Keeping the two-way communication.

The time and the energy necessary for the efficient vision communication depend a great deal on simplicity of the message that the vision transmits, and also on its clear presentation. Information which are free from slang phrases and the purpose oriented, that is, focused, are apt to the placement to the larger client groups, which is the core prerequisite for vision distribution through all organization levels. Using technical and too many professional phrases may lead to confusion, cause suspicion and mistrust, even a degree of alienation which is outstandingly undesirable in the organizational changes process. Because of that it is necessary, no matter of a periodical necessity of using specific professional and expert's expressions, to keep communication the simplest possible and easily understood for the largest possible number of internal and external organizational changes constituents.

Another important possibility for making the vision communication effectiveness better is in using metaphors, analogies and examples in its shaping and presentation. Metaphors and analogies make possible creating a clear mental vision picture, in that way making it closer and more accessible for everyday communication. Well chosen metaphors increase the degree of message memorability and make it striking and recognizable in the competence with hundreds of other information.

Effective communication understands the usage of various forms and media for information transmittance, starting with the large, organized, formal meetings, through the memoranda, newspapers, posters all the way to informal, individual contacts and the conversations. When the same message is put to people from many different directions, the chance is increased for it to be noticed and leave an impact on the intellectual and emotional level [Kotter, p. 93].

It is known that the core point of every learning is in repeating. Except in exceptional cases, where there is very little possibility for the information to be remembered for good after it has been uttered just once. The process of frequent repeating is especially important when it is tried to impose something completely new in the situations when people are overburdened by various information and ideas struggling to gain their attention. Due to this fact, it is considered that successful vision communicating has to be based on frequent repeating the message being expressed, using each convenient moment and each free space for its presentation. Still, what is more important than all is leading by one's own example which confirms the fact that the most efficient way of vision communication, in fact is in one's own behavior.

The leader living in accordance with his vision and whose behaviour is synchronized with the ideas that the vision expresses, becomes a better communication medium than hundreds of written messages, slogans or metaphors. As it has earlier been mentioned, the majority of people are more prone to believe in deeds than in words, that is, choosing between the verbal and non-verbal, priority is given to the latter kind of communication. Leader's behavior which is completely inconsistent with the promoted vision of organizational changes represents a certain way of undermining all communication and other efforts aimed to their carrying out. If it is impossible to avoid inconsistency from time to time, both in behavior and messages, it is necessary to, sincerely and openly, face it and explain the followers the reasons for such occurrence. Besides, the leader must always be available for some additional information and explanations if necessary.

Besides all stated, it is important to emphasize that one of the key prerequisites of efficient communication is in two-way which understands the need of sending and receiving feedback. Because of the fact that vision communicating is often a complicated and difficult activity, it may easily happen that it turns into a one-way information distribution with no suitable feedback which is one of the causes of hardship in organizational changes realization.

One of the crucial factors of effective two-way communication is the ability of active listening and perception. It is the generally widespread belief that in contemporary enterprises the most important information comes from lower organizational levels that is moving from bottom up, thus "effective listening" is considered to be a significant component of a leader's process [Pearce, pp.160]. It understands the ability of understanding and interpreting the original and essential meaning, that is the message sense and requires attention, energy and specific abilities, such as concentration, curiosity, high level of response and the like. Active listening initiates the development of interpersonal trust, affirms respect and common perception which leads to better problem understanding and faster finding appropriate solution. However, experience shows that most people put much more energy into efforts to formulate their next thought during their conversation than to listen carefully to what their conversationalists speak about at the moment.

The ability of active listening understands the ability of identification with the conversationalist, with an attempt to really understand the problem being exposed and the message that is wanted to be transmitted. It requires an effort to give up one's own inner dialogue which very often has all our attention and to concentrate completely on what someone else exposes.

There, the attention must not be put only on verbal but it must be directed to the non-verbal aspects of communication which understand an attempt to reveal the implicit message content which is to be transmitted through the communication process. It is as well necessary, to let the conversationalist know that you have heard and understood him/her, which may be achieved by paraphrasing his/her presentation from time to time. The ability of the effective listening is determined, among other things, by the ability of putting right questions which are of help in getting the right meaning of what has been said and check if the recipient has adequately understood the information placed to him, and on the other side, the person receiving information may ask for some additional explanation also by putting questions which will make it possible for him.

To reveal the core of the problem, effective listening represents engaged activity which helps overcome barriers between leaders and followers, as well as to initiate their active participation in the communication process.

An important segment of the effective communication is a constructive dialogue. *In the dialogue process, people create a common opinion and share common ideas and attitudes on a certain occurrence, which makes it possible to understand their own and someone else's position better, as well as their interrelations.* It is necessary to be emphasized that there is a distinction in communication through a dialogue, compared to classical forms of discussion, which can be seen in the absence of prejudice, but already made answers and solutions, and also strict beliefs which are to be kept too strongly. As different from discussion based on attempts to eagerly defend one's attitudes and persuade other participants in com-

munication to accept them at any price, in the process of a dialogue, the starting point is to reach the real solution through common attempts, by establishing the relationship of trust and by creating common feelings and thoughts on certain issues. The dialogue result is not a short term, forced agreement on problem solution, but a long term unity of a group which is the consequence of transformed attitudes and the ways of thinking.

Conclusion

The Successful two-way communication is not exclusively the matter of intellect and logic, but of trust, emotions and accepting difference of other people and the efforts to comprehend the intention of the communication, with no prejudice and priori refusing the message content. The ability of keeping such communication is of an essential importance in the process of organizational changes which request changes at personal level too, with efforts to understand and appreciate individual distinctions. "Effective communication understands learning and expressing in languages of logic and emotions, with the ability to listen not only by ears but primarily by heart" [Covey, p.126 –128].

Abstract

A prerequisite of the successful communication including an enterprise into the globalization process is the organization changes implementation which demands the effective leader communication. The most important aspects of the communication process, representing the core prerequisite of successful carrying out organizational changes, have been considered in the work. Also analyzed are the basic forms and ways of communicating, the characteristics of verbal and nonverbal communications, as well as the most important assumptions of the effective communicating in relation to active listening, using feedback and constructive dialogue.

Literature

Covey S., *Principi uspešnog liderstva*, Poslovni sistem "Grmeč" Privredni pregled, Beograd 2000.

Du Brin A., *Leadership: Research Findings, Practice and Skills*, Houghton Mifflin Company, Boston 2000.

Ferraro G., *The Cultural Dimension of International Business*, Third Edition, Prentice Hall, New Jersey 1998.

Hall E. T., *Beyond Culture*, Doubleday, New York 1976.

Kotter J.P., *Leading Change*, Harvard Business School Press, Boston 1996.

Lengel R., Daft R., *The Selection of Communication Media as an Executive Skill*, Academy of Management Executive 2, 1998.

Mandić T., *Komunikologija*, Poslovni sistem "Grmeč" Privredni pregled, Beograd 2001.

Pearce G., *Doing Something About Your Listening Ability*, Supervisory Management, March 2007.

PETAR VESELINOVIĆ

Export Performances of National Economy in the Conditions of Global Economic Crisis

Introduction

The emergence of crisis in the world economy announced slowing down of economic growth and the projections of International monetary fund (IMF) for 2009 testify the same. World economy growth, according to the data received from this institution in 2008, was 3%, while for 2009 the growth is projected fewer than 2%. If the following predictions are accomplished, world economy in 2009 would have growth rate for half smaller than growth rate in 2007. Although the expected tendency of slowing down economic growth is valid both for developed and developing countries, IMF in its projections indicates diminishing economic growth of developed countries in 2009 almost to zero growth rate, while the economic growth of developing countries and countries with market in the process of creation would be in the zone of positive values. Such economic growth scenario for 2009 would have as the consequence fall in the stock market prices, which would lead to the decrease of income for the exporters of primary goods. Export of Serbia can not remain immune to the unfavorable trends in international surrounding, so we should expect harder approach to EU market, although the export to CEFTA countries would be faced with difficulties. Due to that, domestic companies would have less income from exports, which is already present as

the tendency. Decrease of the export level would have the consequence of lower economic growth. Less aggregate demand in EU countries has the consequence of harder realization of Serbian export in this region, while in 2009 we can expect cancelling some of the exporting contracts. Although we can expect slower growth in trade deficit, deficit in the current transactions balance would still be very high, that is in non sustainable zone, where we would have the problems in its financing. Having in mind above mentioned statements, in this paper we would stress in more details basic performances of Serbian economy export activities in the conditions of global economic crisis.

1. Trade (of Goods) with Other Countries

After 2000 there is registered tendency of Serbian trade deficit growth. Parallel, deficit in current transactions balance was growing that in 2004 reached 13.8% of gross domestic product (GDP) while in the first eight months 2008 it increased to 19.1% (table 1). Deficit in trade balance in 2007 was 9.7 billion dollars, which caused the growth of deficit in current transaction balance on 13.6% of GDP. Sudden increase of trade deficit to almost 10 billion dollars in the first ten months in 2008 induced the growth of deficit current transactions balance on 7.5 billion dollars in the same period.

Growth in both trade and current transactions balance was induced by the significant increase in the value of the import of goods that increased from 10,9 billion in 2005 on 19,3 billion in the first ten months of 2008. When we start from the fact that the trade deficit was also high in previous years, it is imposed the estimation that it comes from incoherent structure of domestic export with the structure of world export demand, that is due to insignificant increase in export. Growing competitiveness on the world market and in regional frames makes difficult the export of domestic companies. Structure and the factors combined with strengthening of competition and weakening of export demand in developed countries, led to slower growth of Serbian export in 2008 and increase of trade deficit.

Importance of Serbian economy should be looked also from the standpoint of its participation in GDP. Average level of export of goods in Serbian GDP was in the period 2001–2004 namely 16%, which was significantly less than in other countries of the similar level of development. Increase of the level of export and import of goods and services in GDP is imposed as one of the most important tasks for the subjects of economic policy in the following years. It is undoubtedly need in order to increase foreign currency inflow for regular servicing foreign debt of the country and regular payment for current import of goods and services. Insufficient growth of export could lead to deepening structural misbalances, especially if there is no expected inflow of foreign currency after the privatization is

over. According to the table 1 we could notice that the participation of Serbian export of goods in GDP in 2007 was only 22.7% and that insignificantly increased on 23.6% in the first nine months in 2008, that persuasively illustrates low level of export in domestic production. For now on there are no serious problems, because monetary reserves in foreign currency had the tendency of growth that also continued in the first part of 2008¹, and the inflow of foreign direct investments (FDI) revived in 2008. Of course, there was also the increase of foreign debt, so that the experts of IMF did not miss that and they suggested decreasing of the deficit in current transactions balance on approximately 10% of GDP.

Table 1. Export of goods, GDP and current transactions balance in Serbia (in millions of US\$ and %)

	2001	2002	2003	2004	2005	2006	2007	2008
Import of goods, FOB*	1.721	2.075	2.756	3.879	4.898	6.428	8.825	9.559 ¹
Export of goods, FOB*	-4.261	-5.614	-7.477	-10.935	-10.617	-13.172	-18.554	-19.275 ¹
Trade balance*	-2.540	-3.539	-4.721	-7.056	-5.719	-6.744	-9.729	-9.716 ¹
GDP**	11.581	15.277	19.755	23.776	25.776	29.604	38.898	36.756 ²
Export of goods/GDP (in %)	14,9	13,6	14,0	16,3	16,3	21,7	22,7	23,6 ³
Current transactions balance**	280	-650		-3.281	-3.281	-2.986	-5.286	
Current transactions balance/GDP (in %) **	2.4	-4.3	-7.8	-13.8	-13.8	-10.1	-13.6	19.1

Note: Since January 1, 2008 there is reclassification of current transactions in order to adapt to the scheme of balance of payments of IMF, so that we could expect corrections of data on current transactions balance, and therefore derived indicators.

¹ Data are related to the first 10 months (Source: National bank of Serbia (NBS), http://www.nbs.rs/export/internet/cirilica/80/80_2/platni_bilans/index.html, approach December 12, 2008).

² Datum is related to the first three quarters and was gained through addition of the values in the quarters (Source: NBS, 2008, p. 58, table A).

³ Calculated according to the data from the table, and is related to the first nine months.

Source: *NBS (2008a, p. 54–57); **NBS (2008, p. 50)

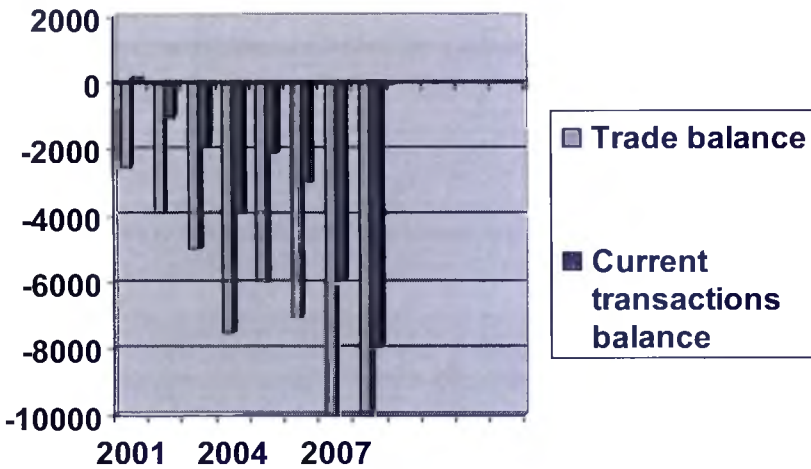
¹ Monetary reserves in foreign currencies in NBS has grown from 5.8 billion \$ at the end of 2005, on approximately 14.2 billion \$ at the end of 2007, that is on 11.7 billion \$ at the end of November 2008 (data on moving of monetary reserves of NBS do not cover monetary reserves of banks and are taken from the website of National Bank of Serbia http://www.nbs.rs/export/internet/latinica/80/80_2/devizne_rezerve2008.pdf).

The emergence of world financial crisis has reached the domestic market, and there is the pressure on exchange rate of RSD. In autumn 2008, sudden weakening of RSD induced the interventions of NBS on monetary market. Nevertheless, banks also reacted by placements of the part of short term capital abroad, which led to the decrease of monetary reserves.

The overview of trade deficit and deficit in Serbian current transactions balance (after 2001) is demonstrated on the graph 1.

The increase of trade deficit in Serbia led to the increase of deficit in current payments balance in 2008 at around 19% of GDP. Although Serbian export of goods in 2008 increased according to the rate of 33%, growth of import with the high rate of around 35% led to the increase of trade deficit compared to the previous year. Several factors influenced over the growth of deficit: over estimated value of RSD, loans of companies and banks abroad, big public expenditures, low results of the real sector of economy reform, etc. NBS tried to prevent the growth of aggregate demand and maintain the stability of prices in 2008. Stability of prices is achieved to some extent, although with the cost of strengthening RSD in the first part of the year and expansion of trade deficit. Having in mind that this tendency is not sustainable on long term, prevalently due to the level of foreign debt of the country, in the future years we need more dynamic growth of export compared to import in order to limit trade deficit to sustainable level. It could not be achieved easily unless there is bigger inflow of FDI's, especially Greenfield and Brownfield investments, and also with mutual effects of monetary, fiscal and policy of structural adjustment. In order to create conditions for expansion of trade, there is often stressed the need to decrease "marginal costs", increase the competitiveness of the export and creation of similar conditions for trade in the free trade zone in Southeastern Europe. In the area of custom protections it is indicated the need for further coordinated liberalization in the process of joining to the World trade organization (WTO) and EU. Further standardization and application of the mechanisms for protection domestic market according to the rules of WTO, should be the main direction of harmonization of country in the region trade policy.

Graph 1. Trade balance and current transaction balance in Serbia (in million \$)



Deepening of world economic crisis and lowering economic activity acts as limitation on the export growth in future period. Economy of Serbia is in unenviable position due to several reasons: (1) weaker economic activity in the world leads to exhausting world export demand and its redirection to national frames; (2) structure of domestic import is defined with the structure of production with stressed participation of primary sectors and products of the lower phases of processing which, in normal conditions, made difficult export growth; (3) increase the price of money on domestic market make loans more expensive, so the costs of domestic company grow in financing production for export; (4) there is the need for the companies to approve export credits with longer periods, before all to the customers from CEFTA countries, and the possibilities for its refinancing are made more difficult; (5) finance potential of domestic agencies that operate in the sector of insurance and credits for export (AOFI and SMECA) for stronger support to the export; (6) unilateral application of ASA with EU since January 1, 2009 will enable easier approach to the exporters from EU to domestic market, strengthening competition.

Mentioned reasons are combination of the effects of long term structural factors and current more difficult circumstances on the increase of Serbian export. Plait of these circumstances can lead to stronger slow in export comparing to the expected dynamics of import, which can make big pressure on further increase of trade and current transaction balance deficit. The question is, up to which limit is possible to endure the increase of deficit in current transactions balance, which

is linked to the performances in real sector of economy and the sources for its covering. The circumstance that deficit in current balance is not specific only for Serbia imposes the need for comparative analysis with the countries in transition which are in the process of restructuring of economy and export.

2. Foreign Debt and Export Focus of Serbian Economy

Sustainability of deficit in payments in Serbia is linked to the decrease of deficit in trade balance, and also with the need for accomplishment of satisfactory inflow of foreign currencies in order to have orderly paying of obligations related to debt and paying towards countries abroad for current export of goods and services. In order to achieve that it is necessary in future years to provide continual increase of export of goods. According to the data in table 2 we can notice that foreign debt of Serbia at the end of September 2008 was 29.5 billion dollars, and that it was 60.6% GDP in that year, that is 195% in value of export of goods and services. Although Serbia, according to the both indicators at the end of September 2008, was not in the group of highly in debt countries we should have in mind that at the end of 2007 foreign debt participated in export of goods and services with 222%, which was above the upper limit when it is considered that the country is highly in foreign debt. This fact indicates that in future years the burden of paying off foreign debts of Serbia will increase. Foreign creditors monitor the trends of these indicators and the rating of the country falls down with its transfer into the strong obligations zone. Countries that cover their growing deficit in current transactions with foreign debts are exposed to the risk to move to the group of highly obliged countries which questions the sustainability of this deficit. The conclusion is imposed that the sustainability of one country's deficit must be seen from the standpoint of reached level of its foreign debt.

Table 2. Export of goods and services and Serbian foreign debt (in mil. \$ and %)

Year	2002	2003	2004	2005	2006	2007	2008
Export of goods and services	2961	4358	5557	6605	8763	11798	11836
Foreign debt (end of the year)	11230	13575	14099	15467	19606	26236	29516
Debt/GDP (in %)	73.5	68.1	59.3	61.0	66.2	67.4	60.6
Debt/export of goods and services (in %)	379	312	254	234	334	222	195
Monetary reserves in foreign currency/import of goods and services (per months)	4.5	5.2	4.3	5.9	9.5	6.3	5.7

Year	2002	2003	2004	2005	2006	2007	2008
Paying off the debt/ GDP (in %)	1.4	2.0	3.9	4.7	6.8	10.2	8.0
Paying off the debt/ export of goods and services (in %)	7.1	9.1	16.8	17.9	23.1	33.7	26.3

Note: * Data are related to the first nine months in 2008 (sum of first three quarters). Source: http://www.nbs.rs/export/internet/latinica/90/90_5/inflation_novembar_08.pdf.

Significant part of the deficit in trade balance in Serbia, in the last few years, is covered with suffices of current transfers whose two main components are net inflow of money orders from our workers and emigrants abroad and net buy out effective money from the citizens. To this positive balance should for sure be added irreversible transfers (foreign aid)². Thanks to such positive net inflow of foreign currency, balance of payments current transactions balance in Serbia has significantly less negative amount³. At the end of 2007 and in the first months of 2008 the increase of current transaction deficit is mainly the effect of strong total demand which is additionally increased with the appreciation of exchange rate for RSD. To this trend contributed the increase of public expenditures, investments and salaries. Negative current transactions balance in Serbia in the last few years is more than covered with net inflow of FDI and credits from abroad, so there is continual growth of monetary reserves in foreign currency in NBS. They have reached the level of 14 billion of dollars at the end of 2007 (without reserves in authorized banks), and at the end of November 2008 their level fell on 11,7 billion of dollars⁴. Monetary reserves in foreign currency in 2007 covered the value of import of goods and services for six months (this indicator dropped on 5,7 months in the first nine months in 2008). Dynamic growth of foreign currency monetary reserves was the effect of high inflow of commercial capital in domestic economy until the end of the first quarter of 2008. Increased interventions on foreign currency market during October and November 2008 decreased the level of monetary reserves in foreign currency and tempted economic policy bearers. Although at the end of 2008 we could not see the problem of prompt servicing debts towards abroad, we have quoted the reasons for increase the percentage of export of goods and services in GDP. Opposite to this need there are numerous limitations augmented by world economic crisis impacts. Bad performances of Serbia related to the participation of export of goods and services in GDP are shown by the table 3.

² Balance of current transactions in balance of payments for Serbia in 2007 reached 2.4 billion dollars and in the first ten months in 2008 3.5 billion dollars (data for 2007 was from NBS (2008a, p. 50), and the data for 2008 from http://www.nbs.rs/export/internet/cirilica/80/80_2/platni_bilans/index.html).

³ Serbian current transaction balance in 2007 was negative and was 6.9 billion dollars, and in the first ten months in 2008 also was negative amount of 7.5 billion dollars (sources are like for footnote 11).

⁴ Taken from <http://www.nbs.rs/export/internet/cirilica/80/index.html>.

Table 3. Participation of export of goods and services in GDP (in percentages)

	2000	2007
Bulgaria	55.7	71
Croatia	47.1	47
FRY Macedonia	48.6	56
Montenegro	38.4	42
Moldavia	49.8	43
Romania	32.9	26
Serbia	28.4 ¹	28
Albania	17.6	27
BiH	31.1	36

Note: First data is related to Serbia and Montenegro.

Source: World bank data taken from <http://web.worldbank.org> on December 14, 2008.

According to the data in Table 3, we could see that the participation of the export of Serbia in GDP in 2000 was 28.4%, which is significantly less percentage compared to other countries shown in this table, except for Albania. From other countries, Bulgaria in the same year had participation over 50%, Macedonia 48.6%, BiH 31.1%, while Albania with the percentage of 17.6% had less participation than Serbia and Montenegro. It can easily be noticed that most of the observed countries had performed obvious progress until 2007. For example, Bulgaria increased the participation of export of goods and services in GDP on 71%, Macedonia on 56%. Serbia significantly lacks behind with the participation of 28%, so it is the same as in 2000⁵. Mentioned comparisons draw attention to insignificant participation of export of goods and services of Serbia in GDP, for which is of course important factor lacking out of several technological cycles comparing to the world, which prevented creation of competitive export structure. Export still did not become dominant channel for GDP realization, from that comes from insufficient competitiveness in export. Price of traditional export structure can be extorted reduction of trade and deficit in current transactions balance, although reaching out for administrative measures will not be easy due to the reached liberalization of foreign trade and initiation of ASA since January 2009.

⁵ For the comparison with other countries in transition we should see Kovacevic (2008). IMF in 2006 pointed out on the link between big trade deficit of Serbia with relative low coefficient of investing compared to other countries in Central and Southeastern Europe. In the analysis is stressed that fix investments in Czech Republic in period 1995–97 were 31% of GDP, and in Slovakia 32–36% of GDP between 1996 and 1998. Later the observed percentage stabilized on 26–27% of GDP. In Bulgaria fix investments in 2005 reached 24% of GDP, and in Romania in the same year 23%. In this report IMF estimated that fixed investments in Serbia increased after 2000, although that was according to the estimation of IMF still the low level of 19% of GDP in 2004. It was concluded that low capital intensity of production in Serbia is the effect of low coefficient of investing. (IMF, 2006, p. 10). The impact of global economic crisis will be experienced also on the field of investments, which can significantly diminish the possibility for increase of export of Serbia in future years.

Availability of the labor factors impacts over technological intensity of export. It is well known that profit rates in export of goods in intensive work are relatively low. It for sure does not mean that the countries that have non qualified labor could not produce goods intended for foreign market. Of course, the profit from export would in this case be mostly less.

Bigger involvement of Serbia in international production network could lead to increase of labor intensive goods percentage in export. In the initial phases of transition, most of the Southeastern Europe countries relied on the export intensive in non-qualified work, within international buying chains for textile and furniture.

Some of these countries managed to make turnaround comparing the increase of export of goods that are intensive in qualified labor, through productive network of car industry and industrial branches of IT (in whom there is the same ownership of vertically integrated phases of the production process and mostly is the result of FDIs). The export of parts and components (within productive chains) from Southeastern European countries increased for around 5 times, expressed in dollars (from 6% to 11% of industrial export) in the period 1996–2005. Export of parts and components from Serbia and Montenegro in the same period decreased from 5.8% of industrial export in 1996 on 5.4% in 2005. Prevalent part of export of these products in Southeastern Europe region was related to Romania, to which belonged 60% of regional export of parts and components in 2005, significantly more than 36% which was in 1996. Tendency of decreasing the export of these products in the observed period from Serbia and Macedonia in industrial export of these countries testifies on their insufficient involvement in international production chains. Percentage of export of these products in industrial export of Croatia was increasing (from 8.4% in 1996 to 9.4% in 2005), while in BiH was noted the jump of percentage from 5.5% in 1996 to 22.5% in 2005.⁶ Prevalent part of parts and components trade is owned to the FDI. The foreign direct investments inflow in Albania, Serbia and Macedonia was relatively small before 2005, which influenced to the fact that network trade was insignificant. Larger inflow of FDI in Serbia induced stronger interest for loan jobs during 2006 and 2007. With the emergence of crisis the first stroke went towards export of raw materials and semi processed goods due to the decrease of volume of production in developed countries. Because of that export of parts and components in machine and electro industry is decreasing, and the same fate will be of the exporters of black and colored metals. Therefore, primary sector is the first on the strike of the crisis, which will inevitably influence the total export results of Serbia in 2009. Of course, from the standpoint of short and long term, processes of structural changes of production and trade will enable continual export growth. During crisis stronger accent should be on financing the production intended for export and enabling export of equipment and technology for strengthening export competitiveness.

⁶ Kathuria S., *Western Balkan integration and the EU*, Washington 2008, DC: The World Bank, 42–43.

3. Liberalization of Free Trade of Serbia, CEFTA Agreement and EU Stabilization and Accession Agreement

Liberalization of foreign trade of Serbia led to the big growth of export and increase of trade deficit in the period after 2000. Decreasing the average customs to the import competitiveness on domestic market increased. Harmonization of customs nomenclature and customs rates with EU should enable adjustment to the conditions of doing business in EU and joining Serbia into the membership of WTO. On the liberalization of trade is looked on as to the mechanism that should lead to strengthening of export motivation of the companies, through decrease of costs of trade. The latest analysis of World bank shows that Serbia on this field achieves significant progress.

Table 4. Costs and procedures for export and import of standardized goods shipment in 2008

Indicators	Serbia	Montenegro	BiH	Croatia	Macedonia	Bulgaria	Hungary
Export documentation (number)	6	9	6	7	7	5	5
Necessary period for export (days)	12	18	16	20	17	23	18
Costs of export (USD per container)	1398	1710	1070	1281	1315	1626	1300
Import documentation (number)	6	7	7	8	6	7	7
Necessary period for import (days)	14	19	16	18	15	21	17
Costs of import (USD per container)	1559	1910	1035	1141	1325	1776	1290

Source: World Bank (2009), taken from the website of World Bank:

<http://www.doingbusiness.org/ExploreTopics/Trading/AccrossBorders/>

According to the costs and procedures in import and export of standardized shipment of goods (one container of goods) we can notice that Serbia has achieved significant progress in 2008 compared to the status in 2005. Current status is characterized by: the number of requested documents (6) is less than in most of the countries in surrounding, but it is for one document bigger than in Bulgaria and Hungary. But, according to the number of days needed for the export to be realized, Serbia with 12 days possessed the shortest time from all the observed countries. Also, total costs of Serbian export per container (1398\$) are less than in Montenegro and Bulgaria, but are bigger than in other observed countries. Ac-

According to these data, Serbia has significantly improved export procedures and made export easier.

Number of requested documents during import in Serbia is 6 which is, like in Macedonia, the least among all the observed countries. Especially is noticed that the necessary number of days for import in Serbia (14) is less than all the observed countries in table 5. But the costs of import in Serbia (1559 \$ per container) are bigger than in other countries, except for Montenegro. According to this overview, we could observe that Serbia managed to achieve obvious progress in the area of liberalization of foreign trade. Borders procedures are simplified, but the work of services is still not coordinated, which is lowering down so called "costs of the border".

Signing CEFTA agreement opened the possibility to increase the trade in this region. Increasing the CEFTA into multilateral agreement was followed with expectancies in the companies in all the members to increase export due to canceling the customs. Such expectations have realistic foundations, although there are always the effects of non-custom barriers that could slow down potential export growth. To the extent of removing the effects of these obstacles, in the future we could expect creation of coherent conditions for doing business on total area of this integration. Although the companies due to free flow of goods and services could account for usage of advantages of the economy of scale, product differentiation is imposed as the need in order to take in some market segments. Investments in modern technology are necessary for it, and transnational corporation mostly use such technology today (TNC). On the other side, strengthening the competition on domestic market will place in a more difficult position the companies that are exclusively oriented towards selling on domestic market. It is important reason for the companies (especially small and medium enterprises – SMEs) to join timely the linking with companies from abroad in international production networks, with the aim of organizing production of parts, structures and substructures for foreign ordering party. Therefore, we establish the market for continual supplies. In Serbia in the last few days we register the occurrence of stopping the cooperation between domestic suppliers of inputs for production in big privatized companies, and therefore diminish domestic production and increase import, with simultaneous growth of unemployment.⁷

Initiation of unilateral application of ASA with EU will result in further decrease of duty rates and with decrease of export price of certain products in the very beginning. It will lead to strengthening the competition on domestic market. This additional liberalization of export comes in bad moment, because the waves of world crisis poop the coasts of domestic economy. If we have in mind that in ASA is predicted the dynamics of gradual cancellation of duties for sensitive products, when the foreseen period expires, it will be followed by the creation of

⁷ Kovacevic R., *Foreign trade policy as the factor of integration of Serbia in the world economy*, Scientific society of economists from AEN and Faculty of Economics University in Belgrade, Belgrade 2007, p. 150.

free trade zone between Serbia and EU. Therefore domestic market will be fully opened (without duties) on the import of products from EU. The fact is that until now we did not reach significant progress in restructuring of the production and export of goods, warns on possible bad influences of liberalization on domestic production. On the other hand, it would definitely have the impact on creation of competitive structure of production and export, although with significant costs. In current phase of the development it is very important that in the future years we secure significant inflow of investments, not only through privatization, but especially through Greenfield investments. Intensification of trade in CEFTA area and increase of the export of goods on the EU market should be the priority of economic policy.

Conclusion

Overall crisis in the world economy announces significant slowing down of the global economic growth. Although the tendency of the slowing down of economic growth both in developed and developing countries, in the IMF projections is announced decrease of the economic growth of the developed countries in 2009 almost to the zero rate, while the growth in developed countries and countries with market in establishment will be maintained in the zone of positive values. Such economic growth scenario would have for its effect the decline of stock market prices, which would lead to decrease of income from export for the exporters of primary products for 2009.

Export of Serbia could not stay immune to unfavorable trends in international surroundings. We should expect more difficult approach to EU market, although the export to CEFTA countries will not be without any difficulties. Therefore domestic companies would make less income from export, which is the tendency that is already present. Fall in the volume of export would have for the consequence lower economic growth, which is projected on around 3%. Smaller aggregate demand in EU countries already leads to slower realization of Serbian export to this region. We could expect also the cancellation of certain agreements on export of domestic products, which will be reflected on slowing down of economic growth of Serbia in 2009. Although the growth of trade deficit will be slower, deficit of current transactions balance would also be very high, that is in unsustainable zone, where there would occur the problems of its financing.

Emergency of crisis and slowing down of the economic activity in the world acts limiting to the possibility of export growth in the future period. Economy of Serbia is in non enviable position for several reasons: (1) weaker economic activity in the world leads to weakening of the world import demand and its redirecting towards national frames; (2) structure of domestic export is defined with the structure of the production with accentuated participation of primary sectors and products with lower phases of processing which, also in normal circumstances

made the growth of export more difficult; (3) the price of money grows on domestic market, so the costs of domestic companies in financing production for export also grow; (4) there is the need for the companies to grant export credits with longer periods, before all to the customers in CEFTA countries, and the possibilities for their refinancing are more difficult; (5) insufficient is financial potential of domestic agencies that are working in the field of insurance and crediting the export (AOFI and SMECA) for stronger support to the export; (6) unilateral application of ASA with EU since January 1, 2009 will make easier the access to the products from EU to domestic market, exposing therefore domestic companies to the stronger competition.

Unilateral application of ASA with EU will have for the result further decrease of duty rates and make cheaper the import of certain products in the very beginning. This additional liberalization of import comes in bad time, because the waves of the world economic crisis are hitting the coasts of domestic economy. If we have in mind that in ASA is predicted the dynamics of gradual elimination of duties for sensitive products, when the proscribed period of time ends it will be made the free trade zone between Serbia and EU. Therefore domestic market will be fully opened (without duties) for import of the products from EU. The fact that until now is not achieved significant progress in restructuring of the production and export of goods warn on the possible unfavorable impacts of liberalization to the level of domestic production. On the other side, it will definitely impact the creation of competitive productive and export structure, although with significant costs. In current phase of the development is very important that in future years is ensured more significant inflow of FDI, not only through privatization but especially through Greenfield investments. Intensifying of trade in CEFTA area and increase of export of goods on the EU market should be the priority of economic policy in the future period. In created circumstances we should maintain the efforts to make easier financing the production intended for export and increase the credit potential planned for crediting and insuring the export businesses.

Abstract

The main goal of Serbian policy makers is to create preconditions for increasing export possibilities. Economic development on long run can not be achieved through usage of natural resources and low labor costs. Without creating competitive advantages and technology development Serbian economy will not be involved in world trade with opportunity to obtain significant export results.

Literature

Becker T. & P. Mauro, *Output drops and shocks that matter*, IMF working paper 2006/172.

ICEG European Center, *Sustainability of External Balances in the Baltic Countries*, „News at the Month” 2007 (December).

IMF, IMF Country Report No. 08/55, Republic of Serbia: Selected Issues, Washington D.C. 2008, (February): IMF.

Kathuria S., *Western Balkan Integration and the EU: An Agenda for Trade*, 2008.

Kovacevic R., *Foreign trade policy as the factor for integration Serbia in the world economy*, Challenges of economic policy of Serbia in 2007, ed. Milena Jovicic, Scientific society of economists with AES and Faculty of economics University in Belgrade, Belgrade 2008, p. 141–154.

Kovacevic R., *Increase of the export as the factor of decreasing the misbalance in the balance of payments of Serbia*, Current movements in economy, economic policy and structural changing in Serbia 2007/2008, Scientific society of economists with AES and Faculty of economics in Belgrade 2008, p. 115–128.

Radelet S. & J. Sach, *Shipping Costs, Manufactured Exports, and Economic Growth*, unpublished paper, Washington, DC 1998, World Bank.

UNCTAD, *World Investment Report 2008: Transnational Corporations, and the Infrastructure Challenge*, UN, New York and Geneva 2008.

World Bank, *Doing Business 2009*, World Bank, Washington, DC 2009.

Internet sites

http://www.nbs.rs/export/internet/cirilica/80/80_2/platni_bilans/index.html.

http://www.nbs.rs/export/internet/latinica/80/80_2/devizne_rezerve_2008.pdf.

<http://web.worldbank.org>.

<http://www.nbs.rs/export/internet/cirilica/80/index.html>.

<http://www.doingbusiness.org/ExploreTopics/TradingAcrossBorders/>.

EMILIJA VUKSANOVIĆ, RADOŠLAV STEFANOVIĆ

Implementation of FIX Protocol in Stock Exchange Market in Serbia

Institutional Framework

The capital market of Serbia is in a relatively early stage of development, which inevitably calls for frequent interventions in existing regulations or setting up of new ones, in order to adjust them to the needs of everyday practice. The basic regulatory framework of the current situation is set out in the Law on Market of Securities and Other Financial Instruments passed in 2006 (took effect on 11 December 2006). In accordance with the law, the Belgrade Stock Exchange is the only organizer of securities trading in Serbia. Apart from the BSE, the Ministry of Finance of the Republic of Serbia, the Securities Commission, the National Bank of Serbia, the Central Securities Register, broker-dealer companies, commercial banks, and purchasers and sellers of securities also take part in securities trading.

The Ministry of Finance of the Republic of Serbia is responsible for passing and harmonizing of laws concerning stock exchange operations and securities (the legal framework for the securities market). Through the Ministry, the Republic of Serbia – being one of the founders of the Belgrade Stock Exchange – realizes its ownership rights. The Belgrade Stock Exchange has an obligation to provide the

Ministry of Finance with information that are of importance for this institution based on the owner's rights to be informed, as well as the National Bank of Serbia based on supervision of the organized money market.

The Commission for Securities and Financial Market is an independent regulatory and supervisory body of the organized securities market. It is a member of the International Organization of Securities Commissions (IOSCO). It is accountable to the National Assembly of the Republic of Serbia. As part of its activities, the Commission establishes criteria that must be fulfilled by computer systems of the authorized participants dealing with securities if they want to deal in securities trading. Its supervisory (and protective) function is of paramount importance, since it functions as a unique regulatory body in the securities market of the Republic of Serbia. By law, it is its duty to set up an information system with participants in the financial market and to provide data protection. In respect to the said, it prescribes criteria for communication security and protection of the data available. Establishing the criteria that have to be met by information systems of the participants that take part in securities dealings also comes within its competence. The Law on Securities Market prescribes that information received via an information and telecommunication system, in compliance with characteristics and conditions/terms prescribed by the Commission, are to be accepted as an original document.

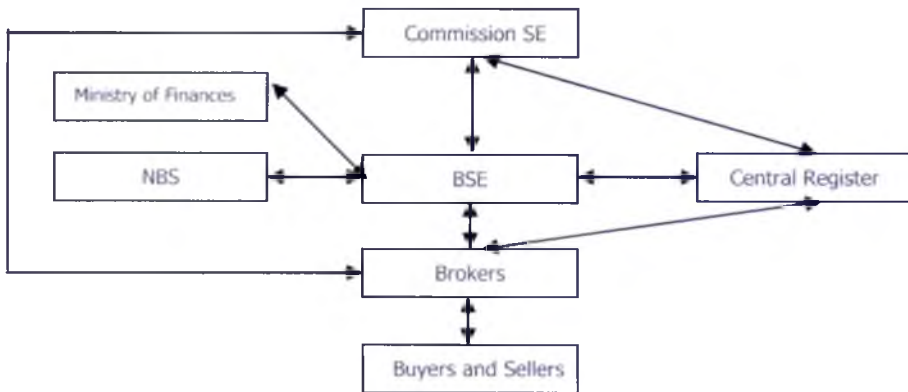
The central Securities Register registers legal holders of securities and other financial instruments, rights arising out of these securities and instruments, and third party entitlement to securities and instruments, and is in charge of clearance and settlement of securities, and securities trading claims incurred in the course of securities dealings. It is based on electronic entry. The members of the Central Register may be: the Republic of Serbia, the National Bank of Serbia, broker-dealer companies, commercial banks, authorized banks, custody banks, stock exchanges, companies for fund management, and foreign legal entities dealings with clearing and settlement. The central Register has its own information system, which was established in 2001 for the needs of clearing and settlement required by the trading process of bonds issued based on frozen hard currency savings. Later on, it was adjusted several times to meet market requirements, allowing for the clearance and settlement of all securities.

The National Bank of Serbia controls the organization and functioning of the money market and short-term securities market on the basis of the submitted reports on activities relating to the above mentioned financial instruments and activities of commercial banks on the financial market, government administration of the Republic of Serbia as it was the issuer of bonds to reimburse the debt arising from the frozen currency savings. Trading in securities pertaining to the

scope of work of the National Bank of Serbia takes place at the Belgrade Stock Exchange as well as on the over-the-counter marker (OTC).

Open market operations as an indirect monetary policy instrument are based on securities sale and purchase transactions. The NBS implements the platform for NBS bills and short-term and long-term RSD (dinar) and foreign currency securities trading via permanent transactions as well as repurchase arrangements. Since October 2003, auction trading of securities between the NBS and banks has taken place electronically through internal electronic platform of the NBS (the NBS's electronic trading system – SET-NBS) based on the technological infrastructure of the RTGS system, according to the DVP model of the Central Securities Registry.

Figure 1. Participants on the Serbian capital market



1. Securities Settlement System

Operations of the securities trading system are based on full dematerialization. Securities ownership and newly created changes are recorded in the Central Securities Registry. Electronic exchange of data between the Central Securities Registry, all participants, and the Belgrade Stock Exchange is a prerequisite for this function. The direct participants, such as brokers, banks, the Republic of Serbia, and the NBS, have direct online access to the Central Securities Registry. All transactions executed on the Belgrade Stock Exchange are balanced through the Central Securities Registry.

Three types of securities accounts are maintained with the Central Securities Registry: 1. accounts of the Central Securities Registry members, 2. securities deposit

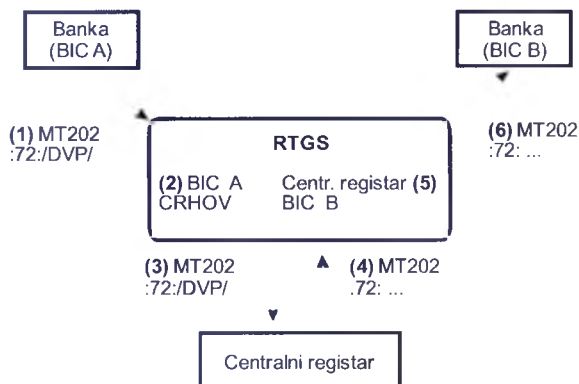
accounts, and 3. accounts of issued securities. There are two types of members: clearing and non-clearing members (which are included indirectly, through clearing members, by concluding special agreement with them).

Trading on the Belgrade Stock Exchange is based on multilateral netting, the “rolling” settlement between T+0 and T+3, depending on request of participants under the operating rules. In this system, the Belgrade Stock Exchange e-mails the Central Securities Register about the executed trades at the end of each trading day. The Central Securities Register executes multilateral netting and informs the participants about their positions during the same day (T+0). At the moment of an order delivery, both sellers and buyers trading on the Belgrade Stock Exchange need to have a sufficient level of securities on their accounts with the Central Securities Registry or money funds in commercial banks.

Credit and liquidity risk control is realized through the guarantee system based on individual collateral and collective pecuniary fund, in which every member (whether a clearing or a non-clearing member), excluding the NBS and the Republic of Serbia, must deposit EURO 40,000.

In order to execute settlement, based on the DVP principle, members of the Central Securities Registry participates in the RTGS system via their settlement accounts. The prerequisite for settlement at the Central Securities Registry is receiving, by the Central Securities Registry, the message from the RTGS system informing that there are enough funds on the settlement account of the buyer’s bank. For that purpose, the messages for funds transfer between financial institutions, MT202, are used. In the event of a shortage of funds, the amounts in the collective fund are used.

Figure 2. Flows of messages in the settlement process



2. FIX Protocol Implementation in BSE

The Belgrade Stock Exchange (BSE) was established in 1894 as the first stock exchange in the Balkans, and resumed its operations in post-war period in 1989. Today, upon five decades of non-functioning, it walks with long strides into the future in compliance with business conditions and the current level of corporate culture. Intensive cooperation with foreign partners during 2007 resulted in the first foreign-established index of the Serbian stocks (SRX by the Vienna Stock Exchange) and the sale of the first license for index BELEX15, based on which structural products are produced and traded at the Frankfurt and Stuttgart stock exchanges. In the course of the same year, a partnership memorandum was signed with representatives of the Ljubljana, Zagreb, and Macedonian stock exchanges to promote the regional market, and the development, and production of regional stock-exchange products and services, as well as to service more successfully the needs of institutional and retail clients.

The BSE has its own electronic trading system in compliance with requirements set by the modern-state-of-the-art organization of system set up for the needs of this industry. The trading system currently used, put into operation in November 2001, was set up for trading in bonds issued to reimburse the debt arising from frozen hard currency savings. The system has been modified several times in accordance with new market circumstances, and technological requirements. Later on, the electronic platform was also expanded to include stock trading. In technological terms, the most important element was a remote trading system, which was established in 2004. The present system is one of the most modern trading systems in the region, and in line with all technology and performance criteria – advised by the EU.

The shift to the electronic trading system called for many changes in the operating process organization, much better possibilities of getting access to the system, number of shares comprised by the trading system, dissemination of information to the public, etc. The increasing demands of users led to the development of the information function. BELEX.info is the service of the Belgrade Stock Exchange that enables the distribution of trading information to all interested users in real-time (outside the circle of certified brokers that are stock exchange members) via the Internet. It is made up of three applications: BELEX.info web application, BELEX.info WAP service, and SMS. This service gives the users an insight into the current state of the securities market, that is, price movements of all securities traded at the Belgrade Stock Exchange, the supply-demand ratio, as well as to the review and a graph of the total realization, i.e. number of trades executed in real-time.

In order to increase the security and speed of information exchange, the Belgrade Stock Exchange in 2008 decided to develop the market organization and trading system by introducing a trading system based on the FIX protocol. The introduction of the Protocol ranks the Belgrade Stock Exchange, in terms of technology, among well-known world stock exchanges, and gives domestic brokers an opportunity to operate within a wider framework, increase the number of clients and trading orders, and thus raise the quality of the entire market.

The Belgrade Stock Exchange carries out all activities concerning the implementation process of the FIX protocol in Serbia. Apart from producing its own trading application, it has coordinated the activities of all market participants, has prepared a specification of the FIX protocol, and has created a basic version of a broker application for trading at the Exchange (due to an inadequate level of technological development of numerous market participants). To implement the FIX protocol, the Belgrade Stock Exchange has formed a special working group that defined a strategic plan of the new trading system development - BELEX FIX, whose key role is to communicate with legislative bodies, educate and promote. It has been made up of the representatives of all institutions included in the securities trading process.

The implementation of FIX in BSE was based on open architecture of Quick FIX solution, which was already successfully implemented in Luxembourg. The solution of BSE on the server side is developed according to their own requests, with the basic modules from Quick FIX. This is the hybrid approach to the development, using all advantages of Quick FIX best practice together with the all-specific solutions that are implemented in the work in BSE. The main role of this application is to provide the integral communication of brokers with BSE and the processing of broker requirements and messages from BSE, with their distribution to the broker applications. This server application has two modules – Client center is managing and processing all functionality of BSE and FIX API takes all the gateway functionality responsible for acquisition and distribution of all messages between BSE and broker houses.

The information system of broker houses in Serbia is usually organized through 3 main applications: activities with the Central register, trading activities in BSE (the subject of FIX implementation) and the back-office system. The FIX solution implemented in broker houses, on the client side of this communication system is the basic version of broker application developed by BSE. In the first phase all members of BSE are supposed to use this application and later they will be able to develop their own solution. This client side application has the full functionality for the comfort work in the stock exchange, it does not have any negative implication on the BSE gateway or their trading system, and the

members are always recognized by BSE server side. Their communication is standardized on implemented FIX documents and certificates for the work of members were created by BSE.

There are 2 main groups of implemented messages in this communication system:

- public messages contain all transactions concerned with lists of stocks, trading sessions, status of stocks and the trading data,
- Private messages are defined in the specification of BSE and in this group; we can find transactions, which could contain next contents: header, order, sales agreement, cancels of sale agreement, trading blocks, order cancels, order replaces and the book of orders.

BSE has 80 members (15 of them are banks) and they worked together in the processes of testing and implementation, and changing the classic application with the new, FIX application through the gateway in BSE. The installation of the FIX application was strictly scheduled and performed in 2007. Testing process was organized in 4 phases: connection tests, tests of FIX sessions, tests of FIX applications and integration tests, based on processes created by the Global Fixed Income Committee because of the cooperation between their technical and business subcommittees.

During this process of implementation BSE organized communication with all the relevant entities in this process: members of BSE, software vendors, working group for implementation of FIX protocol in Serbia, FIX Organization – Sector for Europe and the experts (Working Group for Implementation of FIX Protocol, 2007).

A part of the activities mentioned is introducing the FIXAPI (FIX Application Programming Interface), the programming module with accompanied documentation that gives an individual member of the Exchange the possibility to develop its own programming solutions (applications) for direct electronic connection with the BELEXFIX system of the Belgrade Stock Exchange. An application based on the BELEXFIX API facilitates the next FIXAPI services of the Exchange: 1. integration of programming solutions of a member of the Exchange with the BELEXFIX trading system, 2. delivering trading orders into the BELEXFIX system by a member of the Exchange, 3. withdrawing and modifying orders delivered into the BELEXFIX system, 4. informing on status of orders by the Book of orders, and 5. informing on status of sales agreements by the Book of sales agreements.

The change of the trading system of the BSE brought about changes in the information system. At the end of the first quarter of 2008, all BELEX.info service users got the new version – BELEX.professional, based on the FIX protocol, which considerably improves the characteristics of the current system (facilitates the five-level market depth presentation, gives an opportunity to observe trading in 60 selected securities during a chosen period, etc).

Conclusion

The system currently in use can satisfy market needs at this point however, in order to increase the security and speed of information exchange, the Belgrade Stock Exchange will further develop the market organization and trading system by introducing a new trading system based on the FIX protocol. The introduction of the Protocol ranks the Belgrade Stock Exchange, in terms of technology, among well-known world stock exchanges, and gives domestic brokers an opportunity to operate within a wider framework, increase the number of clients and trading orders, and thus raise the quality of the entire market.

Potential positive effects are multiple, both for individual participants and the entire financial market. Being the latest and the most widely spread protocol on capital markets throughout the world the FIX protocol is seen as an imperative to go on with the capital market development in Serbia, because one of the conditions for foreign investors to invest is the creation of environment similar to that in their own countries. Furthermore, the financial market itself becomes more efficient and reliable.

Positive effects for the BSE itself are expected to include an increase in the number of transactions as well as the whole operating volume; a quicker response to all requirements of users due to the Protocol's flexibility and comprehension; risk management; a rise of the system stability, control, and efficiency; and conditions for faster and more simpler implementation of new technologies and solutions.

Positive effects for the brokerage itself are expected to include: a rise in trading reliability and decrease in mistakes or errors, as a user's order is received electronically; much more time for other assignments; expenses cut due to the reduced manual work, errors or mistakes; a higher degree of adaptability of the independent IS to own needs; a more efficient distribution of trading information to the clients, which enables a quick and accurate way of monitoring particular development phases.

Buyers and vendors may experience positive effects including: an efficiency increase in operations control in the trading process, especially in order recording

and report receiving; a rise in the speed and efficiency of order-recording, which implies lower costs and errors; better inter-connecting, a higher degree of transparency and economy.

To use the above-mentioned advantages to the hilt, some essential preconditions are to be fulfilled. One of them is the creation of an adequate legal framework which will appropriately follow the established standards and trends in the securities industry. It has been accepted that, in the course of the first (transitional) phase of the FIX protocol implementation, it should be used without any serious legislative changes. In the second phase, the existing regulatory framework should be updated and suited to the needs.

The second prerequisite relates to a need for further technological improvements and standardization in this field. With respect to the said, a transition to the gateway concept is of a vital importance, as well as an independent development of the IS of the BSE, and other market participants.

Finally, it must be taken into account that further development of the capital market of Serbia will depend on the available market material, which only partially depends on legal, operational, and technological solutions. By introducing the FIX protocol in its trading system, the Belgrade Stock Exchange has secured all required prerequisites to attract foreign portfolio investors and a better position itself in the process of regional integrations.

Abstract

The aims of this paper are to present the new trading system of the Belgrade Stock Exchange based on FIX protocol. It contains main characteristics of the FIX protocol structure, characteristics and technical solutions, concentrating on the FIX protocol implementation and the importance of this protocol in the frame of the Belgrade Stock Exchange connecting regional and European financial markets. In the first part, it describes the characteristics of the institutional framework of the capital market of Serbia. The second part deals with securities settlement system in Serbia and Belgrade Stock Exchange Operations. In the third part FIX protocol implementation in the Belgrade Stock Exchange is described. Finally, the conclusions are presented.

Literature

Assessment methodology for „Recommendations for Securities Settlement Systems”, (2002), CPSS & IOSCO, www.bis.org, November.

Folkerts-Landau David, Garber Peter and Dirk Schoenmaker, (1996), „The Reform of Wholesale Payment Systems and its Impact on Financial Markets”, Group of Thirty, Washington, DC.

Garlatan Robert, “Payment, Clearance, and Settlement Systems”, (1997), u Kevin Merz and Joseph Rosen, (ed.), “The Handbook of Investment Technology”, p. 239–256.

Implementacija FIX protokola na tržištu kapitala u Srbiji, radna grupa za implementaciju FIX protokola, Beograd, Oktobar 2006.

Kevin Houston, FIX Protokol, IT Performance, (2007), 6th Belgrade International Conference, Belgrade, p. 14–36.

Payment Systems in Serbia, CPSS, June 2007.

Perold Andre, “The Payment System and Derivative Instrument”, (1995), u Dwight B. Crane (ed.), “The Global Financial System: a functional Perspective”, p. 33–56.

Recommendations for Securities Settlement Systems, (2001), CPSS & IOSCO, www.bis.org, November.

Sheppard D., *Payment Systems*, Center for Central Banking Studies Bank of England, London 1996.

Vuksanović E., Jošanov B., The Business Effectiveness of FIX Protocol in Stock Exchange Market in Serbia, 8-Th European Conference E-Comm-Line 2007, Bucharest, September 25–27, 2008, p. 7–10.

About the Authors

Prof. dr Verica Babić

Faculty of Economics, University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Management and Business Economics

E-mail: vbabic@kg.ac.rs

Dr Klemens Budzowski

Professor of Andrzej Frycz Modrzewski Krakow University,

Chancellor of since 2000

Andrzej Frycz Modrzewski Krakow University

1, G. Herlinga-Grudzinskiego Str. 30-705 Krakow, Poland

E-mail: rector@afm.edu.pl

Prof. dr Stevan Devetaković

Faculty of Economics of the University of Belgrade

6, Kamenička Str. 11000 Belgrade, Serbia

Department of Economic Analysis and Policy

E-mail: sdvtkvic1@nadlanu.com

Prof. dr Momčilo Djordjević

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Management and Business Economics

E-mail: mdjordjevic@kg.ac.rs

Mr Jelena Eric

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department: Management and Business Economics

E-mail: jelena_eric@kg.ac.rs

Mr Srdjan Furtula

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department: Finance, Financial Institutions and Insurance

E-mail: furtulas@kg.ac.rs

Prof. dr Biljana Jovanović Gavrilović

Vice-Dean of the Faculty of Economics of the University of Belgrade

6, Kamenička Str. 11000 Belgrade, Serbia

Department of Economic Analysis and Policy

E-mail: bgavrilo@ekof.bg.ac.rs

Prof. dr hab. Tadeusz Grabiński

Rector of the Krakow University of Economics (1996–2002). Vice-Rector (1990-1996)

Andrzej Frycz Modrzewski Krakow University, 1, Herlinga-Grudzińskiego Str. 30-705 Krakow

Krakow University of Economics, 27, Rakowicka Str. 31-510 Krakow, Poland

Department: Strategic Analysis

E-mail: tg@afm.edu.pl; tg@uek.krakow.pl

Prof. dr Vlastimir Leković

Vice-Dean of the Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of General Economics and Economic Development

E-mail: lekovic@kg.ac.rs

Prof. dr hab. Marek Lisiński

Vice-Rector of the Krakow University of Economics (1996–2002).

Krakow University of Economics, 27, Rakowicka Str. 31-510 Krakow, Poland

Department: Strategic Analysis

E-mail: lisinski@uek.krakow.pl

Mr Nikola Makojević

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of General Economics and Economic Development

E-mail: nmakojevic@kg.ac.rs

Prof. dr Ljiljana Maksimović
Faculty of Economics of the University of Kragujevac
3, Djure Pucara Str. 34000 Kragujevac, Serbia
Department of General Economics and Economic Development
E-mail: maksimoviclj@kg.ac.rs

Prof. dr Slobodan D. Malinić
Dean of the Faculty of Economics of the University of Kragujevac (since 2004)
3, Djure Pucara Str., 34000 Kragujevac, Serbia
Department: Accounting, Auditing and Business Finance
E-mail: efdekan@kg.ac.rs

Prof. dr Dragana Marković
Faculty of Economics of the University of Kragujevac
3, Djure Pucara Str. 34000 Kragujevac, Serbia
Department of Finance, Financial Institutions and Insurance
E-mail: dmarkovic@kg.ac.rs

Prof. dr hab. Jerzy Mikułowski Pomorski
Rector of the Krakow University of Economics (1990–1996).
Krakow University of Economics, 27, Rakowicka Str. 31-510 Krakow, Poland
Department: European Studies
E-mail: mikuloj@uek.krakow.pl

Mr Vesna Milovanović
Variant&Frog d.o.o. 121, Ivana Milutinovića Str. 11400 Mladenovac, Serbia.
E-mail: ansev1984@yahoo.com

Prof. dr hab. Roman Niestrój
Rector of the Krakow University of Economics (since 2008), 27, Rakowicka
Str. 31-510 Krakow, Poland
Department: Management of Marketing
E-mail: niestror@uek.krakow.pl

Dr Zbigniew Paszek
Professor of Andrzej Frycz Modrzewski Krakow University, Rector's
Plenipotentiary for IT Studies. Krakow University of Economics (1962–2003).
Creator and Director of the School of Entrepreneurship and Management of the
Krakow University of Economics (1991–2003)
Department: Statistical Methods
E-mail: zpaszek@afm.edu.pl

Prof. dr hab. inż Tadeusz Pomianek

Rector of the University of Information Technology and Management in Rzeszów (since 2003), University of Information Technology and Management in Rzeszów, 2, H. Sucharskiego Str. 35-225 Rzeszów, Poland

E-mail: tpomianek@wsiz.rzeszow.pl

Prof. dr Gordana Radosavljević

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department: Management and Business Economics

E-mail: gocar@kg.ac.rs

Dr Andrzej Rozmus

Head of the Department for Research of the University of Information Technology of Management in Rzeszów.

University of Information Technology and Management in Rzeszów, 2, H. Sucharskiego Str. 35-225 Rzeszów, Poland

E-mail: arozmus@wsiz.rzeszow.pl

Prof. dr Predrag Stančić

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Accounting, Auditing and Business Finance

E-mail: pstancic@kg.ac.rs

Phd. student Vladimir Stančić

Faculty of Economics of the University of Nish, 11, Trg Kralja Aleksandra 18000 Nish, Serbia

Department:

E-mail: vladastancic@hotmail.com

Prof. dr Radoslav Stefanović

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department: Accounting, Auditing and Business Finance

E-mail: rades@kg.ac.rs

Doc. dr Vesna Stojanović Aleksić

Vice-Dean of the Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Management and Business Economics

E-mail: vesnasa@kg.ac.rs

Dr Srdjan Šapić

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Management and Business Economics

E-mail: ssapic@kg.ac.rs

Prof. dr Petar Veselinović

Vice-Dean of the Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of General Economics and Economic Development

E-mail: pveselinovic@kg.ac.rs

Prof. dr Emilija Vuksanović

Faculty of Economics of the University of Kragujevac

3, Djure Pucara Str. 34000 Kragujevac, Serbia

Department of Finance, Financial Institutions and Insurance

E-mail: evuksanovic@kg.ac.rs



Zbigniew Paszek, Predrag Jovanović Gavrilović
Kraków – kraljevski grad

Andrzej Frycz Modrzewski Krakow University
The Institute of Economics and Finance in Belgrade

Kraków–Beograd 2010