

The epistemic abandonment

*“The consequence of violence is even greater violence,
the power of one extreme activates the force of the other extreme
and the structural adversity produces adverse systems.”*

When Economics centred its analytical system on wealth, a double epistemic abandonment occurred. Economics chose to prevalently single out an exception – the individual wealth – and to promote it as the exclusive target for human action. Instead of serving the natural diversity of the roles of coexistence, Economics has now also chosen to segregate the options of identity from the moral motivation.

The direct consequence was that the conceptual heart of Economics has migrated from the place of restraint where its modern form was forged and then tried to reach its maturity by socially devaluing the ancient vision known as *Oikonomia*. As such, any link of filial respect for tradition has been severed and the intellectual effort for understanding and making functional the actional structures supporting human subsistence has been annulled. From this moment on, Economics bet everything on the sumptuary condition of abundance.

Opening the Pandora’s Box of individual wealth has complicated the rationalization of the human condition by creating expansion channels for the *animal spirits*. In an anti-modern way, establishing wealth as the target of economicity has again focused the human nature on a state of conflict for the territorial supremacy on resources, where the quotidian behaviour is exclusively modelled on fundamental adversity.

Additionally, the path of materialness represented by wealth has banished the individual’s inclination towards balancing the scales of preoccupations, turning spiritual values into the ingredients of the obsession for the lucrative.

That economy which is conceptually centred on wealth has parted forever with the primordial universe made up of things which are measured against life’s needs. That happened when it chose to exhibit the experiential forms of arranging the rules of survival according to the model of the social pyramid. From now on the choice of roles – in the ancient way of ordering by destination the places in the social machine of survival – no longer functions. The subordination of roles in the unfolding of the specific processes related to the human condition – work, labour,

action – has been thoroughly functionalized putting wealth on a position of strength towards which all personal interests have been allocated.

The conceptual about-turn has generated the upheaval of the logical order of natural things on which the world is built. By introducing the virus of expectations miraculously fulfilled in some possible future, a radical desensitization to the social purpose of individual action has been instilled. We stepped away from the reality of concrete existence, which is limited by human arrangements as a result of naturally formed acumen, and through the gates of utopia. It was an error with costs on a planetary scale, throwing mankind into a whirlwind of dystopias created by ideological extremes, by rationalized fundamentalisms and by institutionalized violence.

The economy of the last 100 years, which straddled two centuries, with its debut marked by the first global conflagration, is the scenery of the great epistemic abandonment in Economics. The consequence of violence is an even greater violence, the power of one extreme activates the force of the other extreme and the structural adversity produces adverse systems.

Even though at the dawn of the rationalist Enlightenment it was called Political Economics, the theoretical reconstruction around the concept of wealth has pretended to be – simply, neutrally and correctly – Economics. In fact, in order to dissimulate the rational founding error bestowed by Wealth onto the interests, the king actually wanted to be seen naked because he had nothing left to hide, as the interests were his very dermis.

The exhibitivistic evolution has proved inventive in fighting against the social vision on the redistribution of wealth, in erasing the traces of sentimentalism from the quantification of happiness as an indicator of yield, in demolishing the scaffolding around the construction of the welfare state. The forms of the exhibition are now certifying the correctness of the socialization of the losses incurred by bad corporate governance, the public budget propping of the failures in the market etc. We can also add to the exhibition the trend to experiment with global monopolies – with transient phases dissimulated in fraternal oligopolies – by splitting the controlling power of markets.

The pretence that it is no longer political is successfully exhibited in a world which was taught Economics from manuals fabricated to contain only the hypothesis of wealth and not the reason behind it: the interest in controlling the political power through wealth. The niche of econometrics-Economics is destined to represent the hard proof that the rationalization of work, labour and action pertains to the logic of science by definition.

Except that Economics is a special kind of science, whose interior conceptual relevance is attained when it supports something exterior: the bases of human life, among which subsistence is the differentia and sociality is the genus.

Economics is a science only because it rationalizes the human condition for the wellbeing of the human nature. Any other perspective, such as the reversed vision of exhibiting the evil contained in the human nature in order to obtain successful results in rationalizing the human condition, confers Economics with the status of a Machiavellian book of recipes for managing the power of wealth against man's freedom to rationally seek the royal path of fulfilling the human nature.

The reduction of human happiness to wealth is in opposition to the diversity of humanity, to the complex human nature of the experiences of life. This reductionism introduces the option of a totalitarianism sublimed around a single dimension of the human nature and it turns Anti-Prometheism into an eschatological ideal for human creationism.

The world built on wealth is without soul, while the materialist Economics is a neurotoxin for the spirit. Economics must be, after all, a science of the human condition.

Marin Dinu

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Diversifying the risk through portfolio investment

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Abstract. *The stock exchange markets are characterized by high dynamics of the investment activity, mainly portfolio investments. The existing relation between yield and risk, on one side, and the portfolio diversification, on the other side, are two basic aspects allowing the investors to build up a portfolio founded on the yield and risk targets which they are aiming. In the frame of this article we have applied the Markowitz model on a number of portfolios of equities issued by commercial companies listed at the Bucharest Stock Exchange on the main REGS market.*

Keywords: financial instrument, portfolio, risk diversification, yield, Markowitz model.

JEL Classification: G11, G32.

REL Classification: 11B.

1. Introduction

In terms of capital market, we talk about the interaction modality between legal persons or individuals holding, at a certain time, an excess of capital – entering this market as investors – and those entities which are facing a certain need of capital and therefore, are showing their intention to draw the available amounts through emissions of equities or other specific financial instruments (Anghelache, 2009).

The intermediation between the two categories of players referred above is achieved by specialized entities, called financial investment services companies.

Both the theoretical works and the actual activity the emphasize goes maximizing the profit function under the conditions of minimizing the risks connected to the analyzed transactions. When considering minimizing the risks specific to the transactions on financial instruments the portfolio investments are to be compulsory considered.

2. Literature review

The economists running their activity both during the second half of the century XX and nowadays paid a high consideration to the analysis of the typical activities of the capital market and, implicitly, to the management of the financial instruments portfolio.

In this respect, we have to underline the contributions brought by Harry Markowitz (*Portfolio selection. Efficient Diversification of Investments*, 1959), William Sharpe (*A Simplified Model of Portfolio Analysis*, 1963), John Lintner (*The valuation of risk assets and the selection of risk portfolios and capital budgets*, 1965), Jan Mossin (*Equilibrium in a Capital Asset Market*, 1966), Stephan Ross (*The Arbitrage Theory of Capital Asset Pricing – APT*, 1976). These works are submitting – from theoretical point of view – a series of economic-mathematical models for analyzing the yield and risk of the financial instruments which may be considered as the very basis for all the analyses being performed on the subject of the financial instruments portfolios.

The theory of the management of the financial instruments portfolio is originating back to the first half of the XX century when the first models for the analysis of risk and profitableness for the investments in financial instruments have been drawn up. Thus, it is by the beginning of the previous century that a number of models for the analysis of the financial investments made themselves conspicuous: the “fair game” model (Louis Bachelier, *The speculation theory*, 1900); the “martingale” and “sub martingale” models; “random walk” model. The

“fair game” model has been put in discussion by Louis Bachelier (1900) by his dissertation work “The speculation theory”, being subsequently submitted by Paul Cootner in his work *The Random Character of Stock Market Prices*, issued in 1964.

These attempts to systemize the notions referring to the investments on the capital markets are however considered as modest and therefore, replaced by the modern theory of the portfolio.

In the case of the portfolio modern theory, the investments are statistically modeled taking into account the level of the expected profit and the degree of volatility of the financial instrument which, in fact is considered as the specific risk bearer for each instrument. This theory is meant to let each investor identify the accepted level of risk and thereafter to identify that specific portfolio of the highest yield for the respective level.

The starting points of these theories go back to the beginning of the second half of the XX century and are to be found out in the works issued by the American Professor Harry Markowitz. Giving up the classical approach of the financial investment analysis (based on the technical and fundamental analysis), he focused to the analysis of the overall performance of a portfolio of financial instruments (which analysis is grounded on the ratio yield/risk of the components of a portfolio). The activity achieved by Professor Markowitz materialized in the publication of his work titled *Portfolio selection. Efficient Diversification of Investments* (1959) for which he get awarded with the Nobel Prize for Economics in the year 1990.

On the other hand, William Sharpe is the one who elaborated the CAPM model, through his work *Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk* published by the *Journal of Finance* in September 1964. The CAPM model meant a real qualitative jump in the frame of the financial theory, from the normative models to a model of equilibrium between the demand and the offer for risky assets meant to generate unique prices for the financial assets.

Further on, in 1976, Stephan Ross submitted – by his work *The Arbitrage Theory of Capital Asset Pricing – APT* – an alternative to the Markowitz and Sharpe models of analysis for the profitableness of a financial instruments portfolio. The supporting basis of this theory is given by the hypothesis that all the financial instruments should be identified in an identical way on the different capital markets.

The above mentioned models for the analysis of the financial instruments portfolios are representing the starting point for a large number of studies being performed during the last years and published in specialized international reviews.

It is obvious that, during the respective period, number of specialists in the field of the financial investments have analyzed the models created during the second half of the previous century and accommodated them to the specific requirements of the economy at the beginning of the III millennium.

There is in this context that we have to mention also the works published by Baule Rainer (*Optimal portfolio selection for the small investor considering risk and transaction costs*, 2010), Hagstromer Bjorn, Binner Jane M. (*Stock portfolio selection with full-scale optimization and differential evolution*, 2009), Kini Omesh, Mian Shehzad, Rebello Michael, Venkateswaran Anan (*On the Structure of Analyst Research Portfolios and Forecast Accuracy*, 2009), Lisa Koonce, Marlys Gascho Lipe and Mary Lea Mcanally (*Judging the risk of financial instruments: Problems and potential remedies*, 2005), Marco Taboga (*A simple model of robust portfolio selection*, 2005), Ralph Steuer and Yue Qi (*Developments in multi-attribute portfolio selection*, 2006), Considine G. (*Projecting portfolio risk and return*, 2007), Bhalla V.K. (*Investment management*, 2008), Ameer Hachmi Ben, Prigent Jean Luc (*Behavior towards Risk in Structured Portfolio Management*, 2010), etc.

We are meeting the same problems of how to optimize the financial instruments portfolios under risk conditions when considering the work *On portfolio selection under extreme risk measure* published in 2006 by Stephan Clemencon and Skander Slim.

Meanwhile, in the frame of his article *Projecting portfolio risk and return* published in 2007, Geoff Considine is applying to an informatics instrument (QPP – Quantext Portfolio Planer) meant to forecast the evolution of a portfolio formed by 20 equities issued by American companies and quoted on the NASDAQ market. QPP is combining the recent evolution of the instruments defined by the user with long term relations concerning the connection between the profit and the risk for forecasting the evolution of the 20 instruments over a 33 years period.

3. Reasons concerning the portfolio and the portfolio management

The concept of portfolio is a complex one so that, over the time, the specialists in the field, both in the country and abroad, paid enough efforts in order to identify those elements helping the definition of this notion. The portfolio is representing a „combination of financial instruments held by an individual or a company with the purpose to multiply the invested capital under the conditions of minimizing the risk through diversification” (Roman, 2003).

It is recommended that the activity of building up and managing the portfolio takes into account to select equities out of the under-valued category, to choose

the best moment of entering the market and, when considering to sell and get profit, to wait for the moment when the price reaches a concordance with the financial outcomes, taking into consideration the market fluctuations, so that the opportunities they are offering are not getting lost (Anghel and Dinu, 2013).

When building up a portfolio, it is required to consider an as diversified range as possible so that the undertaken risk is as small as possible. The number of the financial instruments which might make part of a portfolio is depending on the investor but the specialists in the field are alleging that this must be minimum 7 in order to allow compensating a loss which might be recorded in the case that one or more out of these instruments are facing an unexpected drop. Meantime, these specialists are recommending that the instruments should be diversified on activity sectors (Anghel, 2013).

The management of a financial instruments portfolio is an important activity because the factors leading to the best performances for the respective investment are basically the adequate structure and the good administration of the portfolio.

Although advisable that the portfolio management is run by brokers or by placement consultants, even those with no qualification in the field can administrate their own portfolios with good results provided they are following and applying a series of principles and techniques.

Basically, the decision of any investor as to place the capital he is holding in financial instruments must take into account the adopted investment strategy, the modality to identify and select the financial instruments, the number of selected instruments, the achievement of the optimum combination of the built up portfolio and, mainly, its management in time depending the degree of adversity of the investor as against the risk and the degree of profitability expected by this one (Manole and Anghel, 2013).

By the time the decision of building up a portfolio is taken it is aiming to get an as high as possible capitalized value of the future benefits. Under such circumstances, the risk of getting a variable capitalization rate of the benefit may occur. The risk of the portfolio may be diminished through diversification.

If to define the portfolio management, it comprises the totality of methods and models through which an optimum combination of the assets is achieved, based on the correlation yield-risk. Under these conditions, the decisions being taken in the activity of the portfolio management are based on the portfolio yield and the corresponding risk. This is a complex activity which requires to be continuously carried out because of the fact that modifications arousing on the determinant variables for the yield and risk of the portfolio component instruments would imply modifications to be made within the portfolio structure (Dragotă, 2009).

The valuation of the portfolio is made on the basis of the profitability-risk criterion. The profitability means the level of the gain provided by an investment. Between the profitability of an investment and the connected risk there is a directly proportional relation: to the extent the risk is smaller, the investment profitability which might be achieved is smaller but to the extent the undertaken risks are bigger the investment profitability is increasing accordingly (Anghelache and Anghel, 2014).

Consequently, it may be said that the investor must take into consideration the type of financial instruments which provides an optimum ratio between the profitability and the risk, a ratio adjusted depending on his adversity to the risk as well as on his expectations as regards the portfolio and, meanwhile, the available financial possibilities.

4. The Markowitz model

The entire portfolio theory is meant to create the required framework for identifying an optimum portfolio, namely that specific combination of financial assets „which provides the best possible profitability for a certain level of risk or bears the lowest level of the possible risk for a certain profitability rate (Roman, 2003).

The concept of optimum portfolio has been used for the first time by Harry Markowitz, back in 1959. He argued that it was possible to meet various portfolios being associated with different levels of risk and profit. Under the circumstances, each investor has to decide the maximum level of the risk he would accept but considering also the value of the expected profit out of the forecasted investment. Depending on the decision previously made, the investor can select the optimum solution for his financial assets portfolio diversification.

In his work, *Portfolio selection. Efficient Diversification of Investments*, Harry Markowitz proved that the decision as to choose the portfolio can be achieved through studying „the portfolio expected rate of gain and the dispersion or the average squared deviation, as risk measure” (Markowitz, 1959).

The practical application of the Markowitz model allows us to set up the level of the individual dispersions of the financial instruments yields, both for a simplified portfolio of instruments (formed of two financial assets only) and for a portfolio formed up „n” financial instruments (Anghel, 2013).

Even if considering two or more assets from different markets, the construction of an efficient portfolio implies the gradual running through the following stages (Anghel, 2013):

- Identification of the risk-gain profile for each alternative combination of the asset in the frame of the portfolio;
- Setting up the combination of risky assets with minimum variance depending on the adversity degree of each investor;
- Setting up the complete portfolio by combining the portfolio of minimum variance with risk free assets which the investor intends to take in his portfolio;

The Markowitz model for diversifying the financial instruments portfolio may lead to the identification of some optimum portfolios of risky assets, respectively of portfolios providing a maximum of the estimated yield for a certain level of the risk which the capital investors are willing to undertake depending on their behaviour against the risk.

The simplest model of portfolio which can be analyzed with the support of the Markowitz model is formed of two financial instruments.

The mathematical expectation of the yield rate for the portfolio (E_p) is set up by using the relation:

$$E_p = X_1E_1 + X_2E_2,$$

where:

X_1, X_2 = the weights of participation to the portfolio;

E_1, E_2 = the yields of the two assets.

The second element which has to be analyzed in order to characterize the portfolio efficiency is given by the portfolio dispersion, as measure of the risk connected to the investment. In this respect, the following mathematical relation is used (Anghelache and Anghel, 2014):

$$\sigma_p^2 = X_1^2\sigma_1^2 + X_2^2\sigma_2^2 + 2X_1X_2\sigma_{12}$$

The portfolio dispersion is influenced by the following elements (Roman, 2003):

- The dispersion of each asset included in the portfolio;
- The proportions in which the two financial assets are combined;
- The covariance between the two considered assets.

The covariance between the two assets (σ_{12}) (Anghelache and Anghel, 2014)

$$\sigma_{12} = \frac{1}{T-1} \cdot \sum_{t=1}^T (R_{1(t)} - \bar{R}_1)(R_{2(t)} - \bar{R}_2)$$

where:

$t = 1, \dots, T$ (number of observations in time on the yield rates);

$R_{1(t)}$ = the yield of the asset "1" at the moment "t";

\bar{R}_1 = the average yield of the asset "1";

$R_{2(t)}$ = the yield of the asset “2” at the moment “t”;

\bar{R}_2 = the average yield of the asset “2”.

Based on the previously presented methodology, it is possible to determine the performance and risk for any type of financial instruments portfolio, regardless the number of titles included in its structure.

$$E_p = \sum_{i=1}^n X_i E_i$$

Also, in the case of portfolios made of „n” financial titles, the profitability of portfolio depends on the estimated profitability of each title included in the structure of the portfolio, and as well on the weight they hold in this structure.

$$\sigma_p^2 = \sum_i \sum_j X_i X_j \sigma_{ij}$$

The covariance between the asset “i” and the asset “j” (σ_{ij}) (Anghelache, 2013)

$$\sigma_{ij} = \frac{1}{T-1} \cdot \sum_{t=1}^T (R_{i(t)} - \bar{R}_i)(R_{j(t)} - \bar{R}_j)$$

Dispersion σ_i^2

$$\sigma_i^2 = \frac{1}{T-1} \cdot \sum_{t=1}^T (R_{i(t)} - \bar{R}_i)^2$$

In the case of the portfolio risk it is to note that its level is influenced by (Stancu, 2007):

- The individual risks of each asset included in the portfolio;
- The weight of each asset in the portfolio structure;
- The covariance between the assets yields, considered two by two.

5. The analysis of the yield and risk for a portfolio formed up of two assets issued by companies transacted at the Bucharest Stock Exchange

We applied the Markowitz mode in order to analyze the yield and risk of a simple portfolio formed up of two equities. In this respect, we have built up a portfolio of assets issued by two commercial companies from our country transacted through the intermediary of the Bucharest Stock Exchange. The two selected companies are VRANCART SA and MECANICA CEAHLĂU.

VRANCART SA is running its activity in the field of “Manufacturing of paper and corrugated cardboard” (Cod CAEN Rev.2 – 1721), while MECANICA

CEAHLĂU is running its activity in the field of „Manufacturing of machines and equipment for agriculture and forestry exploitations” (Cod CAEN Rev.2 – 2830).

The main information referring to the assets issuers are synthesized as follows (Table 1):

Table 1. *Details on issuers*

Company	VRANCART S.A.	MECANICA CEAHLĂU
Location	Adjud, Vrancea County	Piatra Neamț, Neamț County
Symbol	VNC	MECF
Category	II	II
Market	Main, REGS	Main, REGS
Date start transacting	15.07.2005	15.02.2006
Number shares	863.717.920	239.908.460
Nominal value per share	0,1	0,1
Social capital	86.371.792	23.990.846

Based on the weekly evolution of the prices recorded by the two assets in the year 2013 (03.01.2013 – 30.12.2013), we can proceed to estimating the yield and the connected risk for the year 2014. In this respect, the average weekly yield and the corresponding risk degree recorded for 2013 have been calculated.

Table 2. *Weekly yields of the shares included in the portfolio, recorded in the year 2013*

Week	Yield VRANCART	Yield MECANICA	Week	Yield VRANCART	Yield a MECANICA
1	0.026900	0.020500	27	0.004360	0.055634
2	-0.184593	0.047840	28	0.017366	0.050033
3	0.228164	-0.013991	29	0.001422	-0.047014
4	0.004354	-0.000747	30	0.034091	-0.040000
5	0.013006	0.006726	31	0.002747	0.075694
6	0.062767	0.017075	32	-0.004110	0.049064
7	0.004027	-0.010949	33	-0.012380	-0.144615
8	-0.008021	0.005904	34	0.019499	0.029496
9	0.037736	0.008070	35	-0.006831	0.030049
10	0.000000	-0.017467	36	-0.016506	0.007463
11	0.000000	-0.005185	37	-0.001399	-0.041751
12	-0.020779	0.000745	38	-0.007003	-0.026001
13	-0.014589	-0.017113	39	0.049365	0.060606
14	0.013459	0.000757	40	-0.018817	-0.011565
15	-0.009296	-0.014372	41	-0.038356	-0.014453
16	-0.009383	0.036071	42	-0.028490	-0.039804
17	0.012179	0.037037	43	-0.020528	-0.054545
18	-0.004011	0.015714	44	-0.002994	0.042308
19	-0.067114	-0.029536	45	0.042042	0.073801
20	0.000000	-0.041304	46	-0.004323	0.001375
21	-0.010072	0.020408	47	-0.007236	-0.025395
22	-0.011628	0.014815	48	0.039359	0.031690
23	0.014706	0.021898	49	-0.008415	-0.063481
24	-0.014493	-0.003571	50	0.002829	0.020408
25	0.007353	-0.028674	51	-0.031030	-0.025714
26	0.004380	0.047970	52	-0.004367	0.021261

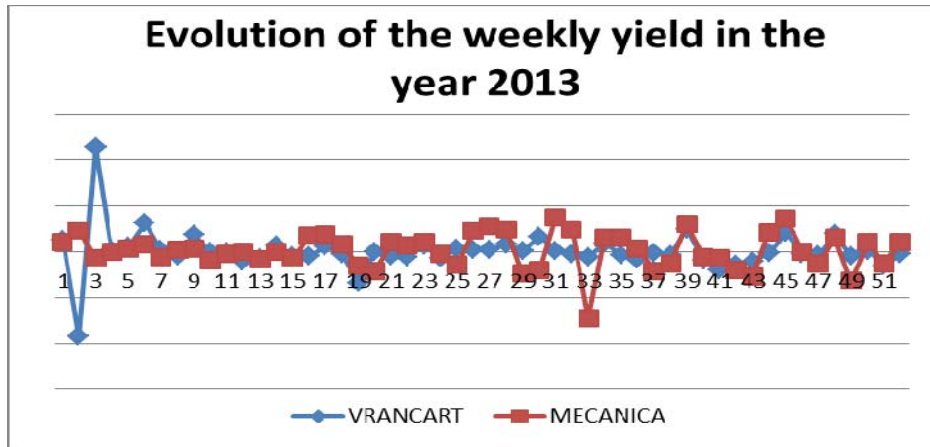


Table 3. The yield and the average weekly volatility for the equities included in the portfolio in the year 2013

No.	Company name	Symbol	Yield	Volatility
1	VRANCART SA	VNC	0.001449	0.046684
2	MECANICA CEHLAU	MECF	0.002561	0.039465

The estimated yield of the considered portfolio is established as follows:

$$E_p = X_{VNC}E_{VNC} + X_{MECF}E_{MECF}$$

Simultaneously, we have calculated the risk connected with this investment, according to the relation:

$$\sigma_p^2 = X_{VNC}^2\sigma_{VNC}^2 + X_{MECF}^2\sigma_{MECF}^2 + 2X_{VNC}X_{MECF}\sigma_{VNC/MECF}$$

The investor has the possibility to make his options on the weights allocated to each type of shares within the portfolio he holds. The influence of these weights on the evolution of the portfolio is submitted in the following table:

Table 4. The estimation of the weekly yield and risk for the portfolio formed up of the two equities for the year 2014 (for different weights of participation)

P	X_{VNC}	X_{MECF}	E_p	σ_p^2	σ_p
P1	100%	0%	0.001449	0.002179	0.046684
P2	95%	5%	0.001505	0.001982	0.044515
P3	90%	10%	0.001560	0.001801	0.042442
P4	85%	15%	0.001616	0.001639	0.040480
P5	80%	20%	0.001671	0.001493	0.038645
P6	75%	25%	0.001727	0.001366	0.036957
P7	70%	30%	0.001783	0.001256	0.035437
P8	65%	35%	0.001838	0.001163	0.034107
P9	60%	40%	0.001894	0.001088	0.032989
P10	55%	45%	0.001949	0.001031	0.032107
P11	50%	50%	0.002005	0.000991	0.031480
P12	45%	55%	0.002061	0.000969	0.031124

P	X _{VNC}	X _{MECF}	E _P	σ ² _P	σ _P
P13	40%	60%	0.002116	0.000964	0.031047
P14	35%	65%	0.002172	0.000977	0.031252
P15	30%	70%	0.002227	0.001007	0.031733
P16	25%	75%	0.002283	0.001055	0.032479
P17	20%	80%	0.002338	0.001120	0.033471
P18	15%	85%	0.002394	0.001203	0.034688
P19	10%	90%	0.002450	0.001304	0.036108
P20	5%	95%	0.002505	0.001422	0.037708
P21	0%	100%	0.002561	0.001558	0.039465

By interpreting the previous results we can conclude the following:

- In the case of the equi-weighted portfolio formed up of the two equities, a weekly yield of de 0.2005% has been recorded in the conditions of an average squared deviation 3.1480% which means that the expected future yield will have the biggest probability to equal 0.2005% ± de 3.1480%, respectively to be comprised in the interval {-2.9475; 3.3485};
- No investor with adversity against the risk would accept anything else but those assets which record the higher yield for an unit of connected risk or, reversely, those assets recording the lowest risk per the forecasted yield unit.

6. The analysis of the yield and risk for a portfolio formed up of three assets issued by companies transacted at the Bucharest Stock Exchange

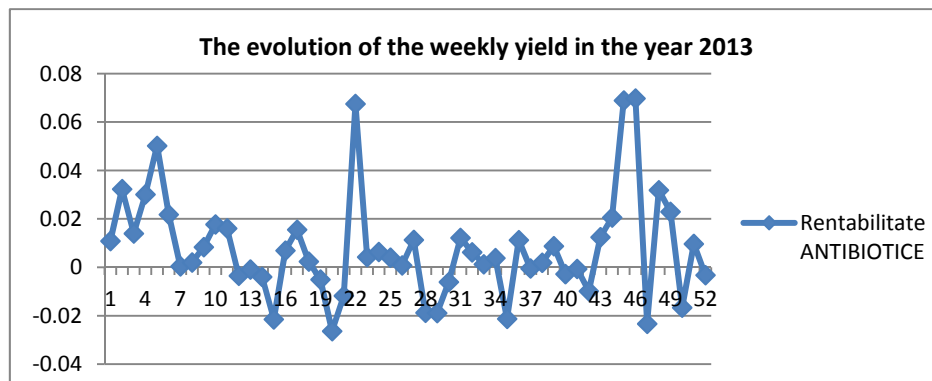
The portfolio previously analyzed, formed up of the two equities (VRANCART SA and MECANICA CEAHLĂU) can be further diversified by including in its structure a third equity “i” (SC ANTIBIOTICE SA). This company has been selected as a result of the economic and financial analysis achieved on its main indicators.

SC ANTIBIOTICE SA is a commercial company located in the district Iași, running its activity in the field of “Manufacturing of basic pharmaceutical products” (Cod CAEN Rev.2 – 2110). SC ANTIBIOTICE SA is holding a social capital amounting 6,133,804 lei, divided in 671,338,040 shares of a nominal value of 0.7000 lei/share.

The shares issued by the considered economic agent have been accepted for transactions in the frame of the Bucharest Stock Exchange on 16.04.1997, getting as symbol of identification the **ATB**. The shares issued by SC ANTIBIOTICE SA are presently transacted in the frame of the stock exchange BVB, on the main market REGS, being include in the category I of financial instruments.

Table 5. The weekly yields of the ANTIBIOTICE S.A. shares recorded in the year 2013

W	Yield ATB	S	Yield ATB	W	Yield ATB	W	Yield ATB
1	0.010900	14	-0.003928	27	0.011361	40	-0.002761
2	0.032326	15	-0.021468	28	-0.018723	41	-0.000639
3	0.014002	16	0.006940	29	-0.018868	42	-0.009802
4	0.030128	17	0.015562	30	-0.006050	43	0.012481
5	0.050207	18	0.002408	31	0.012174	44	0.020616
6	0.021815	19	-0.005023	32	0.006229	45	0.068930
7	0.000454	20	-0.026339	33	0.001281	46	0.069745
8	0.002043	21	-0.011722	34	0.003837	47	-0.023311
9	0.008382	22	0.067518	35	-0.021236	48	0.031885
10	0.017749	23	0.004274	36	0.011282	49	0.022949
11	0.016115	24	0.006383	37	-0.000429	50	-0.016605
12	-0.003476	25	0.004017	38	0.001932	51	0.009700
13	-0.000872	26	0.000842	39	0.008783	52	-0.003202

**Table 6.** The yield and average weekly volatility of the equities included in the portfolio in the year 2013

No.	Company name	Symbol	Yield	Volatility
1	VRANCART SA	VNC	0.001449	0.046684
2	MECANICA CEHLAU	MECF	0.002561	0.039465
3	ANTIBIOTICE SA	ATP	0.007900	0.021442

Based on the methodology previously submitted, we have calculated the yield and the connected risk for the issued shares:

$$E_p = X_{VNC}E_{VNC} + X_{MECF}E_{MECF} + X_{ATB}E_{ATB}$$

Further on, the values of the correlation coefficients between the three financial instruments included in the portfolio structure will be set up:

Table 7. The covariance matrix between the yields of the analysed equities

	ATB	VNC	MECF
ATB	0.000460	0.000056	0.000221
VNC	0.000056	0.002179	0.000114
MECF	0.000221	0.000114	0.002179

$$\sigma_p^2 = X_{VNC}^2 \sigma_{VNC}^2 + X_{MECF}^2 \sigma_{MECF}^2 + X_{ATB}^2 \sigma_{ATB}^2 + 2X_{VNC}X_{MECF}\sigma_{VNC/MECF} + 2X_{VNC}X_{ATB}\sigma_{VNC/ATB} + 2X_{MECF}X_{ATB}\sigma_{MECF/ATB}$$

Here again, the investor has the choice on the weights allocated to each type of equities out of the built up portfolio. The influence of this weight on the evolution of the portfolio yield and risk is submitted in the following table:

Table 8. *The estimation for the weekly yield and risk of the portfolio formed up of 3 equities for the year 2014 (with different weight of participation)*

P	weight VNC	weight MECF	weight ATB	E _P	σ ² _P	σ _P
P1	100%	0%	0%	0.001449	0.002179	0.046684
P2	90%	5%	5%	0.001827	0.001787	0.042270
P3	85%	5%	10%	0.002150	0.001605	0.040057
P4	85%	10%	5%	0.001883	0.001618	0.040220
P5	80%	10%	10%	0.002205	0.001447	0.038034
P6	80%	5%	15%	0.002472	0.001435	0.037881
P7	80%	15%	5%	0.001938	0.001466	0.038290
P8	70%	15%	15%	0.002583	0.001159	0.034043
P9	70%	10%	20%	0.002850	0.001142	0.033799
P10	70%	20%	10%	0.002316	0.001183	0.034400
P11	60%	20%	20%	0.002962	0.000924	0.030393
P12	60%	30%	10%	0.002428	0.000990	0.031469
P13	60%	10%	30%	0.003495	0.000889	0.029811
P14	50%	25%	25%	0.003340	0.000741	0.027222
P15	50%	20%	30%	0.003607	0.000715	0.026733
P16	50%	30%	20%	0.003073	0.000775	0.027844
P17	40%	30%	30%	0.003718	0.000611	0.024715
P18	40%	20%	40%	0.004252	0.000556	0.023583
P19	40%	40%	20%	0.003184	0.000697	0.026402
P20	30%	35%	35%	0.004096	0.000533	0.023090
P21	30%	30%	40%	0.004363	0.000497	0.022292
P22	30%	40%	30%	0.003829	0.000577	0.024025
P23	20%	40%	40%	0.004474	0.000508	0.022537
P24	20%	20%	60%	0.005542	0.000391	0.019766
P25	20%	60%	20%	0.003406	0.000751	0.027407
P26	10%	45%	45%	0.004852	0.000535	0.023134
P27	10%	40%	50%	0.005119	0.000489	0.022117
P28	10%	50%	40%	0.004585	0.000589	0.024272
P29	0%	50%	50%	0.005230	0.000615	0.024799
P30	0%	100%	0%	0.002561	0.001558	0.039465
P31	0%	0%	100%	0.007900	0.000460	0.021442
P32	33%	33%	34%	0.004009	0.000547	0.023390
P33	33%	34%	33%	0.003956	0.000555	0.023555
P34	34%	33%	33%	0.003945	0.000558	0.023620

Including in the portfolio structure the third equity (ATB) led to an increase of the portfolio yield, simultaneously with a diminishing of the risk connected to this investment.

Another variant for diversifying the financial instruments portfolio is given by the purchase of government bonds. These provide the big advantage that, contrary to the equities issued by economic entities, they are not bearing risks. In order to analyze this type of portfolio, we have included government bonds with a weekly yield of 0.1397%.

Table 9. *The yield of the equities included in the portfolio*

VNC	0.001449
MECF	0.002561
GB	0.001397

Also, in this case as well, we have simulated more variants of allocation for the equities weights of participation to the portfolio construction, the results being submitted in the following table:

Table 10. *The estimation for the weekly yield and risk of the portfolio formed up of two equities and one government bond for the year 2014 (with different weight of participation)*

P	Weight VNC	Weight MECF	Weight TS	E_P	σ^2_P	σ_P
P1	100%	0%	0%	0.001449	0.002179	0.046684
P2	90%	5%	5%	0.001502	0.001779	0.042184
P3	85%	5%	10%	0.001499	0.001588	0.039852
P4	85%	10%	5%	0.001558	0.001610	0.040119
P5	80%	10%	10%	0.001555	0.001429	0.037796
P6	80%	5%	15%	0.001497	0.001408	0.037521
P7	80%	15%	5%	0.001613	0.001457	0.038172
P8	70%	15%	15%	0.001608	0.001127	0.033568
P9	70%	10%	20%	0.001550	0.001099	0.033157
P10	70%	20%	10%	0.001666	0.001162	0.034088
P11	60%	20%	20%	0.001661	0.000874	0.029566
P12	60%	30%	10%	0.001777	0.000966	0.031075
P13	60%	10%	30%	0.001545	0.000814	0.028527
P14	50%	25%	25%	0.001714	0.000671	0.025896
P15	50%	20%	30%	0.001656	0.000630	0.025097
P16	50%	30%	20%	0.001772	0.000719	0.026816
P17	40%	30%	30%	0.001767	0.000516	0.022719
P18	40%	20%	40%	0.001651	0.000429	0.020716
P19	40%	40%	20%	0.001883	0.000634	0.025184
P20	30%	35%	35%	0.001820	0.000411	0.020268
P21	30%	30%	40%	0.001762	0.000357	0.018888
P22	30%	40%	30%	0.001878	0.000473	0.021739
P23	20%	40%	40%	0.001873	0.000355	0.018829
P24	20%	20%	60%	0.001640	0.000159	0.012592
P25	20%	60%	20%	0.002106	0.000675	0.025983
P26	10%	45%	45%	0.001926	0.000347	0.018639
P27	10%	40%	50%	0.001868	0.000280	0.016736
P28	10%	50%	40%	0.001984	0.000423	0.020555
P29	0%	50%	50%	0.001979	0.000389	0.019733
P30	0%	100%	0%	0.002561	0.001558	0.039465
P31	0%	0%	100%	0.001397	0.000000	0.000000
P32	33%	33%	34%	0.001798	0.000432	0.020777
P33	33%	34%	33%	0.001810	0.000443	0.021044
P34	34%	33%	33%	0.001799	0.000447	0.021143

In situations of a generalized economic and financial crisis it is advisable that the available capitals are invested in government bonds, these being financial instruments which do not involve risks and which might provide even higher yields as comparatively with the equities issued by the economic agents being transacted through the institutions of the capital market.

7. Conclusions

The portfolio diversification by including in its structure more equities is generating an increase of its yield simultaneously with the diminishing of the corresponding risk.

According to the Markowitz model, the choice of the portfolio is resuming in fact to the analysis of two specific indicators respectively the expected gain rate of the portfolio and its average squared deviation as measure of the risk

In the frame of this research, we have analyzed the model in the particular forms represented by the portfolios made up of two, respectively three equities. As result of the analysis we stated out that the portfolios yield is dependent on the estimated yields of each equity included in the portfolio structure, as well as on the weight they are holding in this structure. In the case of the portfolio risk, we have noticed that its level is influenced by: the individual risk of each equity included in the portfolio, the weight of each equity in the portfolio structure, the covariance between the equities yields, considered two by two. The Markowitz model allows the setting up of an optimum portfolio, respectively of that portfolio which provided the best possible profitableness for a certain level of the risk or which presents the lowest level of the possible risk for a certain rate of profitableness.

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Heterogeneous funding patterns and income structure of Croatian banks: panel data evidence

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Abstract. *Dependence of the bank income statement indicators on its capital structure is in the focus of this paper. The dynamic panel data analysis encompasses 28 commercial banks from the Republic of Croatia in a pre-recession period i.e. 2003-2008 with a goal of estimating whether heterogeneity of capital structures among banks in Croatia explains differences seen in their profitability. In comparison to the existing empirical background on the capital structure and bank financial performance nexus, the novelty of this research is in the operating margin which is being defined as a dependent variable, among the other usually employed proxies of the bank profitability.*

Keywords: bank funding, liability management, operating margin, commercial banks, Croatia.

JEL Classification: G21; G28; P34.

REL Classification: 7G.

1. Introduction

A numerous empirical researches have been performed lately in order to confirm a general model on determinants of bank profitability, in which bank profitability is driven by the bank internal characteristics, macroeconomic surrounding as well as some general banking sector specificities. However, the bank liability management has rarely been in the focus when researching a bank performance due to a several reasons. First, active liability management strategies by commercial banks have been adopted since the development of the bank debt securities markets in the 1960s and 1970s at the most developed banking sectors world over i.e. banking sectors of the Anglo-Saxon countries. Second, the bank capital structure is highly regulated due to an existence of explicit deposit insurance schemes since the Great Depression and an appearance of the risk weighted capital requirements in the 1980s under the Basel Accord. Altogether, due to these exogenous restrictions, for a long time it was perceived that bank funding patterns are given in advance and pretty uninventive. Thus, the bank capital structure has not been widely perceived as an origin of differences in its profitability.

The financial liberalization, possibilities of financing on the international money and capital markets, a more competitive markets of banking products, an increased volume of an interest-sensitive funding sources and a reduction of profits in the business of banking (Rose, 2003: pp. 17-21) i.e. a contemporary trends in the banking industry, shed a light on the cost of capital as a mean for altering the bank cost and profit efficiency. In addition, a few empirical researches demonstrated relevance of the capital structure choice for the bank profitability (Berger, 1994; Navapan and Tripe, 2003; Hutchison and Cox, 2006; Berger and Bonaccorsi di Patti, 2006; Ngo, 2006; Pratomo and Ismail, 2006; Kyereboah – Coleman, 2007; Naceur and Kandil, 2009; Berger and Bouwman, 2009). A certain empirical evidence for the Croatian banking sector on the research issue has been given in Kundid (2012). However, the aforementioned analysis for the Croatia used only the return on assets as a proxy for the bank profitability. The intention of this paper is to go a step further by employing the return on equity and the operating margin as bank profitability indicators. Altogether, the paper contributes to a scarce empirical work on profitability implications of the bank liability management and enriches literature on determinants of bank profitability.

The rest of the paper is organized as follows: the second section reviews both, theoretical and empirical background of the research problem, which is found in the transfer of the cost of capital to the credit price and the credit growth, as well as in the agency cost hypothesis. The methodological aspects and the research

results of the empirical analysis for Croatia are given and discussed in the fourth section. The last section summarizes the key findings.

2. Theoretical and empirical background

2.1. The cost of capital in a model of the banking firm

One of the basic financial management principles is that the cost of capital needs to be estimated and incorporated in investment decision – making and asset allocation. Thus, investment decisions or cost-benefit analysis of the capital projects, following the profitability criteria, usually follow the next equation (Vidučić, 2011: p. 273):

$$NPV_o = \sum_{n=1}^N \frac{NCF_n}{(1+k)^n} - I_0 \quad (1)$$

where:

n – the period of return,

NPV_o – net present value,

NCF_n – expected net cash flow in the period n ,

k – the cost of capital,

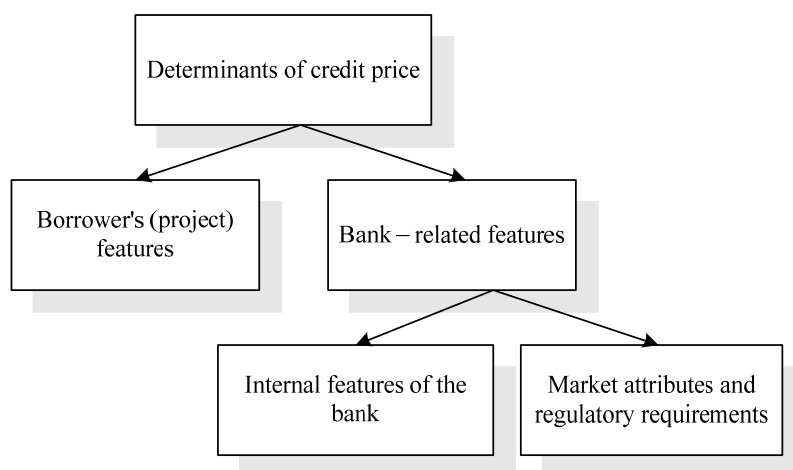
I_0 – initial investment expenditure.

The same holds for the commercial bank financial management. The cost of capital needs to be incorporated in the required rate of return on placements in order to attain and sustain profitability, during the continuous process of creation and usage of capital. Commercial banks take into consideration the cost of its capital in loan granting i.e. the cost of capital is an important feature of a loan pricing and an overall credit risk management process. The cost-plus loan pricing method might serve as an example of the cost of capital relevance due to the loan interest rate being a sum of the following four components: marginal cost of raising loanable funds to lend to borrower, nonfunds operating costs, estimated margin to compensate for default risk and desired profit margin or required rate of return on equity funds (Rose and Hudgins, 2013: p. 577).

However, other determinants of the credit price should be also borne in mind. Thus, general framework of credit price is presented with Figure 1. Borrower's and/or project features are quantified with an estimated margin to compensate for default risk, while nonfund operating costs and marginal funding costs depend upon internal features of the bank. Regulatory requirements might impact funding costs, operating costs and desired profit margin in dependence with an adjustment modes of banks to an existing or new regulatory burden. Further, banking sector

(market attributes) and the position of one bank in a sector, especially whether the bank is a price taker or price setter, correspond to a desired profit margin and, moreover drive bank cost and profit efficiency. Obviously there exist multiple direct and indirect relations between various loan interest rate components and bank and the banking sector characteristics. Thus, the structure of the loan interest rate can be modified with interest rate remaining on the same level what means that a commercial bank internalizes some bank-related features of the credit price. Contrary to the aforementioned, bank clients will be affected by the changes in the loan interest rate, as well as, if an overall economy passes throughout considerable changes. Apparently, each determinant of the credit price from the presented model depends upon a general macroeconomic environment – a systemic component which is a non-diversifiable.

Figure 1. *General framework of credit price*



Source: Author's presentation.

Further, the level of financial liberalisation has sizeable effects to an overall economy, as well as on the commercial banks efficiency due to an intensified competition, broader range of permitted activities, liberalized capital flows and reduced regulatory requirements. A scarcity of available funding sources due to limited economy potentials, disposal of money and capital funds inside banking and overall financial-service industry and diverting towards direct financial markets amplified a necessity of searching for the more efficient bank capital structure. On the other hand, increased competition reduces profitability levels and meltdowns the potential of individual set up of the desired profit margin. In addition, Rose and Hudgins (2013: p. 577) conclude that “deregulated competition has narrowed profit margins many lenders are able to earn, making correct pricing of loans even more imperative today than in the past”. The most of banks are price takers and thus are in a poor position to increase the desired profit margin. On the

other hand, borrower's and project characteristics are out of bank scope and are considered as exogenous or uncontrollable variable in the presented model. Non-interest expenses might be reduced if the better cost management and accounting techniques are adopted. Nevertheless, interest costs remain the most important deductible item of the income statement. This is why the capital structure issue has been altered since the financial liberalisation took place. Monitoring the level of the cost of capital i.e. acquiring and managing a capital in a manner which minimizes the costs and maintains banks credit capacity is a foundation upon which decisions on financial placements are carried out with an obvious impact on the bank profitability.

A contribution of the market trends in the passive interest rates and capital structure to the net income volume is visible from the following equation (Koch and MacDonald, 2000: p. 111):

$$NI = \sum_{i=1}^n r_i A_i - \sum_{j=1}^m c_j L_j + (OI - OE) - PL + SG - T \quad (2)$$

where:

NI – net income,

r_i – average pre-tax yield on the i^{th} asset,

c_j – average interest cost of the j^{th} liability,

A_i – volume of the i^{th} asset,

L_j – volume of the j^{th} liability,

OI – noninterest income,

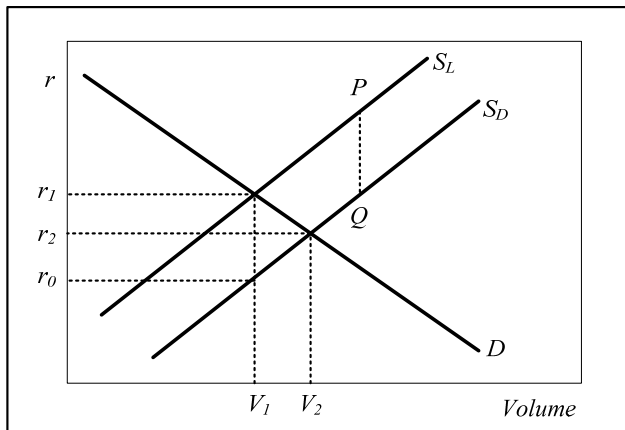
OE – noninterest expense or overhead expense,

PL – provisions for loan losses,

SG – securities gains (losses),

T – taxes.

In line with an equation, it seems that a bank should increase the level of assets in order to boost its net income ceteris paribus. On the other hand, capital requirements limit growth of assets potentials. Thus, the value of the interest income could be increased if more loans are granted at higher interest rates, what corresponds to the capital market line conclusion on the linear relationship between risk and profit as well as to the banking firm model (Figure 2).

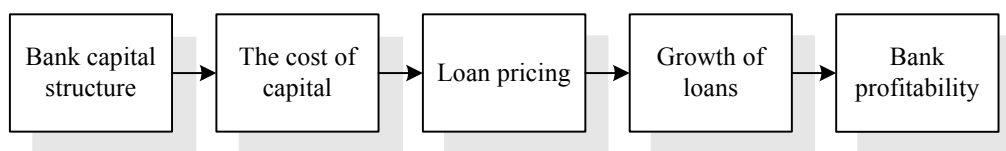
Figure 2. *The banking firm model*

According to a banking firm model (Llewellyn, 1999: pp. 13-14), the volume of deposits (S_D) and loans supply (S_L) is proportional to the interest rate level (r). Thus, higher the interest rate, higher the volume of deposits and volume of loans. However, due to reserve requirements (whether obligatory or voluntary reserves), bank grants lower amounts of loans in comparison to received deposits. In addition, it “sells” loans at the interest rate which is for the difference between P and Q interest rate points higher than the interest rate on deposits. PQ serves to cover bank non-deposit costs, the cost of capital, the risk premium charged on loans, tax and net income. The volume of loan demand (D) is increasing with an interest rate decrease. Although, the banking firm model is widely accepted description of the business of banking logic, a several model presumptions are considered to be at least disputable if not wrong. First, there exists no clear empirical evidence that the interest rate level will be the solely driver of the volume of deposits (Pojatina, 2000: pp. 8-16), even in the case of the deposit insurance system existence. Regulatory interventions, whether discretionary on non-discretionary (likewise regulation Q) should reduce bank/s policy of aggressive deposit taking or attracting. On the other hand, cross-selling appearance is decreasing opportunities for the deposits transition from banks with lower to banks with higher deposit interest rates due to transaction costs. Second, the model assumes only the demand-driven credit rationing and ignores the supply-driven credit rationing.

Namely, in the traditional banking intermediation, the bank growth and consequently a bank profitability is highly driven by the prudent credit growth. According to the credit rationing theory (Stiglitz and Weiss, 1981) credit price is inversely connected with the probability of credit payment and contrary to the general market mechanism in which supply is linearly connected with a price, on the bank loan market continuously rising supply loan curve is an irrational

assumption due to an increased probability of the bad debt loans. In short, increase of the financing costs could become an originator of a default risk. This is relevant for the both, the borrower of the bank and the bank itself. With an increase of the bank financing costs, credit price for the bank clients increases what decreases bank profitability in a time lag. Slower credit growth caused by a decrease in both, loan supply and demand on one hand, or rising non-performing loans induced by the higher risk taking behaviour on the other hand, impair bank profitability what corresponds to the previous equation. According to the aforementioned theoretical background, the overall model which summarizes the impact of the bank capital structure on its profitability is presented with the Figure 3.

Figure 3. *The impact of the bank capital structure on its profitability*



Source: Author's presentation.

However, availability of a certain funding sources and the choice of the bank capital structure affect not only the credit risk of the bank, but market risks as well, likewise liquidity risk (e.g. funding liquidity risk), interest rate risk (e.g. refinancing costs) and currency risk. Thus, multiple effects of the bank capital structure on its profitability occur.

2.2. Agency cost hypothesis in the banking industry: a review of the empirical work

In addition to an explanations of the capital structure relevance for the bank profitability, derived from the financial management literature and found in commercial banks risk management practice, theoretical explanations on the capital structure (i)relevance for the company value are controversial and ununiformed. However, a discussion on the capital structure theory and its applicability to the banking industry is beyond the scope of this work and is available in e.g. Orgler and Taggart (1981), Marcus (1983) and Miller (1995). Nevertheless, a relation between debt and equity financing in the profitability context, usually comes down to an empirical examination of the agency cost hypothesis which points out that the financial leverage is a mean for the disciplined and efficient managers i.e. there exists proportional linkage between financial leverage and profitability due to reduced potentials for the moral hazard behaviour of bank managers. This is why an empirical background refers to the latter hypothesis.

The key methodological features and conclusions of the reviewed empirical researches can be summarized in the following points:

- *Data sample unit.* The most of researches refer to commercial banks, and only one research relates to microfinance institutions (Kyereboah – Coleman, 2007).
- *Data sample spatial attributes.* Banking sector of the USA is the most frequently explored one (Berger, 1994; Hutchison and Cox, 2006; Berger and Bonaccorsi di Patti, 2006; Ngo, 2006; Berger and Bouwman, 2009), while researches for the developing countries are deficient (Pratomo and Ismail, 2006; Kyereboah – Coleman, 2007; Naceur and Kandil, 2009; Kundi, 2012). With reference to the spatial component the sample size varies: from the samples with only 15 banks (Navapan and Tripe, 2003; Pratomo and Ismail, 2006) to the samples with a more than 18 000 banks (Berger and Bouwman, 2009). Among reviewed papers, cross – country researches are extremely rare (Navapan and Tripe, 2003).
- *Data sample time period attributes.* Berger and Bonaccorsi di Patti (2006) and Kundi (2012) analyse the shortest data sample period – 6 years. The longest time period is being analysed by Naceur and Kandil (2009) – 16 years and by Berger and Bouwman (2009) which analyse the data from the period of 25 years. The data since 2005 has been included only in Berger and Bouwman (2009) and Kundi (2012), and both researches end data with 2008.
- *Variables selection.* The most of the researches aimed to examine the relation between capital structure and return on equity (Berger, 1994; Navapan and Tripe, 2003; Hutchison and Cox, 2006; Pratomo and Ismail, 2006; Berger and Bouwman, 2009). Capital structure has usually been proxy with equity to asset ratio or *vice versa*, financial leverage ratio. A step further in variables selection is visible from the Ngo (2006) who uses capital adequacy ratio and Kundi (2012) who beside capital adequacy ratio takes into consideration various bank capital structure indicators. Profit efficiency function as a profitability proxy is found in Berger and Bonaccorsi di Patti (2006), Kyereboah – Coleman (2007) takes into consideration financial performance by commercial banks in the broadest sense by using non-performing loans in relation to total loans as well as an indicator of an annual percentage change in the number of bank clients, while an impact of the capital structure on the bank net interest margin is found in Naceur and Kandil (2009) and on the return on assets in both, Naceur and Kandil (2009) and Kundi (2012).
- *Bank capital structure and profitability interdependence.* Mutually positive equity and return on equity relation is confirmed only by Berger (1994). Agency cost hypothesis i.e. negative impact of higher equity to asset ratio on the bank profitability is given in Navapan and Tripe (2003) and Hutchison and Cox (2006) and *vice versa* the positive impact of higher indebtedness on the business profitability is found in Berger and Bonaccorsi di Patti (2006),

Pratomo and Ismail (2006) and Kyereboah – Coleman (2007). Poor effect of profitability on the bank capitalisation is recorded by Berger and Bonaccorsi di Patti (2006), while Ngo (2006) completely rejects hypothesis on the mutual linkage between capital and profitability and thus affirms the capital neutrality hypothesis. Berger and Bouwman (2009) conclude that a higher level of equity could be beneficial both to small and large banks in the financial crisis and can positively reflect on the return on equity.

- *Capital regulation impact on the bank profitability.* Negative effects are recorded by Kundid (2012), and positive ones by Naceur and Kandil (2009). Ngo (2006) argues conclusion on the zero net effect from the capital adequacy introduction with positive effects from the equity increase and negative effects from the cost of capital increase being mutually annulled.
- *Comparability of the banking sector results for developed and developing economies.* There exists no clear difference in the research results which could be attributed to the level of economic development.

To sum up, the theoretical background indicates that the research problem is relevant and actual, while according to the reviewed empirical work, further empirical evidence which takes into account various profitability indicators is suggested. Altogether, a research hypothesis H_1 is set up:

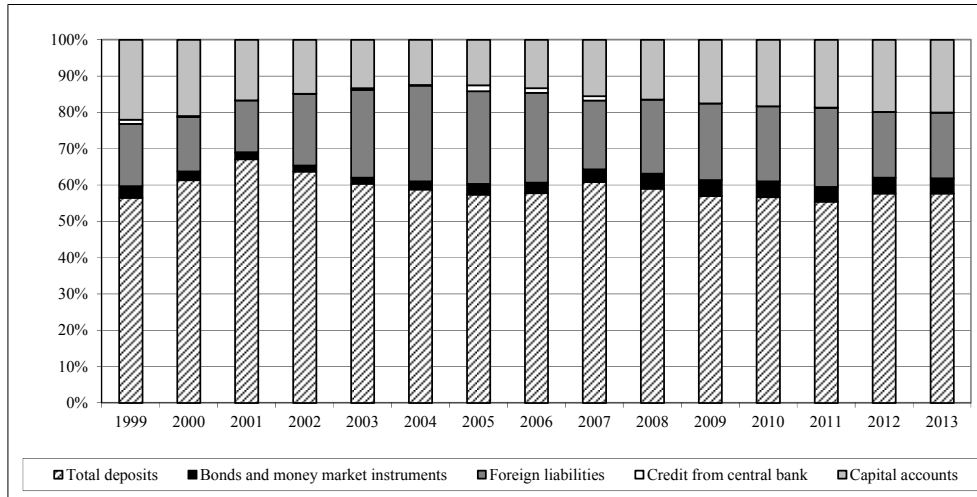
H_1 : Bank liabilities management adds to its overall profitability proxy with a return on equity and operating margin.

3. Capital structure and bank earnings in Croatia

3.1. Key facts and figures

The capital structure of Croatian banks has not been changing significantly in the last decade, at least, not at the aggregate – the banking sector level (Figure 4). Banks in the Republic of Croatia have been dominantly financed with deposits which on average made approximately 60% of the overall funding sources during the observed period (1999-2013). However, the modest absolute volume of the banking sector assets in 1999 which amounted 93.3 billion HRK (Croatian kuna) should be noted. Until 2013, the banking sector asset has been continuously increasing up to 408.4 billion HRK, what means that the volume of deposit financing has also enlarged (Figure 5). Among all deposit types, foreign currency deposits achieved the largest growth.

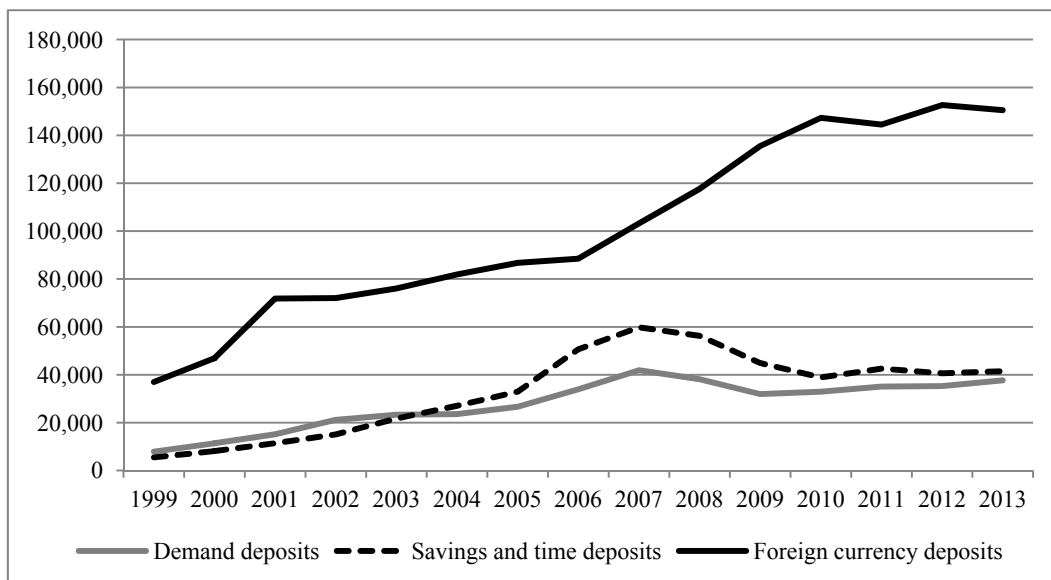
Figure 4. Capital structure of commercial banks in the Republic of Croatia, 1999 – Q2/2013, in percentage



Source: Author's calculation according to the Croatian National Bank (CNB) data.

Foreign liabilities were the second most important funding source in the observed period with 20.4% participation in the capital and liabilities, on average. Capital accounts were on the average level of 16.8%. Bonds and money market instrument were on average 3.2% and credit from central bank was 0.4%.

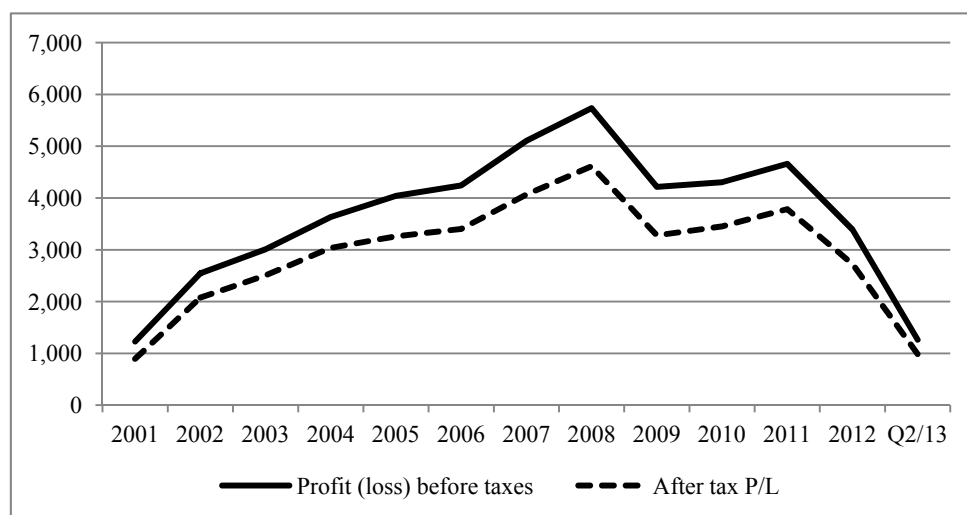
Figure 5. Commercial banks deposits by deposit types in the Republic of Croatia, 1999 – Q2/2013, in millions HRK



Source: Author's calculation according to the CNB data.

In the period from 2001-2008 the amount of the overall banking sector profits had been on continuous increase (Figure 6) and in 2008 amounted 5.7 billion HRK before taxes and 4.6 billion HRK after taxes. The influence of the financial and overall economic crisis in Croatia is the best seen in the fact that currently (mid-year results for 2013) profit and loss before taxes is 1.2 billion HRK or 0.9 billion HRK after taxes. The latter means that after a decade of growth and profitability the banking sector has returned to a level from 2001 when privatization and reconstruction of the banking sector started taking place.

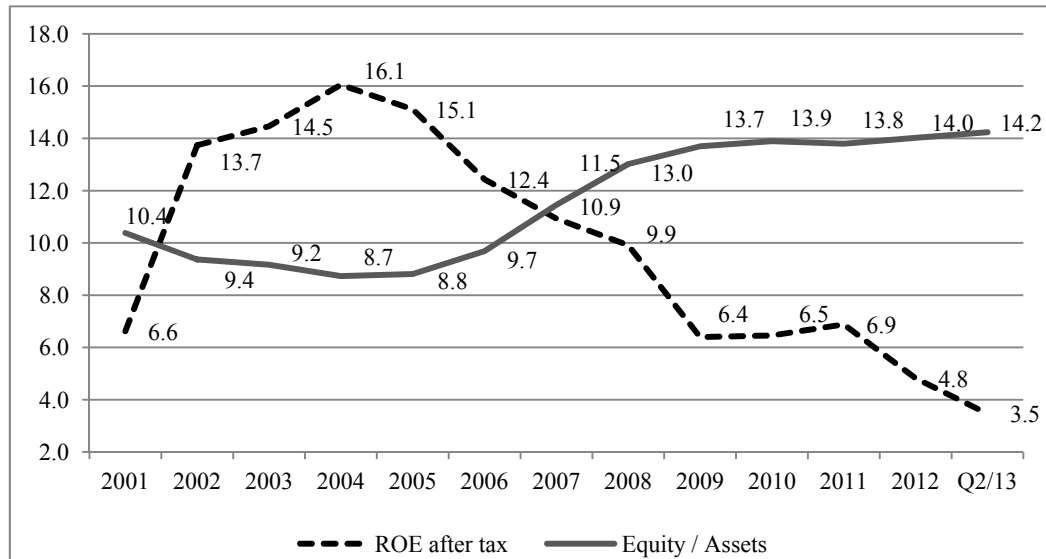
Figure 6. *The commercial banks earnings in the Republic of Croatia, 2001 – Q2/2013, in millions HRK*



Source: Author's calculation according to the CNB data.

Figure 7 shows that the average return on equity was the highest in 2004 (16.1%), when equity to assets ratio was on the lowest level (8.7%). Since then financial leverage is on the continuous decrease as well as return on equity of the Croatian banking sector.

Figure 7. The commercial banks return on equity and equity to assets ratios in the Republic of Croatia, 2001 – Q2/2013, in percentage



Source: Author's calculation according to the CNB data.

3.2. Testing the impact of the capital structure on bank profitability

3.2.1. Data, methodology and model development

The empirical research – the dynamic panel analysis (by the Arellano – Bond estimator), to be more precise, has been performed on a data sample of 28 commercial banks in the Republic of Croatia in the period 2003-2008. The list of banks which were encompassed by the analysis is given in the appendix. In every observed year, according to the asset size, a more than 95% of the overall Croatian banking sector has been covered by the analysis. Dynamic panel models have been developed with a goal of establishing relations and impact between the bank funding sources composition and its profitability, proxy with a return on equity (ROE) and an operating margin (OPM). Return on equity is normally used as an indicator of bank profitability, whilst the usage of operating margin could be perceived as a novelty of this study. In addition, operating margin is perceived to be the most stable component of bank earnings or so called structural determinant of bank profitability according to Couto (2002) which, thus, can be used as an estimator of the future trends in the bank profitability. Research results were obtained throughout STATA 11 and EViews 7. Correlation between aforementioned dependent variables is found to be moderate (0.50972). Thus, both variables have been used interchangeably as profit efficiency indicators. Developed models are specified as follows:

$$\begin{aligned}
ROE_{it} = & \mu + \gamma ROE_{i,t-1} + \beta_1 GROWE_{it1} + \beta_2 INT_L_{it2} + \beta_3 INT_D_{it3} + \beta_4 MOR_{it4} + \\
& + \beta_5 INSD_A_{it5} + \beta_6 GROWRC_{it6} + \beta_7 GROWA_{it7} + \beta_8 GROWD_{it8} + \beta_9 CA_{it9} + \\
& + \beta_{10} SHARE_{it10} + \beta_{11} E_A_{it11} + \beta_{12} RECD_A_{it12} + \beta_{13} RECL_A_{it13} + \alpha_i + \varepsilon_{it}; \\
& i = 1, \dots, N, t = 1, \dots, T
\end{aligned} \tag{3}$$

$$\begin{aligned}
OPM_{it} = & \mu + \gamma OPM_{i,t-1} + \beta_1 GROWE_{it1} + \beta_2 INT_L_{it2} + \beta_3 INT_D_{it3} + \beta_4 MOR_{it4} + \\
& + \beta_5 INSD_A_{it5} + \beta_6 GROWRC_{it6} + \beta_7 GROWA_{it7} + \beta_8 GROWD_{it8} + \beta_9 CA_{it9} + \\
& + \beta_{10} SHARE_{it10} + \beta_{11} E_A_{it11} + \beta_{12} RECD_A_{it12} + \beta_{13} RECL_A_{it13} + \alpha_i + \varepsilon_{it}; \\
& i = 1, \dots, N, t = 1, \dots, T
\end{aligned} \tag{4}$$

where: i denotes an individual and t denotes time, μ is an intercept, γ is a parameter of the lagged dependent variable, $\beta_1, \beta_2, \dots, \beta_K$ are the parameters of the exogenous variables, α_i is an individual-specific effect and ε_{it} the error terms.

Table 1. List of variables used in regression models

Group of indicators	Explanation	Variable
Profitability indicators	Return on equity	ROE
	Operating margin (before overheads)	OPM
Growth indicators	Growth of assets	GROWA
	Growth of equity	GROWE
	Growth of deposits	GROWD
	Growth of regulatory capital	GROWRC
Capital structure indicators	Equity / Assets	E_A
	Received loans / Assets	RECL_A
	Received deposits / Assets	RECD_A
	Insured deposits / Assets	INSD_A
Interest costs indicators	Interest costs on received loans / Received loans	INT_L
	Interest costs on received deposits / Received deposits	INT_D
Regulatory indebtedness ratio	Capital adequacy ratio	CA
Bank size and market share indicator	Market share of bank assets	SHARE
Dummy variable	Marginal obligatory reserve (1 for 2005, 2006 and 2007; 0 for 2003, 2004 and 2008)	MOR

Source: Author's presentation.

3.2.2. Research results and model quality

Panel data estimations of developed models are given in the Table 2.

The growth of equity (GROWE), both the interest cost indicators (INT_L and INT_D) and the growth of deposits (GROWD) have a negative sign in the case of return on equity being set as a dependent variable. The indicator of interest costs on the received loans (INT_L) has the highest negative impact on the return on equity. The growth of regulatory capital (GROWRC), growth of assets

(GROWA), equity to assets (E_A) ratio, received deposits in total assets (RECD_A) and received loans in total assets (RECL_A) are in a positive relation with a return on equity. Indicators of received deposits and received loans as well as equity to assets ratio have the highest impact on return on equity. All aforementioned dependent variables are statistically significant, while the rest of the model variables are statistically insignificant.

Panel data estimation for the model with an operating margin pointed out a few statistically significant variables, out of which only the capital adequacy ratio (CA) has a negative sign. A lagged dependent variable ($OPM_{i,t-1}$), interest costs on the received loans (INT_L), dummy variable for the marginal obligatory reserve (MOR) and equity to assets (E_A) indicator are in a positive relation with an operating margin.

Table 2. Panel data estimation

Explanatory variables	Dependent variable (ROE)	Dependent variable (OPM)
$ROE_{i,t-1}$	-0,1094765 (0,1979566)	-
$OPM_{i,t-1}$	-	0,3635791** (0,1785584)
$GROW_{i,t}$	-0,1249235*** (0,0354799)	-0,0085164 (0,0058042)
$INT_L_{i,t}$	-3,755649*** (1,487077)	0,5715978* (0,2970123)
$INT_D_{i,t}$	-0,4421207** (0,2018459)	-0,0073868 (0,0239496)
MOR_t	1,079312 (1,170052)	0,2628979* (0,1439724)
$INSD_A_{i,t}$	0,0587783 (0,0675773)	-0,0103749 (0,0106649)
$GROWRC_{i,t}$	0,095623** (0,0437231)	0,004704 (0,0066227)
$GROWA_{i,t}$	0,2495951** (0,1284364)	0,0087047 (0,0152616)
$GROWD_{i,t}$	-0,1246445* (0,0763249)	-0,0001055 (0,0099774)
$CA_{i,t}$	-0,0614427 (0,3118851)	-0,0963696** (0,0465865)
$SHARE_{i,t}$	1,016102 (1,987709)	-0,2141808 (0,2968431)
$E_A_{i,t}$	2,200452*** (0,5997935)	0,2531556*** (0,101158)
$RECD_A_{i,t}$	1,138344*** (0,3866984)	0,0487386 (0,0883488)
$RECL_A_{i,t}$	0,8371724*** (0,3222816)	0,0351776 (0,0770462)
α	-1,034738 (0,893666)	-0,4286095*** (0,1047991)
Number of observations	108	108
Number of groups	28	28

Explanatory variables	Dependent variable (ROE)	Dependent variable (OPM)
Sargan test (p-value)	0,0727	0,885
m_1 test (p-value)	0,94	0,0973*
m_2 test (p-value)	0,2189	0,8767

*** Statistically significant at 1% level, ** statistically significant at 5% level, * statistically significant at 10% level.

Source: Author's calculation.

Sargan's test as well as autocorrelation test (the second order i.e. m_2 test) prove reliability and quality of both models as Sargan test exceeds 0.05 and the second-order autocorrelation test exceeds 0.10. The first-order autocorrelation (i.e. m_1 test) can be ignored as it is often being expected.

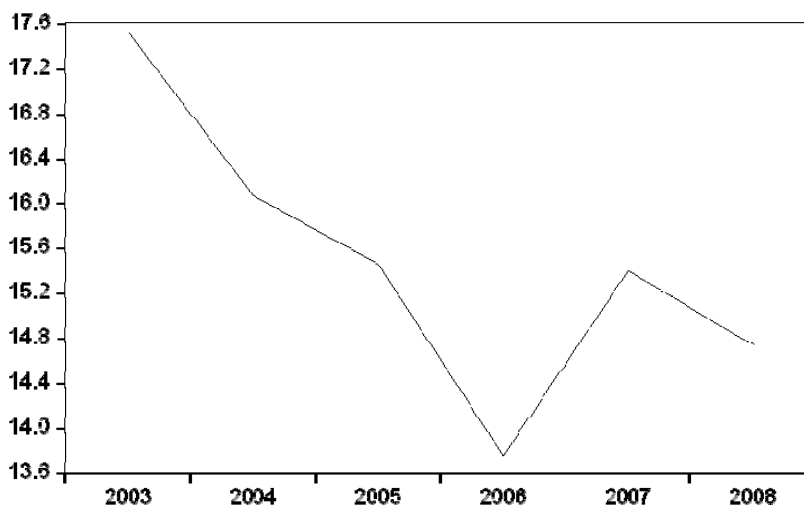
3.2.3. Discussion on the estimation results

Return on equity seems to be driven by a several growth indicators. A negative impact of equity growth (GROWE) is expected as it means deleveraging and thus higher financing costs. However, growth of deposits (GROWD) also decreases return on equity in estimated model what could be explained with an argument of a more expensive deposit attracting for commercial banks in a more competitive financial-service industry and an insufficient saving capacity of the national economic subjects. Further, marginal obligatory reserve, which was put into effect with a goal of reducing the interbank deposits from the Croatian parent banks from other European Union countries, additionally increased the deposit financing costs. Growth of regulatory capital (GROWRC) increases return on equity as well as growth of assets (GROWA). The aforementioned implies that commercial banks assets growth is supported by the required regulatory capital growth which is normally higher when riskier, and potentially more profitable, activities are being performed. Equity to assets (E_A) indicator positively impacts return on equity as higher equity financing reduces bankruptcy costs and refinancing risks i.e. funding liquidity risk and interest rate risk. Further, the cost of equity financing is almost equal to zero (if transaction or issuing costs are being ignored) when accounting profitability measures are used as proxies. In addition, a positive effect of using the financial leverage is proven with received deposits to assets (RECD_A) and received loans (RECL_A) to assets indicators. Both interest cost indicators are in a negative relation with return on equity what is expected due to interest costs being a deductive item in the profit and loss account. However, the interest costs on received loans (INT_L) impacts return on equity more intensively than the interest costs on received deposits (INT_D), what means that financing from the so called purchased funds i.e. loans in this case can be a source of comparative advantage/disadvantage as lower these costs are, higher the profitability indicator and vice versa. The outflows or sudden stops in the

wholesale financing might trigger crisis events likewise evidenced by Brealey (1999) for the Asian financial crisis and Jeong and Jung (2013) for Korea. In addition, Winkler (2009), and Ercegovac and Kundid (2011) pointed out a threat of a similar episodes in the South-eastern Europe and Croatia, respectively.

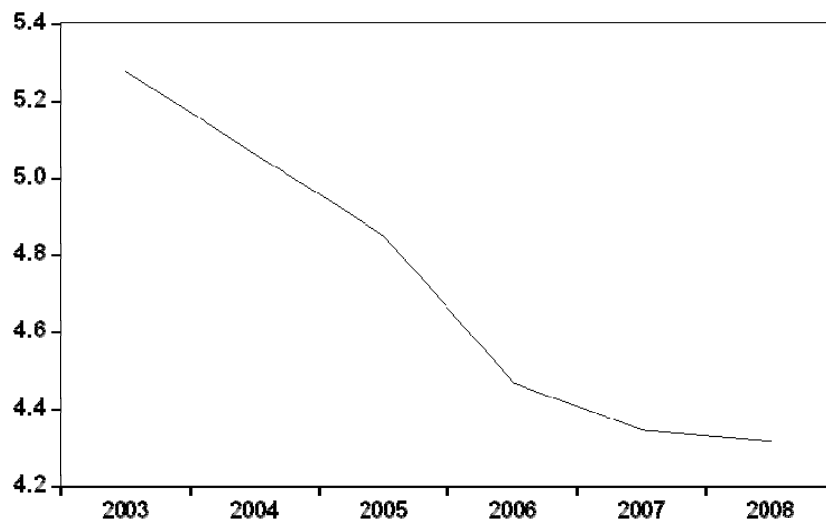
Operating margin is positively determined with operating margin in the previous year(s) what is in line with the phenomenon of persistence in profitability, contrary to results for the return on equity. Coefficient value of slightly above 0.35 indicates that profitability persistence exists at a moderate level and that the Croatian banking sector seems to be fairly competitive (if the value is closer to 1 the banking sector is less competitive). With reference to this, market share is not statistically significant. Explanation for the positive impact of equity to assets ratio to bank profitability is already explained in the aforementioned text. Marginal obligatory reserve (MOR) increased bank operating margin due to substitution of commercial banks external debt with an equity financing. Finally, capital adequacy (CA) ratio negatively affects operating margin, what means lower the capital adequacy ratio, higher the operating margin (obviously due to movements at the end of an observed period i.e. from 2006-2008). Figures 8 and 9 serve as an insight into capital adequacy and operating margin trends.

Figure 8. *Capital adequacy – mean value for the data sample*



Source: Author's calculation.

A subsample analysis shows that after 2005 large banks increased their capital adequacy until 2007, while medium-sized and small banks were since 2003 continuously decreasing this ratio.

Figure 9. *Operating margin – mean value for the data sample*

Source: Author's calculation.

Finally, interest cost indicator (INT_L) has an unexpected positive impact on the operating margin and the argument that could be used is that the marginal obligatory reserve penalized deposit/loan financing from the abroad and thus increased its costs and reduced its volume. Namely, the most of the deposit/loan funding in the Croatian banking sector was originated by the foreign owned banks throughout interbank liabilities. The biggest banks alleviated these negative effects by substituting the debt with equity, by retaining earnings as well as by increasing the credit price, which altogether led to higher operating margin level. Thus, the causes of this positive influence are multiple. To sum up, operating margin is driven by the inherited financial results, higher equity financing and better transfer of the bank cost of capital price on credit price (proxy with an interest cost indicator). At last, marginal obligatory reserve is found to be a correct measure of reducing the external debt created by commercial banks and appropriate measure of ensuring the banking sector stability.

4. Conclusion

Deregulation has altered the bank capital structure importance. Namely, liability management of commercial banks was until recently perceived to be driven solely by the depositors confidence, their objective needs and saving capacity and habits or on the other hand regulatory restrictions related e.g. to the financial leverage usage. Thus, researches on the capital structure as a source of the bank

comparative advantages/profitability were deficient. This paper aimed to go a further from the previous papers and instead of using return on assets as a profitability indicator, it uses both, return on equity and operating margin as dependent variables. The most of the research results could be explained with beneficial effects of using the financial leverage i.e. bank managers achieving better overall results when the pressure of returning debt is higher. However, the agency cost hypothesis is only one possible explanation in the capital structure theory. In addition, the level of competition, the level of financial liberalization, the bank ownership and the observed time period with reference to trend in the overall economy i.e. recession or expansion, significantly impact funding opportunities, the cost of capital and finally, allocative efficiency. Likewise, regulatory restrictions in a form of the marginal obligatory reserve in the Republic of Croatia increased operating margin due to loan funding substitution with a cost-free equity financing, at least in the accounting sense. This is why, further researches which might build and estimate models on some of the aforementioned direct and indirect relations between bank or the banking sector funding patterns and consequently its profitability are highly welcomed. At last, presented models could be estimated using the data samples from the banking sectors which are comparable to the Croatian.

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Appendix: The data sample commercial banks

Zagrebačka banka, Privredna banka Zagreb, Erste & Steiermärkische Bank, Raiffeisenbank Austria, Soci t  G n rale Splitska banka, Hypo Alpe – Adria – Bank, Hrvatska poštanska banka, OTP banka Hrvatska, Slavonska banka, Volksbank, Međimurska banka, Podravska banka, Jadranska banka, Istarska kreditna banka Umag, Karlovačka banka, Banco Popolare Croatia, Croatia banka, Kreditna banka Zagreb, Credo banka, Centar banka, Partner banka, Štedbanka, Imex banka, Banka Kovanica, Samoborska banka, Banka Brod, Nava banka, Primorska banka.

Young people's considerations regarding the fidelity of tourism products consumption

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Abstract. *In order to satisfy, maintain and fidelize the consumers, considering the multitude of users on the tourism market, it is necessary to implement a relational marketing paradigm, thus offering products that permanently meet the needs and dynamic wishes of tourists, and so, sustaining a certain chain of supply – delivery based on values, and respecting the interests and objectives of the partners. In order to identify the elements/components of the tourism products, towards who the respondents are faithful, and in order to learn the constant aspects in making the decisions of buying and consuming, a quantitative marketing research has been conducted on a sample of 165 people, aged between 18 and 24 years old.*

Keywords: relationship marketing, fidelity, young people.

JEL Classification: M3, L83.

REL Classification: 14F, 14G.

Introduction

Given that the economic agents offer to consumers a wide range of options regarding the tourism consumption, the success of those who work in this domain depends in a significant proportion on a frame that allows to reorganize the tourism activities, and so, the relationship with the client, to be in a central position. In this paradigm of modern marketing, relational marketing accentuates the centre role of the relations and networks in interacting with the client – supplier and in building relationships, and also from the emergence of relations of the new business domains (Lindgreen and Wynstra, 2005, Möller and Svahn, 2009, Ulaga, 2003, quote from Möller, 2013, p. 325).

Conceptual framework

Within the tourism strategies and partnerships, in order to maximize the client value throughout the relationship with the company and with the suppliers in the value chain of the tourism product that is offered in order to consolidate the value for clients, it is important to maintain the collaboration between the client and supplier. Still, in order to ensure the competition of the tourism destination, the social-economic space, all the agents have the same common final objective – the sustained destination development, and so it is necessary to harmonize as much as possible, all the stakeholders, regardless if between them economic relationships of competition or collaboration are established. These policy measures are strengthened under the guidance of a vision and superior understanding of client or partner, and are consistent with the objective of relationship marketing.

According to Grönroos, relationship marketing is “to identify, establish, improve and, where necessary, end relationships with customers and other stakeholders in terms of profit so that the objectives of all parties to be established under interchange and fulfillment of promises” (Grönroos, 1994, cited in Egan, 2011, p. 38).

For the collaboration between operators at a destination level, it is necessary that they consider meaningful use of monetary resources, time, energy conditions and availability tourists, to provide a positive and memorable experience, and the development of new organizational structures to a company level (Gruen, 2005, cited in Pop, 2006, p. 35). Thus, “the competition” on these resources should also propose new approaches, where they should create new tourism experiences that should become richer by offering diverse activities, belonging to different domains/areas of interest (being offered by different entities).

Creating attachment to the tourism service company can have positive effects for all companies or brands that are in the value chain at both attitudinal and behavioral level (e.g., accommodation, transportation, recreation, treatment, counseling etc.), carrying several stages (from fidelity to loyalty) and can reach

exclusivity in the exchange relations between market actors (Pop, 2005, quote from Pop, 2006, p. 37).

Amongst the objectives of a company that uses relationship marketing as a philosophy of economic activities, those activities/measures that are necessary to fidelize the client can be found, cultivating a long term connection, which follows in the end to obtain attachment from the client (Pop, 2006, p. 39). Customer fidelization represents an assembly of all the measures taken by the company to guide the behavioral intentions in a positive manner, in relation to current and potential customers with a supplier and its offer, relative to its performance to achieve stabilization and development companies' relationships with buyers (Bruhn, 2001, cited in Pop and Petrescu, 2008, p. 111). Therefore, "coagulating the universe of destination's brands" with all the services implemented in multiple, satisfying means of leisure involves focusing all efforts of the companies at this level to honouring the standards set by the consumer and to creating and managing relationships.

Methodological framework

While knowing that a complex tourism product is not owned by a single company, actually representing the collaboration between different partners, it has been considered important to identify those elements that, due to consumer satisfaction or other reasons that imply repeated choice, remain constant in time in buying or/and consuming a product. Thus, a quantitative marketing research has been conducted, on a sample of 165 people, aged between 18-24, in order to know the elements of the tourism product to which respondents are loyal (e.g.: accommodation, transportation, food services, leisure, treatment etc.), to identify the constant elements in making buying and consumption decisions.

Of all respondents, 75.2% are female and 24.8% are male; 37% come from Muntenia, 36.4% from Bucharest, 10.9% of respondents came from Moldova, 9.7% from Oltenia, 3.6% in Dobrogea, 1.2% and 0.6% of Transilvania and 0.6% from Banat-Crişana and Maramureş.

In terms of monthly income, 60.6% had an income below 1,000 lei, 28.5% have income between 1000 to 1999 lei, 6.7% had an income between 2000 to 2999 lei and 4.2% have an income over 3,000 lei.

Research results

A first objective of the research was to determinate the way young people organize and perform their holiday, as well as the duration, type, frequency and purpose of the holiday. While only 14.5% of the respondents organize only one

holiday for themselves and 39.4% two of them, most of the respondents (46.5%) have usually more holidays in one year. Most frequently the holidays last up to one week (48.5%), short holidays of one or two days being also a significant choice for young people (41.2%), while only 10.3% have holidays that last more than 7 days. This fact offers information regarding the tourism product consumption, due to the fact that the time and frequency of the holiday influences the intensity and complexity of the tourism experience, through the activities that they held during the holiday and their duration. The first two types of tourism practiced by the respondents are the seaside tourism (27%) and the mountain-based tourism (23.9%), least of the practiced ones being the rural tourism (3.1%), urban (2.3%) and balneotherapy tourism (0.8%). Most of the respondents plan their holidays a few weeks ahead (53.3%) and only 21.8% spend a few days with the planning process. Still, 24.2% of those plan their holidays a few months ahead, fact that shows a high volume of time and energy spent for the research and evaluation stages of the options they have during the buying decision process. While most of the respondents travel with their friends (63.6%) and 34.5% with their families, only 1.2% of these travel alone. All the auxiliary information of the research process has the purpose of describing the general conditions of young people's travelling, as a starting point in the final evaluation of the selection process and the tourism consumption.

Another objective has been to identify the constant elements in the choice of tourism products. Thus, it has been shown that a constant choice mostly refers to elements regarding consumers (like a certain timeframe, a certain type of tourism and others); mainly choosing a certain hotel/restaurant/transportation firm records 2% of the answers and choosing a tourism/tour-operator records 9% of the answers (Table 1).

Therefore, young people's fidelity towards the partners in the value chain of tourism products is significantly shown. Constant elements in young people's holidays are mostly highlighted by choosing a certain timeframe of the destination (27%), a certain destination (23%) a certain type of tourism (22%), followed by choosing certain types of activities they plan to do during the trip (17%).

Table 1. Constant elements in choosing the tourism products, according to the respondents

	% of total column
Always choosing a certain agency of tourism/a tour-operator	8.9
Always choosing a certain destination	23
Always choosing a certain type of tourism, according to their destination	22
Always choosing a certain timeframe, according to their destination	27
Always choosing a certain hotel/restaurant/transportation firm	1.6
Always choosing certain activities, according to their destination	17
Total	100

Source: statistical survey conducted by the authors.

In addition, important for the research purpose has been to identify the offer of a tourism agency that is consistent with the respondents' needs, the most important elements indicating, according to the respondents, the facilitation of their access to certain destinations/tourism attractions (36% of the answers), the quality of their accommodation (30%) and the variety of recreational possibilities (28%) – appropriate elements of tourism services suppliers at the destination level, which, usually, the agency aligns and guarantees (Table 2). It is important to highlight the necessity of implementing relationship marketing, through the fact that those aspects that count mostly to the consumer, regarding the offer, are those which can be developed only by collaborating with suppliers/partners.

Table 2. *Elements of the offer corresponding to the needs of respondents*

	% of total column
Variety of recreation	27.9
Quality of the accommodation	29.7
Facilitating access to certain destinations/attractions	35.8
Assistance throughout the journey	2.4
Safety	3.6
Others	0.6
Total	100

Source: statistical survey conducted by the authors.

Regarding the fidelity towards a tourism destination, most of the respondents who mentioned that they have visited a destination more than 5 times consecutively during 5 years (60% of the respondents), think of a seaside destination (29% of the total of the sample), or of a mountain destination (16.3%). Still, all the respondents who have visited a certain destination more than 5 times consecutively during 5 years, have also visited other destinations of the same kind (in which they have practiced the same type of tourism), most of them making the same kind of voyages 2-3 times (33% of the total respondents). The conditions in which the respondents would return to the same location are various, such as: new attractions, group circumstances, accessibility over other destinations, keeping the environment and the quality/price ratio, habit, permanent modification of the offered services, including new services like wellness etc.

In contrast to the tourism destination, 85,4% of the respondents indicate the inexistence of a hotel or other accommodation where they stayed at least 5 times in a 5 year consecutive timeframe, fact that shows a low degree of fidelity towards this kind of tourism services. Also, there has been noticed that auxiliary recreational activities have contributed, in conjunction, to a very great extent, to a great extent and indifferent, 79.5% of the choice (Table 3).

Table 3. Percentage in which the auxiliary activities contribute to the choice of the hotel

	% of total column
Very small extent	4.8
Small extent	15.8
Indifferent	40
Largely	34.5
Very great extent	4.8
Total	100

Source: statistical survey conducted by the authors

Considering accommodation services, food, transportation, entertainment etc., parts of integrated experiences, respondents were asked to give importance to each category in influencing the total experience. Thus influencing the utmost satisfaction experience are accommodation services (with an average of 4.34 on a scale from 1 to 5) – 91.5% of respondents considering this to a large and very large extent – and food services (4.06) – 84.7% of respondents considering this to a large and very large extent (Table 4). Surprisingly, the lowest score was attributed to the recreational services (with an average of 3.72), even though the diversity of recreational services has recorded a significant percentage within the offer desired by the respondents.

Table 4. Contribution to the satisfaction/dissatisfaction total travel experience

	% of total column				
	Transportation services	Accommodation services	Food services	Recreational services	Tourism agencies
Very small extent	2.4	0.6	0.6	1.2	3.6
Small extent	17.6	1.2	4.9	3.6	6.1
Indifferent	26.1	6.7	9.8	29.7	30.9
Largely	46.1	46.7	57.3	53.3	40
Very great extent	7.9	44.8	27.4	12.1	19.4
Total	100	100	100	100	100

Source: statistical survey conducted by the authors.

According to the respondents, it was also important for the proposed purpose to identify those elements that would determinate the disruption of the collaboration with the 3 types of tourism services entities that have been studied (tourism agency, destination, hotel). There are elements which respondents consider unacceptable regarding the collaboration with a tourism agency like (Table 5): unreliability (30.3%) and not respecting promises (25.2%), followed by insecurity (13.1%). Regarding the experience in a tourism destination, there were considered as unacceptable the lack of leisure services (25%), the insecurity (19.4%) and the unfavorable ambiance (17.4%), and regarding the relationship with the hotel, they considered the unfavorable ambiance (22.8%), the insecurity (20.8%) and the unreliability (17.2%).

Table 5. *Conditions whose failure could lead to abandonment of certain categories of services*
% of total column

	Tourism Agency	Destination	Hotel
Unreliability	30.3	6.9	18.1
Limited offer	16.1	11.8	12.7
Not respecting promises	25.2	6.9	17.9
Lack of the guide	7.3	12	-
Unfavorable ambiance	4.1	17.4	22.8
Insecurity	13.1	19.4	20.8
Lack of leisure services	3.9	25	7.7
Total	100	100	100

Source: statistical survey conducted by the authors.

In the end, 70% of the respondents have declared that they are not loyal to a certain agency that offers tourism products. Although the respondents consider that accommodation services can influence mostly the satisfaction/dissatisfaction of the tourism experience, it shows that the level of fidelity towards an accommodation unit is the lowest (2%) – Table 6.

Table 6. *Fidelity towards companies that have different tourism services*
% of total column

Transportation	11.2
Hotel/Hotel chain	1.8
Restaurant/ Restaurant Chain	8.8
Tourism agency	7.6
None	70.6
Total	100

Source: statistical survey conducted by the authors.

This can be explained by different factors, including the fact that the accommodation, food or transport units etc. do not respect the criteria required or expected by this segment (young people), the undifferentiated nature of companies from the desired destinations, the tourists' desire to live new experiences and meet new destinations.

Limits

The services categories studied closely during this research mostly refer to the primary services that are requested by the consumers, namely the accommodation (hotels) and distribution (tourism agency). In addition, for a clear and complete view, the authors consider it is necessary to perform an extensive research, also considering the other types of services (food, transportation, leisure, cultural services, treatment services and others), that, for a certain type of destination, are essential in making a choice. Also, in order to emphasize the complex phenomenon of fidelity, it is necessary to view it from a multi-angle perspective, i.e. studies from the tourism company's point of view and also from the perspective of other segments of consumers.

Conclusions

The differences and complexity of the tourism products towards the goods, in general, and services, by means of a large scale of needs and desires, determines the specificity of certain marketing phenomena, including the fidelity towards a tourism company. Although, generally, the satisfaction is the basis of fidelity, in the case of the tourism phenomenon, accomplishing all the desired or imposed criteria of the potential consumers, does not lead to a repeated buying action of a certain product or service. Facts like the desire of living new experiences, learning new things or spending the leisure time in a way that expresses one's personality by new means, can lead to indicating new situations where consumer satisfaction could not lead to repeating the buying act. Even though, the marketing specialist should consider the characteristics whose lack of fulfillment can lead to relinquishing certain service categories, such as:

- For a tourism agency: unreliability and not respecting promises.
- For a destination: insecurity and unfavorable ambiance.
- For a hotel: unfavorable ambiance and insecurity.

While for a tourism agency and for a destination, the conditions are those expected by the authors, in the case of a hotel, the small percentage of the element "lack of entertainment services" towards giving up the accommodation unit (7.7%) can be explained by the general habit of the young people, which is mostly passive. The lack of fidelity towards accommodation, transportation, food and entertainment is relevant and shown by the respondents' answers, constant elements of the young people's voyages referring mostly to the timeframe of the trip, destination, and type of tourism. These results do not discourage the relationship marketing perspective in tourism, on the contrary, it accentuates the necessity of insuring the competitiveness, by the collaboration between economic agents in the tourism, at the level of a destination, for a better knowledge of the consumer and for offering targeted products according to their dynamic needs.

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A stochastic convergence analysis for selected East Asian and Pacific countries: A Fourier unit root test approach

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Abstract. *The main aim of this study is to analyze stochastic convergence dynamics for selected East Asian and Pacific countries over the period 1960–2010, using a recently introduced unit root test with a Fourier function capable of capturing unknown form for structural breaks. Our test results show that we cannot reject the stochastic convergence hypothesis for Australia, Fiji, Korea, Nepal, Pakistan, Philippines, and Thailand.*

Keywords: stochastic convergence, Fourier function, stationarity, East Asian countries, structural breaks.

JEL Classification: C12, O47.

REL Classification: 8E.

1. Introduction

Economic growth differentials among countries and determinants of long-run economic growth have been very important topics among economists and for economic growth theories. After they languished in the 1960s, economic growth theories flourished again in the late 1980s. The new approach, called endogenous growth theory, focused on models of the determination of long-run growth. On the other hand, the older approach, the neoclassical growth model, focused on the empirical implications for convergence across economies (Barro and Sala-i-Martin, 2004).

East Asian and Pacific countries such as Japan, Australia, New Zealand, Korea, Hong Kong, Malaysia, Singapore, Thailand, Indonesia, China, and India are strong engines of global growth with healthy economic development structures and characteristics thanks to appropriate economic policies, strong saving-investment structures, qualified human capital, high productivity, and technological progress. In this context, it is vital to analyze the dynamics of economic growth and convergence structures surrounding this region. Jin (2009) states that East Asian economies, which are highly dependent on international trade, were not only hit hard by the Asian financial crisis of 1997–1998 but also vulnerable to the worldwide high-tech crisis in 2001. Jin (2009) also claims that facing such economic crises caused many Asian governments to recognize the importance of education in sustaining high economic growth. In particular, education increases the number of competent workers, enables the creation of new technologies domestically, and facilitates the absorption of advanced technologies from overseas, and hence economies with more educated human capital grow faster than other countries. Genc, Miller and Rupasingha (2011) state that empirical techniques for convergence tests fall into four main categories. These categories include sigma convergence; beta convergence, which is divided into the two versions of absolute (unconditional) and conditional beta convergence; and finally stochastic convergence.

Barro and Sala-i-Martin (2004) explain that sigma (σ) convergence concerns the measure of cross-sectional dispersion. If the dispersion measured by the standard deviation of the logarithm of per capita income or product across a group of countries or regions declines over time, convergence occurs.

There are two versions of beta (β) convergence. First, absolute (unconditional) convergence applies if a poor economy – defined without the conditioning of any other economic characteristics – tends to grow faster than a rich one, so that the poor country tends to catch up to the rich country in terms of levels of per capita income or product. Conditional beta convergence occurs when all the economies do not share the same parameters, and therefore, differ in terms of their steady

state positions. If the steady states are different, an economy grows faster the further it evolves from its own steady state.

The final category is stochastic convergence. Time-series methods are used to determine whether random shocks to a regional economy persist in time (see Genc, Miller et al. 2011: pp. 369-377; Campbell and Mankiw, 1989: pp. 319-333). To test the convergence hypothesis, time-series methodology plays an important role, especially in testing for conditional stochastic convergence. Kutan and Yiğit (2005) claim that conditional stochastic convergence, which does not require each country to converge to the same steady state, is applicable when per capita income disparities between countries follow a mean-stationary process, i.e., relative per capita income shocks lead only to transitory deviations from any tendency toward convergence. A cross section of regions meets the test of stochastic convergence if the region's deviation of per capita income or earnings relative to that of the nation is characterized by a non-zero mean stationary stochastic process. Time-series methods to test convergence have some advantages especially if heterogeneity exists across the economies.

In this study, we aim to analyze stochastic convergence dynamics for selected East Asian and Pacific countries using a Fourier unit root test approach for the period 1960-2010.

2. Econometric methodology

Since Perron's seminal paper (1989), which emphasized that ignoring structural breaks while using unit root tests can give biased results, numerous studies have introduced new unit root tests into the literature that take into consideration the effect of such breaks. But the number and form of structural breaks in these studies are given a priori. Unit root tests developed by Zivot and Andrews (1992) and Perron (1997) restrict the number of structural breaks to one, whereas Lumsdaine and Papell (1997) and Lee and Strazicich (2003) extend this number to two. In these studies, the form of the breaks is sharp. On the other hand, Kapetanios, Shin and Snell (2003) and Leybourne, Newbold and Vougas (1998) allow for smooth breaks. That is, generally the nature of structural breaks is not known a priori; using an incorrect specification regarding the number, form, or duration of structural breaks, however, can be problematic.⁽¹⁾

Christopoulos and Leon-Ledesma (2011) develop a Fourier unit root test to circumvent such problems given that only a small number of low-frequency components from a Fourier approximation can capture the behavior of an unknown function (see Gallant, 1981: pp. 211-245; Becker, Enders et al., 2004: pp. 899-906; Becker, Enders et al., 2006: pp. 381-409). By using the Fourier unit

root test, we do not need to specify the number, form, or duration of the breaks; the unknown number and form of breaks can be approximated.

The Fourier unit root test is comprised of three steps. For the first step, we estimate the following model:

$$y_t = \alpha_0 + \sum_{k=1}^G \alpha_1^k \sin\left(\frac{2\pi kt}{T}\right) + \sum_{k=1}^G \alpha_2^k \cos\left(\frac{2\pi kt}{T}\right) + v_t \quad (1)$$

Here k shows the number of frequencies, t is the trend term, T is sample size, π is 3.1416, and $v_t \sim N(0, \sigma)$. Ludlow and Enders (2000) showed that a single frequency in Equation 1 is enough to approximate the Fourier expansion, so Equation 1 can be rewritten as follows:

$$y_t = \alpha_0 + \alpha_1 \sin\left(\frac{2\pi kt}{T}\right) + \alpha_2 \cos\left(\frac{2\pi kt}{T}\right) + v_t \quad (2)$$

Because the value of k , representing appropriate frequency, is not generally known a priori, Equation 2 must be estimated using all frequencies in the interval $k = [0.1, 0.2, 0.3, \dots, 4.8, 4.9, 5]$ and choosing the k that gives the minimum value of the Bayesian information criterion. The reason for considering fractional frequencies is that integer frequencies imply that the breaks are temporary, whereas fractional frequencies imply permanent breaks.

In the second step, we proceed to the unit root testing. Given Model 2, we can show the null hypothesis of the unit root as follows:

$$H_0 : v_t = \mu_t, \quad \mu_t = \mu_{t-1} + h_t$$

Where h_t is assumed to be a stationary process, the mean of which is zero. Therefore, we can apply the unit root test by employing the OLS residuals obtained in Equation 2:

$$\Delta v_t = \beta_1 v_{t-1} + \sum_{j=1}^p \delta_j v_{t-j} + u_t \quad (3)$$

Where u_t is a white noise error term. It is clear that Equation 3 is a standard ADF regression, thus the null of unit root $H_0 : \beta_1 = 0$ is tested against the alternate $H_0 : \beta_1 \neq 0$ using the standard t-test. The necessary critical values are tabulated in Table 1 of Christopoulos and Leon-Ledesma (2011) for different values of k .

Only for the case where the null of the unit root is rejected can we proceed to the third step in which we test the significance of trigonometric terms. This condition

is necessary because the F statistic used to test for the presence of trigonometric terms has low power if the data are nonstationary. The null hypothesis for testing the presence of trigonometric terms is $H_0 : \alpha_1 = \alpha_2 = 0$. Rejection of the null hypothesis shows that the variable under investigation is stationary around a nonlinear deterministic function. The critical values for the F-test are tabulated in Becker, Enders and Lee (2006).

3. Data and empirical results

To test the stochastic convergence hypothesis among Asia-Pacific countries we test the stationarity of **real gross domestic product per worker** to the ratio of the mean. We obtained data containing the series of Australia, Bangladesh, China, Fiji, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, and Thailand from Penn World Table 6.3 over the 1960-2010 period.

We first choose the optimal frequency by estimating Equation 2 for all the possible fractional frequencies in the interval [0–5] using increments 0.1. The second column of Table 1 shows the optimal frequencies, and the third column shows the minimum Bayesian information criteria. For all countries, we find the frequency close to 1. We also present the time paths of the series with the Fourier approximations in the Appendix I. All the estimated Fourier functions seem to fit well the swings in the series.

Table 1. Test Results of the Fourier Unit Root Test

Country	k	minBIC	FADF	Fu(k)
Australia	0.2	-3.56	-4.02**	470.10*
Bangladesh	0.1	-3.41	-2.79	1224.06
China	0.4	-2.35	-3.31	1839.88
Fiji	0.4	-2.41	-3.81***	410.45*
Hong Kong	0.2	-2.64	-3.48	465.86
India	0.1	-2.96	-1.97	100.12
Indonesia	0.8	-2.11	-3.46	83.53
Japan	0.1	-3.20	-2.95	328.39
Korea	0.5	-3.81	-3.69***	2452.65*
Malaysia	0.3	-2.97	-3.58	361.41
Nepal	0.1	-3.68	-4.35**	540.20*
New Zealand	0.4	-3.13	-3.20	1207.69
Pakistan	0.1	-3.16	-3.77***	67.28*
Papua N. G.	0.6	-1.86	-2.91	276.21
Philippines	0.7	-2.42	-4.26**	353.05*
Singapore	0.3	-3.32	-3.54	776.83
Sri Lanka	0.3	-3.05	-3.39	266.81
Thailand	0.6	-2.49	-4.72*	330.13*

In the second step, we applied the unit root test using Equation 3 and presented the test results in the fourth column of the table. Because we can reject the null of the unit root for Australia, Fiji, Korea, Nepal, Pakistan, Philippines, and Thailand, we tested the presence of an unknown form for breaks using the F-test. The test results showed that the trigonometric terms are significant, and the series are stationary around a nonlinear deterministic function, which validates the convergence hypothesis for Australia, Fiji, Korea, Nepal, Pakistan, Philippines, and Thailand.

4. Conclusion

The main aim of this study is to analyze stochastic convergence dynamics for selected East Asian and Pacific countries over the period 1960–2010, using a recently introduced unit root test with a Fourier function capable of capturing unknown form for structural breaks. Our test results show we cannot reject the stochastic convergence hypothesis for Australia, Fiji, Korea, Nepal, Pakistan, Philippines, and Thailand. As a result, these countries follow their own steady-state path, and income disparities among these countries follow a mean-stationary process, i.e., relative per capita income shocks lead only to transitory deviations from any tendency toward convergence.

Note

- ⁽¹⁾ The procedures developed by Kapetanios (2005) and Lee, Strazicich and Meng (2012) allow the researcher to determine the number of breaks endogenously but the breaks are limited to the sharp form.

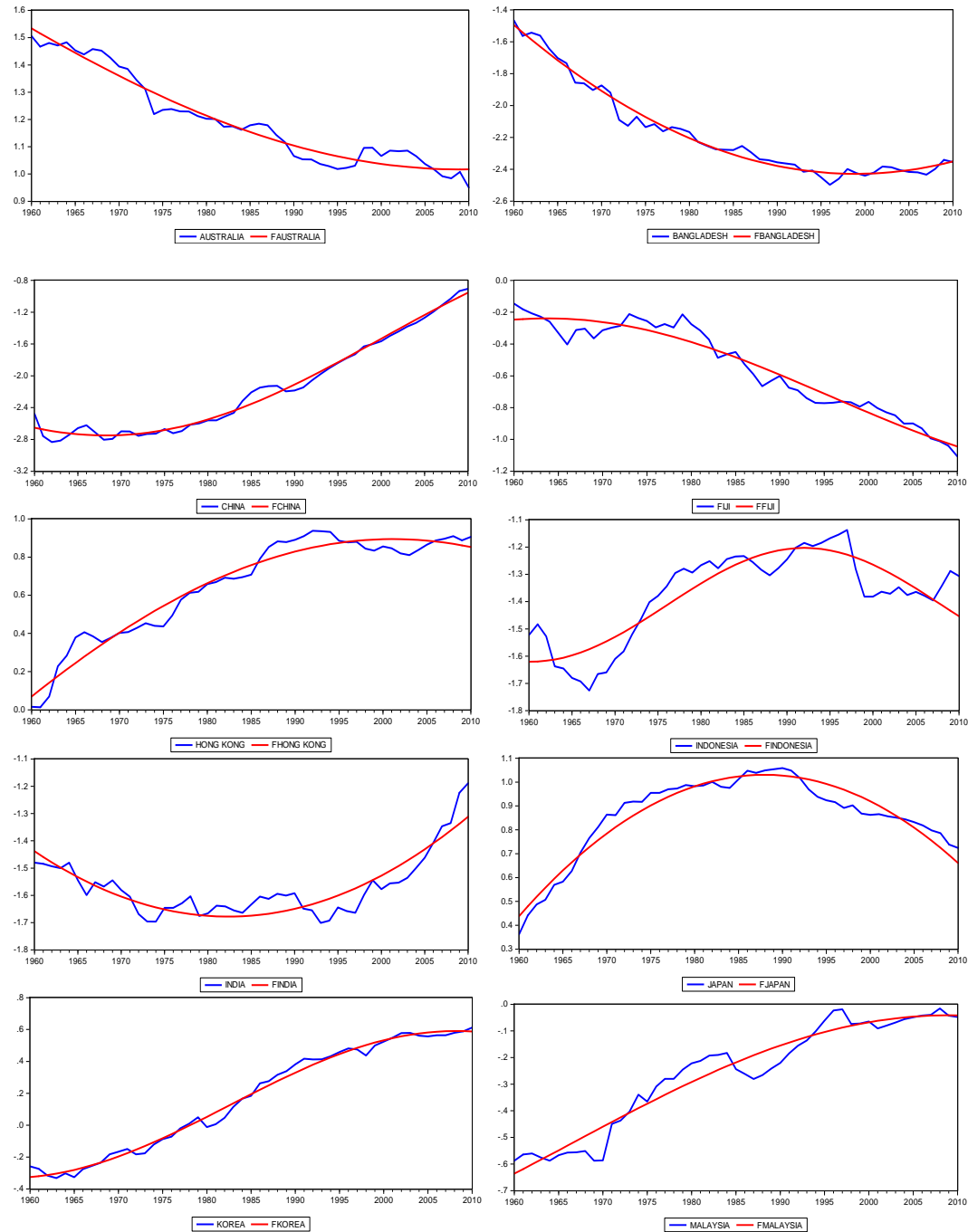
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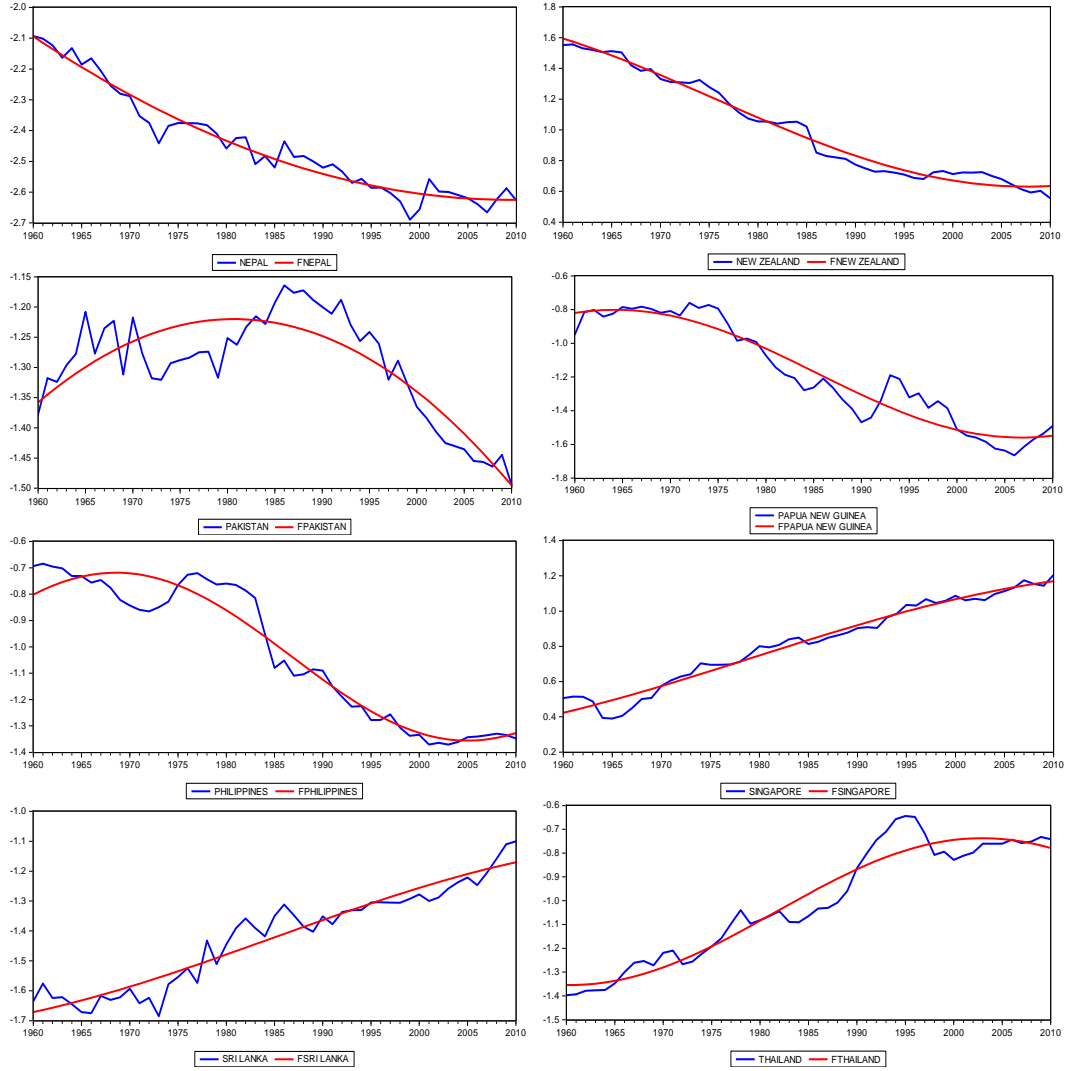
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Appendix I: Relative output and the Fourier functions





Economic disparities between urban and rural Romanian labor market

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Abstract. *Romania's integration in the European Union (EU) imposes new requirements of human capital, creating new challenges for the sector.*

At this time the Romanian economy requires a competitive workforce with new skills and qualifications. To meet these demands, the Government should (i) increase the efficiency and equity of education in the context of decentralization by introducing student funding formula, school network optimization and training of managers in education, (ii) to raise the quality of education, first through better management of human resources, (iii) create more opportunities for retraining and continuing education, and (iv) to increase effectiveness by developing a coherent strategic program of reform, planning, administration and management of the sector.

Keywords: urban, rural, labor, employment, EU.

JEL Classification: J00, J1, J2, J3.

REL Classification: 5J, 12E, 16C.

1. Gaps in the labor market by residence

In the context of economic transition, the labor market in Romania has undergone significant changes in the volume and structure of the main indicators of labor market. This process was characterized, by reducing the active population and employment, maintaining relatively constant values of the unemployment rate. Financial crisis, especially in the second half of 2008 had an effect on the structure of the labor force, while reducing employment bringing an increase in the phenomenon of unemployment.

If during the last half of the 90s, active population remains at high values of over 11 million people, the new millennium began with a significant decline in the indicator.

Later in 2002 the active population fluctuated around 10 million. In 2010, the active population counts 9.965 million, of which 95.8% are in the working age group (15-64 years).

Table 1. Active population, employment and unemployment ILO¹⁾

	2007	2008	2009	2010
Active population - total	9994	9994	9924	9965
Feminine	4479	4418	4400	4416
Urban	5494	5471	5475	5538
Employed population - total	9353	9369	9243	9240
Feminine	4237	4212	4143	4128
Urban	5072	5101	5032	5032
unemployed population- total	641	575	681	725
Feminine	242	206	257	288
Urban	422	370	443	506

¹⁾ According to the methodology of the International Labour Office (ILO).

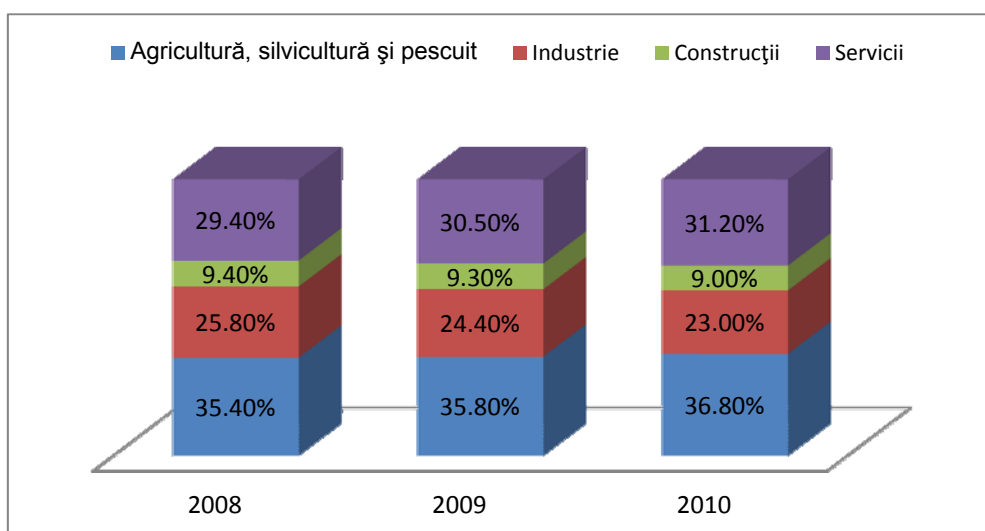
Source: Statistical survey on labor in households (AMIGO).

After a continuous increase recorded in the period 2005-2008, in 2009 the employed population began to decline, and in 2010 reached the lowest value (9.24 million people) in the last five years. Of those employed, 55.3% are men. Until 2002, most of the employed population was represented in rural areas. Since 2003, most of the employed population resides in urban areas 54.5% in 2010. Category prevalent among workers employed population, 65.6% respectively in 2010.

The unemployed population, defined according to the ILO, in 2010 was 725 thousand, increasing in 2009 with 6.5% than in 2008 (26.0%). In 2010, the total number of unemployed population, 28.1% was young population (15-24 years).

In 2010, the total employment in the private sector, 63.2% was active in industry, construction and services, compared to 64.2% in 2009.

Figure 1. Structure of employment in the private sector the main activities of the national economy



Note: The private sector includes forms of property “private”, “cooperative” and “public”. Including production and supply of electricity, gas, steam and air conditioning and water supply, sewerage, waste management and remediation activities.

Source: Statistical survey on labor in households (AMIGO).

Direct effect of the economic crisis triggered in the second half of 2008 the growth of the average number of employees in 2009⁽¹⁾, that was 4.774 million people, down by 272 thousand compared to the previous year (if not re-estimation would be done during 2009, lowering average number of employees would be about 320 000 persons compared to 2008). The most pronounced decreases were recorded in the following activities: manufacturing, construction and trade.

Distribution of employees by economic sector in 2009 show that 60.5% are in services (tertiary sector), that increased by 3.5 percentage points in 2008, and 5.1 percentage points respectively compared to 2007.

In the secondary sector (industry + construction) where 37.2% of total employees, 3.7 percentage points less than in 2008, i.e. 4.9 percentage points less than in 2007.

The percentage of employees who worked in agriculture (primary sector) was only 2.3%, up 0.2 percentage points from the previous year and down 0.2 percentage points from a year, 2007.

The number of unemployed registered at the National Agency for Employment (NAE) decreased until July 2007 (343,000 people), then recorded fluctuated until the end of the year.

After an increase of 4.4% in January 2008 compared to December 2007, the number of registered unemployed continued to decline in the next period, reaching a minimum point (337,000 persons) in June 2008, when the unemployment rate stood at 37%.

Table 2. *Unemployment ILO¹⁾, by age group, sex and area (%)*

	2007	2008	2009	2010
Total	6,4	5,8	6,9	7,3
Under 25 years	20,1	18,6	20,8	22,1
Over 25 years	4,9	4,4	5,4	5,8
Masculine	7,2	6,7	7,7	7,9
Under 25 years	21,1	18,8	21,2	22,3
Over 25 years	5,6	5,3	6,1	6,3
Feminine	5,4	4,7	5,8	6,5
Under 25 years	18,7	18,3	20,1	21,8
Over 25 years	4,1	3,4	4,5	5,1
Urban	7,7	6,8	8,1	9,1
Under 25 years	24,7	23,2	27,1	30,5
Over 25 years	6,2	5,3	6,5	7,4
Rural	4,9	4,6	5,4	5
Under 25 years	16,3	14,7	15,5	15,3
Over 25 years	3,4	3,3	4	3,6

¹⁾ According to the methodology of the International Labour Office (ILO).

Source: Statistical survey on labor in households (AMIGO).

Since July of 2008, the number of registered unemployed rose to a peak (765,000 people). In March 2010, and in the months that followed, the indicator has experienced a steady decline, so that by the end of the records employment agencies registered 627 thousand people unemployed, 11.6% less than the end of 2009.

The ILO unemployment rate (the proportion of unemployed persons in the labor force) recorded an increase up to 7.3 % in 2010 from previous years (up 0.9 percentage points from 2007 and 1.5 percentage points 2008, when there were actually lowest unemployment rates in the last four years examined) and 0.4 percentage points from 2009.

For women there was an unemployment rate of 6.5%, lower than that for men (7.9%), both up from previous years.

Urban unemployment rate significantly exceeds the rate recorded in rural areas (in 2010: 9.1% to 5.0%).

Young people aged 15-24 are most affected by unemployment. Thus, in 2010 the unemployment rate was 22.1% among youth (15-24 years), with sharp differences on average (30.5% in urban areas compared to 15.3% in rural areas).

The value of this indicator was 5.8 % for the unemployed aged 25 and over. The rate of vacancies is one of the indicators expressing demand for labor that occurs on the labor market. Continue to affect the global economic crisis, average annual job vacancies registered in 2010 lowest value since 2005-0.59%, down 0.29 percentage points from the previous year, 1.47 percentage points respectively compared to 2007, when the rate of vacancies recorded the highest value.

In terms of incidence (percentage of long term unemployed in total unemployed), long-term unemployment, which fell on a downward trend in recent years (from 50.0% in 2007 to 30.9% in 2009) recorded an increase, rising 34.9% in value in 2010, only slight disparity both sex and by residence.

2. Increasing labor force participation and reducing structural unemployment in rural and urban areas as a solution for reducing economic gaps

To increase competitiveness and increase labor market participation rates, particularly for those with low skill levels, and in accordance with the guidelines of employment economic policy, European states should review billing and support system and ability of public services to provide the necessary support. European countries can increase turnout by policies that encourage “active aging”, gender equality and equal pay for similar work, youth employment, people with disabilities, immigrants and other vulnerable groups in the labor market. Policies aimed at working conditions, innovation in organizations can be targeted to increase the employment rate, especially among young people, the elderly, women, including attracting and retaining the highly qualified in science and technology. EU Member States should also remove barriers to entering the labor market for those who want to engage for the first time, encourage the self-employed and create jobs in areas that include so-called “green jobs” and promote social innovations, both in rural and in urban areas (Dubey et al., 2004).

The main target of the European Union, on which Member States set national targets, is that in 2020 the employment rate for men and women aged between 20 and 64 years to reach 75%, including through greater participation of vulnerable groups – young, elderly, unskilled workers – and a better integration of immigrants.

Qualification that meet labor market needs, encouraging job quality and lifelong learning European Union Member States can encourage productivity and employability by providing knowledge and skills to meet the requirements of current and future labor market. Vocational education and training must be accompanied by incentives to continue learning throughout life, opportunities for acquiring new skills, ensuring every adult the opportunity to improve training and qualifications obtained. States must ensure recognition of skills acquired systems, to remove barriers to occupational and geographical mobility, to promote the acquisition of transversal competences and creativity, efforts to be directed mainly to support and increase the employability of low-skilled older workers, while improving training, skills and experience of highly skilled workers and researchers.

Improving the performance of education and training at all levels and increasing involvement in tertiary education

To ensure access to quality education and training for its entire population and to increase training outcomes, European countries need to invest in education systems to increase the skills of the workforce, enabling them to meet the needs of contemporary labor market. Measures should cover all sectors, including education in informal and non-formal systems. Reforms should aim at acquiring key skills necessary for each individual to successfully integrate a knowledge-based economy more in terms of employability, further learning and skills in information technology and the mobility of young people throughout the educational system. Member States must increase the openness and relevance of education and training through the implementation of national qualification frameworks enabling flexible training routes and the development of partnerships between the training system and the labor market. Higher education may be open to a wider audience than the traditional and participation in tertiary or equivalent education should be extended (Stiglitz et al., 2009).

The main target of the European Union, on which Member States set national targets, is lowering the dropout rate to less than 10%, while increasing the share of population aged between 30 and 34 years who have completed a tertiary education to at least 40% by 2020.

Promoting social inclusion and combating poverty

Poverty reduction efforts of the European countries should be oriented to promote public contribution to society and the economy, by extending employment

opportunities, using support from the European Social Fund. Also be considered to ensure equal opportunities and access to public services, education and sustainable health and quality. In this context, it is necessary effective measures against discrimination and to combat social exclusion and to encourage participation in active labor market policies should be implemented to foster lifelong learning and inclusion, to create opportunities in all stages of life and to protect people from the risk of elimination from the labor market.

Pension and social security systems must be able to ensure the effective provision of aid in terms of income and access to health services, promoting social cohesion, while remaining financially viable. The support systems have to focus attention on income stability during transitions and reducing poverty in particular for most vulnerable groups to social exclusion – single parent families, minorities, and people with disabilities, children and youth, the elderly, immigrants, homeless persons. Policies of European states should actively support the social economy and social innovation.

The main target of the European Union, on which Member States set national targets, is to reduce by 25% of the European population living below the national poverty line, thus affecting over 20 million people.

Inclusive growth – a high employment economy to ensure economic, social and territorial cohesion

Inclusive growth requires the ability to confer self-government of the people by ensuring high employment rates by investing in skills and abilities, reducing poverty and modernizing labor markets, education systems and social protection systems to prepare people to anticipate and manage change, building a cohesive society. It is also necessary that the benefit of growth to flow to all regions of the European Union, including peripherals, thus increases territorial cohesion. The objective is translated in providing access and opportunities for all citizens. Challenges posed by an aging population and rising global competition require full potential workforce of the European space, and policies that encourage gender equality are necessary to stimulate labor force participation rate, thus contributing to economic growth and social cohesion.

European states must guide the following priority areas:

- **Employment:** Due to demographic changes, employment in the European Union is experiencing a decline. Only two-thirds of the working age population holds a job, compared to over 70% in the US and Japan, and the employment

rate among women and elderly is lower. Young people have been severely affected by the economic crisis; the unemployment rate in this age group was over 21%. The risk of poor population connected or outside the scope of the labor market to lose connection or possibility to integrate the labor market.

- **Skills:** About 80 million people are under-qualified, and programs for lifelong learning are useful especially to those who already have a higher level of training. By 2020 it is estimated that another 16 million jobs will require high qualifications, while demand for unskilled labor will drop by 12 million jobs. The ability to acquire and develop new skills throughout life will also be needed to prolong active life.
- **Fighting poverty:** before crisis, about 80 million people were affected by poverty, 19 million of whom are children. 8% of the employees have earnings that place them below the poverty line, and the unemployed are very exposed to this risk category.

Measures under these priority areas include modernization and strengthening education and training policies, social protection systems, increasing the participation rate of the labor force, reducing structural unemployment and increasing corporate social responsibility – in this respect are very important childcare services and other categories of dependents.

Implementing flexicurity principles and facilitating the acquisition of new skills for workers to adapt to new conditions and potential career path changes are essential. A special effort should be made towards combating poverty and social exclusion and reducing inequalities in access to health services, to ensure an equitable distribution of benefits of growth. Equally important is the ability of economies to support the aging population through an active life and have a health system properly to ensure social cohesion and productivity.

3. Conclusions

Inter-regional mobility of factors of production is one of the most recognized ways to stimulate economic growth and efficiency gains. Expanding the European Union, which included Romania and Bulgaria put the two countries in a position to shape regional policies to stimulate economic development, one of the aspects of the development of effective inter-regional migration to help reduce income disparity by moving force work in areas with low productivity in the high productivity, this can be achieved by improving employment opportunities, real wages and economic and social conditions of the regions. Now gains in efficiency

and welfare (measured by economic outcomes) of inter-regional mobility of labor are notable for Romania.

Not visible results on unemployment and the effects of income are primarily the result of the influence of low wage regions – the source of migration. These counterintuitive results can be explained by the grounds of the inter-regional migration partly as a result of the de-collectivization of Romanian agriculture. This has given opportunities for development in the rural economy, while the urban potential was affected by high unemployment rates. As a result, there has been a process of migration from rural to urban areas which involved including inter-regional relocation.

Analysis of annual differences between the directions of migration reveal a “phenomenon of attraction” rather than one of “rejection” of the countryside, a phenomenon justified the rationality of choice based on revenue analysis. This fact emphasizes the importance of the perspective of socio-economic factors such as housing, infrastructure, health services, and human capital factors to analyze inter-regional migration research. Expanding economic models to include the socio-economic impact of relocation decisions is also a future research direction, conditional on recent and relevant data on internal migration in Romania.

Note

- ⁽¹⁾ During 2009, the number of employees was estimated based on reconciliation information from administrative data sources with estimates obtained from exhaustive observation of “budgetary sector” (public administration - including all local councils belonging to local government, education, health and social) for the reference month of October 2009. Consequently, estimates of the annual “budget sector” made for 2009 are not fully comparable with previous years; the coverage is more comprehensive in 2009 (about 50,000 employees in addition).

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Corporate social responsibility reporting of the banks in Bosnia and Herzegovina, Croatia and Montenegro

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Abstract. *The interest in corporate social responsibility has grown considerably and so is the practice of its reporting. The CSR reporting is an output of sustainability accounting. The aim of this study is to determine the factors of corporate social reporting of the banks in Bosnia & Herzegovina, Croatia and Montenegro and to point out the differences between the practices in those countries. The empirical research reveals that very few banks publish the CSR report. Disclosure of CSR on the Internet is associated with the higher value of assets and profits which is statistically confirmed.*

Keywords: sustainability accounting, banking industry, corporate social responsibility, legitimacy theory, online reporting.

JEL Classification: M41, G21.

REL Classification: 14I, 11C.

1. Introduction

A socially responsible approach to business would involve attention to social and environmental concerns in addition to economic value creation. Socially responsible companies are those that promote the balance between the financial goals and the benefit of all stakeholders.

The concept of corporate social responsibility has had a long and diverse history in the literature (Carroll, 1999: p. 291). World Business Council for Sustainable Development defines it as the „continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large”. The CSR discourse appears to signal a new form of co-operation between government, business and civil society in the promotion of social objectives (Michael, 2003: p. 126). The organizations that engage in CSR typically focus on some or all of the followings (Chaudhury et al., 2011: p. 77):

- environment: While focusing on this, organizations look at the environmental impacts of their products and services, as well as what they do outside the business to improve the environment;
- employees: The organizations who think in this perspective, they take care of all the employees adequately focusing on workplace conditions, benefits, living wages, and training;
- communities: The organizations that care about communities they voluntarily take advance steps to improve the quality of life for employees and their families as well as for the local community and society;
- regulations: While focusing at this point, organizations respect the laws fully and often exceed them to be more socially responsible,
- emergency supports: Sometimes organizations keep plans ready to manage business crises and ensure safety for employees and surrounding communities. Besides they also take initiatives to provide support in times of emergencies such as disaster or epidemics.

Many benefits of the implementation of the CSR are argued and empirically tested. Sigurthorsson (2012: p. 149) argues that CSR has great potential for 1) limiting the negative impact of business on society, 2) increasing the level of convergence of business and societal interests, and 3) leading to corporate action that in one way or another furthers societal interests.

Because of the important role that banks have in the economy, CSR of these financial institutions must not be ignored. The contribution of financial institutions including banks to sustainable development is paramount, considering the crucial role they play in financing the economic and developmental activities of the world (Chaudhury et al., 2011: p. 76). CSR is increasingly becoming a

variable that companies in general and particularly the financial institutions can use to change the competitive scenario, keeping or expanding their competitive edge, and thus the CSR is seen as a way of encouraging changes in the consumers' preferences, introducing new differentiation variables, while improving the work environment, the trust and the support to the institution (Alcaraz and Rodenas, 2013: p. 576).

The CSR practices of the banks can be transparent to the public if they publish them on the official websites. The preparation and presentation of the corporate social reports is one of the tasks of sustainability accounting and it is considered as a communication with the external users of the accounting information. Since the online disclosure of CSR activities is the fastest and the easiest way to communicate to all stakeholders, the focus of this study is voluntary reporting of the banks.

In the next section, theoretical perspectives of the corporate social responsibility are discussed. The literature review of the corporate social reporting in the banking industry worldwide is given in the third section. The empirical research framework as well as the results of the corporate responsibility online reporting of the banks in Bosnia and Herzegovina, Croatia and Montenegro are presented in the forth section. Finally, the article concludes with a discussion of the results.

2. Corporate social responsibility – theoretical perspectives

What constitutes socially responsible behaviour varies according the different points of view. Also, the framework for CSR development can be given from various theoretical perspectives.

From the stakeholder theory (Freeman, 1984) perspective, CSR is a company's response to the interests of its stakeholders. Managers are becoming aware that the success of a company depends on the internal and external stakeholders and they are willing to consider their needs and expectations in order to make long-term balance with the financial goals. In the context of stakeholder approach, CSR is a mean to maintain strategic objectives.

From the perspective according to which business uses its power to legitimate its activities arises the other CSR theory – the legitimacy theory. Legitimacy can be defined as a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions (Suchman, 1995: p. 574). Moir (2001: p. 19) points out that there is some form of social expectation that a legitimate business would act in a particular manner. Legitimacy theory assumes that companies will make a pragmatic strategic response to the public expectations in order to

maintain some sort of social contract with society motivated by the realization that compliance with societal expectations is necessary to safeguard some space for the freedom of action of business in the pursuit of profit (Kuznetsov and Kuznetsova, 2012, p. 37). Since this point of view on CSR relies heavily on communication, the practice of website disclosure of CSR activities can be explained in this context.

Comparing those two theories, Hinson et al. (2010, p. 500) summarize „while the stakeholder theory is built on the demand of stakeholders including employees, customers, community and the environment for companies to behave responsibly, the legitimacy theory emphasises a social contract between the business and society”.

Campbell (2007) offers the institutional theory of CSR consisting of a series of propositions specifying the conditions under which corporations are likely to behave in socially responsible ways. He argues that basic economic factors, including the general financial condition of the firm, the health of the economy, and the level of competition corporations face, are all likely to affect the degree to which corporations act in socially responsible ways. However, the relationships between economic conditions and socially responsible corporate behaviour are mediated by several institutional factors: public and private regulation, the presence of nongovernmental and other independent organizations that monitor corporate behaviour, institutionalized norms regarding appropriate corporate behaviour, associative behaviour among corporations themselves, and organized dialogues among corporations and their stakeholders (Campbell, 2007: p. 948). The institutional theory of CSR gives the answer on what conditions do firms act in socially responsible ways. Economic conditions affect the degree to which corporations act in socially responsible ways but that this relationship is mediated by a variety of institutional factors. Campbell (2007: p. 952) explains that if firms are operating in an economic climate where, for instance, inflation is high, productivity growth is low, consumer confidence is weak, and, in short, it appears that it will be relatively difficult for firms to turn a healthy profit in the near term, they will be less likely to behave in socially responsible ways than would otherwise be the case. However, under normal competitive conditions, where at least a modest profit is assured and firm survival per se is not at stake, firms are less likely to engage in socially irresponsible practices because the imperative to behave irresponsibly has lessened, and, as a result, managers become more concerned with preserving the reputation of their firms for the sake of continued business success.

Summarizing all relevant concepts, Garriga and Melé (2004) classify the main CSR theories and related approaches in four groups:

- 1) instrumental theories, in which the corporation is seen as only an instrument for wealth creation, and its social activities are only a means to achieve economic results;
- 2) political theories, which concern themselves with the power of corporations in society and a responsible use of this power in the political arena;
- 3) integrative theories, in which the corporation is focused on the satisfaction of social demands; and
- 4) ethical theories, based on ethical responsibilities of corporations to society.

It can be concluded that most of current CSR theories are focused on four main aspects: meeting objectives that produce long-term profits, using business power in a responsible way, integrating social demands and contributing to a good society by doing what is ethically correct (Garriga and Melé, 2004: p. 65).

3. Corporate social responsibility in the banking industry

Since CSR is (still) voluntary, the lack of specification of its scope and content generates many questions in this regard. Whilst society may increasingly expect and demand that companies take on social responsibilities, there is no consensus about reasonable criteria for judging which response on behalf of companies in the name of CSR is appropriate and adequate, and which is not (Sigurthorsson, 2012: pp. 148-149). Yeung (2012: p. 112) argues that in order to become a socially responsible organization, bank needs to meet following customer requirements:

- establishing a mindset of risk management, business ethics and corporate social responsibility through internal management of people and process;
- understanding complex financial products through external management of economic situation and internal management of people and process for the benefit of investors, management and community;
- protecting rights of customers with setting up channels for customers to address complaints through internal management of implementing strategy for financial crisis and external management for stakeholder consideration, accountability and creditability.

Pérez and del Bosque (2012: p. 161) point out that there is a wider range of economic, legal, ethical, and discretionary duties that conform to what a social banking institution should do. Because of the huge impact that banks have on society, their CSR activities and disclosure should not be taken lightly.

Analyzing the Icelandic banking crisis, Sigurthorsson (201: p. 1542) emphasizes that banks seemed more attracted to the idea of CSR as philanthropy than the idea of CSR as responsible banking. He argues that so long as the concept of CSR

remains open to opportunistic interpretation and manipulation it has an inherent tendency to get reduced to a PR instrument.

The need to distinguish between the rhetoric and substantial CSR is elaborated by Campbell (2007: p. 950). The companies may publish CSR reports, advertise, disclose their activities on the websites (and elsewhere) but their rhetoric may diverge from their substantive behaviour.

A comprehensive empirical investigation on CSR of the large banks from North America, the Pacific and Europe (Scholtens, 2009) revealed that are important differences between the banks in different countries. Banks from the Netherlands, Germany, France, and the UK on average achieve the highest CSR score. Those, from Sweden, Italy, and Japan had the lowest score. In this study, bank's performance with respect to reporting, adopting international codes, and having in place certified management systems, to internal environmental policies and the availability of financial products that also aim at sustainable development, and with respect to their social conduct i.e., external relations with the community, employee relations, and ethics codes were taken into consideration.

The different aspects of the public disclosure of the financial institutions are in the focus of various studies (Bonsón-Ponte et al., 2006; Branco and Rodrigues, 2006; Chaudhury et al., 2011; Day and Woodward, 2009; Hossain and Reaz, 2007; Hossain, 2008; Kundid and Rogošić, 2011; Kundid and Rogošić, 2012; Pérez and del Bosque, 2012; Scholtens, 2009; Serrano-Cinca et al., 2006).

Serrano-Cinca et al. (2006) studied the determinants of the internet disclosure of 70 Spanish financial institutions and found out that there is statistically significant impact of size on e-transparency and internet visibility while financial performance was not statistically significant to e-transparency so the impact of the financial performance to online reporting is rather indirect.

Branco and Rodrigues (2006) empirically supported the assumption that banks with the higher visibility and listing status, generally disclose more information about their social responsibility activities. This research was conducted on 15 Portuguese banks and the authors established that those banks publish more of such information in annual reports than on their websites.

Day and Woodward (2009) analysed the CSR reporting of the financial institutions in United Kingdom. Their hypothesis on the positive linkage of the financial services providers' size on compliance with social responsibility reporting guidelines was supported although the disclosure level was quite low.

One empirical study carried out in India revealed that bank size variable as well as profitability, credit risk, own funds financing and board composition proved out to be statistically significantly connected with disclosure index, whilst bank age,

complexity of business and assets-in-place proved irrelevant (Hossain, 2008). The recent survey on the banks in India shows the scope of CSR activities. Chaudhury et al. (2011, p. 79) concluded that CSR activities are centred on education, rural upliftment and helping the physically challenged. Some of the CSR initiatives, the major banking companies in India have undertaken are education for all, community development, adoption of children, vocational training, rural development, environment protection and socioeconomic development of the vulnerable sections of society.

In depth analysis of the CSR website reporting of the banks in Croatia (Kundid and Rogošić, 2011) revealed that large banks publish more information on their CSR activities comparing to small-sized banks. Also, this empirical investigation on 32 banks statistically confirmed that profitability had a positive impact on the CSR practices disclosure. This study included disclosure of socially responsible activities divided into six components: environment protection activities, disclosure on human resources issues, products, clients relation, community involvement, and charity as well as public disclosure of financial and other non-financial information on the Internet. The authors created the Bank Social Disclosure Index in order to determine the level of the online CSR reporting and concluded that banks in Croatia in general do not have developed that practice.

Although the banks might have different motives to disclose their CSR reports and/or CSR activities on their official websites, many of the above mentioned studies indicate that CSR reporting is not common for the banking industry.

4. Research hypotheses, methodology and results

Most of the previously mentioned studies have empirically confirmed that the bank's size is the determinant of social responsibility disclosure (Branco and Rodrigues, 2006; Day and Woodward, 2009; Kundid and Rogošić, 2011) which can be explained by the fact that the large banks have a wider public (communicate with the numerous stakeholders) but also by greater social awareness and its role in the society. Although the bank size classification is usually determined by central bank methodology (for each country) the major factor that affects the bank size is the value of the assets. Regardless the motive for the bank's CSR disclosure and whether it is rhetoric or substantial CSR, it can be assumed that:

H₁: The higher value of the assets is associated with the disclosure of the CSR reports in the banking industry.

Although the annual report, as an important tool for presentation of the accounting information, is often used for CSR communication (Branco and Rodrigues, 2006),

the separate statement emerged. The CSR reports became an annual report in addition to the traditional annual financial reports (Idowu and Towler, 2004). At first, companies included various information in their CSR reports. Global Reporting Initiative (GRI) launched, in the year 2000) the guidelines for the financial sector proposing specific indicators of social performance for this industry (Alcaraz and Rodenas, 2013: p. 565). The GRI guidelines along with AA1000 standard became the framework for CSR reporting that is the focus of sustainability accounting.

Considering the results of the empirical investigations on CSR disclosure (Day and Woodward, 2009; Kundid and Rogošić, 2011), financial performance of the bank was noticed as a determinant of the online presentation of CSR activities. This can be justified by the fact that philanthropic activities can engage those who have (greater) surplus so it can be assumed that:

H₂: The most profitable banks publish the CSR reports on their official websites.

In order to test the above mentioned hypotheses, the empirical investigation was conducted during December 2013. The research is focused on the banking sector of Bosnia and Herzegovina, Croatia and Montenegro so it begun by consulting the official websites of the central bank in each of these countries in order to identify all banks (in Bosnia and Herzegovina) and to collect the financial statements (for the banks in Montenegro) and financial ratios (for the banks in Croatia). Croatian National Bank discloses the wider scope of the accounting information and financial performance of the banks that cannot be compared with the practice of the other two central banks.

The online analysis includes the official websites of 18 banks in Bosnia and Herzegovina, 31 banks in Croatia and 11 banks in Montenegro.

The research objective is to determine the differences between the CSR reporting in three countries: Bosnia and Herzegovina, Croatia and Montenegro. Also, the goal is to perceive the institutional and contingency factors that may cause those differences.

According to the previous research results, the overall level of CSR disclosure in separate statement (whether is CSR report aligned with GRI and/or AA1000) is low. Table 1 presents the frequency of CSR report online disclosure of the banks in each of the observed countries.

Table 1. CSR reporting of the banks – comparison between countries

CSR reporting	Country		
	Bosnia and Herzegovina	Croatia	Montenegro
no CRS report	17	28	11
with CSR report	1	3	0
Total	18	31	11

The Table 1 reveals that only 3 out of 31 (10%) banks in Croatia have published their CSR report on the website. In Bosnia and Herzegovina the situation about CSR reporting of the banks is even worse because there is only one bank (6% of all banks) with that statement disclosed and in Montenegro there is no bank with that kind of practice.

The reasons why more banks in Croatia disclose the CSR report than in the other two observed countries can be explained (at least partly) by several factors. From institutional theory point of view, corporations are less likely to act in socially responsible ways where they are operating in a relatively unhealthy economic environment (Campbell, 2007; Chih et al., 2010). The overview of some institutional factors like gross domestic product (GDP) per capita (in USD) and inflation (GDP deflator) as macroeconomic indicators (World Development Indicators, 2013) and other such as strength of the accounting and reporting standards, ethical behaviour of firms and transparency of government policymaking (The Global Competitiveness Report, 2010) is given in Table 2.

Table 2. Institutional indicators by country

Country	GDP p/c	Inflation (%)	Strength of Accounting Standards	Ethic behaviour of firms	Transparency of government policymaking
Bosnia and Herzegovina	4556	0,6	3,4	2,6	2,7
Croatia	13881	2,0	4,5	3,8	4,3
Montenegro	7041	1,9	4,4	4,4	4,8

Among all observed countries, Croatia has the highest GDP per capita and the strength of the accounting standards. The strength of the accounting standards can be directly aligned with CSR reporting practice because the knowledge and acceptance of the accounting standards lead to preparation of new forms of statements for external users. On the other hand, ethical behaviour of the companies and transparency of the government is highly estimated in Montenegro which is in contrast with the lack of CSR reporting of the local banks.

The contingency factors that might cause the slight difference in CSR reporting of the banks between countries are: the number of borrowers from commercial banks (per 1.000 adults), automated teller machines (per 100.000 adults), capital to assets ratio and interest rate spread (World Development Indicators, 2013).

Table 3. Contingency indicators by country

Country	Borrowers from commercial banks	ATM	Bank capital to assets ratio (%)	Interest rate spread (p.p.)
Bosnia and Herzegovina	266	37.68	10,7	3,9
Croatia	677	109.44	12,3	7,6
Montenegro	217	66.25	10,9	6,3

According to the data presented in Table 3, the banks in Croatia have much more borrowers (clients) and those banks have adjusted providing them more automated teller machines (ATM). These external contingency factors may influence the banks' interest in CSR reporting. Also, the internal factors that may stimulate CSR activities (as well as CSR reporting) are linked to better financial performance (the greater capitalisation and higher earnings). All the observed contingency factors indicate that banks in Croatia are more engaged with their the most important stakeholders (clients) who bring them the highest interest rate spread (that reflects on earnings) and who, also, represent the wider public. The better CSR online reporting practice can be explained from the legitimacy theory perspective keeping in mind that contingency indicators are important in this case.

The independent samples t-test was performed to determine whether is the difference between the amount of the total assets and profit in banks that disclose CSR report on their official website and those that do not have that kind of practice. The total assets and the gross profit or loss for each bank was converted in EUR so the amount can be compared.

Table 4. *T-test statistics on assets and profits of the banks regarding the CSR report disclosure*

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference	
				F	Sig.	t	df	Sig. 2-tailed	Mean Difference
Total assets	Equal variances assumed	49,633	,000	-5,493	58	,000	-5,60743E+06	-7,65076E+06	-3,56411E+06
	Equal variances not assumed			-1,777	3,021	,173	-5,60743E+06	-1,56100E+07	4,39511E+06
Gross profit/loss	Equal variances assumed	64,219	,000	-6,382	58	,000	-7,4782037E+04	-9,8235997E+04	-5,1328076E+04
	Equal variances not assumed			-2,023	3,019	,136	-7,4782037E+04	-1,9198047E+05	42416,3937188

The first and the second hypotheses were tested at the confidence level of 95% and supported empirically. The results of the independent samples t-test showed that there is statistically significant (Sig. = 0,000) difference between the value of total assets and financial result in banks that disclose their CSR report (as a separate statement) comparing to those without CSR online reporting. This leads to conclusion that the higher value of the assets as well as profit is crucial for CSR reporting practices in the banking sector. This empirical finding supports the legitimacy theory point of view on CSR (and CSR reporting) of the banks.

5. Concluding remarks

Sustainability accounting is new field of accounting that includes the CSR reporting. In order to inform a wider public of their CSR activities, companies publish online the CSR reports. The reasons for the engagement in CSR activities

as well as those for CSR reporting are many and can be viewed from different perspectives. The paper gives an insight into the main theories (stakeholder, legitimacy and institutional theory) associated to CSR. Those theories were taken into consideration while explaining the differences in CSR reporting between banks in Bosnia and Herzegovina, Croatia and Montenegro.

The empirical research is focused on the analysis of the official websites of 60 banks (18 banks in Bosnia and Herzegovina, 31 banks in Croatia and 11 banks in Montenegro). It reveals that only four banks disclose the CSR report and among those three banks are from Croatia.

Several factors were taken into consideration in order to determine those that might be linked to CSR voluntary disclosure. The GDP per capita and the strength of the accounting and reporting standards are two institutional indicators that differs Croatia (a new EU country) from the other two countries. The internal and external contingency indicators even better explain greater tendency of the banks in Croatia for CSR reporting. Banks in Croatia have more borrowers and more ATM (better adjustment to the clients). Also, banks in Croatia have higher interest rate spread (meaning greater earnings that lead to better financial performance) and higher capital to assets ratio (often related to capital adequacy ratio defined by central bank authority).

The overall level of CSR disclosure in the banking industry is quite low. The main research finding is that CSR reporting is related to the higher value of assets and profits which gives a confirmation for legitimacy theory perspective. Since the observed contingency indicators mostly explain the between-country differences in CSR reporting, the contingency theory should also be considered in this context.

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Demo-economic restructuring in South-Muntenia development region. Causes and effects on the regional economy

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Abstract. *The social effects were always at the core of economic theories and policies. Each person has two key roles: as a factor of production and the role of consumer, which reveal its importance for the development of certain economies. This paper focuses on researching the causes that generate migration flows and demographic changes in South-Muntenia Development Region. This approach involves the use of mathematical economic tools to support empirical assumptions. The analysis performed is useful to highlight the main changes in the behavior of individuals, as a result of major restructuring undergone by the regional economy in the last two decades.*

Firstly the economic effects of the declining population which is serverly increasing in the rural areas are analyzed. Development disparities (social and institutional infrastructure, basic public services and utilities, etc.) determine individual migration from rural to urban centers in the hope of a higher standard of living. Also, another important reason that decreases the number of rural residents is the declining birth rate. In this regard, the quantitative analysis is necessary to determine the link between the economic and social indicators, and captures the influence of behavior change in the demographic balance as a result of economic changes.

Keywords: sustainable development, labor market, demographic, migration flows.

JEL Classification: O11.

REL Classification: 5G, 15D, 16J.

Introduction

In the twentieth century, especially in the second part of its intensified research on the relationship between population dynamics and the evolution of the economy. Researchers from academia, but also key players in government or private companies are directly interested in direct relation to the economy generated by demographic movements.

Demographic profile of the European continent has changed significantly in the last century. Demographic changes associated with aging of the "baby-boom" and the free movement of persons within the European Union, has significantly changed the demographic structure of countries that acceded to the European construction progressively. Migration and aging have been and remain factors that influence labor market of any economy, with large long-term implications regarding the ability of pension systems to support current and future sustainable elderly pensioners, current contributors.

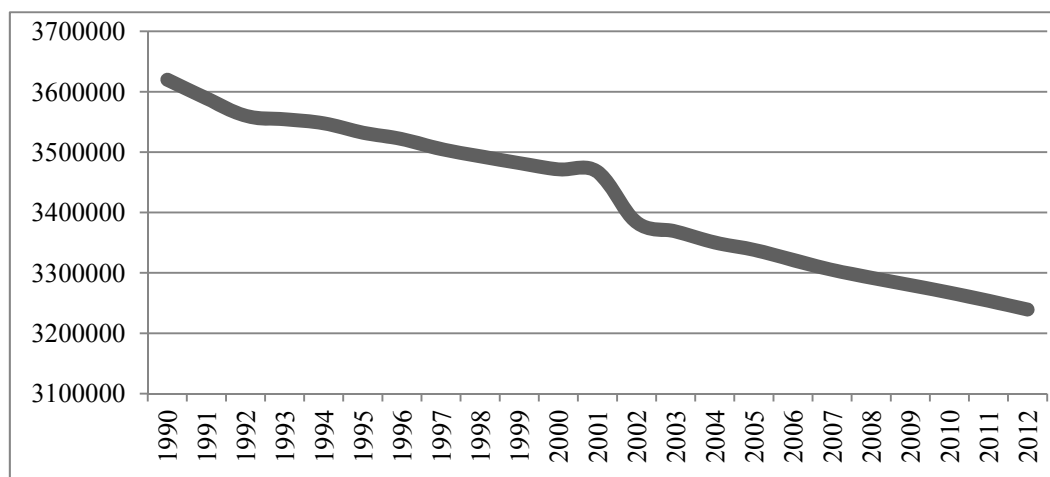
Romania not ignores this trend the European continent albeit a temporary difference of almost a century. The basis of this process was the delay differences of economic development and social policy compared to Western countries.

The causes of population decline in South-Muntenia development region

The demographic aspects highlight the risks of a territory due to the fact that people influence the development of all of its features: number, education, occupation, birth, death, aging, migration balance. All these features are interrelated and highlight the positive/negative effects that they have on the economy.

The population from the Sud-Muntenia region is facing a severe declining process due to these following factors: aging, reduces fertility and negative net migration. More serious is that population decline in rural areas where the standard of living is already low, is more pronounced. This presents itself as a lasting obstacle and very difficult to repair in regards to the integrated development of the region. Looking ahead, these phenomena will increase in intensity and generate multiple effects on society and the economy.

Graph 1. Demographic development in South-Muntenia region (number of persons)



Source: National Institute of Statistics.

Demographic decline in the South-Muntenia accelerated significantly during the transition, the population decreased by 380,549 inhabitants by 2012, according to the National Institute of Statistics. The largest decrease was recorded in the southern counties, Giurgiu and Teleorman. Considered an economic force before 1989, due to the production of grain and food products, these counties currently have a process of stagnation or even economic decline, because dozens of businesses have closed or reduced their activity with restructuring and privatization.

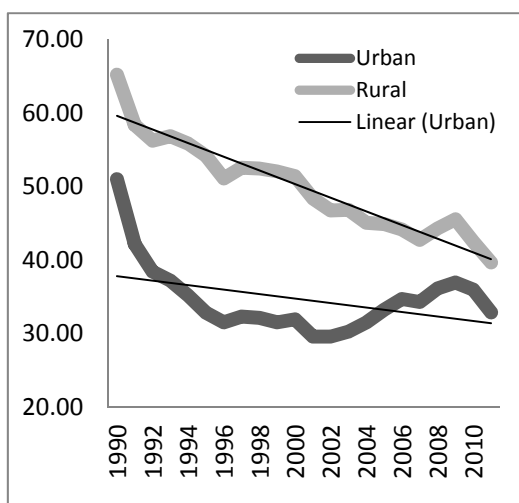
Table 1. Evolution of the number of people in South-Muntenia

	The absolute difference of the total population 1990/2012	The procentual difference of the total population 1990/2012
Arges	-41.781	-6%
Calarasi	-41.139	-12%
Dambovita	-42.125	-7%
Giurgiu	-46.320	-14%
Ialomita	-24.954	-8%
Prahova	-71.717	-8%
Teleorman	-112.513	-22%
Total	-380.549	-

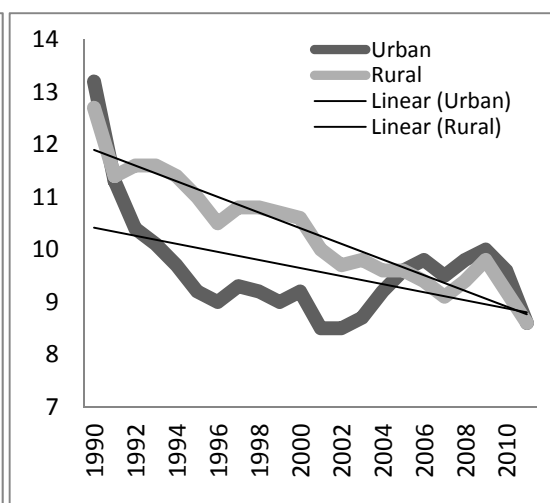
Source: National Institute of Statistics.

Economic restructuring in the poorest counties in the southern region has meant the loss of tens or hundreds of thousands of jobs, with direct effects on poverty, unemployment and the prospects for economic and social development. Under these conditions the behavior of individuals has changed the family adjustment plans, these were due as well by increasing incentives to migrate in search of jobs.

Graph 2. Fertility rates in South-Muntenia development region



Graph 3. The birth rate in South-Muntenia development region



Source: National Institute of Statistics.

- On the long term, low birth rates contribute directly to reducing the share of young people, resulting in negative implications for the economy and society. The demographic is influenced by many factors that affect both birth rate and fertility rate. It notes in this regard:
- Freedom of couples to decide when and how often they want to have children and easier access to birth control;
- Changes in the populations mentality on the establishment a family;
- Unstable economic environment which began with the transition from socialist economy to the capitalist economy and the recent financial crisis, which causes instability of employment or unemployment;
- High cost of child care and limited access of young people in their own home ;
- Empowerment of women who wanted to increasingly participate in economic activities outside their own household;
- Increasing the duration and level of education asked the labor market;
- External migration elderly procreation

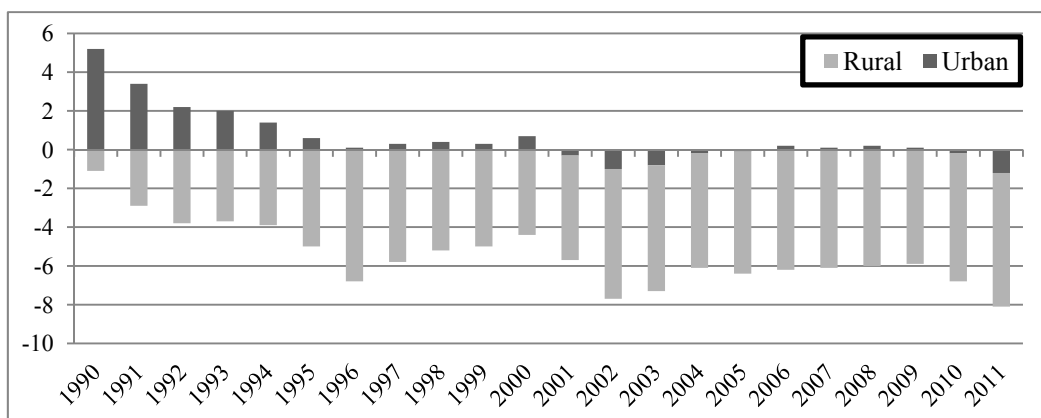
Table 2. The correlation coefficient (Pearson)

	The number of marriages	Average age of mothers at first birth	Fertility rate	Number of graduates	Unemployment rate	Disposable income (euro / person.)
The birth rate	78,4%	-76,8%	99,2%	-59,7%	-18,2%	7,5%
Fertility rate	77,5%	-73,6%	-	-57,9%	-23,6%	24,6%

Source: Author's calculations based on National Institute of Statistics and Eurostat data.

According to the analysis of socio-economic indicators, using the Pearson correlation coefficient (indicating connection direct/indirect and intensity, the two data sets), the biggest influence on the birth rate (number of births per 1000 inhabitants) and fertility rate (number of children born to every 1,000 women in childbearing age) are determined rather by changes in social behavior, and not by economic factors. The decrease of these two rates causes a negative natural balance due to the weakening ability to replenish the population. In this case, it is noted discrepancies between urban and rural areas in terms of population growth.

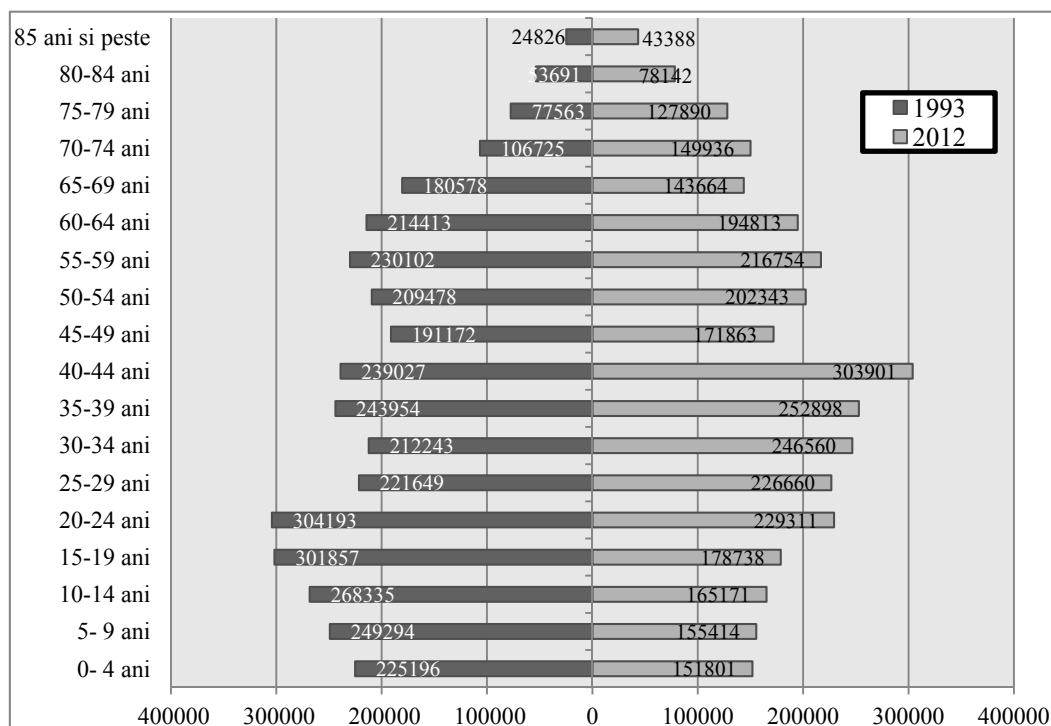
Graph 4. Natural growth rate in the South-Muntenia



Source: National Institute of Statistics.

In the rural environment the mortality rate is higher because of the lower income, the exodus of fertile population and the number of aged people. Although it is said that in the rural areas people are living a healthier lifestyle, reduced access to healthcare takes its toll on the average life expectancy of its residents.

The populations pyramid offers an image of the population distribution and its shape, reflecting the significant influence on production and income. As the middle section of the population, representing the most productive class of the labor market and supporting the maintenance costs of young and older people (adult population aged between 20 and 59 years), is bigger, the tax base and the sustainability of social systems is higher.

Graph 5. Population pyramid in the region South-Muntenia development region (number of people)

Source: National Institute of Statistics.

To have a deeper understanding of the demographic ageing, you can use various indicators consecrated in specialised literature. The aging index (ratio of the population aged over 60 years and population between ages of 0-14) shows the community's capacity for regeneration. Another relevant indicator is the percentage of elderly in the total population. This report can be used in comparative analyzes to reveal the attractiveness of rural areas than urban areas for people in different age structures.

Table 3. The degree of population aging

	Index of aging (Population 64 / population 0-14)		The share of older people in an area (population +60 / total population)	
	Urban	Rural	Urban	Rural
Regiunea Sud-Muntenia	76,1%	58,8%	18,0%	25,9%
Arges	82,8%	58,4%	16,1%	25,6%
Calarasi	89,7%	65,2%	17,3%	25,9%
Dambovita	82,8%	70,8%	16,5%	22,4%
Giurgiu	81,0%	54,0%	17,7%	27,8%
Ialomita	96,5%	64,3%	16,3%	26,5%
Prahova	62,0%	66,3%	20,7%	23,0%
Teleorman	71,6%	37,2%	18,4%	34,2%

Source: Author's calculations based on National Institute of Statistics and Eurostat data.

The degree of aging is higher in rural areas. Renewal capacity of generations, in the year 2012 in urban areas is 76.1% while in rural areas only 58.8%. The share of the elderly population is higher in rural areas than in urban areas for each county in the region.

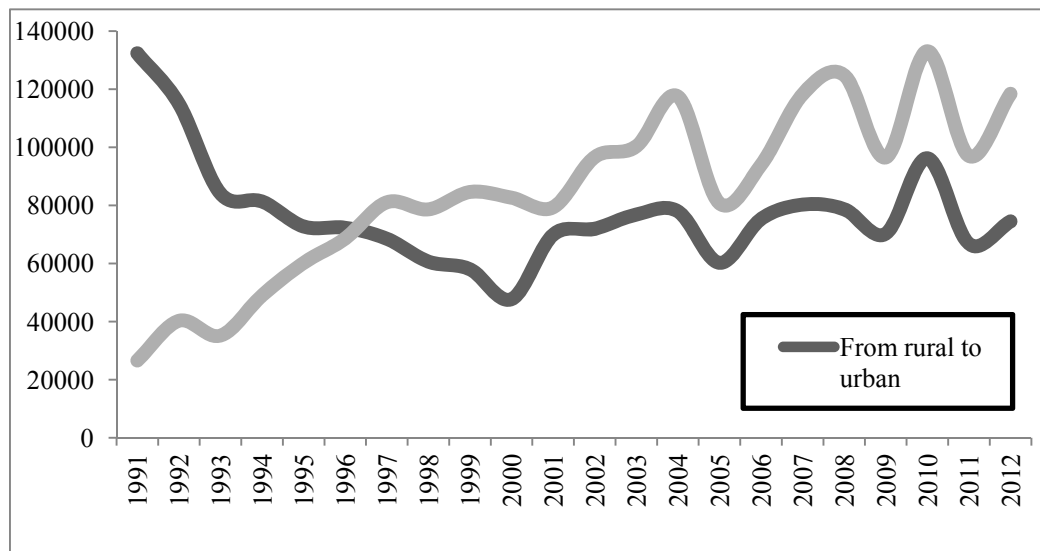
Through the movement of the 1970-1990 generations to the top of the demographic pyramid, which is considered to have a high natality rate due to the pronatality policies, the current demographic trend will produce future effects in the economic plain and specially in the social one. These persons are still active on the labor market from the Sud-Muntenia region, but starting with 2015-2020 there will be a chain withdrawal from the economical activity, this will directly affect the labor market and also the sustainability of social services systems.

Because of births and deaths, the number of the population will change, not only in the communes in the region, but also in the exodus from the territory. Due to the migration of young population searching for more attractive jobs in the urban areas, the depopulation process is a real demographic problem.

The problem concerning the rural area is the fact that the older population is replacing the younger population. In the early 90s, migrants to urban areas came from all age groups. The trend has changed in the second half of the decade, when young people began to leave the rural areas and older people migrating to the countryside. The countryside has become increasingly attractive to the population over 65 years, who are usually more vulnerable in the labor market in urban areas.

The exodus of young people is a significant demographic challenge for sustainable rural development. The regional development, as well as the youth development (in an educational, social and professional sense) depends on the sum of services available in the territory, the training opportunities, area resources and last but not least, on the opportunities from the local labor market.

Graph 6. Evolution of internal rural-urban migration flows in the region of South-Muntenia development region (number of people)

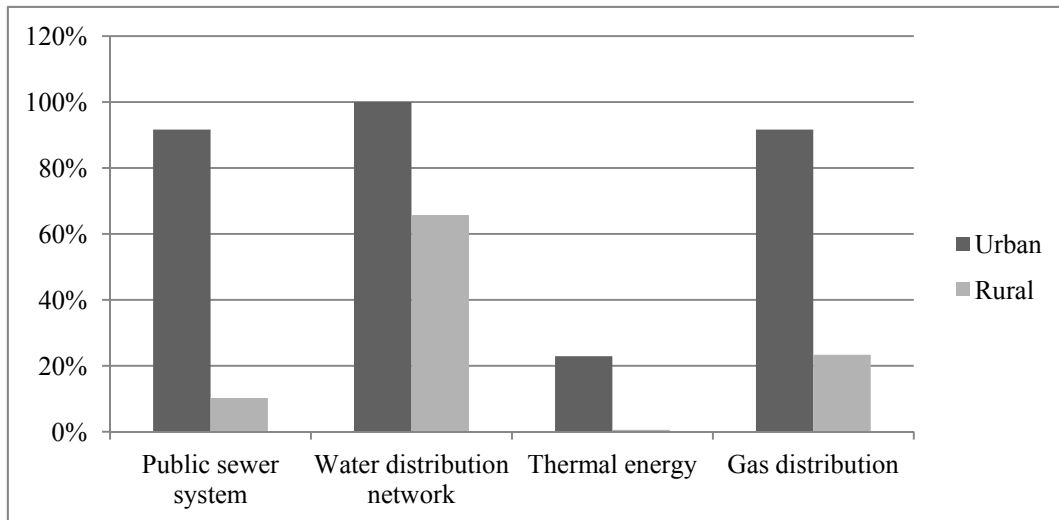


Source: National Institute of Statistics.

Although positive, the rate of internal migration - from urban to rural - can not compensate for departures from the early 1990s when there was a massive migration from rural to urban areas. The trend was reversed during the transition of the economic system, as economic restructuring and restitution of land have increased the attractiveness of rural areas. However, urban-rural migration remains insufficient to offset the decline in rural population.

Many people are attracted to the idea of living and/or working in rural areas, provided they have similar conditions of work and life style with the city. That means access to basic services and infrastructure. But in rural Romania, and implicitly the counties of Sud-Muntenia development region, the physical infrastructure strongly impacts the quality of life of residents. All services related to the development of a region ABC (transport infrastructure, the distribution of drinking water and sanitation, access to electricity and heat, public recycling services, Internet access, etc.) are still an inadequate level and affects both local and business development.

Graph 7. Share utilities in the administrative units in urban and rural South-Muntenia development region



Source: National Institute of Statistics.

Conclusions

The causes of population decline in the South-Muntenia are vast: population exodus abroad, migrating in the opposite direction to the urban youth and older people in the cities to rural areas, the birth rate and declining fertility. All these factors are accounted for in the negative demographic growth.

Individuals have the ability to make predictions about the potential for personal development and socio-economic development within their proximity. Therefore, if the present is perceived as mediocre, the future will also be imagined that way, thus inducing the self-motivating need for change that comes from within the individual.

The methods through which the population decline can be stopped or slowed down, are mending the causes underlying the decision of young, active and fertile people to leave the region. In essence, it is about improving education and health, improving physical infrastructure and diversification of the rural economy.

Attracting and retaining young people in rural areas, to ensure the optimal average age and thus having an equilibrium in the population structure, it is necessary that they should be provided with appropriate education prerequisites time, a decent lifestyle and an opportunity to apply their knowledge after graduation.

All these aspects are focused on the basic principles of the concept of sustainable rural development. In a broad sense, rural development is translated for the people of the territory into higher incomes, job security and a better standard of living. Rural development issues are complex and differ depending on the specificities of each territory separately. Most times the resolution of various deficiencies (social, economic or environmental) requires successive integrated programs that can provide new insights and long-term effects.

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Adaptability and competitiveness of Romanian aeronautical industry in the European context

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Abstract. *The aeronautical sector is one of the world leaders with an annual turnover that exceeds 100 billion euro and provides employment for about 750000 people. Also, the European aeronautical industry is facing an international competition that is investing significantly in research and development programs, as well as European environmental standards. This paper provides a synthesis of the new European policy and the European programs regarding European aeronautics industry development and its objectives. For this purpose, the main European documents were analyzed and the results of the main ongoing projects developed under the common initiative Clean Sky, were used in the aeronautical industry. This paper presents the current state of Romanian aeronautical industry and its ability to rise to the European aeronautical industry in order to achieve the EU’s objectives.*

Keywords: aeronautical industry, flight path 2050, Europe 2020, Horizon 2020, Clean Sky.

JEL Classification: L22.

REL Classification: 17E.

Introduction

Aviation sector in the European Union (EU) contributes significantly to the economies of our countries generating an annual turnover of 100 billion euro, connecting markets and people around the world. The Economic and social benefits have been immense with the efficient and fast transportation of people and goods. The growth of air traffic over the past 20 years has been spectacular, and will continue in the future, particularly in the emerging markets in the Far East. In Europe are 448 airlines and 701 commercial airports that allow free movement of people and goods across borders (A new beginning for European Aviation Research, About Acare). "Research and innovation are essential to maintain the capacity and competitiveness of Europe" (Thomas Enders, CEO EADS, Chair ACARE). On average, almost 7 billion per year for civil aeronautics are reinvested in research and development, particularly due to the fact that countries such as USA, Brazil, Canada, China, Russia, are investing in research and development programs. In this paper I provided a synthesis of the new European policy and the European programs regarding European aeronautics industry development and its objectives. For this purpose, the main European documents were analyzed and the results of the main ongoing projects developed under the common initiative Clean Sky, were used in the aeronautical industry. Also, this paper presents the current state of Romanian aeronautical industry and its ability to rise to the European aeronautical industry in order to achieve the EU's objectives.

The policies and European research programs

European vision on developing of the aviation sector had main representative ACARE - Advisory Council for Aeronautical Research in Europe (www.acare4europe.com). Members of the European Commission have invited personalities from key stakeholders of the main sectors concerned, European aviation industry and the research community to agree how aviation could better serve society's needs and maintain global leadership in aeronautics. The result was the "European Aeronautics: A Vision for 2020", which was published in January 2001. The group of personalities agreed to establish an Advisory Council for Aeronautics Research in Europe (ACARE), which includes leaders (CEO) of stakeholder organizations in aeronautics and air transport to develop and maintain a Strategic Research Agenda (SRIA) that will help to achieve the goals of Vision 2020. ACARE was launched at the Paris Air Show in June 2001 and attracted over 40 member of the organizations and associations including representations from the Member States, the Commission and stakeholders: manufacturing industry, airlines, airports, service providers, regulators, institutes research and

academia (A new beginning for European Aviation Research, About Acare). Implementation of the Strategic Research Agenda of the development and innovation through European and national public and private programs was a key element in achieving and maintaining the leading position of Europe in the aeronautical sector supporting in the same time the society needs.

Programs of aeronautics and air transport research in cooperation with the European Union, such as the Clean Sky Technology common Initiative, Common Undertaking SESAR resulted from 7th Framework Program, national programs from many Member States as well as research programs of private companies, providing important initiatives and bring benefits to aviation industry. So far, ACARE has brought a significant contribution with regard on the overall objectives of the Vision 2020.

In the same period, a number of boundary conditions have determined members to reconsider ACARE Vision 2020 objectives aim to expand to a new horizon for 2050 – Flight path 2050. Innovation in aviation is complex, capital intensive and takes time, partly driven by very stringent certification requirements, consistent with the paramount importance of safety in the sector. Aeronautical programs involve very long research and innovation cycles, are very expensive and generally involves obstacles along the way being, thereby associated with a higher than acceptable risk for the industry or financial community. Low profitability discourages private investment, making the public financial intervention being necessary. Infrastructure development is dependent on the availability of excellent research capabilities, testing and validation. Vehicles additionally require platform integration and full-scale demonstration. For this reasons, the SRIA roadmap is staggered over three times scales:

1. Short – term – to 2020.
2. Medium – term - to 2035.
3. Long – term – to 2050.

ACARE has played a central role in supporting the High Level Group for Aviation Research, convened by the European Commission that has formulated a new vision beyond 2020 that extends till 2050. In response to this new vision, a new strategic research and innovation agenda was developed by ACARE in 2012, in the same time with the establishment of the new research programs in Europe and at national level, including the “Horizon 2020”.

Horizon 2020 - is the financial instrument implementing the innovation Union, a Europe 2020 flagship initiative aimed at securing Europe’s global competitiveness. “Europe 2020” emphasizes the need of developing of some favorable conditions for research and innovation investments. The Horizon 2020 program will run in 2014-2020 period with an €80 billion budget. Within this

frame the European commission, EU Member States and European industry will invest more than €22 billion over the next seven years in innovation for sectors that deliver high quality jobs (Skyline, Horizon 2020: A step closer to the innovation union, 2013). Most of the investment will go to five public-private partnerships in innovative medicines, aeronautics, bio-based industries, fuel cells and hydrogen, and electronics. These research partnerships will boost the competitiveness of EU industry in sectors that already provide more than 4 million jobs.

Common Initiatives Technology has been created by the European Commission under Framework Program 7 (FP7) to allow the achieving of ambitious and complex research objectives. The discussion was started between the European Industry and research establishments on a new Common Technology Initiative, since 2004. At that time we talked about a possible FLIP (Flexible Long term Integrated Program). Given the fact that the U.S. has been running in a large scale demonstration programs for a long time Europe should not stay behind (Adrian De Graaff, Interview, Skyline, 2011).

Clean Sky

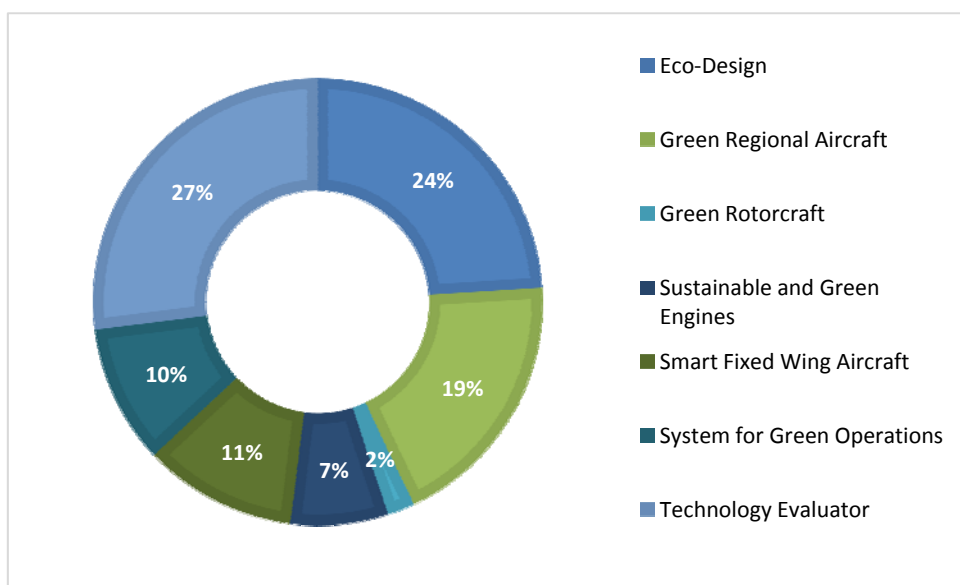
Clean Sky Partnership and program (CS) is a direct result of the ACARE vision and a success of EU policies in research and development field. Clean Sky is the most ambitious aeronautical research program ever launched in Europe. Its mission is to develop breakthrough technologies to significantly increase the environmental performances of airplanes and air transport, resulting a less noisy and more fuel efficient aircraft. Despite of a slower establishment than was hoped, Clean Sky proved to be a good thing. Partnership Clean Sky has created a program with a wide and diverse participation of all key stakeholders, including with a significant involvement of the small and medium enterprises (SMEs). 77 Members - 12 ITD leaders and 65 associates - have joined forces at the beginning of the program in 2008 to develop and mature the new and breakthrough 'clean technologies' for Air Transport (*Clean Sky a success story, 2013*). This approach sets up the solid basis for large and sustainable projects and encourages the active involvement of Partners. This makes Clean Sky the largest ever aeronautical program in Europe and one of the most promising Common Initiatives Technology. Also, was taken into account the assurance of European industry competitiveness, supported by a strong network of research and by a balanced regulatory framework in the face fierce competition from rivals part. There were established the following measures for aeronautical field in developing:

- maximization of the economic contribution of the aviation sector and the creation of added value;

- attracting the best people and talents;
- serving social and market needs for connection affordable, durable, reliable for passengers and freight transport with sufficient capacity.

A key objective of Clean Sky is to overcome the so-called “market failure” by using public support to reduce the development risk of non conventional technologies to a level that is considered to be financially viable by industry (Bertolini et al., 2012).

Activities were integrated in Clean Sky frame in six demonstrators (DTI) “Integrated Technology Demonstrators” and “Technology Evaluator”. The scheme below presents the members contribution on each technological demonstrator:



Between 2009 and 2012, 13 Calls have been evaluated. More than 550 topics have been issued so far. The average cost of a topic is 515 000 euro. Since the launch of the programme, 1223 proposals have been received, and 405 have been funded: the selection rate for applicants is around 30%. In total – Members included – more than 550 Participants take part in the Clean Sky programme. More than 470 Partners are involved in Clean Sky projects through Calls for Proposals. More than 50% of Clean Sky’s Beneficiaries are Newcomers in European funded research programmes.

A key issue of Horizon 2020 program is that for the first time EU funding for research and innovation is put together in a truly integrated program. The aim is to

obtain a greater impact on each euro spent, and to radically simplify the complex landscape of funding programs that currently exist. Implementation will be simplified and standardized, covering both funding schemes and rules. Public-private partnerships will have to play an important role in the implementation of Horizon 2020, based on experience in FP7. Also, this does not automatically mean that every common initiative will continue her mandate in the same form. Expanding the scope of the Commission's program of aviation transport in light of the new Transport White Paper regarding Flight Path 2050 for aviation will certainly need to be considered for the future proposals ITC. Clean Sky Programme 2 will maintain the basic structure of the Clean Sky program, will be based on technologies developed and the demonstrators in it, but will include three innovative aircraft demonstrator platforms (IADP).

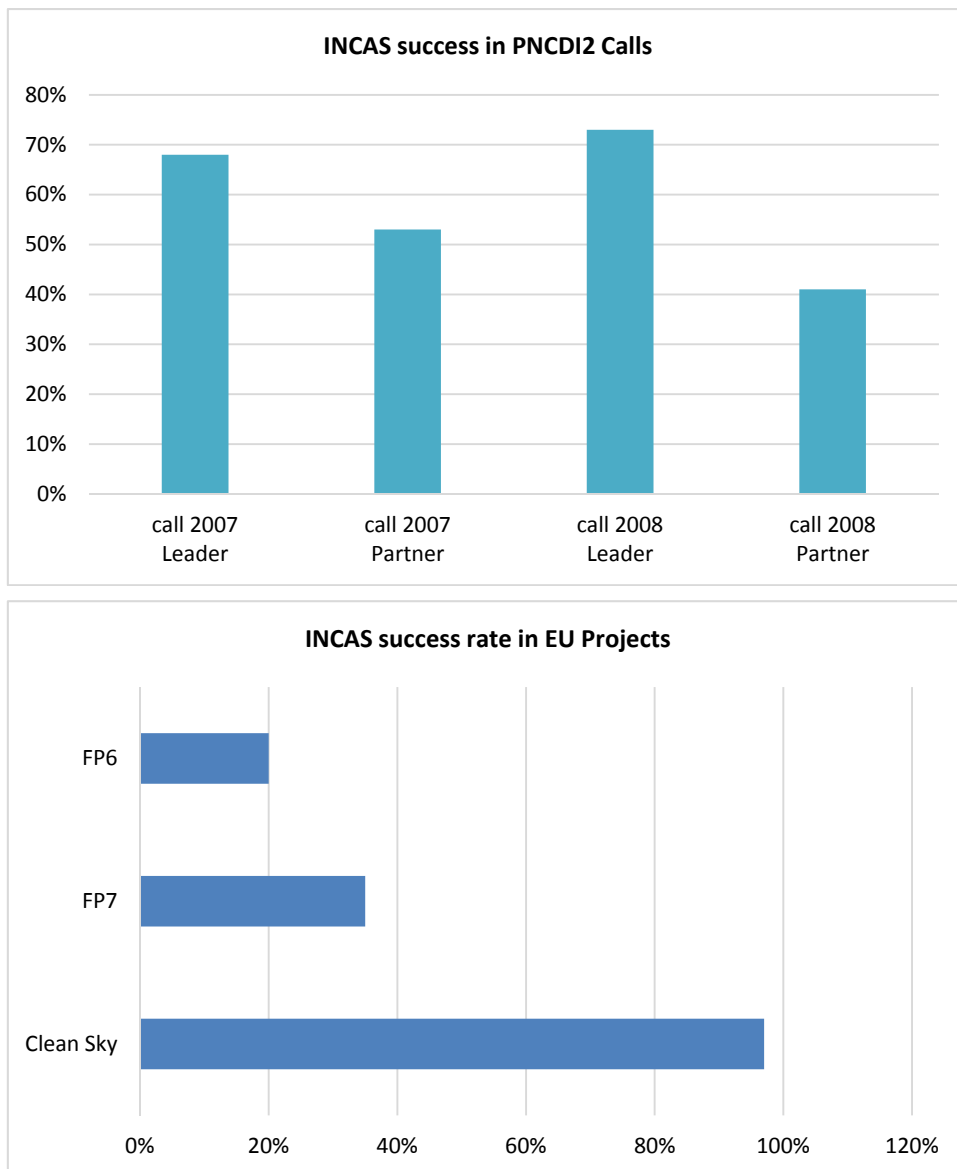
- Large Passenger Aircraft;
- Regional Aircraft;
- Fast Rotorcraft.

Regarding the current program Clean Sky will be retained as an important tool, and its role will be strengthened. This will allow a detailed assessment of the environmental benefits associated of new technologies and will measure the impact of various technological advances in relation to their specific targets.

Aviation Sector in Romania

Aeronautical sector in Romania, both at research level, but especially at industrial, take part in the main actions worldwide, both through participation in specific aviation lounges, like Le Bourget, Farnborough and ILA-Berlin, and other actions organized at EU level, such AeroDays – 2011 or Clean Sky Forum. These participations highlight the significant progress that research registered, as well as high degree of integration of the aviation industry international level. Obviously, the ultimate goal is to attract new partners and the involvement in major projects and outlook (Market Watch, 2011). Since the state budget for research and development has been limited, efforts to attract European funds for research into aviation industry and other fields have been intensified. Thus, within the European Framework Programmes were conclude research contracts and technological development with key partners, aeronautics, and DLR, ONERA, NLR, CIRA, INTA, FOI, VZLU, ILOT and developed partnerships for collaboration in future international research consortium. Romania is part of Clean Sky by Incas Cluster as a founding member in the Integrated Technology Demonstrato Smart Fixed Wing Aircraft and was also selected as a partner in CIRA Plus Group in Green Regional Aircraft Demonstrator. INCAS has accumulated massive experience and competence in recent years participation in

international activities, especially in FP6 and FP7, with the significant participation of Romania in the EU program as Clean Sky.



By participating to Clean Sky in the INCAS Cluster, Romania has a privileged position and an unique development opportunity. Consortium led by INCAS – National Institute for Aerospace Research "Elie Carafoli" brings together outstanding research capabilities offered by the Incas and STRAERO, as well as technological and industrial potential offered by ROMAERO Bucharest and

Craiova AIRCRAFT, in the context of integrating these capabilities to develop new technologies in aerospace field. Base participation is in Integrated Technology Demonstrator (ITD) called SFWA - Smart Fixed Wing Aircraft, together with EU industry represented by Airbus, SAAB, Dassault and the largest research centers in Europe, represented by DLR, ONERA and NLR. In Europe are approximately 12 countries with aeronautic potential. Romania is one of those countries. Obviously, the same thing can be said about the Czech Republic and about Poland – or else, given how currently is discussing about a certain European aeronautics industry, we can take into account that both in Romania and in Czech Republic and Poland, there is an unused potential that can be integrated at the level of a new technological initiative (Nae, Money Factory, 2010).

Given the experience that a research institute as INCAS and its tradition as an integrator of industrial activity in Romania, and also the currently existing capabilities at the main factories in aviation industry as ROMAERO, AIRCRAFT Craiova, Aerostar Bacau and Brasov IAR - to enable the formulation of a development plan for a technology demonstrator. Romania is the only country in Central and Eastern Europe that participate as a member of JTI - CS. This participation allows a particularly technology leap at the industry level, that comes in direct contact with the technologies associated to a class of aircraft destined for years 2020, and on design level, where research has the possibility to implement technologies that are on different levels of maturity. INCAS represents Romanian aeronautics industry in Program - FP7, also in the new ACARE, because Incas is the responsible entity for all major aeronautical projects from Romania, civil and military, both past and from present.

Due to Clean Sky participation, Incas managed first of all to secure a large number of position in research. Also we were in a position to create other jobs for some of the activities, where we wanted to develop new competences. At ROMAERO, a manufacturing unit, there is a large number of jobs secured as a result of activities undertaken within the partnership (Nae, Skyline, 2012).

Conclusions

Europe is entering a new era where it faces many challenges such as globalisation, the financial system in need of reform, climate change and an increasing deficit of resources. This is why the European air transport system is directly concerned by new challenges regarding its competitiveness, performance and sustainability.

The importance of research and development cooperation in the aeronautical field has grown steadily due to increasing of risks and costs of innovation complexity. Collaborations between firms appear especially in technology-based industries.

Firms that engage in innovation activities are aware of the need to establish a cooperative research and development to achieve results that can not be generated inhouse. Such collaborations are defined as partnerships for achieving a common goal, for developing new and improved products (Marini et al, 2012). International cooperation will be an important cross-cutting priority of Horizon 2020 program. Furthermore, Horizon 2020 program is fully open to international participation, specific actions with key partner countries and regions will focus on the strategic priorities of the EU. Strategic Research and Innovation Agenda represents an essential contribution for maintain and expand this excellence into the future and provide guidance on research, development and innovation necessary for vision Flightpath 2050. Air transport imposed requirements, for the years 2050, causes a massive reorganization and new partnerships in order to develop new associated technologies. A number of major initiatives at EU level provide an unique opportunity to integrate research and technological potential existing in Romania in strategic partnerships aiming a new transport system. At this moment, Romania is in the situation where has a potential market in terms of funding that can be provided through the Framework Programme 8, towards redefining its policy, and also in the national perspective - in this case - to highlight the unused capabilities and to support them through the use of available funds in Romania and of the other countries in the EU perspective of integration.

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Assessment of key determinants for economic growth in Pakistan

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Abstract. *This study actually attempts to investigate economic growth determinants in case of Pakistan for the period of 1980 to 2009. The autoregressive distributed lag (ARDL) and error correction model (ECM) have employed to investigate the long run and short run parameters between economic growth and its major determinants. Prior the stated approaches has confirmed through ADF test that all of the variables are integrated first order i.e. $I(1)$. The results from ARDL show that there is co-integration between economic growth and explanatory variables that are real domestic investment, foreign investment, export, remittances and literacy rate. The estimated long run elasticities of economic growth with respect to domestic investment, foreign investment, exports, remittances and literacy rate were found as, 0.121, 0.026, 0.020, 0.065 and 0.224. Further, results depict that the error coefficient term is -0.67 and significant, suggest 67 percent adjustment in a year.*

Keywords: economic growth, Time Series Data, ARDL, Pakistan.

JEL Classification: E21.

REL Classification: 8E.

I. Introduction

In literature, the per capita income is commonly applicable economic growth representative. There should be no doubt that a progressive development of economic indicators promotes the economic growth of a country. Economic indicators are too many, for instance saving, domestic investment, foreign investment, inflation, real export, real imports, real exchange rate, foreign remittances, factor productivity, and literacy rate etc. However, this study chose key growth indicators that are gross fixed capital formation/real domestic investment, literacy rate/human capital, foreign remittances, real foreign direct investment, and real exports.

Since, investment is considered the life blood for economic growth of a country. Investment leads to create employment opportunities, increase the production in goods and services and then accelerate the national income. The educational skill has its own importance to promote the economic growth. According to endogenous growth models, human capital is more important than physical for economic growth acceleration. For developing country like Pakistan, foreign investment must be considered in growth model because foreign investment can easily bridge the saving investment gap in case of country domestic capital shortage. Worker remittances cannot be neglected, as from the year 1980 worker remittances contributes a large share of Pakistan's foreign exchange reserves. Finally, exports are necessary for favoring trade balance, increasing foreign exchange reserves, and for open economy is the engine of growth.

Partially, these key variables are modeled in fundamental growth equations to guess for their role in Pakistan's economic growth. For instance Iqbal and Zahid (1998) and Azam and Ahmed (2010), stress upon on human capital in economic development of the country. In later study also suggests that expenditure on education and health is imperative to improve the national human capital and hence economic growth. Din et al. (2003) provides evidence of long run equilibrium relationship between trade openness and economic growth of the country. Remittances are being modeled in Pakistan economic growth model by Ali (2011).

Thus, this study stress upon on comprehensive analysis, offer new and relatively inclusive evidence regarding the economic growth and its major determinants specific to Pakistan. For the purpose, study is completed as following, after introduction Section-II gives an overview of literature review, Section-III discusses model and methodology, Section-IV summarize data sources, Section-V represents empirical findings of the study and the last Section-VI concludes the study.

II. Literature review

The role of the economic indicators affecting economic development has been long debated in economic literature. Since the publication of Adam Smith's "Wealth of Nations" in 1776 to the present era economists contributed a lot to economic development and its determinants. With the passage of time, economists have specified various factors that affecting economic development of a country. Studies of diverse nature have investigated the economic growth determinants, regardless of different conceptual and methodological point of views. However, no discussion has reached to the consensus to find out that which dimensions of the economic indicators matter most.

Extensive studies have inquired into the factors that determine economic growth. The neoclassical growth models highlight that savings and investment ratio is an important determinant of short run economic growth and technological progress in the long run Solow (1956). Further, Romer (1986) and Lucas (1988) developed in their studies endogenous growth models where assumed that technology is endogenous rather than exogenous and human capital is basic to economic growth.

Taking data for the period of 1960-1985, Barro (1991) examined for the impact of physical stock and human capital on economic growth of 98 countries. He related the real per capita GDP to human capital and other potential determining variables. The author found that the output was positively and significantly determined by human capital, as proxied by both primary and secondary education enrolment. Another study of Graff (1995) tested the role of human capital in explaining growth rate of some 114 countries taking the data from 1965 to 1985. Generally, found that the accumulation of physical capital, human capital as well as technological progress all to be the significant determinants of the economic growth process. Jenkins (1995) for the UK economy, uses annual data from 1971-1992 and in results confirms the finding that the investment in human capital instigates to increase productivity. Similarly, Asteriou and Agiomirgianakis (2001) for the Greece economy explore the relationship between formal education and gross domestic product. In results finds the significant relationship between the two and further depicts that the causality runs through education variables to economic growth.

Empirical literatures are innumerable that have stressed upon the relationship between remittances and economic growth. Among, too many have admitted the facts that economic growth and remittances are positively related, e.g. Stark and Lucas (1988), Taylor (1992) and Faini (2002). The Jongwanich (2007) supports mix results about the impact of worker's remittances on economic growth and on poverty reduction. In results express that through the increase of poor's' income

remittances on poverty alleviation has a significant impact in developing economies.

Lucas (2005) cites numerous case studies, where have shown that in countries like, India, Morocco and Pakistan remittances had helped to speed up investment. Glytsos (2002) for seven Mediterranean countries has modeled the indirect and direct effects of remittances on incomes and hence on investment, and consequently discovered that investment promoted with remittances in total six out of the seven countries. For transition economies of Eastern Europe using the data of 1990-1999, León-Ledesma and Piracha (2004) findings shows that remittances had influenced positively employment and productivity either directly or indirectly through its impact on investment. Fayissa and Nsiah (2010) used an unbalanced panel data spanning from 1980 to 2005 for the aggregate impact of remittances on the economic growth of eighteen Latin American Countries and found that remittances have a positive and significant effect on their economic development.

The links of foreign direct investment and economic growth have been presented in many empirical studies. Among many, few reviewed here for understanding the association between two variables. Falki (2009) and Gudaro et al. (2010) have conducted studies to investigate for the impact of FDI on economic growth in Pakistan. Former, based the analysis on the theory of endogenous growth and a regression analysis, in results support that FDI had a negative and significant effect on the economic growth of the country. The later study for the period of 1981 to 2010, investigate for the positive and significant impact of FDI on gross domestic product of the country.

Similarly, Ahmad et al. (2012) in their study using co-integration and error correction techniques investigates for the relationship between FDI and economic growth. Model of the study takes gross domestic product dependent while FDI, capital formation and labour force as explanatory variables. In results, suggest that FDI and economic growth of the country are positively related in short as well as long run.

Considering the issue, Adam and Tweneboah (2009), conducted study for Ghana and concluded that FDI in Ghana had a positive and significant impact the economic growth of the country. Moreover, Abbas et al. (2011) examined for the influence of FDI on the GDP's of SAARC member nations. They employed multiple regression models using data for the period of 2001 to 2010. They found that the respective models in these countries supported a positive relationship between FDI and gross domestic product. Abdul Khaliq (2007) study too support for the positive impact of FDI on economic growth in case of Indonesia from 1997 to 2006.

III. Model and methodology

Model of the Study: Broadly, in this study a model of growth determinants was developed to execute the long run analysis for Pakistan's economic growth and its various determinants. Based on studies of Iqbal and Zahid (1998), Shahbaz et al. (2008), Afzal (2009) and Zaman et al. (2010) uses the below model expressing the relationship between economic growth and various economic variables having impact on economic growth:

$$\begin{aligned} \ln RYPC = & \beta_0 + \beta_1 \ln RGFCF + \beta_2 \ln Lit + \beta_3 \ln Rem + \beta_4 \ln RFDI + \\ & + \beta_5 \ln RX + e \end{aligned} \quad (1)$$

Where,

ln = Natural Logarithm

RYPC = Real Gross Domestic Product per Capita,

RGFCF = Real Gross Fixed Capital Formation,

Lit = Literacy Rate,

Rem = Remittances,

RFDI = Real Foreign Direct Investment,

RX = Real Export,

Moreover, β_1 , β_2 , β_3 , β_4 and β_5 are coefficients of the independent variables and their expected sign are assumed as, $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$ and $\beta_5 > 0$. The estimate of β_0 (constant) may be either positive or negative. The last term e is white noise error term.

Methodology: Based on the model, the purpose of the study is to provide the long run as well as short run estimates. The co-integration provides a convenient methodology for this purpose. Though the techniques are multi for co-integration analysis but the ARDL is preferred here because of its priority over the co-integration approaches used by Engle and Granger (1987) and Johansen and Juselius (1990). Particularly, the ARDL or Bound test is more appropriate for small sample study and the test can be run irrespective of the pre test of unit roots, where the technique is originally developed in Pesaran et al. (2001).

Using ARDL, initially estimate the Unrestricted Error Correction Model and then use the Wald Test to find out either there is co-integration among variables in model or not. For equation (1), the error correction representation of ARDL model then can be written as follows:

$$\begin{aligned}
\Delta \ln RYPC_t = C &+ \sum_{i=1}^m \alpha_i \Delta \ln RYPC_{t-i} + \sum_{i=0}^n \beta_i \Delta \ln RGFCF_{t-i} + \sum_{i=0}^o \gamma_i \Delta \ln Lit_{t-i} \\
&+ \sum_{i=0}^p \theta_i \Delta \ln Rem_{t-i} + \sum_{i=0}^q \sigma_i \Delta \ln RFDI_{t-i} + \sum_{i=0}^r \varphi_i \Delta \ln RX_{t-i} \\
&+ \delta_1 \ln RYPC_{t-1} + \delta_2 \ln RGFCF_{t-1} + \delta_3 \ln Lit_{t-1} + \delta_4 \ln Rem_{t-1} \\
&+ \delta_5 \ln RFDI_{t-1} + \delta_6 \ln RX_{t-1} + \mu_t \quad (2)
\end{aligned}$$

Accordingly, for the presence of co-integration tested the null and alternative hypothesis as:

$$H_0 = \sigma_1 = \sigma_2 = \sigma_3 = \sigma_4 = \sigma_5 = \sigma_6 = 0 \quad \text{No-Cointegration}$$

$$H_0 = \sigma_1 = \sigma_2 = \sigma_3 = \sigma_4 = \sigma_5 = \sigma_6 \neq 0 \quad \text{Co-integration}$$

Note that the study of Pesaran et al. (2001) provides upper and lower bound set of critical values. We have to calculate the Wald-test or F-statistics for the coefficients of level lagged variables in equation (2). If the computed F-statistics exceeds the upper bound value as given by Pesaran et al. (2001), then it suggests the acceptance of alternative hypothesis of co-integration.

Once the presence of co-integration between dependent and independent variables is confirmed then we move to estimate the long run coefficients of growth model and the associated ARDL of error correction model for short run coefficients. In both the long run and short run model the lag length are specified on the basis of Schwartz Bayesian Criteria. However for convenience in earliest, test of order for each variable is conducted by using Augmented Dickey- fuller (ADF) test to check the stationarity. ARDL framework does not require the pre-testing of variables, but the unit root test can help to determine whether ARDL model should be used or not. Econometric packages Microfit and EViews are used for estimation purpose and to check unit root testing for stationarity.

IV. Data and data source

This research study takes six variables to develop growth model for Pakistan. GDP per capita is the dependent variable as was also used by Shahbaz et al. (2008) and many others. Gross fixed capital formation, literacy rate, remittances, FDI and exports are the determinants of economic growth as used partially by Iqbal and Zahid (1998), Shahbaz et al. (2008), Afzal (2009) and Zaman et al.

(2010). GDP per capita, gross fixed capital formation (GFCF), foreign direct investment (FDI) and exports (X) were converted into real form using GDP deflators. Literacy is taken in its growth rate form and remittances in million. In order to make model and to test the hypothesis the study requires assembling of data related to the concern indicators and economic growth. For this purpose, secondary statistical data sources are utilized. The data were collected from Pakistan Economic Survey various issues and Hand Book of Statistics, October 2010, see last two references. The data is annual and spans the period of 1980 to 2009.

IV. Empirical results

Unit Root Test Results: Unit root is tested by ADF test to check the stationarity of the variables in the specified model. The results of the tests are given in the Table 1 at level and in Table 2 at first difference.

In table 1 the results of Unit Root test are presented in the form of t-tests values along with their p-values for all six variables of the model. All the results of ADF tests are given at level. These are further classified into three categories. These are the results with intercept, with intercept and trend and with none. The results show that all variables are non-stationary at level.

After testing unit roots at level, again it is tested at first difference. These results are given in Table 2. The results in Table 2 are again classified into three categories. In the first category the results are given in the form of the values of t-test along with their p-values. All the variables are stationary with intercept. The real gross fixed capital formation is stationary at 5% and all the other five variables are stationary at 1%. In the second category the results of all the variables are given with intercept and trend. All the five variables are stationary at 1% except real GFCF which is non stationary. In the third category the results of t-test along with their p-values are given with none i.e. neither with intercept nor trend. Real GDP per capita is stationary at five percent and all the others variables are at one percent except the literacy rate which is non-stationary. Conclusively, we can say that all the variables are integrated to order of one i.e. I (1).

Table 1. Augmented Dickey Fuller Test Results at Level

Variables	With Intercept		With Intercept & Trend		None	
	T-test	p-values	T-test	p-values	T-test	p-values
<i>lnRGDPPC</i>	-0.1442	0.935	-1.495	0.8080	8.006	1.0000
<i>lnRGFCF</i>	-1.4073	0.5644	-3.1512	0.1146	2.394	0.9947
<i>lnLIT</i>	-1.663	0.4354	0.807	0.9996	0.8836	0.8939
<i>lnREMIT</i>	0.799	0.9923	-0.560	0.9740	3.209	0.999
<i>lnRFDI</i>	-1.063	0.7163	-2.855	0.1906	0.992	0.9109
<i>lnRX</i>	0.139	0.9753	-1.928	0.614	2.678	0.9973

Table 2. Augmented Dickey Fuller Test Results at First Difference

Variables	With Intercept		With Intercept & Trend		None	
	T-test	p-values	T-test	p-values	T-test	p-values
lnRGDPPC	-4.505*	0.0013	-4.437*	0.007	-2.221**	0.0277
lnRGFCF	-2.9986**	0.0473	-2.9051	0.1760	-2.7609*	0.0076
lnLIT	-3.860*	0.0066	-4.877*	0.0028	-0.858	0.3349
lnREMIT	-4.267*	0.0024	-4.582*	0.0055	-3.569*	0.0009
lnRFDI	-5.348*	0.0002	-5.154*	0.0014	-4.868*	0.0000
lnRX	-5.412*	0.0001	-5.409*	0.0008	-4.154*	0.0002

Note: * and ** denotes 1 percent and 5 percent level.

Co-integration/Long Run Analysis: In selected long run ARDL (2, 0, 0, 1, 1, 0) model, the maximum lag length is set out by using Schwarz Bayesian Criteria (SBC). The Schwarz Bayesian Criteria for the selected long run ARDL is 80.12 minimum as compared to any other estimated ARDLs. The normalized long run coefficient estimates are reported in Table 3:

Table 3. Estimated Long Run Coefficients of Economic Growth Using the ARDL Approach

Selected Model is ARDL (2, 0, 0, 1, 1, 0) based on Schwarz Bayesian Criterion			
Dependent Variable = lnRGDPPC			
Regressors (Log)	Coefficients	Standard Errors	T-ratio (p-values)
Constant	7.2157	0.1493	48.321 (0.000)*
RGFCF	0.1212	0.0342	3.535 (0.002)*
LITER	0.2241	0.0510	4.394 (0.000)*
REMIT	0.0650	0.0097	6.710 (0.000)*
RFDI	0.0260	0.0103	2.531 (0.021)**
RX	0.0203	0.0298	0.681 (0.504)

Note: * & ** represents 1 and 5 percent level of significant respectively

In Table 3, the coefficients of the independent variables show the percentage change in the dependent variable due to change in independent variables. One percent change in real gross fixed capital formation has to change real GDP of the country positively by 0.1212 percent. The literacy rate has to increase economic growth by 0.224 percent. The results also show positive relation between economic growth and foreign investment i.e. FDI. The coefficient of FDI is 0.026. Concerning the effects of real exports on economic growth, there is positive and insignificant relation between the two. All of the estimated coefficients have positive signs, which showing that all the five independent variables (real gross fixed capital formation, literacy rate, remittances, real foreign direct investment and real exports) positively effects the dependent variable (real GDP per capita) in long run.

Error Correction Term: Next to the long run coefficient estimates, the above selected ARDL (2, 0, 0, 1, 1, 0) is used to get the error correction term (ECT). In final step to estimate for the coefficient of error correction term as well as short run effects of the variables, here must need to develop Error Correction Model

(ECM). In this study based on SBC (Schwarz Bayesian Criteria) lag selection criterion, the selected ECM becomes as given in equation 3:

$$\Delta \ln RYPC_t = C + \alpha_1 \Delta \ln RYPC_{t-1} + \beta_1 \Delta \ln RGFCF_{t-1} + \beta_2 \Delta \ln Lit_{t-1} + \beta_3 \Delta \ln Rem_{t-1} + \beta_4 \Delta \ln RFDI_{t-1} + \beta_5 \Delta \ln RX_{t-1} + \delta ECT_{t-1} \quad (3)$$

Table 4 provides results for equation 3.

Table 4. Error Correction Representation of the Selected ARDL

Error Correction Representation for the Selected Short Run ARDL (2, 0, 0, 1, 1, 0)			
Dependent Variable = $\Delta \ln RGDP$			
Regressors	Coefficients	Standard Errors	T-ratio (p-values)
Constant	4.8397	0.6617	7.3142 (0.000)*
$\Delta \ln RGDP$	-0.3266	0.1514	-2.1568 (0.043)**
$\Delta \ln RGFCF$	0.0813	0.0245	3.4039 (0.003)*
$\Delta \ln LITER$	0.1503	0.0442	3.4039 (0.003)*
$\Delta \ln REMIT$	-0.0013	0.0103	-0.1284 (0.899)
$\Delta \ln RFDI$	-0.0070	0.0067	-1.0396 (0.311)
$\Delta \ln RX$	0.0136	0.0198	0.6854 (0.501)
ECT_{t-1}	-0.6707	0.0888	-7.5508 (0.000)*
R-Squared	0.81	Adjusted R-Squared	0.72
AIC	86.787	SBC	80.126
F-Stat	11.059 (0.000)	DW-statistic	2.3795

Note: Δ denotes difference and \ln natural logarithm. * and ** represent 1 and 5 percent level of significance.

In Table 4 real gross fixed capital formation, literacy rate and real exports are positively related with real GDP per capita, while remittances and real FDI have negative relationship with the dependent variable real GDP per capita in short run. T-ratios in the table interpret that real GDP per capita is significant at 5%, real gross fixed capital formation and literacy rate are significant at 1% level of significance, while remittances, real FDI and real exports are insignificant. The value of error correction term (ECT) is -0.67072 in between 0 and -1 showing valid speed of adjustment/conversion to equilibrium. R^2 is the coefficient of determination and defines the proportion of total variations in dependent variable. If $R^2 = 1$ shows the perfect variation and if $R^2 = 0$ means that the independent variable has no explanatory power on the dependent variable. In the above ECM model the given value of R^2 is 0.81 explaining 81% goodness of fit that is the model properly explains the real GDP per capita of Pakistan. Similarly, the value of adjusted $R^2 = 0.72$ explains 72% goodness of fit. The value of F-statistic is 11.059 with its Probability (0.0000) interprets that the overall model is fit.

VI. Conclusion

The present study attempts to investigate the relationship between various macroeconomic indicators and economic growth in Pakistan during the period of 1980-2009. It covers six different economic variables, which are real GDP per capita, real gross fixed capital formation, literacy rate, remittances, real foreign direct investment and real exports. Where real GDP per capita is dependent variable and real gross fixed capital formation, literacy rate, remittances, real foreign direct investment and real exports are independent variables. The aim is to measure for the long run effects of enlisted variables on Pakistan economic growth. Moreover, it also explains short run elasticity estimates and speed of adjustment.

Prior to the ARDL test analysis, the ADF test was carried out to check for stationary and non stationary level of the variables. After finding at level all the variables are non-stationary and become stationary at first difference. In another words, at level variables are of I (1) order and at first difference are of I (0) order. The unit root results are common in different models of ADF test. As for as have shown in table (1) and (2). ARDL and Error Correction models (ECM) have employed to specify the long run and short run relationship among the variables. Whereas in long run all of the variables coefficients are significant instead of real export. The coefficients have expected signs. Domestic investment and literacy rate effects are 12 percent and 22 percent respectively in the long run. Both variable coefficients are statistically significant at 1 percent level. Similarly, the effects of FDI (significant at 5 percent) and remittances (significant at 1 percent) are too positive on country economic growth but lesser than that of domestic investment and literacy rate effects.

Finally, the error correction model has estimated to capture the short run effects of domestic investment, literacy rate, foreign investment and remittances on economic growth, where have only domestic investment and literacy rate emerged as importance determinants of economic growth model for Pakistan. The ECM for selected ARDL of lag order 2 expresses that real gross fixed capital formation, literacy rate and real exports are positively related with real GDP per capita, while remittances and real FDI have negative relationship with the dependent variable. T-ratios interpret that real GDP per capita, real gross fixed capital formation and literacy rate are significant, while remittances, real FDI and real exports are insignificant in short run. In the analysis real gross fixed capital formation and literacy rate appear the two prominent indicators of the economic growth of Pakistan as both are significant and have positive relationship with real GDP per capita in long run as well as in short run. The value of error correction term (ECT) is in between 0-1 and significant, endorse the co-integration among variables.

Moreover, indicates that deviation occurs in short run return to its long run equilibrium with speed of 67 percent.

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The public debt management and the political marketing in the context of negative economic fluctuations on a global level

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Abstract. *The economic crisis which affects a globally states economy is capable to change the economic system based on continued economic growth. Thus, the economic shocks which take place in the economy, could affect the activities of individuals in different periods of time. The mix of economic measures must create a healthy economic development. The institutional regulation represents a fundamental element to prevent the economic crises. The article aims to present the influences that have caused the economic crisis on the political marketing strategy and the public debt management. The cyclicity of the global economy reveals that the economy is adjusted by economic crisis that take place at different time intervals. The prevention of major economic slippages represents a way of guidance policies which having been performed at the state level. Creating a solid financial and economic system, based on the supply and demand freedom must lead to a stable economic environment, which is favorable to economic growth.*

Keywords: economic fluctuations, the economic crisis, political marketing, public debt, economic development.

JEL Classification: E20, E32, F01, F62, F63, H70, H77, M31, M38.

REL Classification: 10B, 18B, 13 F, 14G.

Introduction

The political marketing strategy has been changed over the period of economic crisis as a result of the turbulences arising from symmetrical and asymmetrical economic shocks from economic and financial market. The economic crisis which broke out in 2008 imposed a particular economic conduct. It has moved from the economic and financial deregulation to the economic and financial regulation and building a more secure economic environment. The economic growth must be achieved in a healthy way by lowering the unemployment, increasing investments in the economy, GDP growth and GDP per capita growth. Thus, the policy makers must realize a proactive measure of economic growth. The political marketing is achieved by adapting the communication strategy to the needs which individuals have. The feedback should be a fast one, through which the political parties and the candidates should be able to express the political ideas in a proactively way.

The global economy, through onset of the economic and financial crisis in 2008, revealed which is characterized by a new paradigm of market, governed by supply and demand. The globalization is the new economic and political order of the world (Dinu and Socol, 2004, pp. 28-36). The autoregulation of a global economic system is achieved by economic crisis, which occur at different periods in time. Treating the panacea in a definitively way of an economic crisis does not exist, but it has created economic rescue plans both in the USA, TARP (Troubled Asset Relief Program), as well in Europe, the Europe 2020 plan. Economists such as Nouriel Roubini, George Soros, Joseph E. Stiglitz, achieved a broad overview of the current economic environment, which is influenced by economic instability, as a science of life. The reinvigoration of a global economic and financial system located in an identity crisis is necessary by imposing a regulation, which aimed at sustainable economic growth over time. Thus, it is necessary to achieve a healthy economic development of the current economic environment. The reconstruction of a sense for confidence in the economy is a key factor in creating an economic system which promotes economic growth.

The international economic context, dominated by economic uncertainty after the outbreak of the economic crisis has imposed a mechanism of sustained and healthy economic recovery. The political marketing in the actual period must to cope some challenges which have never faced before. If after the end of Great Depression of the years 1929-1933, came to power the extremist parties in Europe (the Marxists in Italy, the Nazis in Germany and the Communists in Russia), after the contemporary economic crisis has achieved a regulation of economic and financial market gradually. The article is composed of five chapters: 1) the negative influence of economic shocks on the global economy; 2) the public debt

management in the context of economic crisis; 3) the political marketing in the context of economic crisis; 4) the economic recovery policies and their influence on the activities of individuals; 5) the influence of economic cycles on political elections.

1) The negative influence of economic shocks on the global economy

The Great Depression which took place in 1929-1933 was the greatest economic and financial crisis which the humanity has lived up to that moment. The economic crisis that broke out in 2008 is an economic autoregulation which the world had to confront. Breaking the speculative bubbles in a real estate and a financial field has generated an economic system characterized by uncertainty. The globalization process created a strong interdependence between states. For this reason, the phenomenon of contagion has contaminated the global economy with instability and great financial problems. If till the down of Iron Curtain existed a bipolar economy, today there is an unipolar system. Thus, if in the past the global economy was headed by the USA and the USSR, at present was developed an economic mechanism focused on continuous economic growth of the United States of America. The world economic system is centered around a dominant state, which through the political, economic and military power governs an interdependent world. The American economic model, based on the inclusion of the economic growth and political freedom, but excludes the social cohesion, has become vulnerable, with the outbreak of the economic crisis. The global economic context has made as the democratic value system imposed by the USA to be put to difficult trials. Thus, it has reached to a situation of reducing all economic and financial activities (Dinu and Socol, 2004, pp. 24-40).

If the economic crisis of the years 1929-1933 was a crisis of overproduction, at present the global economy is facing with a crisis of speculative bubbles breaking. Also, the contemporary economic crisis has propagated from the center of the global economy (the USA) to the periphery of countries with developing economies. Since the beginning of 2007 in the US, has produced a crisis of mistrust and denial of reality, as a result of financial deregulation, which led to the creation of an economic environment characterized by a freezing market supply and demand. The unhealthy swelling of prices in asset markets has generated a strong sense of panic. This feeling of distrust has led to the phenomenon of withdrawing money from banks and financial institutions. If the Great Depression has favored the occurrence of the Second World War, the current financial and economic crisis can generate economic shocks which the hardly mankind will correct in the future. The negative economic fluctuations has led to a self-regulating of the economy, as a science of life (Roubini et al., 2010, pp. 33-43).

The world economy is currently in constant motion due to the dynamics of the financial transactions which take place. The globalization process made out of economic crisis an entity for correcting the unhealthy economic increases of the past. Any economic decline should end in a certain period of time. The problem of the economic crisis is the fact that it may appear anytime and can propagate in the economy through a breaking of speculative bubbles. It functions like a circular system of creating shocks in the economy. For this reason, policymakers should take appropriate steps to proactively prevent the occurrence of any economic crisis. In 2007, the US real estate bubble burst. The credit has dropped dramatically and in this way, has dropped the population consumption. The high cost of the credit has caused a decrease in stocks and a reduction of GDP (Stiglitz, 2010, pp. 81-88).

Today the global economy has reached a state of high vulnerability as a result of the financial mistakes which have been made in the past. Both the EU as well as the US must carefully manage a public debt. The global economic context has created an economic environment which can self-regulate through major economic crises in the future. The economic market regulation trend must be made gradually, to actively attenuate any possible shocks that may appear over time. Policy makers must shape an economic system based on continued economic growth and to get well a disrupted mechanism of deregulation.

2) The public debt management in the context of economic crisis

In 2008, broke out a large-scale economic crisis which swept both the USA as well as the entire globe. Thus, a large number of people had lost their homes and jobs. The uncertainty has seized the global economy. Financial and economic crisis, which has erupted in the USA, has affected worldwide through the contagion phenomenon. Thus, in China more than 20 million of people have lost their jobs, and several tens of millions of people reached poverty. The excessive deregulation and financial engineering too sophisticated have affected at global level the economic environment. It was necessary an effective risk management and public debt to create an economic environment conducive to welfare (Stiglitz, 2010, pp. 15-26).

The needs that it has the world states must be met by an efficient management of public debt. The public debt represents all financial obligations achieved both directly as well as indirectly by the central and local institutions (Moșteanu and Câmpănu, 2008, pp. 7-15). At the end of the second quarter in 2013 Romania registered a public debt of 38.6% of GDP. The euro area registered an average public debt of 93.4% of GDP. Thus, it highlights the fact that Romania has a low level of debt in comparison with other European Union member states. The

efficient management at the level of policy makers has to create a public debt policy to promote the economic growth (<http://www.dailybusiness.ro>). Construction of a state budget with sufficient income and sustainable expenses should be an objective which must be achieved for building a high-return economic market.

It reveals that there are three poles which must be attained by the public debt to create a high efficiency in the economy: the prudence (the loans must be performed prudently so as not to create further imbalances in the economy), the fluidity (a speed of the economy financing) and the flexibility (the use of public debt in business sectors where funding is needed).

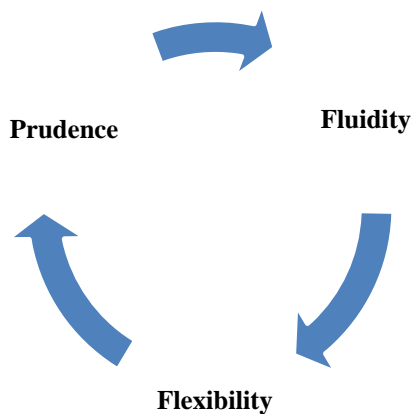


Figure 1. *The trinomial formed from efficiency poles of public debt management*

The flawed management of public debt has led to the onset or worsening of strong economic crisis at the global level. Thus, the public debt problem has created great economic disequilibrium in the 80s. This was due as a result of the chain crisis outbreak caused by inefficient management of the payments to cover the external public debt (Calin, 2006, pp. 17-23). The concept that this time is different was a wrong due to the fact that the economic crisis has hit all the economic sectors and all countries around the globe. The interdependence between states was characterized by creating a chain of crisis which culminated with the sovereign debt crisis in Greece. The old rules of economic problems evaluation no longer applies due to the fact that the countries with big public debts were more vulnerable to the present economic and financial crisis (Rogoff and Reinhart, 2012, pp. 41-48).

3) The political marketing in the context of economic crisis

The political marketing represents the method by which candidates show their problem solving capabilities and needs which intervenes in lives of individuals. The political marketing campaigns are based on effective communication of information which the target audience needs. Promoting the political image of the candidate must be achieved by submission of accurate and complete information. The useful information for individuals who have to choose between offers election at some point in time is fundamental for the construction of a good image which would give efficiency in the electoral process. The analysis and synthesis of information in the economic crisis had to be concentrated on the effect of meeting the needs that individuals have in a certain period of time. The political marketing is based on the organizing, enhancing and promoting of the concepts necessary for fulfilling the policy objectives. Thus, political information manifested by facts and concrete data regarding the economic development must be rigorously managed to earn an image capital as high (Cristescu, 2010, pp. 33-44). The values and the political ideas that it promotes the candidates during the electoral contest represents a growth economic program. After the outbreak of the economic crisis in 2008 the new paradigm of economic and financial markets imposed a gradual regulation of the economic system both in the US as well globally. The current economic crisis has come as an effect of correcting the unhealthy economic increases, based on consumption growth. And economic markets, governed by supply and demand had to adapt to speculative bubbles breaking which have caused significant economic losses in countries which have taken place (Soros, 2008, pp. 7-28). The propagation of economic shocks in the global economy has caused major difficulties in terms of communication policy strategy. Currently, the economic market is influenced by the economic crisis which has infiltrated into all the world countries and provoked damages both at macroeconomic level as well microeconomic level. The economy, as a science of life has suffered from the problems occurred in the real economy. Thus, all economic indicators were affected, and the political marketing strategies were affected. Policy makers were compelled to take austerity economic policies, by which to achieve a healthy economic recovery. The economic context of globalization imposed an interdependence which caused, through the contagion phenomenon, a situation of economic restlessness.

The political marketing is engaged in a determined space and works differently in different time periods. The political strategies are specific to democratic countries, where the separation of powers in the state focuses on the pluralism. The emergence and the manifestation of political marketing depends on the activity of democratic political class. In democratic states, the communicational strategy in the political field is achieved in a proactive manner and cyclical. The political

marketing strategies differ from country to country. The political factors, the state institutions and the economy, as a whole, determine the creation of a political marketing differentiated from one country to another. In the countries which came out of communism, as Romania, Hungary, Czech Republic, Slovakia, Bulgaria and Poland, is manifested apolitical marketing specific to the area where is located, and the propaganda achieved in the old political regimes was gradually transformed into a political communication which must convince voters. Thus, if in communism it was achieved a continuous single party propaganda, in democracy the political marketing is achieved punctually, through election campaigns to attract the target audience. The economic crisis has affected fundamentally the political communication strategy by creating an economic environment characterized by distrust of the financial and economic system (Bardan, 2001, pp. 23-31).

In conditions of pronounced socio-economic inequalities, the political mechanisms are influenced by the situation of the population living standards. The voting process is imprecise, and voters should vote knowingly the party or the candidate. The voting Action offers the right of the individual to choose those who shall develop the state policies. Currently the political marketing is facing a massive voter ignorance to the situation and the position of the candidates. Daily needs of the population make the problems policy strategy not to be always taken into account. Thus, a message which sent candidate or the party may not arrive at the target audience. Also, the feedback is not always a positive one and interpreting of information can distort the political marketing strategy. The electoral mechanism reveals qualities of the candidates which focus on political strategy and on transparency of measures to be taken. The minority must submit to the majority as a result of electoral process. The voter can influence by vote the economic policies undertaken by the previous government. If the policies are well structured and geared towards a sustainable economic growth the elector will continue to support candidates who have achieved this economic optimization gear. In periods of financial and economic crisis have taken place issues that have not been said in election campaigns. The symmetrical and asymmetrical economic shocks have affected both the US economy as well the world economy by creating an economic environment characterized of raised instability (Lindblom, 2003, pp. 58-68). The main objective of political marketing is to ensure the satisfaction of the target audience through improving of institutional processes and increasing of individual welfare. Thus, the behavior of voters during the economic crisis was disrupted negative evolution of economic market.

4) The economic recovery policies and their influence on the activities of individuals

The creation of economic policies which have the role to generate healthy economic growth represents a key objective which every democratic state have to propose itself. For meeting the needs that individuals have, is important that the state to prevent the major economic crises. Thus, by reduction of unemployment, price stability, increased revenue to the state budget and the construction of efficient institutions it can reach to an optimal of individuals, which reveals an increase in standard of living. The instability periodically of economic and financial system is normally to take place in the capitalist system. (Minsky, 2011, pp. 563-571). The attraction of the foreign investments represents a goal of the economic policy for the sustainable economic and financial recovery. The foreign investors are not invested and closed businesses in many countries during the crisis. The economic environment was affected by the tracking behavior of the opportunities which they had the investors. The efficiency and the stability of economic market have been affected by the contemporary economic crisis. For this reason, the policy makers have been forced to find solutions to outgoing from a situation of emphasized economic unrest.

In the USA has been implemented TARP rescue plan (Troubled Asset Relief Program) by which it attempted a financial recovery. The Bush administration has nationalized the giants Fannie Mae and Freddie Mac, has financed the recovery of Citibank, has saved Goldman Sachs, AIG, Chrysler and GM. The Obama governance has created a program to sustained relaunch of the economy, but still too low as the value in comparison with the problems that had accumulated the US. Thus, the safety net for corporations has expanded from commercial banks to investment institutions and insurance companies. The risks as the economic recovery may not be an efficient one were great. In this context, the economic crisis continued to affect USA in the years from 2008 to 2010. There was a strong resistance to change, the greed from leadership of corporations and financial institutions was able hardly be stopped (Stiglitz, 2010, pp. 77-109). The bankruptcy of Lehman Brothers on September 15, 2001 has caused a generalized panic in the US economic market. The measures which have been taken by both the Bush administration as well undertaken by the Obama administration have gradually alleviated the economic crisis and have generated a major economic growth.

At European Union level was created the economic development strategy, Europe 2020. Through this economic rescue plan on medium and long term is aimed: developing an economy based on research and development, creating an economy based on efficiency of natural resource use, promoting an economy based on

growth of employment (<http://ec.europa.eu/>). Thus, it aims to develop an economic market of the European Union propitious to the healthy development. The European Union intervened, after the outbreak of the economic crisis in the US, for rescuing of countries such as Ireland, Spain, Portugal, Italy, Greece and Cyprus. Without the active intervention of the European Union would have been come to high economic slippages, which would be worsened the already existing crisis.

5) The influence of economic cycles on political elections

The globalisation has led to the creation of economic cycles dominated by mistrust in the economic environment, which may suffer at any time symmetrical and asymmetrical shocks of different amplitudes. The political and economic context managed by the EU, NATO, Russia, Japan and China has created a unique economic model within the G20. The highly developed countries can to draw the global economy forward, however, the efficient functioning of the economy is impacted by unemployment, by growth of public debt as share in GDP, by the inefficiency of economic measures, which are undertaken and by the contagion effect. The economic cycle represents an evolution of the individuals activities in the economy. Thus, after a period of sustained economic growth follows a period of decline in the economy. The economic cycles reveals a fluctuating evolution of economic factors. The economic cycle is closely linked with the electoral cycle. In this way, the economic context interacts with the political gear, because the state institutions have the objective to construct the economic measures functioning of open market. The globalisation has created the premises for the development of by highlighting the short (Kitchin type), medium (Juglar type) and long (Kondratieff type) economic cycles (Angelescu, 2001, pp. 92-96).

The state which governs public money policy has the role to pursue the transnational capital flows to streamline the trend of as better the economy over a certain period of time. The nominal economic trend which must to be followed to arrive at a sustained economic stability must contain the inclusion link between the following elements:

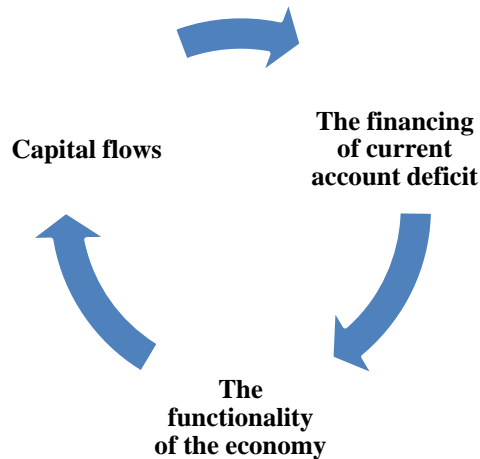


Figure 2. *The nominal economic trend*

The economy, as a science is cyclical self-regulating due to blockage of the of economic market. After the economic growth which lasted for over thirty years has followed a financial and economic crisis, which affected the globalized world through the phenomenon of contagion. The impact action of economic cycles is strong if it starts from the developed economies and spreads to countries with poorly developed economies. If are affected by economic cycles the countries with low economic influence, the economic shocks are easily amortized by the states with developed economies. Thus, the poor states have suffered much from the crisis through amplifying the crisis which started in the USA. In Europe, there were countries that would have generated a high regional instability if it is not achieved European Union intervention.

Conclusions

The negative economic fluctuations have provoked important economic problems globally. The economy, as a science of life must change its mechanisms of integration into the globalization system. The public debt management has been put in difficulty at European Union level. The economic context has led to a tense situation in the world because there is a risk that the economy will return to the crisis. Policy makers should undertake efficient measures to prevent the appearance of economic crises, because the crisis can cause the long term economic decline. The political marketing should focus the strategy on the exposure of healthy economic recovery programs through which to build a stable economy. Globally, the economic recovery should take into account of the

economic and financial regulating and of efficient management on the states budgets. The awareness of appearance the economic threats is very important to prevent the economic crises, which can degenerate into recession of the global economic system.

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