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**The Role of Organizational Humanistic Social Support in Decreasing
the Interference of Work Problems on Employees' Family Conflict**

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Abstract: Despite an increased interest in humanistic touch in global organizational support, the nature of helping processes rendered by supervisor and coworkers is still vague. The study was performed to examine the relationship between organizational humanistic social support and work interference with family conflict using 100 usable questionnaires gathered from academic staff in a Malaysian public institution of higher learning in Borneo. The findings of SmartPLS path model indicated that humanistic touch in term of supervisory support significantly correlated with work interference with family conflict. Similarly, humanistic touch of coworker support significantly correlated with work interference with family conflict. This result shows that the readiness of supervisors and coworkers to amply offer material and moral support in performing task have reduced the intrusion of work problems in employees' family affairs and enriched their skills to decrease family conflicts. In addition, discussion, implications and conclusion are elaborated.

Keywords: Humanistic Social Support; Supervisor support; Coworker support; Work Interference with Family Conflict.

JEL Classification: M5

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1. Introduction

Generally, the success of an organization lies in its ability to render humanistic touch in term of social supports to its employees. In recent years the call to treat an organization as humanlike characteristics has become a controversial issues in human resource management (Allen, Shore & Griffeth, 2003), organizational politics and justice (Aryee, Budhwar & Zhen, 2002), and industrial psychology (Arshadi, 2011; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). It is broadly defined as organizations readiness to regulate better rewards to employees who are efficient and effective, meeting their socio-emotional needs, valuing their contributions and caring for their wellbeing, as well as providing needed assistance to employees in carrying out job effectively and decreasing their distress level in the workplace. These humanistic approaches may encourage favorable results for the whole organization (e.g., increase commitment and performance as well as decrease turnover) and employees (e.g. job satisfaction and positive behavior) (Arshadi, 2011; Ferris, Brown & Heller, 2009; Riggle, Edmondson & Hansen, 2009)

A review of general organizational support literature published by Levinson (1965), Eisenberger et al. (2001), Riggle et al., (2009), Ferris et al. (2009), Arshadi (2011) and Conway & Coyle-Shapiro, (2012), emphasizes that organizational support encompasses several crucial aspects such as fairness, social support, rewards and job conditions. It is broadly practiced by organizations as a promising dealing that may encourage their employees to backing their stratagems and targets. All organizational support aspects are significant, but the role of humanistic approach in term of social support in bettering work to family conflict relationship is not sufficiently elucidated in organizational support research literature (Arshadi, 2011; Fu and Shaffer, 2001; Hammed, 2008). Hence, several scholars such as Fu and Shaffer (2001), Major, Klein and Ehrhart (2002), Hammed, (2008), Ismail, Ridzuan, Yahya, Kadir, Wamin, Kuzi & Suhaimi (2010) and Ismail, Saludin, Wamin & AbdRauf (2011) propose that the role of humanistic approach in term of social support will be plainly implied if it is divided in two unambiguous aspects, namely supervisor support and coworker support. According to House (2003), supervisor support is often viewed as supervisors' preparedness to render at least four key supports to their employees: emotional support (esteem, trust, affect, concern, listening), appraisal support (affirmation, feedback, social comparison), informational support (advice, suggestions, directives, information), and physical support (aid in-kind, money, labor, time and environmental modification). If these supports and helping processes are properly instituted this may promote employees' expectedness, objective and anticipation when handling upsetting and threatening situations in the workplace (Ismail et al., 2010; Mansor, Fontaine & Chong, 2003; Simpson, 2000). Similarly, coworker support is often related to as coworkers inclination to assist each other through practicing positive behavior such

as providing care, becoming friendly, showing empathy and warm relation, appreciation, respect, support and eliminating negative behaviours such as bad biting and gossiping, (Beehr & McGrath, 1992; Fu & Shaffer, 2001; Ismail et al., 2011). If these humanistic supports are aptly performed this may enhance the employees' skills to delivering daily job and handling distressing and threatening circumstances as a mean to create healthy workplace environments (Beehr & McGrath, 1992; Ismail et al., 2011).

An additional review of the workplace assistance program discloses that the preparedness of supervisors and coworkers to sufficiently rendering support in performing a task may lessening the interference of work problems in employees' family affairs and improve their skills to manage family conflict (Fu & Shaffer, 2001; Hamed, 2008). As work interference with family conflict is concerned, researchers like Boles, Howard & Donofrio (2001), Michel, Mitchelson, Kotrba, Le Breton & Baltes (2009) and Ismail et al. (2010, 2011) generally define this term as work interrupts family sphere that causes work to take control family affairs. It usually takes place in three major types: time-based, strain-based and behavior-based. First, time-based conflict happens when the time demands of one role are mismatched with those of another (e.g. working overtime forces an individual to cancel a family outing). Second, strain-based conflict happens when strain experienced in one role meddles with involvement in another role (e.g. meeting a deadline for tender prevents an individual to concentrates to family matters). Third, behavior-based conflict happens when behavior patterns suitable to one role are inappropriate in another (e.g., emotional restrictions at work are contrary with the openness expected by family members). If the differing between work and family roles is not appropriately managed this may intensify role performance in one domain (e.g. increase job performance) and dwindle role performance in other domains (e.g. increase family conflict) (Anderson, Coffey & Byerly, 2002; Byron, 2005; Carlson & Kacmar, 2000; Ismail et al., 2010, 2011; Michel et al., 2009).

There is a common presumption among scholars within an organizational support model that supervisor support, coworker support and work interference with family conflict are different constructs, but highly interconnected. For example, the preparedness of supervisors to sufficiently render humane support (e.g. emotional, appraisal and/or physical support) and coworkers to necessarily offer support (e.g. caring, empathy, respect and/or cooperation) may lessen the intrusion of work issues in employees' family lives and improve their skills to reduce family conflict (Fu & Shaffer, 2001; Hamed, 2008; Ismail et al., 2010, 2011). Even though the nature of this relationship is interesting, the role of humanistic approach in term of supervisor and coworker support in handling work to family conflict is given less consideration in the workplace support research literature (Hamed, 2008; Ismail et al., 2010, 2011). Many scholars state that the predicting variable of supervisor and coworker support is given less emphasized in previous studies because they

have much described the global organizational support concept, explained the general social support characteristics (Arshadi, 2011; Ferris et al., 2009; Riggle et al., 2009), and employed a document analysis method to explore the correlation between role of social support and work to family conflict. Previous study also failed to disclose the effect size of supervisor and coworker support on employees' family conflict and well-being (Michel et al., 2009). As a result, outcomes from these studies have not provided enough information to be used as useful guidelines by practitioners in planning, implementing and monitoring the effectiveness of social support programs in dynamic organizations (Fu & Shaffer, 2001; Hammed, 2008; Ismail et al., 2010, 2011). Hence, this situation motivates the researchers to further investigate this relationship.

2. Objective of the Study

This study outlines two objectives: firstly, is to investigate the relationship between supervisor support and work interference with family conflict. Secondly, is to assess the relationship between coworker support and work interference with family conflict.

3. Literature Review

Several recent studies using an indirect effects model approach to investigate the role of social support in the workplace stress based on different samples, such as 800 employees from 29 academic departments and 34 administrative officers in Hong Kong University (Fu & Shaffer, 2001), and 200 working women from teaching and healthcare professions in Nigeria (Hammed, 2008). Findings from these studies reported that the preparedness of supervisors and coworkers to sufficiently render humanistic support had successfully reduced the interference of work problems in employees' family affairs and reduced their family conflicts (Fu & Shaffer, 2001; Hammed, 2008)

These studies are consistent with the notion of organizational support theory. For example, Eisenberger et al.'s (1986) organizational support theory postulates that the inclination of organization to acknowledge employee contributions and care about their well-being may invoke feelings of obligation from the employees to perform organization goals. While, social exchange theory (e.g., Blau, 1964; Aselage & Eisenberger, 2003; Gouldner, 1960; Organ & Konovsky, 1989) elucidates that the readiness of organization to offer favorable treatments may inspire employees to achieve the organizational interests. Moreover, role theory (e.g., Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964; Katz & Kahn, 1978) posits that work and family domain involve multiple roles, and different expectations and beliefs of others where many demands are engaged on individuals may result in

conflict (e.g., inter role conflict). In addition, conflict theory (e.g. Eby, Maher & Butts, 2010; Zedeck & Mosier, 1990) explains that discordancy of work and family aspect is a result of different norms and requirements may improve role performance in one aspect (e.g., job) and reduce role performance in other aspect (e.g., family). Thus, Edward and Rothbard's (2000) spillover theory states that one's first experience (e.g., bad or good human relation) may subsequently influence his/her experience (e.g., function conflict or dysfunctional conflict). These theories emphasize that recognition of employee contributions, care about employee well-being, favorable treatments, inter role conflict and employee experience are closely related to the concept of humanistic approach of social support (e.g., supervisor support and coworker support). For example, application of these theories in the workplace explains that the preparedness of supervisors and coworkers to sufficiently render material and moral support in executing job have successfully decreased the interference of work problems in employee lives and increase their abilities to decrease family conflict (Fu & Shaffer, 2001; Hamed, 2008; Ismail et al., 2010, 2011).

Based on the literature, it can be hypothesized that:

H1: There is a positive relationship between supervisor support and work interference with family conflict.

H2: There is a positive relationship between coworker support and work interference with family conflict.

4. Methodology

4.1. Research Design

A cross-sectional research designed was used because it had allowed the researchers to amalgamate the organizational social support research literature, the semi-structured interview, the pilot study and the actual survey as a main procedure to collect data for this study. The use of such methods may reduce the inadequacy of single method and improve the ability to gather accurate, less bias and high quality data (Cresswell, 2012; Ismail et al., 2010, 2011; Sekaran, 2003). The data for this study was collected in a Malaysian public institution of higher learning in Borneo. To uphold confidentiality, the name of this organization is kept anonymous. In the first step of data collection, in-depth interviews were conducted involving six experienced academic staff from different faculties such as the science and technology based faculty, the social science, humanities and liberal arts based faculty. They were selected using a purposive sampling technique because they had working experiences more than seven years and well versed on the nature of academic work practiced in their organizations. This interview method was used to further comprehend the supervisor and worker support characteristics, and the

nature of work interference with family conflict, as well as the relationship between such variables in the higher institution. The information gathered from such interviews was recorded, categorized according to the research variables, and constantly compared to the related literature review in order to clearly understand the particular phenomena under study and put the research results in a proper context. Further, the results of the triangulation process were used as a guideline to develop the content of survey questionnaires for a pilot study. Next, a pilot study was carried out. The pilot questionnaires were first discussed with the interviewed participants. Information gathered from such participants was used to verify the content and format of survey questionnaires for the actual study. A back translation technique was performed to translate the content of questionnaires in Malay and English in order to increase the validity and reliability of the instrument (Hulland, 1999; Wright, 1996).

4.2. Measures

The survey questionnaires for this study have three sections: first, supervisor support had 5 items that were developed based on supervisor support literature (Allen, Herst, Bruck & Sutton, 2000; Beehr & McGrath, 1992; Boles et al., 2001; Turner, Frankel & Levin, 2004). Second, coworker support had 4 items that were developed based on coworker support literature (Allen et al., 2000; Beehr & McGrath, 1992; Boles et al., 2001; Turner et al., 2004). Third, work interference with family conflict had 4 items that were developed based on work to family conflict literature (Allen et al., 2000; Boles et al., 2001; Eby, Casper, Lockwood, Bordeaux & Brinley, 2005; Halbesleben, Harvey & Bolino, 2009). These items were measured using a 7-item scale ranging from “very strongly disagree/dissatisfied” (1) to “very strongly agree/satisfied” (7). Demographic variables were used as controlling variables because this study focused on employee attitudes.

4.3. Unit of Analysis and Sampling

A quota sampling was used to determine the number of sample size for this study, which is 200 academic employees. Later, a convenient sampling was employed to distribute the survey questionnaires to academic staff in 8 faculties through their faculty offices. This sampling technique was chosen because the list of registered employees was not given to the researchers for confidential reasons and this situation did not allow the researchers to randomly select participants in the organization. Of the number, 100 usable questionnaires were returned to the researchers, yielding 50 percent response rate. The survey questionnaires were answered by participants based on their consent and a voluntarily basis. The

number of this sample exceeds the minimum sample of 30 participants as required by probability sampling technique, showing that it may be analyzed using inferential statistics (Sekaran, 2003).

4.4. Data Analysis

The SmartPLS version 2.0 as recommended by Henseler, Ringle and Sinkovics (2009) was employed to assess the validity and reliability of the instrument, and thus examine the relationship between many independent variables and one or more dependent variable simultaneously.

The main advantage of using this method may deliver latent variable scores, avoid small sample size problems, estimate every complex models with many latent and manifest variables, hassle stringent assumptions about the distribution of variables and error terms, and handle both reflective and formative measurement models (Henseler, Ringle & Sinkovics, 2009). The PLS path method generated by SmartPLS is used to test the hypothesized model and outcomes of this test may clearly shows the significant relationship between independent variable and dependent variable if the value of t statistic larger than 1.96. This result indicates that independent variable acts an important predictor of dependent variable in the hypothesized model (Henseler, Ringle & Sinkovics, 2009). Thus, a global fit measure is conducted to validate the adequacy of PLS path model globally based on Wetzels, Odekerken-Schroder & Van Oppen’s (2009) global fit measure. If the results of testing hypothesized model exceed the cut-off value of 0.36 for large effect sizes of R², showing that it adequately support the PLS path model globally (Wetzels et al., 2009).

5. Findings

5.1. Participant Characteristics

Findings from analysis revealed that most respondents were male (57.0 percent), aged between 40 to 45 years old (38.0 percent), married (81.0 percent) and had served from 1 to 5 years (45.0 percent) (as in Table 1).

Table 1. Participant Characteristics (N=100)

| Participant Characteristics | Sub-Profile | Percentage |
|-----------------------------|-------------|------------|
| Gender | Male | 57.0 |
| | Female | 43.0 |
| Age | < 27 | 24.0 |
| | 28-33 | 6.0 |
| | 34-39 | 24.0 |

| | | |
|-------------------|---------------|------|
| | 40-45 | 38.0 |
| | > 45 | 8.0 |
| Marital Status | Single | 19.0 |
| | Married | 81.0 |
| | Widow/Widower | - |
| Length of Service | 1-5 years | 45.0 |
| | 6-10 years | 18.0 |
| | 11-15 years | 23.0 |
| | > 16 years | 14.0 |

Source: Research Findings

5.2. Validity and Reliability Analyses for the Measurement Scales

Table 2 indicates the results of convergent and discriminant validity analyses. All constructs had the values of AVE larger than 0.5, indicating that they met the acceptable standard of convergent validity (Gefen & Straub, 2005; Henseler et al., 2009). Besides that, all constructs had the values of $\sqrt{\text{AVE}}$ in diagonal were greater than the squared correlation with other constructs in off diagonal, showing that all constructs met the acceptable standard of discriminant validity (Henseler et al., 2009).

Table 2. The Results of Convergent and Discriminant Validity Analyses

| | AVE | Supervisor support | Coworker support | Work Interference with Family Conflict |
|--|-------|--------------------|------------------|--|
| Supervisor support | 0.762 | 0.873 | | |
| Coworker support | 0.721 | 0.377 | 0.849 | |
| Work Interference with Family Conflict | 0.836 | 0.441 | 0.337 | 0.914 |

Source: Research Findings

Table 3 shows the factor loadings and cross loadings for different constructs. The correlation between items and factors had higher loadings than other items in the different constructs. The loadings of variables greater than 0.7 are considered adequate (Chin, 1998; Gefen & Straub, 2005; Henseler et al., 2009). In sum, the validity of measurement model met the criteria.

Table 3. The Results of Factor Loadings and Cross loadings for Different Constructs

| | Supervisor support | Coworker support | Work Family Conflict |
|--|--------------------|------------------|----------------------|
| Supervisor support | | | |
| My supervisor shows a great understanding when I have family matters to attend to. | 0.349627 | 0.845283 | 0.353381 |
| My supervisor always looks out for me whenever I have work-related problems. | 0.404215 | 0.865271 | 0.245871 |
| My supervisor accommodates me when I have family/personal business. | 0.319701 | 0.803072 | 0.178318 |
| My supervisor understands when I talk about personal/family issues. | 0.506590 | 0.822566 | 0.166106 |
| My supervisor always gives constructive criticism. | 0.542217 | 0.905945 | 0.458123 |
| Coworker support | | | |
| <i>I have co-workers who are cooperative and friendly.</i> | 0.883603 | 0.292533 | 0.218480 |
| <i>I have co-workers who are responsible in accomplishing every task given.</i> | 0.893754 | 0.381508 | 0.368856 |
| <i>I have co-workers who</i> | 0.869833 | 0.449447 | 0.470986 |

| | | | |
|--|----------|----------|----------|
| <i>like to help one another.</i> | | | |
| <i>My co-workers always give support to encourage me to produce a good job.</i> | 0.842791 | 0.575318 | 0.387333 |
| Work Interference with Family Conflict | | | |
| <i>I have enough time to do my personal social activities.</i> | 0.514493 | 0.437805 | 0.908323 |
| <i>Excessive workload DO NOT refrain me from concentrating towards family.</i> | 0.298048 | 0.459300 | 0.929473 |
| <i>Stresses from my work demand DID NOT affect my relationship with family.</i> | 0.432630 | 0.260949 | 0.934768 |
| <i>My concentration towards my family is NOT affected whenever I have work-related problems.</i> | 0.280932 | 0.077908 | 0.882848 |

Source: Research Findings

Table 4 shows the results of reliability analysis for the instrument. The composite reliability and Cronbach's Alpha had values of greater than 0.8, indicating that the instrument used in this study was high internal consistency (Henseler, Ringle & Sinkovics, 2009; Nunally & Benstein, 1994).

Table 4. Composite Reliability and Cronbach’s Alpha

| Construct | Composite Reliability | Cronbach Alpha |
|--|-----------------------|----------------|
| Supervisor support | 0.93 | 0.91 |
| Coworker support | 0.95 | 0.94 |
| Work Interference with Family Conflict | 0.93 | 0.90 |

Source: Research Findings

These statistical analyses confirm that the measurement scales have met the acceptable standards of validity and reliability analyses.

5.3. Analysis of the Constructs

Table 5 shows the results of Pearson correlation analysis and descriptive statistic. The means for the variables are from 4.67 to 5.56 signifying that the levels of supervisor support, coworker support and work interference with family conflict ranging from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variable (i.e., supervisor support and coworker support) and the dependent variable (i.e., work interference with family conflict) were less than 0.90, indicating the data were not affected by serious collinearity problem (Hair, Anderson, Tatham & Black, 2006).

Table 5. Pearson Correlation Analysis and Descriptive Statistics

| Variable | Mean | Standard Deviation | Pearson Correlation Analysis (r) | | |
|---|------|--------------------|----------------------------------|-------|---|
| | | | 1 | 2 | 3 |
| 1. Supervisor support | 5.26 | 0.97 | 1 | | |
| 2. Coworker support | 5.56 | 0.91 | 0.48** | 1 | |
| 3. Work Interference with Family Conflict | 4.67 | 1.41 | 0.38** | 0.29* | 1 |

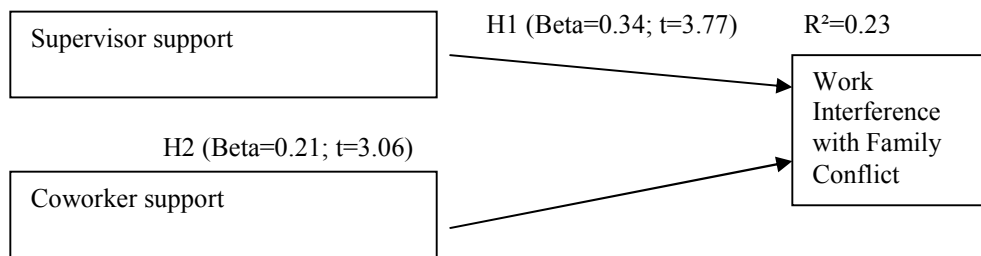
Note: Significant at **p<0.01 Reliability Estimation is Shown in a Diagonal

Source: Research Findings

5.4. Outcomes of Testing Hypotheses 1 and 2

Figure 1 shows the outcomes of testing PLS path model. First, the supervisor support significantly correlated with work interference with family conflict ($\beta = 0.34$; $t = 3.77$), therefore H1 was supported. Second, the hypothesis of coworker support significantly correlated with work interference with family conflict ($\beta = 0.21$; $t = 3.06$), therefore H2 was supported. In terms of explanatory power, quality of model predictions in the analysis can be demonstrated by the score of R². The

inclusion of these variables had explained 23 percent of the variance in dependent variable ($R^2 = 0.23$).



Note: Significant at $*t \geq 1.96$

Figure 1

In order to determine a global fit PLS path modeling, we carried out a global fit measure (GoF) based on Wetzels et al.'s (2009) guideline as follows: $GoF = \sqrt{\{MEAN(Community of Endogenous) \times MEAN(R^2)\}} = 0.44$, indicating that it exceeds the cut-off value of 0.36 for large effect sizes of R^2 . This result confirms that the PLS path model has better explaining power in comparison with the baseline values (GoF small=0.1, GoF medium=0.25, GoF large=0.36). It also provides adequate support to validate the PLS model globally (Wetzel et al., 2009).

6. Discussion and Implications

This study indicates that the humanistic approach in term of supervisor support and coworker support act as important predictors of work interference with family conflict. In the context of this study, management teams have planned and implemented challenging jobs for academic staff in order to sustain and achieve their organizational strategies and goals. According to the interviewed respondents, majority academic staff view that the levels of supervisor support, coworker support and work interference with family conflict are high. This situation explains that the willingness of supervisors and coworkers to adequately provide material and moral support in handling job stress have decreased the interference of work problem in employees' family affairs and increase their family wellbeing.

The study presents three major implications: theoretical contribution, robustness of research methodology, and practical contribution. In terms of theoretical contribution, the results of this study confirm that supervisor support and coworker support have been important predictors of work interference with family conflict in the organizational sample. This result also has supported studies by Fu and Shaffer (2001), Hammed (2008), and Ismail et al. (2010, 2011). Although this study reveals that the relationship between organizational support and work interference

with family conflict is significant, the strength of such relationships is low. The information gathered from the semi-structured interview shows that this finding may be affected by external factors. Firstly, respondents who have different backgrounds have inconsistent views and assessments about the importance of material and moral support provided by supervisors and coworkers. Further, due to their different cultural background the participants of this study may uphold a mix between collectivistic culture and individualistic values. In collectivistic cultures, the needs of the group are more crucial than individual wishes. Individuals in collectivistic cultures are expected to give in to the goals of the group, ignoring their own desires in many aspects. On the other hand, individualists converge on a more personal sense of self. These two forms of values undeniably led participants to have different views on the important of humanistic support rendered by supervisor and coworkers. Secondly, respondents have different values and judgments about the abilities of supervisors and coworkers to equally provide material and moral support to employees who have worked in different job groups. These differences may decrease the acceptance and appreciations of employees to the implementation of such support processes in the studied organization. Additionally, the employees' may perceive the assistance rendered was related to organizational politics. They may construe and characterize supervisory and coworker support as a self-serving effort to gain political favor, particularly if the support is rendered in an obvious manner. This may interfere with their acceptability and appreciation of support rendered by supervisor and coworkers.

With respect to the robustness of research methodology, the survey questionnaires used in this study have exceeded the acceptable standards of the validity and reliability analyses may lead to the production of accurate and reliable findings. In terms of practical contributions, the findings of this study can be used as a guideline by the management to improve organizational support programs. The possible suggestions are: firstly, training content and methods need to be properly planned and implemented to managers and operational workers in order to impart necessary knowledge, up to date skills, new abilities and positive attitudes. Secondly, high commitment management practices need to be inculcated in order to encourage participative decision making styles. Thirdly, work-life balance courses need to be implemented to decrease the effect of work problems on employees' family affairs and the effect of employees' family problems on their job. Fourthly, the level of pay needs to be increased to increase employees' purchasing powers and increase their daily standards of living. Finally, counseling and guidance unit or an outsourced Employee Assistance Program (EAP) need to be established and subscribed to help employees getting proper assistances about their personal, work, social and financial problems. Additionally, management should consider running periodic survey on employees' work satisfaction and use the findings to improve system delivery and compensation. A monthly talk or

seminar on work related issues deliver by external parties may also help to boost the employees' morale. If management heavily considers these suggestions this may induce positive employee attitudes and behavior.

7. Conclusion

This study proposed a conceptual framework based on the organizational support literature. The measurement scales used in this study met the acceptable standards of validity and reliability analyses. The outcomes of testing PLS path model confirmed that organizational support significantly correlated with work interference with family conflict. This finding also has supported and broadened the organizational support research literature mostly published in Western countries. Therefore, current research and practice within organizational support needs to consider supervisor support and coworker support as crucial dimensions of the workplace employment domain. This study further suggests that the willingness of supervisors and coworkers to adequately provide material and moral support will strongly decrease the intrusion of work problems in employees' family affairs and enhance their capabilities to decrease family conflict. Thus, these positive outcomes may lead to increased employee well-being and organizational performance in an era of global competition.

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Strategic Decision Making in Public Sector: Evidence and Implications

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Abstract: For public sector making the decision is crucial to respond at the needs of people, to offer good public services that call for a public response. Examine the decisions in public and private sector it can be note the difference as it is shown by numerous studies in the field. These differences are attributing to the specific role of the sectors in the society. The research responds at three questions: a) What are the differences in making decisions between public and private sector?; b) Which are the practices used by managers from public sector to respond to efficiency, rationality and social responsibility? c)How can be increasing the capacity of managers from public sector to adopt the best decisions?

Keywords: managers; controversy; public organisation; environmental; strategic decision

JEL Classification: M51; L33

1. Introduction

Activity in public organization is an activity of a particular group of people who meet certain criteria of rationality and efficiency in order to meet public interests. Processes to achieve these tasks are complex and implement action efforts of their organization. These are activities and decision processes consist of segregation of certain elements of the decisions of the organization and establishment of constant organizational procedures to select and determine these elements and to communicate those members (Simon, 2004, p. 5). Thus, the organization takes a person decisional autonomy and substituted by a process of organizational decision making.

This study aims to identify differences in decision making in the public sector to the private sector and the practices used by managers to meet the principles of efficiency, rationality and social responsibility.

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2. Differences in Making-Decision in Public and Private Sector

Examining decision-making processes in the public and private sector has shown that there are significant differences (Rodrigues & Hickson, 1995, pp. 655-678). While private sector decision making is characterized by organization, linearity, purpose, decision-making in the public sector are subject turmoil, conflict, and influence of external factors (Ring & Pery, 1985, pp. 276-286).

Factors influencing the decision-making process were the subject of study for researchers of the field. They (Bozeman, 1984, pp. 46-62) identified a number of factors such as environmental factors, cooperation, competition, constraints, political influence, elections, property, purpose, authority. These factors are able to influence strategic decision-making practices within the organization.

A picture of the factors influencing the decision-making procedures in the two sectors is given below:

Table 1. Influence factors on decisions making in private and public organizations

| Factor | Private organisations | Public organisations | Impact on strategic decision making |
|-----------------------------|--|--|---|
| Environmental market | The buying behaviour of people defines the market | Oversight bodies make up the market | Decision makers are obliged to seek out views of people in oversight bodies in public sector organizations. |
| Cooperation vs. competition | Competition among organizations that offer a given service | Collaboration among organizations that offer a given service expected. | Competition shifts to collaboration in a public organization, so key players must have a role in suggesting alternatives. |
| Constraints | Autonomy and flexibility limited only by law and the need for internal consensus | Mandates and obligations limit autonomy and flexibility | The need for consensus increases in public organizations. |
| Political influence | Political influence indirect and internal | Political influence stems from authority network and from users | More time is required to balance user needs with demands of oversight bodies in a public organization |
| Transactional scrutiny | Can sequester the development of idea | Can sequester the development of idea | Alternatives are more apt to be disclosed as they are identified in a public organization |

| | | | |
|-----------------------------|---|--|---|
| Ownership | Ownership vested in stockholders whose interests are interpreted using financial indicators | Citizens act as owners and impose their expectation about organizations activities and the conduct of these activities | More people are involved in decision making in a public organization. |
| Organizational process goal | Goals often clear and agreed upon; efficiency dominant concern | Goals shifting, complex, conflict-ridden and difficult to specify; equity dominant concern | Clarity about the desirability of an alternative declines, increasing the time to make decision in public organization. |
| Authority limits | Power vested in authority figures who have the authority to search | Stakeholders beyond the authority leaders control influence the search for ideas | Search time and resources are more limited in a public organization. |

Source: Adapted from (Nutt, 2005, p. 292)

Environmental factors are external and include market organization, cooperation and competition and political factors. In the private sector customer purchasing behaviour suggests business organization. The public sector is characterized by inertia market mechanisms; the behaviour is determined by the degree to which supervisors engage in market. Establishment within the public revenues from taxes paid by people suggest leaving the market principles and public pressure on the authorities. This behaviour requires managers from public sector decision makers better determine the needs of people.

The public sector is characterized by collaboration in order to meet the needs of citizens. Competition and marketing would be attributes of public organizations would create similar services to their duplication. However, public marketing theory suggests the need to reflect the needs of consumers of services and public goods. The voluntarism vision, long-term regulatory and public administration through public marketing vision is appreciated opportunistic market movements, the diversification of needs (Profiroiu, 2001, pp. 108-11). Government faces stiff competition in the delivery of services to citizens. From this perspective, the need for marketing in the public service is absolutely natural. In a competitive market measures should be taken to ensure the best conditions for increasing the quality of services in order to maintain competitive advantage.

Lamb (1987) estimated that the financial resources available to the government for offering consumer services and products to the client shall be conducted under optimal conditions leading to its satisfaction. Obtained through traditional channels

(sampling of local taxes), the state's financial resources are insufficient to meet social needs. Consumers, citizens believe that they are paying too high a price for what they offer. Taxpayers, legislators, customers, citizens and groups affected by state actions begin to show their dissatisfaction with the performance of public organizations that do not agree with the vote cast, with participation in community life, the effort expressed in taxes paid.

Another argument which explains the increase in marketing in public life is given by Alford (2002): service users are attracted only to the consumption of material goods, but also the realization of symbolic values, and social norms. Public organizations must meet these needs not only political authorities ask this, but they need to receive a wide range of other things to beneficiaries of public services: information, cooperation and participation.

Collaborative public organizations enable key stakeholders to be involved in decision making by providing alternatives. Unlike private sector is characterized by competition that provides competitive advantage in the market. Ideas are well guarded and developed in order to develop activities and to become competitive in a market defined.

Political factors directly influence decision-making practices in public organizations. Under the direct authority of state power (exercised by organs of public power), public organizations are directly involved in decision-making in full concordance with deliberative decisions taken by authorities which are more important than economic criteria that private organizations are crucial (Nutt, 2005, p. 293). Public sector decision makers are subject to limits due to disagreements about the importance of classification needs (from very important no matter). They need more time to balance the needs of citizens with supervisors and control applications. Public organizations develop numerous transactions with key actors in the environment, these relationships being mediated by the exercise of voting and ownership.

Voting is the determination of the representatives of public power. Their involvement in decision making in the public sector is subject to public debate in the media, so it is difficult to quickly identify alternative solutions to complex problems. Blumenthal's (1983) has described this manner of decision making as fishbowl management, showing the difficulty of decision making in public organization through creative and innovation capacity decreased. The decisions to adopt the state budget or the local budget mean to follow a complex procedure that reflects the public power. The public budget represents the high degree of representativeness in public finance (Oprea, 2011, pp. 20-21) and show the wealth fare of the state. Organizational process that makes distinction between public and private organization is to establish organizational goals and limits of authority. While public organizations may have multiple purposes, which may be vague,

controversial and undefined in terms of SMART (specific, measurable, accessible, relevant and anchored in time), private organizations define their goals in terms of efficiency and economic efficiency to meet the need for which was founded - profit. The clear public policy objectives that the organization is able to meet the challenges of the new guidelines, according to the specificities environment that operates otherwise unclear and vague formulation will result in poor performance and obtaining credit will decrease decisional alternatives, will be ineffective decision making. In this regard, a special role manager has a responsibility to find those challenging elements defining strategic directions for action in order to obtain performance. Equally it is necessary to use the full potential of the organization in order to ensure fulfilment of performance. These issues must be pursued at the level of the whole organization and the functional subdivisions.

Public sector managers do not have broad autonomy in making strategic decisions in comparison with the private sector. Public managers cannot use public money than their data according to destination, the refocusing of the other possible investment amounts marked by complex rules and procedures. As a result, alternative investments to cover decision are much reduced public sector to private sector where the investment decision is adopted easy.

3. Efficiency, Rationality and Social Responsibility –Principles to Make the Decision

Private addresses needs of stockholders determined, while the public sector must fulfill the ever-growing and diversifying population. This last point refers to the specific needs of rationality and public sector and social responsibility he has towards citizens. These distinct roles of the private and public sectors related needs lead to the need for specific decision-making practices. The question is whether managers in the private sector and the public sector have a different perception of risk it takes and how to adopt the same practices used when making the decision.

Literature specific decisions in the public sector (Simon, 2004, pp. 23-27) identify a number of principles:

- a) The effectiveness of a public organization is enhanced by specialization of tasks distributed among group members;
- b) The effectiveness of public organization increases with group members in a location clear hierarchy of authority;
- c) The effectiveness of public organization is increased by reducing the control range at a short distance, at any point of hierarchy;
- d) The effectiveness of public organization is enhanced by grouping employees in the exercise of control by the purpose, process, clientele and location.

Although these principles have found their place in public decision-making theory but not without controversy. Specialization is a feature of a group effort, no matter how efficient or inefficient as the effort. Specialization means that different people do different things. Following the principle of specialization is subject to multiple interpretations depending on place, time and specific work undertaken. Unit reflects the idea of subordinating civil authority superiors. The question is whether more heads its way of exercising this authority? (Gulick & Urwick, 1937, p. 25). The interpretation of this principle lies in determining how authority should be divided so as to ensure management unit and through what channels should be exercised. Reducing the control range at lowered ready at any point in the hierarchy requires uncontrolled increase organizational levels. Hence, an oversize organization structures means an abdication of the principles of specialization and control unit. Addressing efficiency of public organization in terms of purpose, process, clientele or weak spot is motivated by the fact that the bases are competing organization. The goal is the goal, the purpose of the activity, reflecting the means of achieving the goal. Customer is determined mainly aimed directly concordance and instead of making the agreement work order process and customer choice.

Corporate social responsibility is a concept that refers to organizations has a duty, and in particular the multinational towards all parties involved in carrying out their profile generated by economic activities, respective customers, employees, partners, and towards local communities and the environment.

The concept encourages corporations to take into account the interests of society and beyond legal regulations. Thus, success in business achieved by observing the law, the code of ethics, economic development, and proper attention is given special environment, taking into accounts the needs and interests of all partners. Voluntary organizations involved and continuously improving the quality of life for employees and their families, local communities and society in general. Although it is a voluntary instrument, it must be implemented properly to gain confidence factors interested.

4. Conclusions

Importance of decision making within the organization is essential for its success or failure. The analysis performed in this work to the public and the private sector is significant differences. Responding different purposes, public and private organizations use practices that affect decision making functionality and organization. Managers of public organizations are held to the rules and regulations imposed by supervisors and control of financial and budgetary limitations and the inability to develop creativity and innovation by way of decision making. Efficiency, rationality and social responsibility are principles with impact on public organizations, but their decisions respecting the various dimensions behave.

Public sector managers may engage in dangerous decisions when decisions are made as a group of colleagues and subordinates. The concept of coordination has implications both internally and externally, as long as the implications of the decision reflect the social level. Private sector managers can make decisions in this manner. Working group seeks to achieve the purposes for which it was established, and decisions will affect a given number of people. It is easy to note that public managers do not focus on group decision, considering it risky. Have an important role supervisors and control them through cooperation and collaboration with public organizations can show whether or not serve the public interest by decision.

This research will be continued by reflecting individual and contextual factors in decision making in public organizations using decision models known in the literature.

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Impact of Migration on Housing Prices: A Case of Low-Income Households in Iran

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Abstract: Housing shortage is a problem for all levels of household income particularly affects low-income households in recent years. The main purpose of this paper is to investigate the relationship between migration and housing prices of low-income households. This study adopted the quantitative research method and involved a questionnaire survey of 381 low-income households in the district 20 located in south of Tehran, Iran. The result of this research shows that the inappropriate policy to control the housing prices in Tehran. The finding of this research can be used by the public and the private sectors as a basis for policy and decision making in housing markets, especially in the Iranian context.

Keywords: migration; housing prices; low-income household

JEL Classification: R31

1. Introduction

During the past two decades, housing in Iran has been studied as an important property investment asset, although traditionally it is considered as a consumer good or a shelter (Abbasinezhad & Yari, 2009). The construction and housing sector are one of the most important sectors in economy of Iran and nearly 120 industrial activities are related directly or indirectly to this sector. Historically, housing prices have never decreased in Iran. Low interest rates and strong housing demand are the most important problems in the housing market in Tehran. Due to the inflation in recent decade, housing prices have increased faster than the prices of other commodity services in Tehran (Naji Meidani et al., 2011). The average price of a housing unit in urban areas is about ten times the annual income of urban households. Generally, increasing the housing prices cause several problems for

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low-income households such as spending the portion of household income on housing payment and having a lower quality or less housing (Frank, 1999).

Due to the unprecedented population growth, this city faced with several problems such as housing shortage and affordability crisis particularly for low-income households. Population migration rush especially has automatically resulted in population growth rate in Tehran capital of Iran. The main causes of migration during the years 1999-2009 are as follows: family dependence (46%), employment (13.8%), military service (10.3%), studying (9.9%), and job transfer (5.1%), (Atlas of Tehran Metropolis, 2009). Unfortunately, there is no reliable source of the statistics of low-income households available in Tehran. According to the income category in Iran, monthly income below USD540 for a family of five persons has been declared as a poverty line in 2010 (ISNA Agency, 2010).

2. Review of Housing Demand Literature

Housing demand has been studied for at least three decades. Housing is the most important asset and the largest expense for many households around the world (Warnock & Warnock, 2008). Housing is one of the consumption goods which includes of the largest portion of the average household budget (Kim, 2004). Accordingly, housing is an important socioeconomic issue in different areas which low-income households are faced with the issue as it is in around the world. There are some characteristics indicating that market mechanisms for housing are different from those of other goods or services and determine demand and supply in the market. The distinguishing features of housing are listed and described as follows: fixity, durability and heterogeneity of housing. According to Gilbert et al. (2009), the first step for most of housing demand studies is the individual consumer's utility function that affects the consumers' performance for a product in relationship to all products. The purpose of examining housing needs determines what elements are included in a measure. Leunig and Overman (2008) define housing demand as the quantity of housing of the type and quality that household can afford to purchase or rent. Therefore, housing demand considers as preference and the ability to pay. Moreover, in the public sector, demand is assumed to be equal to housing needs and in the private sector, demand is constrained by affordability. Obviously, the special feature of housing is to determine the behaviour of demand and supply for housing from the demand and supply curves for other goods (Koebel, 2008). Therefore, the willingness and household affordability to pay affect on demand condition for housing.

3. Migration and Demand for Housing

“*Urban housing demand is a reflection of households’ desire to live in cities*” (Poterba & Sinai, 2008). The source of population growth determines whether there is an immediate or future demand for housing. A market search is the first step that households face when they want to migrate (Aroian, 2010). Obviously, there is a strong relationship between changes in housing and net migration, which represents the new household formation. Therefore, housing and lack of housing may lead to out-migration or prevent migrants from entering (Mulder, 2006). The result of some studies shows that homeowners are considerably less likely to migrate than renters in most countries (Helderman et al., 2006; Mulder, 2006). The impact of migration on housing may be discussed meaningfully in terms of supply and demand. Furthermore, internal migrants affect housing demand and supply the labour, so a structural economic aspect would identify elasticities with respect to housing prices (Vermeulen & Ommeren, 2009).

Saiz (2007) points out that due to the migration during the period 1967 to 1983, Los Angeles experienced major housing price increases compared to other American metropolitan areas. Similarly, Ley and Tuchenner (1999) find time-series correlation between immigration in Toronto and Vancouver and housing prices. In Australia, Burnley and Murphy (1997) point out that migration is one of the major correlates of inflation of housing prices in the main immigrant city such as Sydney. Therefore, immigrant concentration in an area affects the price of an average dwelling (Akbari & Aydede, 2009). Besides, housing market has affected migration flows through shared owner-occupied houses and housing prices. According to the adjustment of regional labour market, changes in housing prices have different effects on in-migration and out-migration. Increasing in housing prices may constrain some households who prefer to move, and may slow down in migration as well (Arzaghi & Rupasingha, 2008). Qualitative factors such as moving to a new job increase migration and are important variables in housing demand. Work site, income, and life cycle all have significant effects on households' choice of location and the amount of housing consumed (Straszheim, 2008).

4. Housing Prices

Price is determined based on demand and supply. The average house prices and trend in house prices is a key element of the housing market. In a fully competitive housing market, housing price is determined in an equilibrium demand and supply condition. On the one hand, applicants for housing demand different quantities of it with different purchase prices but in a constant condition where other factors are not changed. On the other hand, different quantities of goods are supplied by the sellers to the market, provided that other factors remain constant and unchangeable.

The fluctuations in housing prices play an important role in the economy in a wider context (Hadavandi et al., 2011). The housing market refers to the supply and demand for houses in a particular country or region. Accordingly, changes in housing demand and supply effect on changing on housing prices. Therefore, the market price is balanced when the demand and supply have equal conditions in the market. Dusansky and Koç (2007) indicate that housing price has a statistically significant and positive effect on the demand for housing services for those who choose to own. Ioannides and Zabel (2003) state that the demand for structural equation includes a price variable that is the amount of neighbourhood quality purchased. Han (2006) indicates house price uncertainty affects households' home purchase behaviour. Price is basically reduced when the demand is reduced. *"Income and price elasticity of housing demand may change with different concepts of housing demand"* (Zabel, 2004). In Tehran, Iran, Hadavandi et al. (2011) find that the main portion of house prices is affected by land price in Tehran's 20 different areas housing prices. Moreover, some researches show that geographic variables are an important determinant of housing prices (Goodman & Thibodeau, 2003). Housing prices also influence household location decisions.

6. Methodology

The main purpose of this research is to examine the association between migration and housing prices linked to the specific condition of low-income households. Accordingly, this study highlights a main objective which is the foundation of this research; to examine the relationship between migration and housing prices of low-income households. This study adopted the quantitative research and the questionnaire survey was the major source of gathering primary data to identify relationships between independent and dependent variables of this research. The study has research population of 50,000 households (respondents) in the study area of Tehran, the District 20 (Shahr-e-Rey). The required sample size for population of 50,000 in this research was calculated as 381 respondents (Krejcie & Morgan, 1970). Accordingly, the questionnaire surveys were sent to the respondents by postal mail and after all the respondents feedback had been collected, the appropriate analysis methods were carried out. The analysis method in this research is mainly descriptive and regression analysis by using the SPSS software.

7. Data Analysis and Discussion

After collecting the data, this research adopted the Descriptive Statistic (DS) for frequency and percentage of respondent's background. Descriptive statistics of respondent's background indicate that nearly 93% of the respondents (household head) in this research are more than 40 years old, 71% of them are male and most

of the them (67%) are married. Household gender is important because family size and overcrowding can be influenced by household gender. In addition, nearly 82% of the respondents have low levels of education (completed high school or below). Besides, 59% of the respondents indicated that their income was below USD540. Nearly 77% of respondents have lived in Tehran for less than 10 years and 50% of them indicated that employment or job transfer was the reason for migration. Other reasons for migration are 9% family dependent, 7% Tehran facilities, 6% higher education, and 3% marriage. Further, 92% of respondents live in rental houses, while 85% of respondents indicated that they live with more than one family in one residential unit.

The aim of research objective is to investigate the contribution of each of the predictor variables (independent variable) towards the variance of a dependent variable. In Table 1, the *R* Square identifies the variance explained by the independent variable (migration) that is approximately 0.163, it means that the model after the IV has been entered, explains 16.3% of the variance in housing prices.

Table 1. Model Summary for the Dependent Variable (Housing Prices)

| Mode | <i>R</i> | <i>R</i> Square | Adjusted <i>R</i> Square | Std. Error | <i>R</i> Square Change | Sig. <i>F</i> Change |
|------|----------|-----------------|--------------------------|------------|------------------------|----------------------|
| 1 | 0.403 | 0.163 | 0.160 | 0.39473 | 0.163 | 0.000 |

In Table 2, the ANOVA table indicates that the model is significant contribution as indicated by the Sig. = 0.000 this really means $P < 0.005$.

Table 2. ANOVA for the Dependent Variable (housing prices)

| Model | | Sum of Squares | df | Mean Square | <i>F</i> | Sig. |
|-------|------------|----------------|-----|-------------|----------|-------|
| 1 | Regression | 11.459 | 1 | 11.459 | 73.544 | 0.000 |
| | Residual | 59.053 | 379 | 0.156 | | |
| | Total | 70.513 | 380 | | | |

Analysis and evaluator of the research data revealed that migration as independent variable had a good relationship with housing prices. Therefore, Multiple Regression Analysis found the relative contribution of each independent and dependent variable of the study. Accordingly, the objective of the research was achieved.

8. Conclusion

The main objective of this research has designed to examine the relationship between migration and housing prices of low-income households. The result of this study found that there is a positive relationship between migration and housing prices. Further, the research has detected some of the main problems associated with the low-income households in Tehran who have migrated. The result of this research shows that most of migrated households to Tehran have low level of education, low income, and migrated to this city during the past ten years ago. Furthermore, this research finds one of the main problems of housing demand in Tehran is a lack of policy to control the housing prices. Therefore, the Government should pay more attention to income affordability, purchase affordability to decrease the burden of low-income household. The government should improve housing credit, housing loan, and ease loan term, and decrease the interest rate especially for developer who wants to improve low-income housing conditions. Furthermore, loan terms is very difficult in Iran with high interest rate, so low-income household does not have the ability to borrow money from banks and also amount of payment is not economically reasonable according to their income. Accordingly, Government can apply new policy for low-income to facilitate long term, by this, the Government can help them repair or reconstruct existing housing stock to promote housing quality.

It will be useful for future research to consider another aspect of housing demand in another locality. In addition, this study just focused on the influence of one variable on housing prices which facing by low-income households, hopefully in the future study survey other variables of housing demand such as housing inflation, construction cost and etc. in another area.

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International Gold Market, Stock Market and Business Cycles: the Central and Eastern European Countries

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Abstract: During the economic recession periods, gold investments seem to become very important because gold is considered a means to preserve the investment value. Gold has also maintained this feature during the financial and economic crisis that occurred at the end of the year 2007. Although the inflation rate has recorded significant increases, the investment in gold has kept its value because the price of gold has increased. After the beginning of the financial and economic crisis the price of gold has also recorded a significant increase in volatility. The aims of this study focus on the comparative analysis of the gold price cycles and the stock market cycles in the Central and East Europe as well as the determination of the return of gold investment on the return and risk of stock markets in these countries. The results obtained confirm that both the return and the risk in some of the stock markets under analysis are influenced by the return of gold investment.

Keywords: asymmetric volatility; EGARCH; Hodrick-Prescott filter

JEL Classification: E32; C18; C22

1. Introduction

The identification of influence factors of return and risk of stock markets is a topic that attracts both investors and theoreticians. The price of gas, the exchange rate, the price of houses as well as the price of gold represents potential causes of the evolution of stock markets.

The market model which was discovered by Markowitz (1959) based on the discovery of empirical connections between the stock returns and the return of stock market and which was later on developed by Sharpe (1964) show that the returns of stock generally evolve in the same direction as the stock market. The exception from this rule is represented by few stocks. Some of them are the gold mines. They generally evolve in a contrary direction from that of the stock market. If during the economic growth period and also during the ascending evolution of

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the stock market, the stocks of the gold exploitation companies are less attractive, during the economic downturn periods and the stock market recession they become attractive since they offer the possibility to diversify the portfolio of financial assets, to reduce the risk and to ensure the portfolio. The effective purchase of gold may be an alternative to the investments in financial assets.

In the last years, the gold request has burst out on one hand due to the occurrence of the global financial and monetary crisis that determined the entrance in recession of the USA and the European countries and on the other hand due to the reduction in global gold production and the existence of a significant gold demand. The occurrence of economic recession has caused an inflation increase (Gagea, 2011). Since gold is known as an investment that maintains its value, regardless of the stages of the business cycles, it has been a possibility to preserve value and therefore the investors have allocated a part of their resources for gold purchase. During this time, due to the economic crisis in China and India, one could notice an increase in gold demand.

Most of the studies which analyze the role of gold price on the stock price take into consideration the long-term evolution. The methodology used to reach this objective is cointegration. Due to the fact that Baur D.G.'s study (Baur, 2010) identifies a reaction of gold investments within the daily data and not in the weekly or monthly ones, we propose to analyze this correlation on a short term period.

Ciner C.'s analysis (Ciner, 2001) shows that gold has played an important role in the portfolio diversification. Baur D. G. (Baur, 2010) analyzes the role gold has in the global financial system and draws the conclusion that gold can be considered an asset offering the possibility to ensure the financial asset portfolios. The conclusions he reaches are valid for the daily data, underlying the fact that the investors react very quickly to the shocks on the market. This situation is valid for the developed countries. In the emerging countries the investors do not ensure the portfolio of financial assets through the purchase of a certain asset such as gold, thus they suffer losses.

Wang M.L. et al. (Wang et al., 2010) prove that there is not a long-term relation between the price of gas, the price of gold and the exchange rate and the stock markets for the USA but this relation exists for Germany, Japan, Taiwan and China.

We can find the testing of influence of gold price on the stock markets in Indonesia, Thailand, Vietnam, Philippines and Malaysia in Do G. Q.'s paper (Do, 2009). To reach the objectives of the paper, he uses the heteroscedastic models GARCH(1,1)-X and GJR(1,1)-X. The results confirm that three of the five stock markets are influenced by the return of gold investment.

The purpose of the present paper is on one hand to analyze the evolution of the gold market in comparison with the stock markets in Central and Eastern Europe

by comparing the cycles of gold price with the cycles of stock markets and on the other hand to test if the international gold return has a short-term influence on the return and risk of stock markets in the Central and Eastern European countries.

2. Methods

In order to compare the business cycles of gold price with the business cycles of stock markets in the Central and East European countries we went through several stages. The first stage was represented by the estimation of business cycles by means of the Hodrick-Prescott (Hodrick, Prescott, 1997) filter. This filter is very frequently used in the estimation of business cycles and it is also much criticized since it tends to underestimate the cyclic component (Rand & Tarp 2002). The cyclic component is obtained as a difference between the variable used and the estimated trend.

By means of the Hodrick-Prescott filter the trend is determined by minimizing the expression

$$\sum_{t=1}^t c_t^2 + \lambda \sum_{t=2}^t [(g_t - g_{t-1}) - (g_{t-1} - g_{t-2})]^2$$

Where: $c_t = \ln y(t) - \ln y^*(t)$

$$g_t = \ln y^*(t+1)$$

$$g_{t-1} = \ln y^*(t)$$

$$g_{t-2} = \ln y^*(t-1)$$

y^* - the long-term trend of the variable y .

For the parameter λ the most frequently used value for the monthly data is 144000. Since we use daily data we take into consideration the implicit value from the Eviews software equal to 6812100.

In order to test the existence of the cyclic component for a time series we use the Ljung-Box test. The tested hypotheses are: the null hypothesis H_0 implies that the variable is for a white noise and the alternative hypothesis H_1 implies that the variable is autocorrelated, a feature specific for the business cycles. The test statistics is computed according to the relation:

$$Q_k = T(T+2) \sum_{i=1}^k \frac{\hat{\rho}_i^2}{T-i}$$

If the null hypothesis is rejected the time series is not a white noise and presents a cyclic component.

After the estimation of the business cycles of the variables comprised in the study we continue with the analysis of their bivariate correlation coefficients. (Jemna D., 2012). We estimate the bivariate correlation coefficients $\rho(j)$ for the different values of j , $j \in \{0, \pm 1, \pm 2, \pm 3, \dots\}$. A variable is acyclical if the bivariate correlation coefficient $\rho(0)$ is zero and it is pro-cyclical if the bivariate correlation coefficient $\rho(0)$ is positive and countercyclical if the bivariate correlation coefficient $\rho(0)$ is negative. The correlation coefficients may indicate whether the analyzed cycles lead the cycle with j periods if $|\rho(j)|$ has the highest value for a positive j ; it lags the cycle with j periods if $|\rho(j)|$ has the highest value for a negative j or it is synchronous with the business cycles if $|\rho(j)|$ has the highest value for $j = 0$ (Agenor et alii, 1999).

In order to determine if the global return of gold investments has an influence on the return and risk of stock markets in the Central and East Europe, we will model the returns by means of the heteroscedastic models and then we will introduce the variable return of gold investment in the previously estimated heteroscedastic models. We will take into consideration the models GARCH, TGARCH, EGARCH and PGARCH which will be estimated taking into account different error distributions: normal, Student and GED. The heteroscedastic models are specific to the financial variables which are characterized by autocorrelation, dependence, asymmetry, leptokurtosis (or fat tails) and cluster presentation.

The estimation of heteroscedastic models implies the estimation of two equations: the first equation represents the mean equation that is usually represented by an ARMA model while the second one is the variance equation. The GARCH(p,q) model was proposed by Bollerslev in 1986. It is as follows:

- the ARMA(1,1) model for return: $r_t = a_0 + a_1 r_{t-1} + \varepsilon_t - m_1 \varepsilon_{t-1}$

$$- h_t = \alpha_0 + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^q \beta_j h_{t-j}^2$$

In order for the conditioned variance to be positive $h_t = \frac{\alpha_0}{1 - \sum_{i=1}^p \alpha_i - \sum_{j=1}^q \beta_j}$ the

following conditions should be met: $\alpha_0 > 0, \alpha_i \geq 0, \beta_j \geq 0$. The stationary condition is also met if $\sum_{i=1}^p \alpha_i + \sum_{j=1}^q \beta_j < 1$.

In order to test the influence of return of gold investments on the return and risk of stock markets we introduced as a factor, both in the mean equation and in the variance equation, as well as in the GARCH model and in the TGARCH, EGARCH and PGARCH models, the return of gold investment as follows:

$$r_t = \alpha_0 + a_1 r_{t-1} + \varepsilon_t - m_1 \varepsilon_{t-1} + \phi_1 r_{at} + \phi_2 r_{at-1}$$

$$h_t = \alpha_0 + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^q \beta_j h_{t-j}^2 + \theta_1 r_{at} + \theta_2 r_{at-1}$$

The TGARCH, EGARCH and PGARCH models succeed to capture in the modeling the asymmetry phenomenon. The asymmetry phenomenon involves the asymmetry of the impact of new events on return: a negative piece of information of the same intensity as a positive one determines a higher increase in volatility.

The TGARCH model was proposed by Zakoian in 1994:

$$h_t = \alpha_0 + \sum_{i=1}^p [\alpha_i \varepsilon_{t-i}^2 + \gamma_i \varepsilon_{t-i}^2 d_{t-1}] + \sum_{j=1}^q \beta_j h_{t-j}$$

Where: d_{t-1} - dummy variable (binary),

$$d_{t-1} = 1 \text{ if } \varepsilon_t < 0 \text{ and}$$

$$d_{t-1} = 0 \text{ in what follows.}$$

The conditioned volatility is positive when the estimated parameters meet the following conditions:

$$\alpha_0 > 0, \alpha_i \geq 0, \alpha_i + \gamma_i \geq 0, \beta_j \geq 0.$$

The EGARCH model

$$-\ln h_t = \alpha_0 + \sum_{i=1}^p \left[\alpha_i \left| \frac{\varepsilon_{t-i}}{\sqrt{h_{t-i}}} \right| + \gamma_i \frac{\varepsilon_{t-i}}{\sqrt{h_{t-i}}} \right] + \sum_{j=1}^q \beta_j \ln h_{t-j}$$

The existence of asymmetry is highlighted by the estimation of the parameter γ_i . If the parameter is statistically significant then there is an asymmetric reaction of volatility based on the new information occurring on the market.

Ding et alii. (1993) propose the Asymmetric Power ARCH (A-PARCH). The conditioned variance for a A-PARCH (1,1,1) is modeled according to the relation:

$$h_t^\delta = \alpha_0 + \alpha_1 \left(|\varepsilon_{t-1}| - \gamma_1 \varepsilon_{t-1} \right)^\delta + \beta_1 h_{t-1}^\delta$$

The parameters obtained must meet the following conditions: $\delta \geq 0$, $\alpha_0 > 0$, $\alpha_1 \geq 0$, $\beta_1 \geq 0$ and $|\gamma_1| \leq 1$. If $\gamma_1 \neq 0$, the conditioned volatility is asymmetric.

When estimating the conditioned volatility we used the normal distribution proposed by Engle in 1983 (Engle, 1983), the standardized Student t distribution proposed by Bollerslev (1987) and the Generalized Error Distribution proposed by Nelson in 1991 (Nelson, 1991). In our study we will estimate the heteroscedastic models by taking into consideration these three distributions.

3. Data and Empirical Analysis

The stock markets in the Central and East European countries are analyzed by means of their general indicators. The countries considered in the analysis are: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania and Slovenia. The time period for the analysis is 1/03/2000 – 4/30/2012 for which a maximum of 3,216 daily observations are registered. The values of the indices are taken from the websites of the stock markets under analysis. The gold price for the same period was taken from the site World Gold Council. Based on figure 1, we may ascertain that there is a similar evolution of the indices of stock markets in the Central and East European countries during the analyzed period. The stock markets of these countries register in the first period a significant increase until the moment of beginning of the global financial crisis at the end of the year 2007 and then it records a sudden downfall due to the economic recession period. At the end of the analyzed period a return of the growth trend is again noticed. The exception is represented by Slovenia which experienced a sudden growth at the end of the year 2005 and entered the recession period a little bit later than the other countries.

As for the evolution of the global price of gold, it registers an ascending trend as well as short downfall periods. The temporary decreases in gold price are much smaller than the decreases registered by the stock markets.

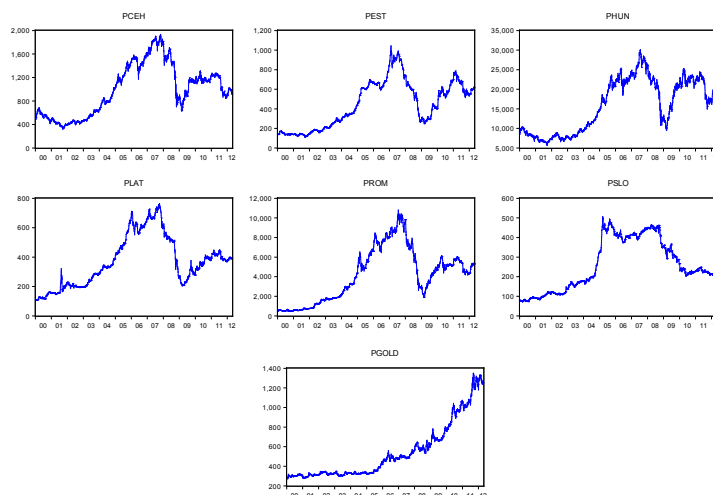


Figure 1. The evolution of indices of the stock markets in the Central and East European countries and of the price of gold during 1/03/2000 – 4/30/2012

Based on the observations 3215 log-returns are obtained (or continuous compounded returns) using the formula:

$$r_t = (\ln P_t - \ln P_{t-1}) \cdot 100$$

Where:

r_t - Continuously compounded return

P_t, P_{t-1} - Index portfolio price at time t and t-1, respectively.

Since the returns of the stock markets determined on the basis of reference indices are stationary (according to annex 1) their means may be considered the returns an investor expects to obtain if he invests in those respective stock markets. As one can also observe from the table below the average returns are very different: the lowest value is for the stock market in the Czech Republic, of only 0.0202% per day, while the highest value is for the stock market in Romania of 0.0769% per day.

The total risk measured by means of the standard deviation has the lowest value for the stock market in Lithuania while the highest value is held by the Romanian stock market. The median of returns is equal to zero for the Czech Republic, Hungary, Latvia and Slovenia, which proves that the investors have 50% chances to obtain a profit and 50% chances to obtain losses while in the case of Estonia, Lithuania and Romania, the median is positive, meaning that the investors have more than 50% chances to obtain a profit.

Table 1. Descriptive statistics for the analyzed returns

| | CEH | EST | HUN | LAT | LIT | ROM | SLO | GOLD |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 0.0202 | 0.046 | 0.022 | 0.041 | 0.037 | 0.076 | 0.028 | 0.0458 |
| Median | 0.000 | 0.041 | 0.000 | 0.000 | 0.011 | 0.024 | 0.000 | 0.033 |
| Maximum | 12.36 | 12.09 | 13.17 | 10.17 | 11.00 | 11.54 | 11.88 | 7.838 |
| Minimum | -16.18 | -7.045 | -12.64 | -14.70 | -11.93 | -13.11 | -14.81 | -8.56 |
| Std. Dev. | 1.523 | 1.210 | 1.646 | 1.546 | 1.147 | 1.756 | 1.213 | 1.088 |
| Skewness | -0.464 | 0.128 | -0.075 | -0.606 | -0.485 | -0.375 | -0.944 | -0.156 |
| Kurtosis | 14.80 | 10.72 | 8.80 | 17.46 | 20.46 | 10.42 | 20.22 | 8.68 |
| Jarque-Bera | 18769 | 7993.2 | 4509.3 | 28240 | 40964 | 7455.4 | 40206 | 4346.6 |
| Probability | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Obs. | 3215 | 3215 | 3215 | 3215 | 3215 | 3215 | 3215 | 3215 |

Source: Results obtained by means of the Eviews software programme

All the return distributions present a negative asymmetry and have a strong leptokurtic feature that is why the distributions do not follow a normal distribution as the Jarque-Bera test shows. The daily returns of gold investments present the specific characteristics of the stock market returns: negative asymmetry, leptokurtosis, they do not follow a normal distribution law. Moreover, as annex 2 shows, the returns of gold investments, as well as all the returns of the analyzed stock markets are autocorrelated and dependent (the high values are followed by high values regardless of their symbol and the low values are followed by low values).

3.1. The analysis of the cycles of the international gold market in comparison with the stock markets in the Central and East Europe

The business cycles of the stock markets and of the gold investment were estimated by means of the previously presented Hodrick-Prescott filter. The variables of the business cycles present autocorrelation according to the results obtained by applying the Ljung-Box test. The results obtained for the bivariate correlation coefficients show that the stock market cycles in Estonia, Hungary and Romania lag the cycle by 15 days, those in the Czech Republic lag the cycle by 12 days, in Latvia they lag the cycle by 13 days and those from Lithuania and Slovenia lag the cycle by 16 days.

Table 2 The bivariate correlation coefficients between the business cycles of the stock markets in the Central and Eastern Europe and the business cycles of the global gold investment with different lags

| | GLD | GLD(-5) | GLD(-12) | GLD(-13) | GLD(-15) | GLD(-16) |
|-------|---------|---------|----------|----------|----------|----------|
| CEH_C | -0.248* | -0.293* | -0.317* | -0.316* | -0.308* | -0.302* |
| EST_C | -0.131* | -0.200* | -0.271* | -0.276* | -0.281* | -0.281* |
| HUN_G | -0.284* | -0.338* | -0.386* | -0.389* | -0.390* | -0.387* |
| LAT_C | -0.219* | -0.254* | -0.285* | -0.286* | -0.280* | -0.277* |
| LIT_C | -0.092* | -0.153* | -0.227* | -0.232* | -0.237* | -0.239* |
| ROM_C | -0.280* | -0.310* | -0.332* | -0.333* | -0.333* | -0.326* |
| SLO_C | -0.089* | -0.102* | -0.112* | -0.116* | -0.122* | -0.123* |

Note: *, **, ***, indicate statistical significance for a taken risk of 1%, 5% and 10%

The results are obtained by means of the Eviews statistical software.

The business cycles of the stock markets in the Central and East European countries under analysis are countercyclical in comparison with the business cycles of the global gold investment because the bivariate correlation coefficient $\rho(0)$ is negative.

3.2. Determining the Influence of Return of Gold Investments on the Returns of the Stock Markets in Central and East Europe

The returns of the index portfolios as well as the returns of gold investments are dependent; therefore they can be modeled by means of heteroscedastic models. Firstly, we identified the corresponding ARMA model for the mean equation in the heteroscedastic models. We chose the Schwarz criterion, its minimal value indicating the best model, because it offers the possibility to identify the models with fewer parameters in comparison with the Akaike criterion. As it was obvious, the errors resulted from the estimation of ARMA models do not meet the homoscedasticity hypothesis, therefore we went on with the estimation of the previously presented heteroscedastic models. We chose the best estimated models, also according to the Schwarz criterion. After their estimation, we introduced the mean equation and the variance equation off the return of global gold investment and we presented them in the table below. The estimated models meet the hypotheses specific to a regression model.

Table 3. The estimation of heteroscedastic models of the index portfolio returns in the Central and Eastern European countries

| Var. Paramete rs | CEH | EST | HUN | LAT | LIT | ROM | SLO |
|---------------------|-----------------|-----------------|-------------|-------------|----------------|-----------------|----------------|
| a_0 | 0.07* | 0.04*** | 0.024 | 0.041* | 0.06*** | 0.069* | 0.163* |
| a_1 | 0.042** | 1.092* | 0.219* | - | 0.944* | - | - |
| a_2 | -0.03*** | -0.126* | -0.844* | - | -0.801 | - | - |
| m_1 | - | -0.942* | -0.217* | -0.084* | -0.083* | 0.091* | -0.007 |
| m_2 | - | - | 0.809* | - | - | - | - |
| ϕ_1 | 0.071* | 0.003 | 0.04*** | 0.012 | 0.039* | 0.04*** | 0.004 |
| ϕ_2 | -0.03*** | -0.001 | - | 0.000 | - | - | 0.018 |
| α_0 | 0.049* | 0.007* | 0.066* | 0.064* | -0.134* | -0.274* | -0.064* |
| α_1 | 0.063* | 0.342* | 0.045* | 0.168* | 0.187* | 0.488* | 0.128* |
| α_2 | - | -0.235* | - | - | - | - | - |
| γ | 0.092* | 0.020 | 0.074* | 0.084** | -0.029* | -0.05** | -0.023* |
| β_1 | 0.863* | 0.920* | 0.8885* | 0.8048* | 0.9644* | 0.9145* | 0.9643* |
| δ | - | 1,090* | - | - | - | - | - |
| θ_1 | 0.05*** | -0.017 | 0.052** | 0.01 | -0.050* | 0.08* | 0.055* |
| θ_2 | -0.019 | 0.0201 | - | -0.0011 | 0.0521* | -0.044* | -0.034* |
| Distrib. Model | Student TGARC H | Student PGARC H | GED TGARC H | GED TGARC H | Normal EGARC H | Student EGARC H | Normal EGARC H |

Note: *, **, ***, indicate statistical significance for a taken risk of 1%, 5% and 10%

The results presented in the table above show that between the return of gold investment and the return of stock market in the Czech Republic and Lithuania there is a direct correlation. This situation shows a similar evolution in the two possibilities to invest since when the return of the stock market has an ascending trend the return of gold investment also increases. If we take a higher risk of up to 10% we could ascertain that there is also such correlation for the stock market in Romania and Hungary.

As regards the risk, the stock markets in Estonia and Latvia are not influenced by the return of gold investment, therefore when the return of gold investment increases the risk of stock markets in these countries also increases. If we take into account that during the economic downturn periods the risk of stock markets significantly increases, we may conclude that in times of economic recession the returns of gold investments also increase. For Romania and Slovenia there is a statistically significant correlation between the return of gold investment and the return of stock market from the previous day but an inverse one. As a consequence,

if one day the return of gold investment increases we may say that the investors are attracted by it the following day. On the stock market when the buying or selling interventions decrease, volatility also decreases.

4. Conclusions

This paper aimed to analyze the business cycles of the stock markets in Central and East Europe in comparison with the business cycles of the gold price. We took into consideration the estimation of these cycles within the daily data since the previous research shows fast changes of goals in the investments in stock markets. The comparative study of these cycles shows that the business cycles of the stock markets in the Central and East European countries under analysis are countercyclical comparatively with the business cycles of gold investments.

The analysis of the stock markets in Central and East Europe and the modeling of their return and volatility indicate that these are characterized by the phenomenon of volatility asymmetry. The results also confirm the influence of price of gold especially on the volatility of stock markets.

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ANNEX 1

Table 1. The results of testing stationarity for daily index portfolio return during the analyzed period

| Variable/ Characteristics | Model with intercept | Model with intercept and trend | Model without intercept and trend |
|------------------------------|----------------------------|-----------------------------------|--------------------------------------|
| LRCEH | | | |
| ADF test | -40.91670 | -40.93252 | -40.91245 |
| Probability | 0.0000 | 0.0000 | 0.0000 |
| Schwarz | 3.678831 | 3.680972 | 3.676496 |
| LREST | | | |
| ADF test | -48.38181 | -48.39192 | -48.32658 |
| Probability | 0.0001 | 0.0000 | 0.0001 |
| Schwarz | 3.199194 | 3.201399 | 3.197775 |
| LRHUN | | | |
| ADF test | -26.95596 | -26.95645 | -26.94685 |
| Probability | 0.0000 | 0.0000 | 0.0000 |
| Schwarz | 3.830859 | 3.833309 | 3.828527 |
| LRLAT | | | |
| ADF test | -28.59861 | -28.65947 | -28.56225 |
| Probability | 0.0000 | 0.0000 | 0.0000 |
| Schwarz | 3.697635 | 3.699220 | 3.695700 |
| LRLIT | | | |
| ADF test | -49.21033 | -49.21923 | -49.17328 |
| Probability | 0.0001 | 0.0000 | 0.0001 |
| Schwarz | 3.098087 | 3.100309 | 3.096355 |
| LRROM | | | |
| ADF test | -50.64350 | -50.71283 | -50.56412 |
| Probability | 0.0001 | 0.0000 | 0.0001 |
| Schwarz | 3.956413 | 3.957571 | 3.955430 |
| LRSLO | | | |
| ADF test | -57.92414 | -58.09015 | -57.90007 |
| Probability | 0.0001 | 0.0000 | 0.0001 |
| Schwarz | 3.229197 | 3.228622 | 3.227269 |
| LRGOLD | | | |
| ADF test | -59.04599 | -59.05841 | -58.93972 |
| Probability | 0.0001 | 0.0000 | 0.0001 |
| Schwarz | 3.005660 | 3.007788 | 3.005183 |

ANNEX 2 Testing the autocorrelation of the index portfolio returns for the CEE countries

Table 1. Testing the autocorrelation o index portfolio returns in the Czech Republic and Estonia

| | LRCEH | | | | LREST | | | |
|----|--------|--------|--------|-------|-------|-------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.070 | 0.070 | 15.692 | 0.000 | 0.156 | 0.156 | 78.448 | 0.000 |
| 2 | -0.052 | -0.057 | 24.400 | 0.000 | 0.059 | 0.036 | 89.711 | 0.000 |
| 3 | -0.046 | -0.039 | 31.339 | 0.000 | 0.042 | 0.029 | 95.469 | 0.000 |
| 4 | 0.026 | 0.029 | 33.465 | 0.000 | 0.034 | 0.022 | 99.228 | 0.000 |
| 5 | 0.044 | 0.035 | 39.587 | 0.000 | 0.028 | 0.017 | 101.74 | 0.000 |
| 6 | -0.016 | -0.021 | 40.395 | 0.000 | 0.049 | 0.040 | 109.58 | 0.000 |
| 7 | -0.004 | 0.005 | 40.450 | 0.000 | 0.042 | 0.026 | 115.25 | 0.000 |
| 8 | 0.015 | 0.016 | 41.134 | 0.000 | 0.038 | 0.024 | 119.99 | 0.000 |
| 9 | 0.017 | 0.011 | 42.019 | 0.000 | 0.042 | 0.027 | 125.58 | 0.000 |
| 10 | -0.017 | -0.019 | 42.987 | 0.000 | 0.062 | 0.047 | 138.07 | 0.000 |
| 11 | -0.019 | -0.013 | 44.163 | 0.000 | 0.040 | 0.017 | 143.13 | 0.000 |
| 12 | 0.061 | 0.062 | 56.142 | 0.000 | 0.042 | 0.025 | 148.89 | 0.000 |

Table 2. Testing the autocorrelation o index portfolio returns in the Hungary and Latvia

| | LRHUN | | | | LRLAT | | | |
|----|--------|--------|--------|-------|--------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.051 | 0.051 | 8.2698 | 0.004 | 0.054 | 0.054 | 9.2841 | 0.002 |
| 2 | -0.076 | -0.079 | 26.905 | 0.000 | 0.106 | 0.104 | 45.610 | 0.000 |
| 3 | -0.020 | -0.012 | 28.160 | 0.000 | 0.025 | 0.015 | 47.658 | 0.000 |
| 4 | 0.087 | 0.083 | 52.287 | 0.000 | -0.078 | -0.092 | 67.213 | 0.000 |
| 5 | 0.035 | 0.024 | 56.324 | 0.000 | -0.031 | -0.027 | 70.212 | 0.000 |
| 6 | -0.056 | -0.047 | 66.277 | 0.000 | -0.050 | -0.030 | 78.153 | 0.000 |
| 7 | -0.022 | -0.009 | 67.793 | 0.000 | -0.037 | -0.024 | 82.572 | 0.000 |
| 8 | 0.021 | 0.010 | 69.227 | 0.000 | 0.005 | 0.011 | 82.658 | 0.000 |
| 9 | -0.005 | -0.016 | 69.317 | 0.000 | 0.045 | 0.049 | 89.050 | 0.000 |
| 10 | -0.051 | -0.041 | 77.588 | 0.000 | 0.078 | 0.068 | 108.47 | 0.000 |
| 11 | 0.001 | 0.011 | 77.591 | 0.000 | 0.061 | 0.039 | 120.59 | 0.000 |
| 12 | 0.027 | 0.016 | 79.925 | 0.000 | 0.079 | 0.056 | 140.67 | 0.000 |

Table 3. Testing the autocorrelation of index portfolio returns in Latvia and Romania

| | LRLIT | | | | LRRM | | | |
|----|-------|--------|--------|-------|--------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.140 | 0.140 | 63.143 | 0.000 | -0.494 | -0.494 | 785.91 | 0.000 |
| 2 | 0.068 | 0.049 | 77.937 | 0.000 | -0.000 | -0.323 | 785.91 | 0.000 |
| 3 | 0.052 | 0.037 | 86.677 | 0.000 | -0.000 | -0.237 | 785.91 | 0.000 |
| 4 | 0.042 | 0.028 | 92.425 | 0.000 | 0.001 | -0.182 | 785.91 | 0.000 |
| 5 | 0.012 | -0.002 | 92.905 | 0.000 | 0.001 | -0.143 | 785.91 | 0.000 |
| 6 | 0.079 | 0.074 | 112.89 | 0.000 | 0.001 | -0.113 | 785.92 | 0.000 |
| 7 | 0.068 | 0.046 | 127.65 | 0.000 | -0.002 | -0.094 | 785.93 | 0.000 |
| 8 | 0.088 | 0.067 | 152.86 | 0.000 | 0.001 | -0.077 | 785.93 | 0.000 |
| 9 | 0.069 | 0.040 | 168.20 | 0.000 | 0.000 | -0.064 | 785.93 | 0.000 |
| 10 | 0.068 | 0.040 | 183.08 | 0.000 | 0.000 | -0.053 | 785.93 | 0.000 |
| 11 | 0.042 | 0.016 | 188.81 | 0.000 | 0.000 | -0.044 | 785.93 | 0.000 |
| 12 | 0.055 | 0.032 | 198.64 | 0.000 | -0.001 | -0.037 | 785.93 | 0.000 |

Table 4. Testing the autocorrelation of index portfolio returns in Slovakia and as well as the returns of gold investments

| | LRSLOV | | | | LRGOLD | | | |
|----|--------|--------|--------|-------|--------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | -0.022 | -0.022 | 1.5782 | 0.209 | -0.039 | -0.039 | 4.9828 | 0.026 |
| 2 | 0.039 | 0.038 | 6.3531 | 0.042 | -0.032 | -0.033 | 8.2410 | 0.016 |
| 3 | -0.016 | -0.014 | 7.1305 | 0.068 | 0.016 | 0.013 | 9.0454 | 0.029 |
| 4 | -0.048 | -0.050 | 14.429 | 0.006 | 0.016 | 0.016 | 9.9043 | 0.042 |
| 5 | 0.030 | 0.029 | 17.369 | 0.004 | -0.020 | -0.018 | 11.238 | 0.047 |
| 6 | -0.001 | 0.004 | 17.372 | 0.008 | -0.031 | -0.032 | 14.327 | 0.026 |
| 7 | 0.015 | 0.011 | 18.102 | 0.012 | -0.038 | -0.042 | 18.970 | 0.008 |
| 8 | 0.036 | 0.035 | 22.310 | 0.004 | 0.042 | 0.037 | 24.654 | 0.002 |
| 9 | 0.007 | 0.011 | 22.480 | 0.007 | 0.055 | 0.058 | 34.351 | 0.000 |
| 10 | 0.020 | 0.017 | 23.766 | 0.008 | -0.004 | 0.005 | 34.399 | 0.000 |
| 11 | 0.016 | 0.018 | 24.560 | 0.011 | -0.055 | -0.054 | 44.158 | 0.000 |
| 12 | 0.038 | 0.041 | 29.309 | 0.004 | -0.025 | -0.036 | 46.143 | 0.000 |

ANNEX 3. Testing the dependence of index portfolio returns of the CEE countries

Table 1. Testing the dependence of index portfolio returns in the Czech Republic and Estonia

| | LRCEH2 | | | | LREST2 | | | |
|----|--------|--------|--------|-------|--------|-------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.322 | 0.322 | 333.69 | 0.000 | 0.150 | 0.114 | 201.76 | 0.000 |
| 2 | 0.294 | 0.212 | 611.63 | 0.000 | 0.086 | 0.038 | 225.32 | 0.000 |
| 3 | 0.335 | 0.225 | 973.24 | 0.000 | 0.105 | 0.070 | 260.83 | 0.000 |
| 4 | 0.284 | 0.120 | 1233.9 | 0.000 | 0.106 | 0.066 | 297.35 | 0.000 |
| 5 | 0.314 | 0.149 | 1551.0 | 0.000 | 0.072 | 0.021 | 313.85 | 0.000 |
| 6 | 0.168 | -0.063 | 1641.5 | 0.000 | 0.063 | 0.021 | 326.46 | 0.000 |
| 7 | 0.162 | -0.021 | 1725.9 | 0.000 | 0.055 | 0.019 | 336.21 | 0.000 |
| 8 | 0.225 | 0.074 | 1888.9 | 0.000 | 0.101 | 0.069 | 369.13 | 0.000 |
| 9 | 0.268 | 0.150 | 2121.2 | 0.000 | 0.115 | 0.070 | 411.70 | 0.000 |
| 10 | 0.323 | 0.196 | 2458.5 | 0.000 | 0.111 | 0.055 | 451.48 | 0.000 |
| 11 | 0.256 | 0.080 | 2669.8 | 0.000 | 0.115 | 0.058 | 494.12 | 0.000 |
| 12 | 0.169 | -0.080 | 2762.5 | 0.000 | 0.200 | 0.200 | 129.29 | 0.000 |

Table 2 Testing the dependence of index portfolio returns in the Hungary and Latvia

| | LRHUN2 | | | | LRLAT2 | | | |
|----|--------|--------|--------|-------|--------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.216 | 0.133 | 460.64 | 0.000 | 0.475 | 0.475 | 725.03 | 0.000 |
| 2 | 0.161 | 0.070 | 544.59 | 0.000 | 0.361 | 0.176 | 1145.5 | 0.000 |
| 3 | 0.149 | 0.069 | 616.25 | 0.000 | 0.283 | 0.077 | 1402.9 | 0.000 |
| 4 | 0.144 | 0.064 | 682.84 | 0.000 | 0.252 | 0.075 | 1607.8 | 0.000 |
| 5 | 0.197 | 0.122 | 807.53 | 0.000 | 0.324 | 0.188 | 1946.9 | 0.000 |
| 6 | 0.165 | 0.054 | 895.55 | 0.000 | 0.285 | 0.055 | 2208.4 | 0.000 |
| 7 | 0.226 | 0.131 | 1060.9 | 0.000 | 0.227 | -0.006 | 2374.7 | 0.000 |
| 8 | 0.256 | 0.135 | 1271.8 | 0.000 | 0.200 | 0.018 | 2503.7 | 0.000 |
| 9 | 0.262 | 0.120 | 1493.4 | 0.000 | 0.252 | 0.122 | 2708.7 | 0.000 |
| 10 | 0.141 | -0.033 | 1557.8 | 0.000 | 0.241 | 0.033 | 2896.8 | 0.000 |
| 11 | 0.148 | 0.025 | 1628.1 | 0.000 | 0.343 | 0.180 | 3275.6 | 0.000 |
| 12 | 0.310 | 0.310 | 309.77 | 0.000 | 0.265 | -0.005 | 3501.6 | 0.000 |

Table 3. Testing the dependence of index portfolio returns in and Lithuania and Romania

| | LRLIT2 | | | | LRRM2 | | | |
|----|--------|-------|--------|-------|--------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.380 | 0.380 | 464.35 | 0.000 | 0.500 | 0.500 | 803.48 | 0.000 |
| 2 | 0.272 | 0.149 | 702.62 | 0.000 | -0.001 | -0.334 | 803.48 | 0.000 |
| 3 | 0.257 | 0.134 | 914.49 | 0.000 | -0.001 | 0.250 | 803.48 | 0.000 |
| 4 | 0.168 | 0.013 | 1005.7 | 0.000 | -0.001 | -0.200 | 803.48 | 0.000 |
| 5 | 0.166 | 0.058 | 1094.3 | 0.000 | -0.001 | 0.166 | 803.48 | 0.000 |
| 6 | 0.154 | 0.043 | 1170.9 | 0.000 | -0.001 | -0.143 | 803.49 | 0.000 |
| 7 | 0.118 | 0.011 | 1215.5 | 0.000 | -0.001 | 0.125 | 803.49 | 0.000 |
| 8 | 0.108 | 0.017 | 1253.4 | 0.000 | -0.001 | -0.111 | 803.49 | 0.000 |
| 9 | 0.121 | 0.045 | 1301.0 | 0.000 | -0.000 | 0.100 | 803.49 | 0.000 |
| 10 | 0.102 | 0.016 | 1334.8 | 0.000 | -0.000 | -0.091 | 803.49 | 0.000 |
| 11 | 0.113 | 0.038 | 1376.3 | 0.000 | -0.000 | 0.083 | 803.49 | 0.000 |
| 12 | 0.117 | 0.033 | 1420.7 | 0.000 | -0.000 | -0.077 | 803.49 | 0.000 |

Table 4. Testing the dependence of index portfolio returns in Slovakia and as well as the returns of gold investments

| | LRSLOV2 | | | | LRGOLD2 | | | |
|----|---------|--------|--------|-------|---------|--------|--------|-------|
| | AC | PAC | Q-Stat | Prob | AC | PAC | Q-Stat | Prob |
| 1 | 0.026 | 0.026 | 2.1770 | 0.140 | 0.173 | 0.173 | 96.372 | 0.000 |
| 2 | 0.016 | 0.015 | 3.0089 | 0.222 | 0.150 | 0.124 | 168.73 | 0.000 |
| 3 | 0.044 | 0.043 | 9.1629 | 0.027 | 0.121 | 0.080 | 215.47 | 0.000 |
| 4 | 0.013 | 0.011 | 9.7412 | 0.045 | 0.141 | 0.099 | 279.90 | 0.000 |
| 5 | 0.018 | 0.016 | 10.816 | 0.055 | 0.216 | 0.169 | 430.83 | 0.000 |
| 6 | 0.002 | -0.001 | 10.836 | 0.094 | 0.124 | 0.044 | 480.58 | 0.000 |
| 7 | 0.025 | 0.023 | 12.789 | 0.077 | 0.098 | 0.020 | 511.35 | 0.000 |
| 8 | 0.010 | 0.007 | 13.095 | 0.109 | 0.124 | 0.059 | 560.81 | 0.000 |
| 9 | 0.005 | 0.003 | 13.165 | 0.155 | 0.069 | -0.012 | 576.01 | 0.000 |
| 10 | 0.039 | 0.037 | 18.120 | 0.053 | 0.136 | 0.064 | 636.07 | 0.000 |
| 11 | 0.002 | -0.001 | 18.133 | 0.079 | 0.096 | 0.025 | 665.54 | 0.000 |
| 12 | 0.145 | 0.144 | 86.312 | 0.000 | 0.104 | 0.037 | 700.54 | 0.000 |

Employees' Performance Contribution to the Growth of the Company on the Emerging Markets – a Managerial Approach

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Abstract: An appropriate human resources strategy can be the necessary competitive advantage that a company must have on the emerging markets in particular. This paper aims to underline the managers' implication on the employees' performance, what strategies are used to retain them, what influences their performance, how this contributes to company's growth and development. These are important aspects, being part of the continuous improvement plans on the emerging markets. More studies have treated this topic and its relevance to the economic literature, trying to provide more explanations for the variance of employees' performance and its results within different types of organizations. This study used the semi-conducted in-depth interview method, among 13 managers from Bucharest, having three tested and confirmed hypotheses. It was confirmed that there are various factors that influence employees' performance and factors that prevent employees from being performant. The employees' performance significantly contributes to the growth of the company. This study has mainly managerial implications, as it emphasizes the role of the human capital to the success of the company. The study is valuable through the emerging character of our country and the need of efficient strategies that could provide competitive advantage.

Keywords: Management; Strategy; Development; Competitive Advantage; Internal Marketing

JEL Classification: L1; M12; O15

1. Introduction

The companies that know how to make a strategy from their ability of using the resources efficiently will grow faster and will get known on the market. This is mainly considered a managerial responsibility and the results depend not only on management's capabilities, but also on the hired employees. We can discuss here about the performance management concept, as the performance represents one of the most important aspects that must be taken into account when talking about the internal marketing of a company, but not only. Reaching performance to the highest level becomes more and more a challenge, given the continuous development of the companies and the continuous increase of the market standards. This assumes not only providing quality of the service and products, but also having a performant workforce. The more the employees exceed expectations, the

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greater the company's competitive advantage will be. This is mainly considered a managerial responsibility and the results depend not only on management's capabilities, but also on the hired employees. A strong company will always attract and retain talents, as they are the basis for its success, as well as the leverage that sustain it. This study was conducted among different companies from Bucharest, Romania - an emerging market with great development opportunities, and the questions for the managers were constructed under the umbrella of the emerging market they activate on. The performance has a significant role on the company's growth and performance on the emerging markets, given the low standardization level and the continuous improvement and innovation requirements.

2. Employee's Performance and Company's Performance on the Emerging Markets

Nowadays, on the emerging markets, the performance management is being looked as a participative system, continuous and future oriented, is being looked as an ongoing cycle of criteria settings, monitorizations, evaluations, diagnosis and improvements, action plans and development resources (Shields, 2007). According to Armstrong (2006), is the top managers' responsibility to develop a high performance culture, and Gruman & Saks (2011) consider that performance management is a critical aspect of the organizational efficiency and although the performance evaluation is the basis of the performance management, the entire process extends to all the organizational policies and practices and creates features that interact for producing effectively the employee performance. The performance management is a systematic process of the workload planning and expectations setting, of the continuous performance monitorization, development of the performing capacity, periodically performance evaluation and high performance recompensation (United States Office of Personnel Management, 2001, p. 5). With respect to employees, it was concluded in a study that high tech organizations are laying off employees in their developed markets in order to devote capital to these emerging markets (Rasch, 2012, p. 3).

Performance is a resource consumer factor (Pitt & Foreman, 1999, p. 29). Thus, the higher performance ambiguity within the employer-employee exchange will increase the negotiation cost, as well as the monitorization and agreements between the organization and its employees costs. This is due either to the lack of ability of measuring the performance of the exchange involved parties, or, when performance can be measured, its value is not evaluated properly. When the exchange object is complex, the value adding is possible only on long term, and the performance ambiguity increases. Moreover, the performance ambiguity is a main source of the transactional cost. The more complex the employment exchange is, the more performance ambiguity increases. Thus, the expectations level and requirements

must be defined as clearly as possible and to offer any possible interpretations – here, the communication has a huge importance and one must pay a special attention to the ways this is performed, as efficient as possible. To note, one must take into account three variables of communication, for this to be successfully completed: frequency, bi-directionality and quality (Massey & Dawes, 2006, p. 1119). The appropriate communication will lead to relationship consolidation. Thus, Schweitzer & Lyons (2008) highlight the importance of a high value relationship creation between the employees and employers. For this to be possible, those types of potential employees must be identified, who can offer as much value as possible to the organization in reaching the strategic objectives and recruitment of these persons in an employment relationship, which will develop in benefits for both the employer and employee, fact that will inevitably lead to the increase of the performance. The point is to create a feeling of safety and to reduce the fear of failure. Fear leads to inefficiency and poor performance (...) the employees must feel secure and this can be accomplished by making sure that they have the necessary and relevant knowledge in relation to their jobs (Martensen & Gronholdt, 2006, p. 97).

Moreover, the orientation, organization and operationalization are the three pillars that determine the degree of distinction that firms performing marketing activities can achieve above other firms (Leeflang, 2011, p. 76). Thus, for the employer, the sustainable competitive advantage is created when the employees are instructed and encouraged to use their abilities for creating knowledge, advantage that has as basis the formation of organizational competencies, according to Shahzad et al. (2012), who underlines in the same time that more than 60 studies taken between 1990-2007 have shown that a strong organizational culture has a positive impact over the employee performance. For this to be put into reality, is necessary that both parts understand the nature of the expectations and to make sure that each of them gives the same high importance to the other (Schweitzer & Lyons, 2008, p. 558).

To continue, job satisfaction is an important index of performance measurement as efficiency of the internal marketing strategy of the company, next to factors as employees' empowerment and their active participation in decision making (Gounaris, 2005, p. 441), and the high degree of the employee commitment leads to performance increase (Gruman & Saks, 2011, p. 123). Similar, those companies that share their earnings with the employees have a higher financial performance in comparison to those that do not do this, as well as those that provide flexible working hours and development programs which encourage the active intellectual participation (Ind, 2007, p. 170). In an original empirical research, it was presented its contribution to the marketing literature by placing frontline employees squarely within the theoretical domain of innovation implementation. Each manager must pay attention to the employees' needs and to provide them the possibility to expose their ideas and to prove their abilities (Cadwallader et al, 2010, p. 220).

With all these, Allan (2010), within a study conducted through human resources specialists, has shown that only in 65% of the organizations the management required complete evaluations for their employees. Moreover, they mentioned that 63% of the managers who evaluate lack the courage of having employee discussions with a higher difficulty level regarding the performance, and 47% of managers consider that performance management is a human resource process and not a critical one for the company success. Finally, low skills were noticed among 36% of managers in objectives setting at the beginning of each employee's evaluation cycle. According to Barr (2012), there are more than several reasons for which managers continue to choose individual evaluations of the performance, such as: employee's motivation, reward of the most performant ones, decision validation of laying off the ones with low performance, continuous promotion and development opportunities, so that the organization and the existing processes to perform better. The more time employees spend within one company, the more familiar they get with its practices, the more they learn and the more their value increases. Because of the employees, the customer builds a bound based on trust and expectations and when these people leave the company, the bound is broken (Ind, 2007, p. 170).

The human resources are the only assets that need to be nurtured generously, as the employees as actually the most valuable resource of the organization and keeping talent within is now becoming a central goal for HR professionals (Mishra, 2010, p. 190). Moreover, the internal marketing orientation has implications not only for internal aspects of the organizational performance, such as employees' retention, their motivation, satisfaction and organizational commitment, but also for external aspects of performance such as service quality, client satisfaction and, in the end, financial performance (Lings, 2004, p. 408). All in all, the employees will always search those employment relationships that invest in their personal growth (Schweitzer & Lyons, 2008, p. 562).

3. The Objectives and the Methodology of the Research

The research was driven around *five objectives*, which aimed:

- To identify the way the employee performance is understood by the managers and how do they evaluate it
- To identify the factors that influence the employees' performance, how the performance employees are retained and the strategies that are applied
- To identify to what extent the employees' expectations are met, as well as managers' expectations
- To identify how does the employees' performance contribute to the growth of the company

- To identify the managers' role in employees' performance reflecting in company's development and growth

For being able to meet these objectives, the study followed *three hypotheses*:

H1: The managers agree that there are various factors that influence employees' performance, as well as factors that prevent employees from being performant

H2: Managers' role and adopted strategies are significant for the employee's performance to reflect in companies' growth

H3: Employees' performance significantly contributes to the increase of the company's performance.

The study was conducted among 13 managers and supervisors from different private companies in Bucharest which had different activity fields. This is an exploratory qualitative research driven using semi-structured in depth interview, part of the also called in depth questioning (Demetrescu, 1973, p. 175), having with duration of 2 weeks from the end of June until the middle of July 2012. The dialog with each respondent took between 30 and 40 minutes and was registered on electronic support, having each respondent's consent. This technique was chosen for gathering the necessary basic information that will support the quantitative research that will be conducted in the months to come.

4. The Results of the Research

At first, managers were asked to explain what performance represents from their point of view. The answers have shown that most of them agreed that the performance is reached when the individual and collective objectives are met and even exceeded and when very good results are obtained – some of the respondents underlined the importance of the customer in reaching performance, as, next to the employees' competencies, the trust of the customer is the key factor. Only one respondent did not provide a general definition for the performance, as he wanted to make a clear difference between what the company's performance means and what the personal performance means and to underline each one's contribution to the another. Moreover, all the respondents agreed that each employee is responsible for reaching performance, by successfully completing the tasks and meeting the objectives – the managers' role here is to ensure the appropriate environment, resources and support by taking the right decisions. For being performant, an employee must not only fulfill his own tasks, but also get involved in more activities and bring personal contributions to the company's development, have maturity in decision making, innovative ideas and a good relationship with colleagues – all these in order to bring more value to the company and to the provided services to the final customer.

In order to identify the factors that influence their employees' performance, most of the respondents organize evaluation session twice a year with their employees. Only two of the 13 managers stated that the evaluation system is based on both quantitative indicators such as income, profit, costs and qualitative indicators such as customer satisfaction, SLA (service level agreement), KPI (key performance indicators). The rest on 11 interlocutors analyze performance through the employees' level of implication in completing tasks, the capabilities they have, the communication skills, the attitude and relationship with colleagues and customers, as well as innovation and decision making capacity. As a result of such evaluations, most of them consider that the main factor which influence the employees' performance, is the personal motivation - it is interesting to analyze in future studies what exactly does this involve. Moreover, the performance is influenced by the working environment, the benefits and rewards, the promotion opportunities, the clarity of the tasks, the communication quality and frequency, as well as by the relationship with the customers. Employees must be driven by personal willing for doing their job responsibly and with dedication and to understand their role within the organization and that their performance reflects in company's performance.

As well as there are factors which positively influence the employees' performance, managers were able to identify those aspects that prevent employees' from being performant; three of the respondents could not identify such issues within their companies. The other interviewed persons agreed that the overload, the complexity of the job and the dissatisfaction related to the financial reward, as well as the way the tasks and expectations are defined are actually obstacles in increasing the performance level – we can add here that the communication and its quality has a vital role and the lack of it leads to confusion. Moreover, after a longer period spent within one company, employees' financial expectations increase and more often they do not get what they deserve and the motivation level decreases and so does the performance level. The quality of their work won't be the same, fact that reflects in the companies' performance on the market. A special attention must be given to the way the employees are motivated within the multinational companies, as they require a more rigid system and regulations regarding the exposure of innovative ideas, the salaries, the promotion opportunities and the continuous changes. The lack of commitment and shared values towards the company, will lead as well to a decreased performance – a good manager will always select those employees that correspond to the job description and whose personal abilities match the job requirements. These being concluded, we may agree that the *H1 can be accepted*.

Of course, as the company's performance directly depends on each employee's performance, managers always try to find and apply the best strategies for increasing performance and retain performant employees. Thus, all the respondents

agreed that encouraging personal development and initiative and create the appropriate environment and opportunities are methods that can increase the level of performance. In plus, creating a competitive environment and a positive image of the company on the market, the employees are stimulated to perform better. Also, their requirements and suggestions are put together by participating to short evaluation sessions and a good manager will take them into account, will organize training sessions suitable for each employee's requirements and development plan. Moreover, the employees' potential is stimulated by empowering and involving them in different activities with a high responsibility level, providing them the chance to participate to national and international conferences and by rewarding them according to their results, making sure that each employee is aware of his value and of the value of the results he or she had. A positive and opened environment also allows to the employee to develop his imagination and put into practice the innovative ideas he has for the business growth, like the opportunity to have new business ideas and develop L6 sigma programs.

The high performant employees are difficult to be retained, but managers are trying to find the best solutions for both the companies and employees, so that they do not leave the company. Thus, they mostly choose methods such as promotion or salary increase, but they did not forget to mention the professional training sessions and career development programs, as special requirements on the emerging markets. One of the respondents agreed that the medical insurance and benefits such as laptop, mobile phone and a car would be the best option for retaining good employees. Moreover, opinions such as providing the employee the necessary degree of liberty to choose his own professional development plan, giving him the chance to make important decisions, within a strong organizational culture with and a flexible environment, would be the appropriate way of retaining the employees. We might conclude here that actually the best method to retain employees does not exist, as this depends from a company to another and from an employee to another – this decision is to be taken according to the individual requirements and to the market requirements.

Of course, together with the employees' performance increase, the managerial expectations increase as well. The respondents agreed that this is actually a normal and logical aspect, as indeed a capable employee will always be considered to be capable of doing more, at least at the same performance level. Again, one of the respondents mentioned that this leads to self-perfection; they become key employees who add value to the company's performance level. Another interlocutor underlined the fact the one should pay attention to the employees' talent and skills, as it is very likely that to a certain point, the job no longer to correspond and failure to closely follow. Moreover, we should not forget about the fact that also the employees' expectations and requirements increase, the more their performance level increases. Basically, they expect in return appreciation, value

recognition, financial or material rewards, promotions, days off, flexible working hours and participation in decisions making. The managers, whose companies have larger budgets, agree that the gifts offered with special occasions or paid vacations are very welcomed by the employees. All in all, the employee must feel his importance and that the work he does is highly appreciated and recognized accordingly, as from a certain level the financial motivation is no longer enough. Again, there is no specific rule for applying recognition methods, as they vary from one person to another. As assumed, *H2 can also be accepted*.

It was also interesting to analyze the way the managers consider that the employees contribute to the growth and development of the company. The managers agreed that a performant employee will not generate extra costs and delays and will always generate positive results. The innovative ideas, the respect shown to the clients, the continuous search of development opportunities and cost reductions. A received answer such as "a performant employee provides a competitive advantage on the market and the service delivery will be done before competitors" emphasizes the importance of such employees over the company, who actually are aware of their activity impact on the organization's performance. The reasons why the managers agree that the employees' performance reflects in company's performance are the positive results obtained, the understood correlation of specific and general objectives and their fulfillment. The performant employees, as already mentioned, will decrease the level of costs, will gain more customers and with no doubt will improve the company's image on the market. For optimum results, the management style is very important, as the participative one will allow the employee to significantly contribute to the company development, in comparison to the authoritarian one, which will limit these possibilities. To note, there is a bidirectional bound between the company's performance and employees' performance – one influences the other and vice-versa.

To continue, the management has a critical role for the employees' performance to reflect in the company's growth. When asked to describe this statement, the respondents provided various answers; they mentioned that this can be achieved through correct tasks and objectives communication and employees' motivation, keeping a transparent relationship with them, assigning to each employee the appropriate tasks according to his skills and experience within an appropriate environment. Each manager needs to make sure the employees understand their role and action accordingly. The continuous improvement plans on the emerging markets, as well as the continuous implementation of various processes and procedures and correct and efficient communication and listening methods are elements under management's responsibility, ensuring that these are in accordance with the company's vision, mission and values. Finally, all the respondents agree with the fact that the employees' performance has a significant role on the company's growth and performance on the emerging markets. Thus, the

employees' performance is a necessity in every company, especially on the emerging markets, where the company's growth takes into account the employees' ability of taking advantage of the opportunities and value them in order to get the best results. Moreover, as on this type of market, the combination between the experience and innovation is essential, the employees' potential must be explored and valued as much as possible and requires continuous investments and costs – this is due to the human resources level of preparation, which is a transitional one, from a working method based on procedures and long term planning, to a more performant one based on immediate results and flexible employees. Based on this information given by the managers, *H3 is accepted as well*, and a brief scheme could be extracted from the information managers provided, as per below. Interesting, managers did not emphasize the relationship with the customer, its creation and consolidation.

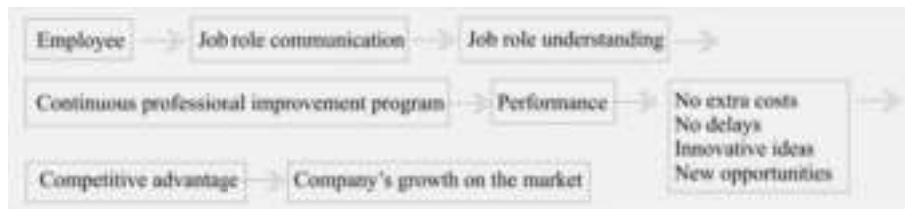


Figure 1. Stages of the employee's performance influence on company's growth

5. Conclusions and Limitations

As we can see, the respondents mainly mentioned internal aspects related to the importance of each employees' performance for the company's growth. Just a few underlined the importance of the relationship with the clients, which is crucial on an emerging market, but not only. A loyal customer, who has a trust based relationship with the employees of a company and with the company itself, is one of the strongest options for promoting the image and the services on the market. To notice, most of the managers were not able to clearly distinguish the characteristics specific to the emerging markets when discussing about the employees contribution to company's development. Of course, the paper has its limitations due to the exploratory character and lack of representatively, but its results might be confirmed through a quantitative research through a representative number of managers.

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The Future of the Common Agricultural Policy

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Abstract: Given the paramount importance of the Common Agricultural Policy, reflected both by the current and future budgetary allotments, and also, by the intense debates that take place on the European and national levels, the current work intends to present what are the main changes that the reformed Common Agricultural Policy 2014-2020 is projected to bring, and how part of these modifications affect Romania. This study is based on the proposals of the European authorities and also, on the suggestions and opinions of other European officials. The analysis will show the common ground that the negotiations have reached so far and an overview of the main measures for simplification included in the official proposals. Also, part of the main changes of the Policy will be presented from Romania's current point of view.

Keywords: new financial framework; Europe 2014-2020

JEL Classification: Q18

1. Introduction

We find ourselves today at a definite turning point: with financial crises spreading in a growing number of states, forcing national authorities to increase austerity measures, thus generating public turmoil, 27 European countries have to sit down and negotiate a common budget, a financial framework that must accommodate the needs and aspirations of each Member State of the European Union: from the “stingy” Brits to the straitened Friends of Cohesion, from the agricultural “enthusiastic” France to the infrastructure deprived Eastern European countries. The budget for 2007 – 2013 sums up to 976 billion Euros (European Commission, 2010, p. 3), which means that the EU's annual budget is equivalent to around 1% of the Union's national wealth, which is about 244 Euros per EU citizen per year (European Commission, 2010, p. 2). As shown in Figure 1, almost 42.33% of this amount is destined to overcome the problems that the environment, agricultural sector and rural areas have, under the Common Agricultural Policy (CAP) umbrella.

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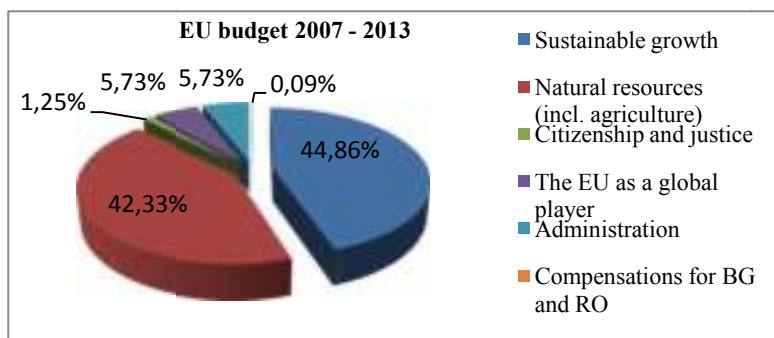


Figure 1. EU budget 2007 – 2013 breakdown

Source: Author’s calculations using EC data (European Commission, 2010, p. 8)

For the next financial period (2014 – 2020), the intense budget negotiations have not yet reached a definitive compromise. Several proposals have been made, spanning from the 890 billion Euros proposed by the British Prime Minister, David Cameron (Preluca, 2012, p. 1), to more than 1000 billion Euros put forward in the Commission proposal in late June 2011 (European Commission, 2011, p. 25). According to this first proposal, the Common Agricultural Policy should receive 37% of the funding, being only exceeded by the measures designed to promote a smart and inclusive growth (with more than 47% of the financing).

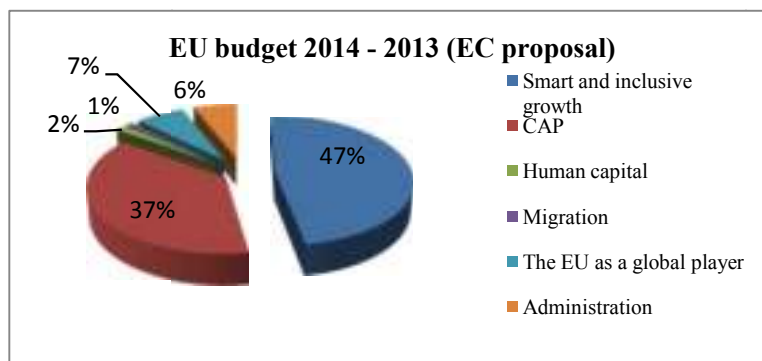


Figure 2. EU budget 2014 – 2020 breakdown (EC proposal)

Source: Author’s calculations using EC data (European Commission, 2011)

Nevertheless, during the negotiations, it became clear that the sums proposed by the Commission are too high taking into consideration the current economic and financial situation of the Member States, and therefore, several stakeholders proposed new cuts. The plan under scrutiny at this moment is the second proposal by Herman van Rompuy, at the European Council summit in late November 2012. As you can see on Figure 3 below, the CAP is one of the main beneficiaries from the debates at the summit, with an increase of about 8 billion euros.

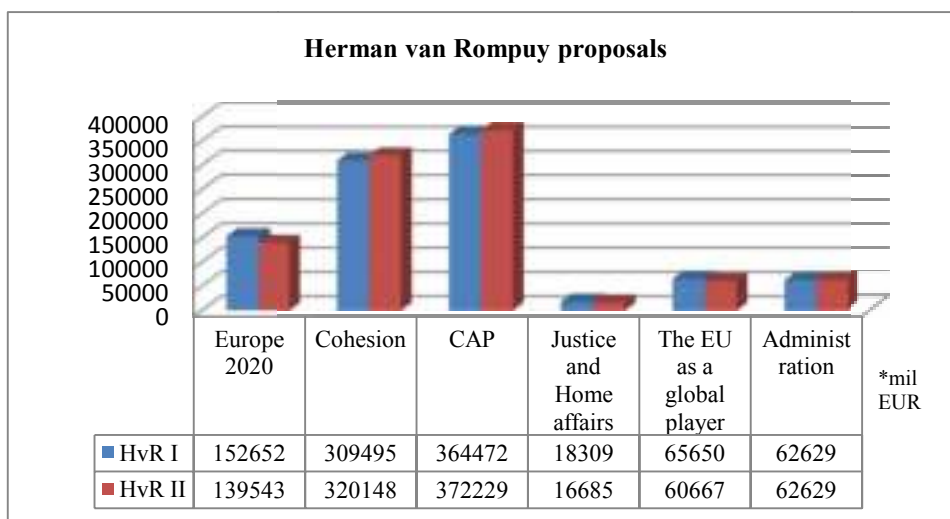


Figure 3. Herman van Rompuy EU budget 2014 – 2020 proposals

Source: Author's calculations using <http://www.contrepoints.org> data

Given the paramount importance of the Common Agricultural Policy, reflected both by the current and future budgetary allotments, and also, by the significant impact it has on the well-being of the European citizens (for example, in 2011 Romania, the income of the agricultural workers increased by 43% since 2005 – (Eurostat, 2011, p. 1)), the present study intends to present *what are the main changes that the reformed CAP 2014-2020 brings, and how these modifications affect Romania.*

2. The Common Agricultural Policy after 2013

In April 2010, commissioner Dacian Cioloş launched a public debate on the Common Agricultural Policy's future, objectives, principles and contribution to the 'Europe 2020' strategy. The debate generated an interest which "greatly exceeded expectations" (DG AGRI, 2010, p. 2): 5700 respondents, representatives of the general public, stakeholders, think tanks, research institutes and others sent in their opinions. The respondents agreed that it is more desirable to continue to invest such large amounts of funds through a common agricultural policy at the EU level, than a series of national/regional policies, or no agricultural policies at all (DG AGRI, 2010, p. 2). Also, the same study showed that a reform of the CAP was mandatory, in order to:

- Enable farmers, the food chain and consumers to deal with the increased instability/volatility of agricultural raw material and food prices;

- Address increasing global demand (and the general trend towards increasingly open global markets);
- Restructure payments within the CAP, and simplify administrative procedures;
- Give greater importance to non-market items, such as environment, quality and health standards, sustainability;
- Respond to the effects of climate change;
- Take into account the various higher expectations from consumers, for example with regard to the origin of crops, guarantees of quality etc;
- Strengthen the competitiveness of European agriculture;
- Ensure better coordination with other EU policies applying to rural areas. (DG AGRI, 2010, p. 3)

Also, in 2008, the Common Agricultural Policy was deemed “a mess” as “for every product category and in every country, a different mix of policy instruments is used” (Zahrn, 2008, p. 2). A simplification of the CAP is then compulsory to ensure the fulfilment of the objectives set. The three main objectives for the future CAP target (European Commission, 2010, p. 7):

a) *Viable food production*

According to DG AGRI, the future CAP should contribute to **farm income** and limit its variability, improve **sector competitiveness** and share in food chain value-added and **compensate areas with natural constraints**.

b) *Sustainable management of natural resources and climate action*

The future CAP should guarantee the **provision of public goods**, foster **green growth** through innovation and pursue **climate change mitigation and adaptation**.

c) *Balanced territorial development*

It is essential for the reformed CAP to support **rural vitality** and employment, to promote **diversification** and to allow social and structural diversity in rural areas.

Nevertheless, the intended reform faces a great deal of challenges: it must take into consideration the limited natural resources, the continuous climate changes and the economic crisis without slowing down the efforts to alleviate the difficult agricultural production conditions, to maintain a competitive EU agriculture in a world dominated by globalization, to sustain a high standard production, to strengthen the territorial cohesion and to ensure an equitable CAP.

The policy instruments proposed are better targeted to objectives and are based on the current two pillar structure. The main changes of CAP 2014 – 2020 target the

direct payments, the single market and the rural development, being designed to ensure a much smoother implementation of the policy than in the current financial period.

a) **Direct payments** – pillar I (analysis based on the Proposal for a Regulation of the European Parliament and of the Council COM (2011) 625)

1. **Small farmers' scheme:** The scheme can reduce the administrative burden generated by management and control. The flat payment will replace all other direct payments, and the farmers will be exonerated of the duties in connection with “greening” and eco conditioning.

2. **Payment for agricultural practices beneficial for the climate and the environment:** it introduces elements of existent agricultural practices. The ecological farms will benefit from such payments, being considered “green” by definition. This kind of payment will bring recognition to the farmers' efforts to maintain the natural resources for the future generations. The direct payment will contribute to achieving the environment objectives, already set in the second priority axis of the second pillar. What's different is the fact that the process will be much simpler and direct, *without a contractual basis*.

3. **Voluntary coupled support:** this kind of aid will lead to a reduction of the coupled schemes. All coupled schemes will be united in a singular chapter of the future Regulation weakening the red tape.

4. **Basic payment scheme and related payments:** the current SAPS(Single Area Payment Scheme) and SPS(Single Payment Scheme) will be replaced by an unique payment system in all Member States, with simpler transfer rules.

5. **Special payments** will be eliminated – nevertheless, farmers that do not own land will have the option to solicit coupled payments in the margins of national ceilings.

b) **Single market** – pillar I (analysis based on the Proposal for a Regulation of the European Parliament and of the Council COM(2011) 626)

1. **Public intervention and private storage** will undergo textual improvements, through eliminating useless details in the legislation.

2. The administrative burden will be reduced by discontinuing the aid schemes for **silkworms** and Union-produced **skimmed milk and skimmed-milk powder** intended for use as a feeding stuff and for processing into casein and caseinates.

3. **Help for beekeeping** – some provisions will be eliminated from the Regulation. The eligible measures will be published in delegated acts with the sole purpose of facilitating later modifications.

4. The mandatory **registration of supply contracts for hops** will be eliminated.

5. The EC is currently confined to establish export restitutions on a trimestral basis even though the respective amount is 0; from the next financial period this obligation will be eliminated so as to diminish the administrative burden of the EC.

6. **Sugar quotas** are set to expire by 30 September 2015, and therefore, the mandatory delivery contracts of sugar beet will end. This will ensure a liberalization of the sugar and sugar beet production, thus generating an increase of the competitiveness of the sector.

c) **Rural development** – pillar II (analysis based on the Proposal for a Regulation of the European Parliament and of the Council COM (2011) 627 and the Proposal for a Regulation of the European Parliament and of the Council COM (2011) 615)

1. All European funds will be placed under the Common Strategic Framework (CSF) **umbrella (ERDF, ESF, CF, EMFM, EARDF)**. By establishing common grounds for the implementation of all the European funds, the projects will become easily manoeuvrable both by the final beneficiaries and the national authorities. Moreover, the implementation of integrated projects will be facilitated.

2. The Common Strategic Framework R 615/2011 **will simplify the reimbursement process of eligible cost** in European funded projects. Efficient approaches (i.e. standard costs, flat payments, unitary financing for different kind of projects) will be introduced.

3. **Developing the LEADER approach** – any activity that corresponds to a rural development policy priority will be eligible, as long as it fits in the local development LEADER strategy. Thus, a more flexible design of local development strategies is mandatory. Also, the regional needs will be more thoroughly addressed. Local strategies that rely on innovation elements will be favoured for financing.

4. **Common indicators** – there will be a cleared monitoring system with less and better defined indicators.

5. The **Local Action Groups (LAGs)** will be better defined and selected on a bottom up approach within the LEADER approach. Currently, the responsibility of selecting LAGs is uncertain.

3. The Future Common Agricultural Policy and Romania

Romania pleads for maintaining a consistent budget for the CAP, emphasizing the importance of equilibrating the direct payments between member states, thus ensuring a more ambitious convergence. The direct payments will rise for Romania from 119 Euros/hectare to 183 Euros/hectare in 2016, as stipulated in the Accession Treaty, and to further 196 Euros/hectare in 2020, stated the Agriculture

Minister, Daniel Constantin (www.agroinfo.ro). The minister showed his concerns in relation to the latest talks on the new financial period in November 2012. Rumor has it that some European stakeholders proposed the rising of the national co-financing rate from 15% to 25% for rural development projects. The Romanian minister underlined that this measure will “affect Romania’s capacity to absorb European funds”, even though the National Programme for Rural Development has the highest absorption rate at this moment - 48.3% (November 2012, www.money.ro).

Being the European state with the largest area cultivated with sugar beet (with more than 3,8 million hectares – Eurostat, 2010), Romania is directly concerned with the ending of quotas by 30 September 2015. The producers have to start to prepare their production to compete with the world-wide sugar industry. In what the expiration of milk quotas is concerned, given the fact that Romania never reached its previously allotted quota (Mustăţea, 2011, p. 1), it is safe to say that the national producers will have to face a greater pressure from the rising imports. That it is why, at this point, Romania argues that the quotas should be maintained until 2018 (Barna, 2012, p. 7).

For 2012-2013, Romania will receive about 10 million Euros for distributing fruit in schools, and given the success of the Programme in all members states, the EC intends to consolidate and expand the school fruit scheme. Nevertheless, the budget for this scheme will be limited to 150 million Euros/year and the co-financing rate will rise for all 24 participant countries (Sweden, Finland and Great Britain decided not to partake in the programme). Given the economic difficulties, in this situation, Romania will have troubles in ensuring its share of the financing.

By 1st of January 2016, the restrictions on EU vineyard planting rights are expected to be lifted, generating a liberalization of this particular market. Romanian will have to face a higher competition that the national producers are not yet ready to overcome (Barna, 2012, p. 7). Therefore, Romania argues in favor of maintaining the planting limits.

4. Conclusions

At the European level, the efforts for simplifying a Common Agricultural Policy that has numerous mechanisms and that addresses various segments of the market have been evidently intensified. A lot of the measures delimited by the new proposals are designed to weaken the red tape, to improve competitiveness and encourage the private initiative. Nevertheless, some measures still face the opposition of the producers.

Taking into consideration the current financial and political climate in both the EU and in Romania, it becomes obvious that, even though the negotiations are fierce,

the measures for improving the lives of farmers and help the rural development in general, have to start with the final beneficiaries. Therefore, it is mandatory at this point for the authorities to start information campaigns presenting the new perspectives so that the businesses directly targeted can prepare measures in view of the new regulations.

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Research Study on the Migration of Clients on Banking Market

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Abstract: In this paper we present the relevancy and importance of knowing the reasons on clients' migration to competitive banking institutions. The main reason of being the client of several banks is due to the fierce competition between credit institutions, thus the banking market has changed. Based on a case study within the Raiffeisen Bank we researched and presented the reasons for discontinuation of banking ties and the migration of clients to other banks. The used research methodology consisted of the application of analysis point of contact by sending a questionnaire through which there could have been identified 105 migrating clients, out of which 89 were former clients of Raiffeisen Bank. Since both in the specialized literature and in practice there is very little information about migration behavior of banking clients - especially in the category of small and medium enterprises - the present research was not limited to the Raiffeisen Bank clients, but to all 105 respondents who discontinued totally or partially their connection with the bank. It can be concluded that the attitude of the bank clients has a considerable influence on the migration behavior. The most "infidel" banking clients are considered in the category of "clients oriented towards the conditions."

Keywords: migration; client; bank; satisfaction; connection

JEL Classification: G20; G24

Introduction

Banks among others faced a dynamic business environment that is managed in terms of technology, limitless at global level and oriented towards the client. These challenges, among others, have called for extensive searches to adopt appropriate strategies by organizations for growth and survival and turbulent change within the market. The business environment orientated towards the customer has forced all the business organizations, especially the banks to adopt strategies to pay attention to customers. This process was approached due to the satisfaction effect of the clients on the activity of a bank and its strategic position. Since the total quality of management strategy was built on the fact that it is a management philosophy that seeks to satisfy the clients through continuous improvement, it is of a potential

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value for the banks to increase the client's satisfaction and loyalty. The main aim of research is to find out the reasons for partial or total disruption of the banking connection of the SME and the migration to other banking institutions.

Research Method

The analysis of the contact point will refer to the overall dimensions of quality banking services, and it will also focus on the concrete events (incidents), experiences of the clients, in direct contact with the bank. The purpose of analyzing the contact point is to find the critical quality point of contact, that is considered to have an influence on customer satisfaction and banking clients behavior - namely maintaining, respectively interrupting, the banking relationship.

A part of the questionnaire is addressed exclusively to clients who in the last two years interrupted totally or partially the connection with an existing bank. A total of 105 migrating clients were identified, of which 89 were former clients of Raiffeisen Bank. Since both in the specialized literature and in banking practice there is very little information on the banking migration behavior of the clients - especially belonging to the small and medium enterprises category - the present research was not limited to Raiffeisen Bank clients, but to all 105 respondents who discontinued totally or partially the banking connection.

Results

105 migrating clients were identified. Of these 57.5% said that the bank with which they discontinued totally or partially their connection was their main bank with which they worked. Thus 42.5% of the migrating clients have stopped working with a secondary bank. Observing that only about 30% of the migrating clients maintain contact with only one bank, one can conclude that clients with more banking links are more likely to migrate than the ones with only one banking connection.

The main reason for being a client to several banks is that, the fierce competition between credit institutions has changed the market of the banking products. Investigating the reasons for the discontinuation of the banking relationship it emerged the situation graphically expressed in figure 1.

It can be seen that the main reason for stopping a banking link is obtaining better conditions both for the interest, loan, and credit, facilitated effectively from other banks. This result indicates that the "financial" side is more important than the so-called "spiritual" side, the competent consultancy, friendly service or rapid development of banking operations. The importance granted to banking conditions is reflected in the offers and banking services of different banks being perceived as

being similar, so interchangeable. Therefore the choice of the offer is subject to the conditions offered by the bank and the ability to obtain some credits on favorable terms. It can be concluded that not only the existing clients can be loyal by providing favorable conditions, but with this tool there can be attracted new clients from other banks as well.

In this paper we also wanted to find some other side effects of interrupting banking relations. From the empirical research it is known that the negative events/incidents are communicated on average, to other 11 to 20 people, unlike those positive ones which are presented to only 3 to 6 people. In this questionnaire it was questioned whether the discontinuation of banking relation has determined other clients to interrupt their relation with the bank (legal and physical entities). It was found that approximately one third of all clients who have migrated to another bank determined other people to do so as well (business partners, family, acquaintances), which means that these "former clients" have enough high influence on other relations between the client and the bank. Thus it appears that the termination of banking ties have significant side effects (by negative advertising). Also it was wanted to find out the intensity of these these side effects by questioning: how many people have stopped the banking connection since the migration of one client to another bank. In the sample it was showed the multiplication factor of 1.5 - that is, in fact, that if two clients migrate to another bank, the bank actually loses three clients.

Distinct Features of Migrating Clients

In the following attempts we answer the question - what characteristic features present the clients that have interrupted the banking ties and how they differ from those clients who still maintain the banking relations - taking into account both the characteristics of the company and the attitude of the banking clients of the two categories, namely migrating - loyal clients.

The results of the analysis highlight the following issues: the clients that have as their domain the trade, have migrated more frequently to another bank than those in the construction, services and manufacturing domain. It was also found that among the companies with less than six years old of activity the migration tendency is greater than among those approaching or exceeding ten years of activity. Regarding the attitude of the representatives of these companies and their relationship with the bank it was found that migrating clients, compared with those loyal, are informed and search more frequently in different banks to obtain better conditions, being willing to migrate to another bank for achieving this purpose.

The migrating clients have less confidence in the bank, in general, as evidenced by a more reliable attitude, independent in investment decisions or setting up bank deposits.

Framing the migrating clients in the typology of banking clients it showed that over 50% of migrating clients belong to the category of “banking clients oriented towards the conditions”. Other migrating clients were distributed almost equally in the other typologies.

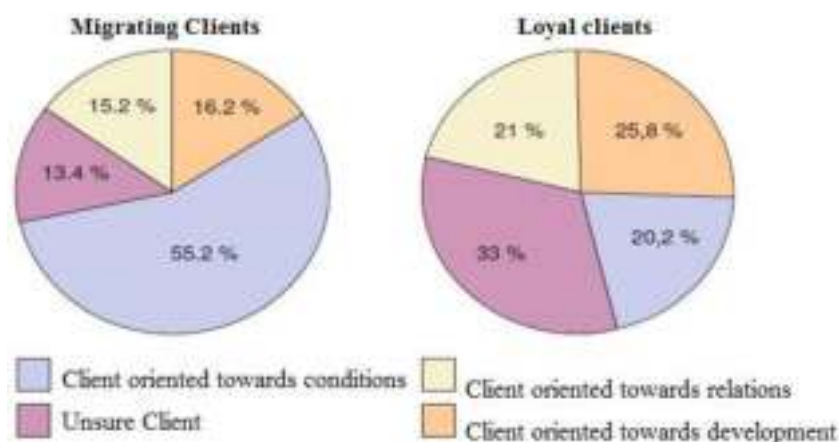


Figure 1. Segmentation of migratory and loyal customers

According to the above data it can be concluded that the attitude of banking clients have a considerable influence on the migration behavior. The most “infidels” banking clients are considered those in the category of “clients oriented towards the conditions.”

It was also analyzed the next issue, namely, the influence of the economic potential (the turnover) on the migration behavior. It could not be found any relevant influence, assuming that those clients who have a higher turnover are more numerous (better represented) in the group of migrating clients than in those of loyal customers, it was not proven to be true.

The Satisfaction - Availability (Intent) Ratio for Migration

The clients that discontinued their banking relationship were asked - before expressing an opinion on the migrating reasons - how satisfied they were with the bank when they still planned not to migrate to another bank. This question was intended as the deduction of the ties between declared satisfaction and the intention/willingness to migrate. The found results are shown in the following figure.

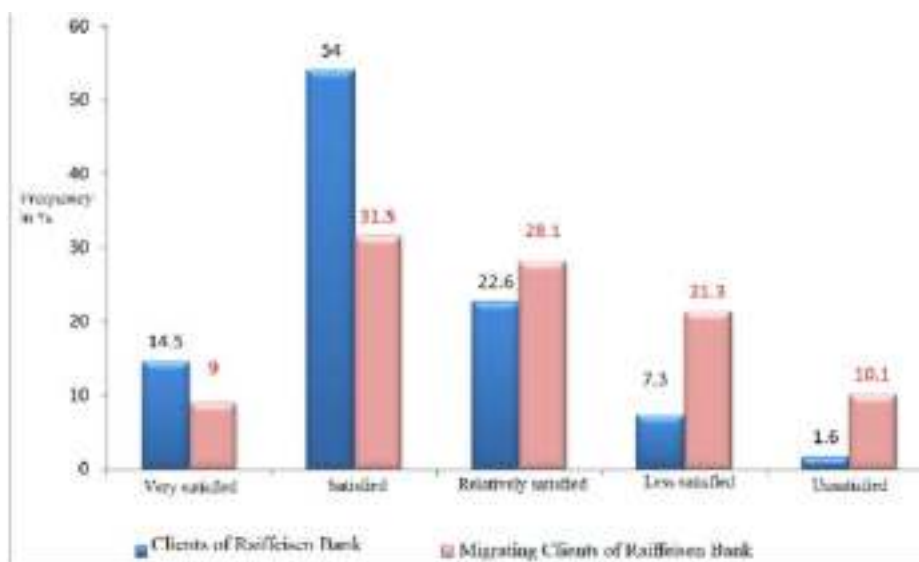


Figure 2. Raiffeisen Bank migrating client satisfaction before the migration intention

In the specialized literature it is indicated that, in general, between 65% and 85% of those who discontinued the business ties say that before stopping the connection were satisfied or very satisfied.

In the current case, the former clients of Raiffeisen Bank, of over 40% said that they were very satisfied or satisfied before stopping the banking connection (9% very satisfied and 31.5% satisfied). Therefore it can be concluded that about 60% of migratory clients have already shown - before the end of the ties with the bank - some restraint, and thus being expected an intent/availability for migration. Although under the declared values in the specialized literature, however, the percentage of 40% is a percentage worthy of taking into consideration. It is known that even higher levels of satisfaction are not a guarantee that the client does not migrate to another bidder. This result supports the idea that in the event of a critical situation it may be the cause of bank relations interruption. Until the occurrence of a critical event/incident, the client was satisfied with the bank. With the advent of the incident, that contentment, satisfaction suddenly transforms into unsatisfaction, and the only solution for the client remains to end the relationship with that bank and to migrate to another.

By comparing between the satisfaction degree of Raiffeisen Bank's clients and those who have migrated, it can be seen that the average of migrating clients' satisfaction is at the value of 3.00 compared to 2.22 value of the remaining loyal bank customers. This value indicates that the clients that appreciate the satisfaction for the bank at the medium level are - in terms of the bank - "in danger" for leaving the bank.

In order to validate the assertion that, indeed, an average satisfaction (3.00) indicates a lower loyalty to the bank, the Raiffeisen Bank clients were asked and their intention/availability for migration. The responses to these questions were correlated with the degree of expressed satisfaction. As shown in the figure below, the results support an assertion, namely, that the already average values of satisfaction expressed by clients may have unpleasant consequences for the bank. Also it can be seen specifically how big is the percentage of those customers who, although have expressed their satisfaction with the bank, they thought of the possibility to migrate.

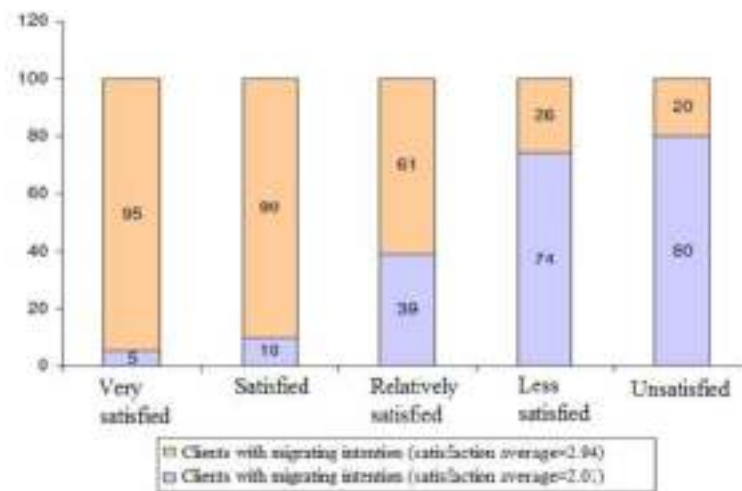


Figure 3. The ratio of satisfaction intention / willingness towards migration

As shown in figure 3 almost 40% of the clients, for example, with an average degree of satisfaction states that they thought to leave Raiffeisen Bank, thus the average of the satisfaction degree of the clients which have sought to migrate to another bank is of 2.94. Customer satisfaction degree of the clients that did not thing to migrate to another bank differs significantly, being at 2.01.

These findings thus confirm that the perception of orienting towards the client of the bank has an influence on the availability of banking clients migration. It is also noteworthy that the value of 2.94 for clients who once thought to migrate to another bank is very close to the calculated value for clients who have migrated to another bank, namely, 3,00.

From the above it can be concluded that it is possible the critical indication of satisfaction to which the clients still remain loyal to the bank. This value is 3.00 in the present study. The values between 2.00 and 3.00 can be considered as acceptable. But in order to really attach the clients to the banking institution, this value should strive from 2.00 up to 1.00.

Conclusions

In this paper we found the side effects of interrupting the banking relation. From the empirical research we know that the negative events/incidents are communicated on average, to other 11 to 20 people, unlike those positive ones which are of only 3 to 6 people. In the questionnaire it was questioned whether the discontinuation of banking relationship triggered the interruption of banking ties and other clients (legal and physical entities). It was found that approximately one third of all clients who have migrated to another bank has led for other people (business partners, family, acquaintances) to break contact with that bank, which means that these “former clients” have enough high influence on other relations between the client and the bank. In the sample it showed the multiplication factor of 1.5 - that is, in fact, that if two clients migrate to another bank, the bank actually loses three clients. Framing the migrating clients banking in the typology of banking clients it showed that over 50% of migrating clients are part of “client oriented towards banking conditions” it can be concluded that the attitude of banking clients have a considerable influence on the migration behavior. There are considered as being “infidels” those clients that are in the category of “clients oriented towards conditions.” Therefore it can be concluded that about 60% of the migrating clients have already shown - before ending the ties with the bank - some restraint, and thus being expected the intent/availability towards migration. This result supports the idea that a critical situation may be the cause of interrupting the banking ties. Until the occurrence of the critical event/incident, the client was satisfied with the bank. With the advent of the incident, that contentment, satisfaction suddenly transforms into un-satisfaction, and the only solution for the client is to end the relationship with the bank, thus migrating to another.

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Accounting and Auditing

The Effects of Company Income Tax on Dividend Policy of Firms in Nigeria

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Abstract: This study examined the effects of company income tax on the dividend policy of firms in Nigeria. To achieve the objective of this study, a total of 40 listed firms in the Nigerian stock exchange market were selected for the study using the judgmental sampling technique. Also, the Central Bank of Nigeria Statistical Bulletin and the corporate annual reports for the period 2006-2010 were used for the study. This paper basically modeled the effects of company income tax on the dividend policy of firms in Nigeria using the regression analysis method. The study as part of its findings observed that there is a significant positive relationship between the company income tax and the dividend payout of the sampled firms in Nigeria. Consequently, the paper concludes that a change in corporate income tax rate will significantly affect the dividend policies of the sampled firms operating in Nigeria.

Keywords: Nigeria; Statistical Bulletin; Company Income Tax; Dividend Policy; Dividend Payout

JEL Classification: F23; H32

1 Introduction

The dividend policy of a firm is a complex and crucial issue in corporate finance. It is basically concerned with the decisions relating to dividend payout and retention. It is a decision that borders on the amount of profits to be retained by the company and that to be distributed to the shareholders of the company (Watson and Head, 2004). Theoretically, there are different types of dividend policies. These include constant payout, progressive policy, residual policy, and zero policy and non-cash policy. Investors are seen to belong to a particular group or clientele. This is because they tend to pitch their tent with a particular policy that might suite them.

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This is the clientele effect of dividend policy (Hutchinson, 1995; Kolb and Rodriguez, 1996). Although investors generally agree on some key determinants of firms' dividend policy, the effect of dividend policy on firm value is largely contended. Dividend policy remains one of the most important financial policies not only from the viewpoint of the company, but also from that of the shareholders, the consumers, employees, regulatory bodies and the Government. For a company, it is a pivotal policy around which other financial policies rotate (Alii, Khan and Ramirez (1993). According to Ross, Westerfield and Jaffe (2002) companies view dividend decision as quite important because it determines what funds flow to investors and what funds are retained by the firm for investment. More so, it provides information to stakeholders concerning the company's performance. In analysing issues relating to firms dividend policy, it is paramount to emphasize in details what dividend is all about. Dividend according to Droughty (2000) is simply the amount of money that a firm pays out to its shareholders from the profits. According to Davies and Pain (2002), dividend can be described as the amount payable to share investors (shareholders) from profit or distributable reserves. Dividend payments however can be made in cash or by issuing of additional shares as in script dividend.

Taxation is a vital instrument in the economic development of any nation. It provides a steady flow of revenue to finance development priorities such as strengthening physical infrastructure, and other numerous policy areas, ranging from good governance and formalizing the economy, to spurring growth. Basically, tax policy shapes the environment in which trade and investment take place. Every nation requires revenue for its' continues existence. Government revenue according to Adams (2009) can come in diverse sources and forms such as indirect and direct taxes, licenses and internal revenue, mining, fees, earning and sales, rent from government property, interests and repayment reimbursements. According to Owosekun and Akinbinu (2008) tax can be described as a compulsory contribution to state revenue, levied by the government on workers' income and business profits, or added to the cost of some goods, services, and transactions. According to Nightingale (1997), tax is a compulsory contribution imposed by the government. He opined that even though tax payers may receive nothing identifiable in return for their contribution, they nevertheless have the benefit of living in a relatively educated, health and safe society. Taxation is not only a means for government to acquire resources. It has an important role in achieving equality and distributive social and economic needs (Samuel and Inyada, 2010).

Arguments relating to issues of taxation and dividend policy have attracted many academic interests. The arguments over the significance of dividend policy was first flickered in Miller and Modigliani (1961) where they proposed that the financing of firms and the dividend policy were unrelated for firm investment decisions and independent of the value of the firm. Masulis and Trueman (1988)

opined that taxes have significant affect on firm's corporate dividend policy. If this assumption were true, changes in corporate dividend payout would be expected whenever the government changes its income tax policy. However, this does not always apply especially in the banking business. Lintner (1956) had asserted that the major determinants of dividend policy are the anticipated level of future earnings and the pattern of past dividend. This inconsistency may have underpinned Modigliani and Miller (1961) theory, which provided a platform for the enormous debates and researches on dividend policy.

In Nigeria, taxation has been in existence even before the colonization of the country by the British. It is not an assessment of benefits; rather it is a means of distributing the burden of the cost of government (Jones, 1998; Samuel and Inyada, 2010). It constitutes a potentially important consideration in firms' financing decisions. Over the years, company taxation has received relatively little attention, in spite of the fact that it is often a significant source of tax revenue in many countries. Prior studies have examined the differential impact of tax treatment of debt and dividends on corporate financial policy in developed countries. However, the same is not true in developing economies like Nigeria. This study will attempt to fill the gap in literature by examining the effect of company income tax on the dividend payout of listed firms in Nigeria.

In the light of the aforementioned objective, the remaining part of this paper is structured as follows. Following the introductory section is the review of relevant literature and hypotheses development. The next section presents the variables definitions, econometric model and the preliminary empirical evidence. Finally, the last section summarizes the main findings and conclusion of the study.

Scope of the Study

This study basically seeks to examine the relationship between company income tax and the financial performance of listed firms in Nigeria. To achieve the objective of this study, the Central Bank of Nigeria Statistical Bulletin and corporate annual reports for the period 2006-2010 were analyzed. In addition, using the judgmental sampling technique, the study considered a total of 40 listed firms in the Nigerian stock exchange market. The choice of these companies arises based on the size and the availability of the annual report of the sampled firms.

2. Literature Review

History of Company Income Tax in Nigeria

According to Soyede and Kajola (2006) Company income tax history is comparatively brief and straight forward and it has always been imposed and

collected by the federal government since its introduction in 1939. In its development, changes to the company income tax have been statutory rather than constitutional. The first tax on companies was imposed under the companies' income tax ordinance 1939. This was consolidated with personal income tax in 1949 under the income tax ordinance 1940. The tax under the ordinance was imposed upon any 'person' and this expression was defined to include a company. Under the 1940 ordinance, the tax was progressive and individuals with chargeable income exceeding fifty pounds and the companies paid the same rate. Allowable deductions were based on all outgoings and expenses wholly and exclusively incurred during the year proceeding the year of assessment in the production of the income. Dividends under the ordinance were paid to shareholders net and did not suffer any more tax in their hands.

In 1943, a new income tax ordinance was enacted to consolidate and amend the 1940 ordinance. The major changes introduced under the 1943 ordinance were in respect of penalties. In this ordinance, failure to furnish a return, to keep the required records, the furnishing of incorrect returns by omitting or understating income and the making of incorrect returns were made criminal offences punishable with fine or imprisonment or both. The present system in the country has its roots in Raisman fiscal commission recommendation that the jurisdiction over companies income tax should be exclusive to the federal government and that the states except for certain uniform principles, should have jurisdiction over personal income tax. In section 70(i) of the 1960 constitution, an exclusive jurisdiction upon the federal government to impose taxes on the income and profits of companies and in exercise of this power the company income tax act (CITA) 1961 was enacted. Since 1979, there have been the following amendments to CITA No. 28. All these amendments were effected through the following finance/miscellaneous taxation provision decrees. Decree 98 of 1979, Decree 4 of 1985, Decree 12 of 1987, Decree 31 of 1989 and Decree 55 of 1989. All these amendments were codified into the companies' income tax Act cap 60, laws of the federation of Nigeria (LFN) 1990. CITA 1990 cap 60 (LFN) has been further amended by: Decree 21 of 1991, Decree 63 of 1991, Decree 3 of 1993, Decree 30 of 1996, Decree 31 of 1996, Decree 32 of 1996 and Decree of 1998.

Prior Studies and Hypothesis Development

Dividend policy is primarily concerned with the decisions regarding dividend payout and retention. It is a decision that considers the amount of profits to be retained by the company and that to be distributed to the shareholders of the company (Watson & Head, 2004). In a related study, Modigliani and Miller (1963) predicted a positive relation between debt and value in regressions that control for earnings before tax because earnings before tax do not capture the debt tax shield.

Profit after tax captures the benefit of interest deductions. Thus there is no relation between debt and value when controlling for earnings after tax. However, Jensen and Meckling (1976) opined that higher leverage allows manager to hold a larger part of its common stock and this reduces agency problems by closely aligning the interest of the manager and other stockholders. According to Jensen (1986) leverage also enhances value by forcing the firm to pay out resources that might otherwise be wasted on bad investments by managers.

Miller and Scholes (1978) argued further that taxes on dividends can be avoided by investing in stocks through retirement plans or by offsetting deductions of personal interest payments. Firm value is not affected in their model because dividend and capital gains are priced as if they are tax-free. Miller and Scholes (1982) also hypothesized that firm value is unaffected by dividend policy because pricing is dominated by investors subject to symmetric taxation of dividends and capital gains and they predict that dividend slopes will be zero. Elton and Gruber (1970) find that personal taxes make dividends less valuable than capital gains, stock prices fall by less than the full amount of the dividend on ex-dividend days. Their findings support the predictions of the hypothesis. On the tax effects of debt, Miller (1977) argued that common stock is priced as if it is tax-free, but the personal tax rate built into the pricing of corporate interest payments is the corporation tax rate. Here, the debt tax shield at the corporate level is offset by taxes on interest at the personal level, and debt does not affect firm value.

Miller and Scholes (1978) considered a situation in which investors avoid personal taxes on all returns on investment, and all corporate securities are priced as if they are tax-free. Modigliani and Miller (1963) argue that corporate debt tax shield will increase firm value by the market value of the corporate tax savings on expected interest payments. The predictions of these hypotheses for the debt slopes will depend on whether or not we control for profit before or after tax. Miller (1977) submitted that if there are two firms with the same earnings before interest and taxes, the more levered firm's higher after-tax earnings are just offset by the higher personal taxes paid by its bondholders. Given pre-tax earnings, there is no relation between debt and value. But the more levered firm has lower value because its investors pay more taxes, if two-firms have the same earnings after tax. Therefore, the relationship between debt and value was negative when after tax earnings are controlled for. In addition, Nnadi and Apkomi (2008) evaluated the tax effect on dividend policy of Nigerian banks and proposed in their study that various factors influenced the dividend pattern of companies. Due to the accessibility of the profit, the dividend policy of the banks is to frequently sustain a low but constant payout. The most important factor of the dividend structure is the liquidity position of the company.

However, Eades, Hess and Kim (1984) opined that a negative tax effect in the pricing of dividend predicts a positive relationship between expected stock return

and the proportion of the expected return received as dividend, usually proxied by the dividend/price ratio.

Despite the importance of the link between taxes, financing decisions and firm value, the available empirical evidences are not really convincing on how taxes affects the dividend policies of firms and their financial performance. In addition, in Nigeria there is a dearth of literature on the relationship between company income tax and the dividend payout of listed firms of listed firms operating in the Nigerian capital market. This study will therefore attempt to fill this gap in the literature.

Development of Hypothesis

The hypotheses to be tested in this study are stated below in their null form:

1) H_0 : *There is no significant relationship between company income tax and Dividend payout of listed firms in Nigeria.*

H_1 : *There is a significant relationship between company income tax and Dividend payout of listed firms in Nigeria.*

3. Research Methodology

To achieve the objectives of this study, the survey research method was adopted. The published Central Bank of Nigeria Statistical Bulletin and the corporate annual reports for the period 2006-2010 were analyzed. This is due to the fact that annual reports are readily available and accessible. However, using the judgmental sampling technique; a total of 40 listed firms operating in high profile industries in the Nigerian Stock Exchange were selected. This represents 20.1% of the total population of listed firms. This is consistent with the propositions of Krejcie & Morgan (1970) where a minimum of 5% of a defined population is considered as an appropriate sample size in making generalization. The choice of these companies arises based on the size and the availability of the annual report of the sampled firms. Nevertheless, in testing the research hypothesis, the ordinary least square (OLS) was used in the estimation of the regression equation under consideration. Nevertheless, in testing the research hypotheses, the ordinary least square (OLS) was adopted in the estimation of the regression equation.

Model Specification:

The following model is used to examine the association between independent and the dependent variables of the listed firms in Nigeria.

$$DPO_{it} = f(CIT_{it}, SIZE_{it}, e_{it}) \quad (1)$$

This can be written in explicit form as:

$$DPO_{it} = \beta_0 + \beta_1 CIT_{it} + \beta_2 SIZE_{it} + e_{it} \quad (2)$$

Where:

DPO_{it} = Dividend Payout ratio is measured as the dividend per equity share divided by earnings per share (Dependent variable)

CIT_{it} = Company income tax rate in Nigeria (30%) Independent Variable

$SIZE_{it}$ = Size of firm is proxied by the firms total assets for the period under consideration (Control Variable).

e = Stochastic or disturbance term.

t = Time dimension of the Variables

β_0 = Constant or Intercept.

β_1 = Coefficients to be estimated or the Coefficients of slope parameters.

4. Discussion of Findings

Table 1. Descriptive Statistics of Variables

| <i>Variables</i> | <i>Observations</i> | <i>Mean</i> | <i>Std. Dev</i> | <i>Min.</i> | <i>Max</i> |
|------------------|---------------------|-------------|-----------------|-------------|------------|
| DPO | 40 | 0.5021885 | 0.4101324 | -0.43556 | 1.98355 |
| CIT | 40 | 0.1036595 | 0.0827992 | -0.13067 | 0.36251 |
| SIZE | 40 | 8.592452 | 05.916028- | 1.33805 | 1845125 |

Note: That DPO represents Dividend Payout. The CIT represents Company Income Tax. While SIZE of the firms which is the control variable in this model is represented as SIZE.

Source: field survey (2012)

Table 2. Pearson Correlations Coefficients for Sampled firms

| | <i>DPR</i> | <i>CIT</i> | <i>SIZE</i> |
|-------------|------------|------------|-------------|
| DPO | 1.0000 | | |
| CIT | 0.6872 | 1.0000 | 0.0000 |
| SIZE | 0.3035 | 0.0757 | 1.0000 |
| | 0.0569 | 0.6426 | |

Table 3. Anova

| <i>Source</i> | <i>SS</i> | <i>df</i> | <i>MS</i> |
|-----------------|------------|-----------|-------------|
| <i>Model</i> | 3.51502382 | 2 | 1.75751191 |
| <i>Residual</i> | 3.04511127 | 37 | 0.082300305 |
| <i>Total</i> | 6.56013509 | 39 | 0.168208592 |

Table 4. Regression Result

| <i>DPO</i> | <i>Coefficients</i> | <i>Std. Err.</i> | <i>t</i> | <i>P > t </i> | <i>[95% Cof</i> | <i>Interval</i> |
|----------------------|---------------------|------------------|----------|-------------------|-----------------|-----------------|
| <i>CIT</i> | 3.30889 | 0.5564026 | 5.95 | 0.000 | 2.181511 | 4.436269 |
| <i>SIZE</i> | 0.0175381 | 0.0077873 | 2.25 | 0.030 | 0.0017596 | 0.0333166 |
| <i>_CONS</i> | 0.0084952 | 0.0963182 | 0.09 | 0.930 | -0.1866641 | 0.2036545 |
| <i>No. of Obs.</i> | 40 | | | | | |
| <i>F (2, 37)</i> | 21.35 | | | | | |
| <i>Prob > F</i> | 0.0000 | | | | | |
| <i>R-squared</i> | 0.5358 | | | | | |
| <i>Adj R-squared</i> | 0.5107 | | | | | |
| <i>Root MSE</i> | 0.28688 | | | | | |

Table 5. Variance Inflation Factor

| <i>Variables</i> | <i>VIF</i> | <i>1/VIF</i> |
|------------------|------------|--------------|
| <i>CIT</i> | 1.01 | 0.994274 |
| <i>CCC</i> | 1.01 | 0.994274 |
| <i>Mean VIF</i> | 1.01 | |

Analysis of the result from the descriptive statistics as depicted in table (1) presents an average dividend payout (DPO) score of about .5021885 for the sampled firms. On the other hand; the company income tax amount for the period maintains an averaged mean distribution value of about .1036595 for the sampled listed firms in the Nigerian Stock Exchange market. Nevertheless, a marathon review of empirical findings from the Pearson correlation analysis on the association between company income tax and dividend payout of listed firms in Nigeria shows that there is a significant positive correlation between company income tax and dividend payout of the selected firms (see table 2). This outcome is significant at 1% probability level with a correlation coefficient (r) value of about 0.6872. The figure demonstrates that both company income tax and dividend are positively correlated with each other. Indicating that tax weigh heavily on the determination of dividend policy of firms operating in Nigeria.

Furthermore, the test for multicollinearity was done before analysing the regression model. According to Field (2000), this test is necessary because multicollinearity can affect the parameters of a regression model. Menard (1995) and Adeyemi and Fagbemi (2010) suggested that a tolerance value less than 0.1 indicates a serious multi-colinearity problem between the independent variables. Nevertheless, since all values are more than 0.10, there is no issue of multi-colinearity between the independent variables. Also, Myers (1990) suggested that a variance inflation factor (VIF) value greater than 10 calls for concern, however, for this study, the VIF values are less than 10. However, findings from the regression analysis result for the selected firms as depicted in table (4) depicts that from the model, the R^2 which is often referred to as the coefficient of determination of the variables was 0.5358. The R-Squared which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 54% of the variability of firms' dividend payout.

This means that the model explains about 54% of the systematic variation in the dependent variable. That is, about 46% of the variations in dividend payout policies of the sampled firms are accounted for by other factors not captured by the model. This result is complimented by the adjusted R^2 (adjusted R-squared) of about 0.51%, which is in essence the proportion of total variance that is explained by the model. Similarly, findings from the Fishers ratio (i.e. the F-Statistics which is a proof of the validity of the estimated model) as reflected in table (3), presents a p-value that is less than 0.05 (p-value < 0.05); this invariably suggests clearly that simultaneously the explanatory variable in this study is significantly associated with the dependent variable (dividend payout).

Similarly, further empirical findings provided in table (4) also show that there is a significant positive relationship between the company income tax and the dividend payout of the sampled firms in Nigeria. This is evident in the t-statistics value of (5.95 and the p-value = 0.000). This outcome basically implies that an increase in company in tax will definitely have a significant impact on the firm's dividend payout. The significant level shows that the independent variable (CIT) may inevitably be contributing factor to the variation in the dependent variable (dividend). Therefore, the alternate hypothesis is accepted. This implies therefore that a change in tax will significantly affect the dividend policies of listed firms operating in Nigeria. This outcome nevertheless corroborates the findings of Jensen and Johnson (1995); Miller and Scholes (1978, 1982).

5. Conclusion

This study basically examined the effect of company income tax on dividend policies of firms in Nigeria. The study came up with findings that are of salient importance to scholars investigating dividend issues in the Nigerian context. Based on the hypothesis tested, findings from the study revealed that company income tax has a significant positive impact on the dividend payout of listed firms in Nigeria. That is, a change in tax will significantly affect the dividend policies of listed firms operating in Nigeria. This outcome nevertheless is in line with the findings of Samuel and Inyada (2010); Nnadi and Apkomi (2008); Jensen and Johnson (1995) and Miller and Scholes (1982). The study therefore concludes that a change in corporate income tax rate will significantly affect the dividend policies of the sampled firms operating in Nigeria. In addition, tax rate is an important determinant in the formation of dividend policies of firms operating in Nigeria.

6. Limitations and Further Research

An important limitation to this paper is the period for which the data is sampled. The sample horizon for this study is short, compared to other samples in the literature from developed economies. To this end, future research can as well increase the sample size. Finally, it would be of interest if future research to examine the effects of company income tax on the debts policies of firm.

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APPENDIX**List of Sampled Firms**

| Sector | Number of companies | Names of listed companies selected from the sectors |
|---------------------|----------------------------|---|
| Agriculture | 1 | Livestock |
| Auto mobile | 1 | R.T Briscoe |
| Banks | 13 | Access bank, Diamond, Ecobank, Fidelity, First bank, FCMB, GTB, SKYE, Sterling, UBA, Union, Wema, Zenith bank |
| Breweries | 2 | Guinness Nig. Ltd, Nigerian breweries. |
| Building materials | 3 | Ashaka cement, Benue cement company nig, Lafarge Cement Wapco Nig. |
| Chemical and paint | 2 | Berger Paint Nig, BOC Gases Nig. |
| Conglomerate | 4 | A.G leventis, P.Z Cussons, Unilever, UAC. |
| Construction | 2 | Julius Berger, Costain W.A |
| Engineering tech | 1 | Cutix Nig. |
| Food and beverage | 4 | 7 up, Dangote Sugar Refinery, Flourmills Nig, Nestle plc. |
| Health care | 3 | GSK, May & Baker, Neimeth Nig plc. |
| Industrial domestic | 2 | Vita foam, Vono Products. |
| Petroleum marketing | 2 | Conoil, Oando plc. |

Budget Discipline in Nigeria: A Critical Evaluation of Military and Civilian Regimes

Ben-Caleb Egbide¹, Godwyns Ade' Agbude²

Abstract: The Nigeria budgetary practices have been characterised with indiscipline and flagrant disregards to budgetary rules and procedures. This culture has been substantially attributed to the long years of military rule. This paper juxtaposes military and civilian regimes in Nigeria with respect to adherence to budgetary estimates. Eight years for each regime were purposively considered (1991 – 1998 and 1999-2006). Time series data were retrieved from secondary sources and analyzed using simple variances, percentages, descriptive statistics as well as independent T-Test. The paper found that although budget discipline under democratic regime is arithmetically higher than budget discipline under military system, the difference is not statistically significant. It was therefore recommended that since budget is a law (appropriation Act); it should be accorded the same respect like any other act of the National Assembly as a justification for the democratic tenet of the rule of law. To that end budget implementation and control should be judiciously enforced with a view to achieving the lofty objectives that accompanies each year's budget, as well as reduce the negative pressure that budget indiscipline engenders.

Keywords: government administration; resource management; financial indiscipline and public sector reform

JEL Classification: H6; H61; H77; H83

1. Introduction

The superior performance of every economy is largely determined by efficient fiscal and monetary policies management. These two macro economic variables are in most countries congregated in the national budget. Besides, being a critical planning and control device, budget gives expression to the macro economic objectives of the government as well as the fiscal strategies for their attainment. However, the extent to which such objectives are achieved depends to a great

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extent on the discipline exercised by government in the implementation and control of the budget. It is also recognized that the attainment of budget can be thwarted by external economic forces uncontrollable for an organization or nation; many aspects of a budget are controllable by the operators- hence discipline is required.

Budget discipline connotes the extent to which an institution or nation stays within the budget or simply, the ratio of budgetary expenditure to actual expenditure, as different from fiscal discipline which is the ratio of budget deficit to the Gross Domestic Product (GDP). Lack of budget discipline has been identified as one of the main factors accounting for the disappointing budgetary performance of many countries in Africa (Lienert & Sarraf, 2001). Indiscipline in the management of resources is iniquitous to the economic progress of any nation irrespective of the nature of government (Military or Civilian).

In Nigeria, the budgetary processes are said to be characterised by lack of discipline and flagrant disregard for budgetary procedures leading to the unimpressive performance of Nigerian economy (Obidegwu, 2005). This reported financial and fiscal rascality of the Nigerian federal government has been substantially attributed to the long years of military rule, which to a great extent associate budget indiscipline to the type of government in power (Orebiyi & Ogochukwu, 2005).

It is to this end that this paper attempts to investigate the budgetary practices of Nigeria at different regimes (Military and Democracy). The paper is predicated on the proposition that there is no significant difference between military autocracy and civilian democracy in terms of adherence to budgetary estimate. The study is intended to emphasize the fact that the sustainability of the Nigerian nascent democracy is dependent on the delivery of tangible dividends to a larger majority of the citizens, and one way of doing that is through discipline in the management of scarce resources.

The rest of the paper is organised into the following sub headings; section 2.0/2.1 undertakes a theoretical discourse of military and civilian administration as well as an X-ray of budget discipline under military and civilian regimes. In section 3.0, the methodology of the study was captured, giving way for data presentation, analyses and discussion of result which took their turn in section 4.0. The paper was concluded in section 5.0 after making recommendations as considered necessary.

2. Literature Review

2.1 Military and Civilian Administrations: A Theoretical Discourse

As a way of establishing the foundational thesis of this paper, it is important we engage in a theoretical analysis of both the military and the civilian administrations. Though our focus is the Nigerian State, we still consider a general discourse of the basic tenets of both administrations as a necessity without necessarily avoiding the Nigerian historical experiments of the military and the civilian administrations. First, the concepts of power and authority are central concepts that distinguish the two administrations. For the military, power is a fundamental factor given that no organized electoral process serves as the basis of the enthronement of military form of government. Frederick (1963) construed power as the capacity to modify the conduct of others in a manner that is desired. Lasswell and Kaplan (1950) conceived power as the process of affecting the policy options of others through the actual or threatened use of sanctions for non-conformity to prescribed behavioural pattern. From the definitions above, power implies the coercive method employed by those not entitled to one's obedience to get one to do what one does not want to do. Their rules and regulations are complied with not because they are legitimate but because sanctions are provoked to compel compulsory obedience. This is peculiar to the military system of government.

Authority, on the other hand, entails willingness to obey given that the one demanding for obedience has the consent of the people. For Carter (1979), authority implies force exercised or capable of being exercised with the general approval of those concerned. For Raphael (1990), when we speak of power in a social context, we are usually thinking of a specific kind of ability, the ability to make other people do what one wants them to do while to have authority to do something is to have the right to do it.

Another important factor that distinguishes the military from its civilian counterpart is the suspension of the constitution. The military operates by decrees to which obedience is by coercion while the civilian government operates within the purview of the constitution to which obedience is based on right to demand it and there is a legitimate ground for its enforcement. Unfortunately, the Nigerian constitution has been a brain work of the several military regimes. For instance, scholars argue that the 1999 constitution lack moral authority (the legitimacy question) and legal validity because its conception and promulgation lack legitimacy, having been introduced by the previous military government (Ogowewo, 2000)

Military is identified as the government of men and not of law because its practitioners (Soldiers) are men not trained in the art of politics and constitutionality but rather in warfare situations where the lives of the opponents are not valued.

The first military coup in Nigeria led to the death of several Northerners including the then Prime Minister Sir Abubakar Tafawa Balewa and several other politicians. Since then, the Nigerian state has witnessed several coups leading to the loss of lives. Thus, given the evils with which the military terminates incumbent political processes, scholars in search of the end to military rule in Nigeria discovered the theoretical underpinnings of military incursion into politics. Obi (1999) links the cause of the military in Africa to weakness of the political structures and process in the post-colonial states.

The poor political structure of the First Republic gave birth to the first military incursion, led by Major Nzeogwu, into Nigerian young democracy. Major Nzeogwu gave a justification for his attack on the politicians as an attempt to remove the political profiteers and swindlers from power (First, 1976). The perceived crises in Nigerian politics seemed to be the basis for military incursion as the different military regimes justified their interventions as patriotic acts based on national interests (Obi, 1999). The different military regimes pledged to put an end to corruption, misrule and indiscipline, but in reality they went on to legitimize what they spoke against. The first military coup, January 15 1966, was the beginning of a journey into a 29-year military rule in Nigeria, with a brief hiatus between 1979 and 1983. From then till 1999, the history of governance in Nigeria was the history of excessive militocratic exercise of naked political power void of legitimacy until the enthronement of democratic governance administered by the civilian administrators who are expected to be the representatives of the people. Obviously, the modus operandi of the two administrations differs. A military administration emerges through a forceful seizure of power while a civilian government is a product of the electoral process where the peoples' preference for who should lead them is expressed.

The concept of opposition parties is foreign to military government. An opposition party, for the military, is an enemy of the state that must be executed. But for civilian government, opposition parties are part of the game of politics. Even the people can rise and demand for accountability and transparency from their leaders under civilian government while such is treated with disdain under military government. In other words, the people have the power to change their representatives in the next elections under civilian government while military government is not a product of the peoples' willing consensus. According to Laski (1978), every government must submit itself to the judgement of those who feel the consequences of its act. While the civilian government can readily, whether willing or unwillingly, submit itself to the critical evaluation of those who suffer the effects

of its policies, military government resort to naked power in clamping down all oppositions.

2.2. Budget Discipline under Military and Civilian Administration

Budget still remains the single most important policy document in the hand of government. This is because budget gives expression to the fiscal intentions of the government in managing an economy. According to Olaoye (2010), public sector budget besides assembling the projected revenue and expenditure of government, addresses the allocation of resources to achieve societal goals; serves as an instrument for managing economic crisis and uncertainty, serves as an instrument of policy direction for the economy; it also represents a tool for defining government economic and societal focus as well as an instrument for economic management. However, budget is not an end by itself; it is a means to an end, hence, the call for discipline at all stages of the budgetary process to ensure the achievement of budget objectives (Olomola, 2009)

Budget discipline connotes the extent to which an institution or nation stays within the budget or better still the ability of a government to confine itself to the limit of expenditure in the approved budget or supplementary budget (Aruwa, 2004). It is measured as the ratio of budgetary expenditure to actual expenditure, as different from fiscal discipline which is the ratio of budget deficit to the Gross Domestic Product (GDP). They are three principal areas or dimensions of budget discipline according to (Oshisami, 1992 & Omolehinwa, 2001) these include; adherence to stated budgeting policies without wavering; adherence to budget calendar in the development, approval, implementation and monitoring as well as adherence to approved estimates in the appropriation act. These three levels of discipline are crucial for the effective working of the budget, and a breach in any level constitutes indiscipline. Indiscipline in the management of resources is iniquitous to the economic progress of any nation irrespective of the nature of government (Military or Civilian). Observation in most literature is that budget indiscipline is a fundamental characteristic of budget practices of most countries in Sub-Sahara African countries including Nigeria (Aruwa, 2004; Obidegwu, 2005; Olaoye, 2010). However, Obidegwu (2005) attributed this callous fiscal behaviour to the degeneration in governance and the increasing lack of coherence between government policies and the budget. This suggests that fiscal indiscipline will be reduced if policies are integrated into the budget. It could also be deduced that the effectiveness of any budgetary system is dependent on the working of the government and the sincerity of her programmes.

In Nigeria, fiscal irresponsibility or budget indiscipline has been observed and identified to be one of the serious problems of budgetary process. According to Aruwa (2004), the principle of strict budget discipline has evaded the

implementation of the federal budget. This observation has been corroborated by a number of literatures. For instance, Orebiyi and Ugochukwu (2005) related budget implementation failures in Nigeria to non-adherence to rules and control mechanisms associated with long years of military rule.

Again, Orebiyi and Ugochukwu (2005) lamented the continuation of this bad practice of non-implementation of budget to the letter in the new democratic Nigeria. It was this worrisome fiscal management that led to the inclusion of budget discipline improvement in the Obasanjo's public sector reform agenda (Ahmed, 2007). This was to be done through effort to establish an annual budget framework and guideline to be followed by all tiers of government as embodied in the fiscal responsibility Act 2007. The extent of compliance and its effectiveness is still a moot. Furthermore, Olomola (2009) studying strategies and consequences of budgetary reforms in Nigeria noted that the budget process has always been fraught with monumental abuses whether under military or civilian regimes.

The military modus operandi undermines the constitution, uses ad hoc procedures in budgeting and celebrates arbitrary budget estimations, as against the civilian regime where the budget is made to pass through constitutional and legal procedures. However, the theoretical dichotomy between the military and the civilian administration do not seem to be reflected in the overall budgetary performance hence, monumental abuses are always reported in both military and civilian regimes. This situation is further buttressed by Olaoye (2010) who studying budget discipline in government, asserted that from whatever angle one looks at the subject of budget discipline, the Nigerian nation still has a long way to go. From the forgoing, it seems conclusive that budget indiscipline is the order of the day whether in the military or civilian administration. However, an empirical analysis would be a better proof of the position, which none of the literature above has provided. This is in fact the justification and relevance of this study.

3. Methodology

This paper adopted both qualitative and quantitative approaches in explaining the budgetary practices in both the Military and the Civilian regimes in Nigeria. The quantitative aspect of the analyses involves the use of secondary data obtained from Central Bank of Nigeria Annual Reports; (2007, 2008) and the Central Bank of Nigeria Statistical Bulletin. Simple variance, percentage analyses, descriptive statistics as well as independent T- Test were employed for analyses, using MS Excel and Statistical Package for Social Sciences (SPSS) to aid the analyses.

Budget Discipline was operationally defined as the ratio of budgetary expenditure to actual expenditure while budget variance is operationally the difference between budget expenditure and actual expenditure. Mathematically;

Budget Discipline = $\frac{\text{Budget Expenditures}}{\text{Actual Expenditure}}$

Actual Expenditure

Budget Expenditure Variance = Budget Expenditure - Actual Expenditure

4. Data Presentation and Analyses

This section presents the data use in this study with the analyses; the analyses undertaken here include; Variance analysis; percentage analyses as well as the independent sampled T-test.

Table 1. Variance and percentage analyses

| 1 Year | 2 Budget Exp (N,M) | 3 Actual Exp (N,M) | 4 Variance (N,M) | 5 Budget Discipline | 6 Budget Indiscipline | 7% of Variation from the Budget |
|-----------|--------------------------|-----------------------|---------------------|---------------------------|-----------------------------|--|
| 1991 | 38,666.40 | 66,584.40 | -27,918.00 | 0.58 | 1.72 | 72 |
| 1992 | 52,035.90 | 92,797.40 | -40,761.50 | 0.56 | 1.78 | 78 |
| 1993 | 112,100.50 | 191,228.90 | -79,128.40 | 0.59 | 1.71 | 71 |
| 1994 | 110,200.00 | 160,893.20 | -50,693.20 | 0.68 | 1.46 | 46 |
| 1995 | 153,496.00 | 248,768.10 | -95,272.10 | 0.62 | 1.62 | 62 |
| 1996 | 189,000.00 | 337,217.60 | -148,217.60 | 0.56 | 1.78 | 78 |
| 1997 | 276,723.20 | 428,215.20 | -151,492.00 | 0.65 | 1.55 | 55 |
| 1998 | 367,917.00 | 487,113.40 | -119,196.40 | 0.76 | 1.32 | 32 |
| 1999 | 358,103.20 | 947,690.00 | -589,586.80 | 0.38 | 2.65 | 165 |
| 2000 | 664,735.30 | 701,059.40 | -36,324.10 | 0.95 | 1.05 | 5 |
| 2001 | 1,752,778.70 | 1,018,025.60 | 734,753.10 | 1.72 | 0.58 | -42 |
| 2002 | 1,018,155.90 | 1,018,155.80 | 0.10 | 1.00 | 1.00 | 0 |
| 2003 | 122,556.60 | 1,226,200.00 | -1,103,643.40 | 0.10 | 10.01 | 901 |
| 2004 | 1,302,231.00 | 1,426,200.00 | -123,969.00 | 0.91 | 1.10 | 10 |
| 2005 | 1,799,938.20 | 1,822,100.00 | -22,161.80 | 0.99 | 1.01 | 1 |
| 2006 | 1,842,587.70 | 2,026,000.00 | -183,412.30 | 0.91 | 1.10 | 10 |

Sources: Central Bank of Nigeria Annual Report; (2007, 2008); Central Bank of Nigeria Statistical Bulletin, December 2002, Vol. 13; Annual Audited Accounts of the Auditor General of Nigeria. Columns 4-7 were computed by the researcher.

Table 1 shows a 16 year variance and percentage analyses of the federal government annual expenditure. The variance analyses result (column 4) show that for the sixteen years period covered, the federal government has recorded mostly adverse variances except for two years (2001 and 2002) where favourable variance were recorded. The percentage of variations from the budget (column 7) ranges from -42% to 0%

(favourable years) and 1% to a record high of 901% (adverse years). Several factors might have accounted for the enormity of these variances. Such factors may include but not limited to poor budget planning, faulty budget assumptions leading to estimation errors, inflation, external variables affecting national annual budget, corruption which is the chief variable of budget indiscipline to mention but a few.

The variance analyses result also show that eight years before the return to civilian democracy (1991-1998 military era) the actual budget expenditure consistently exceeded the targeted expenditure depicting poor discipline, hence the variance curve (figure 1) lie below the horizontal axis indicating adverse variances throughout the period with a mean discipline of 0.6240 and a standard deviation of 0.06849 (see table 2). Eight years after the enthronement of democracy (1999-2006), there seems to be an arithmetic improvement with respect to adherence to budget discipline. The period recorded two years of favourable variances (2001 and 2002) and six years of adverse variance including a record high adverse variance of N1103643.40M representing about 901% extra budgetary expenditure in 2003. This is reflected in a higher mean discipline of 0.8698 but with a higher standard deviation of 0.47823 (Table 2). A higher standard deviation during democratic period indicates that the variances were more erratic than the military era as depicted by the variance curve in figure 1.

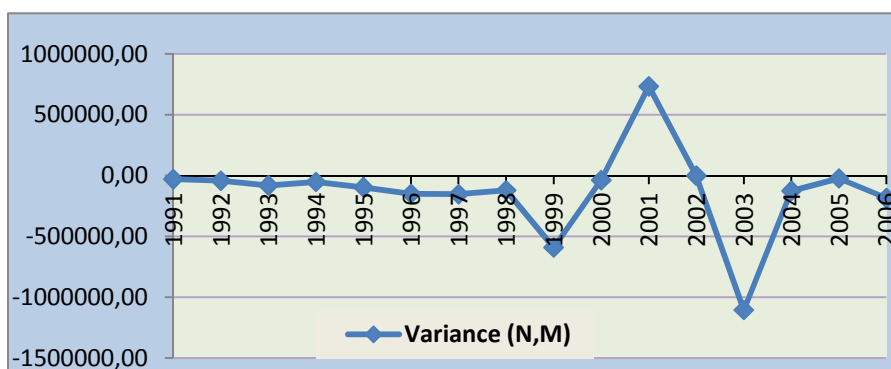


Figure 1. Budget Variance Chart (N,M)

Source: Charted by the authors using micro soft excel

Furthermore, the variance analyses reveals a high proclivity to spend off the budget (budget indiscipline) during transition or election years as demonstrated by the 1999 and 2003 colossal off budget expenditures of 165% and 901% respectively. These budgetary behaviours again suggest the problem of poor budget planning or faulty budgetary allocation. Transitions or elections are not accidental programs; one would have expected their cost to have been adequately factored into the year’s budget either in the appropriation acts or supplementary appropriation acts, thus, reducing the extra budgetary expenditure to the barest minimum if not totally eliminated. A situation

where expenditure for the year is overshoot by about nine times the target cannot be justified by any economic or financial models except to confirm the non-alignment of economic political objectives with budgetary allocations as observed by Aruwa, (2004).

Table 2. Group Statistics

| Type of Government | N | Mean | Std. Deviation | Std. Error Mean |
|---------------------------------------|---|--------|----------------|-----------------|
| Budget Discipline Military Government | 8 | 0.6240 | 0.06849 | 0.02421 |
| Civilian Democracy | 8 | 0.8698 | 0.47823 | 0.16908 |

Source: Computed by the authors using SPSS

Furthermore, in order to test the hypothesis of this study, an Independent Sample T-test was conducted to compare budget discipline under the two regimes (military and democracy). From the result (table 3), the Levene’s test for equality of variance indicates that the data violates the assumption of equal variances since the sig. value of 0.048 does not exceed 0.05. The T-test for equality of mean has a value of -1.439 with a sig value of 0.192. Since the sig value is greater than 0.05 it means that the mean difference between the two independent scores is not significant.

By this result, it is unsafe to reject the research hypothesis. We therefore conclude that there is no statistically significant difference between budget discipline under the military regimes and budget discipline under the civilian regime.

Table 3. Independent Sample Test

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|------|------------------------------|-------|-----------------|-----------------|-----------------------|---|--------|
| | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Budget Discipline Equal variances assumed | 4.710 | .048 | -1.439 | 14 | .172 | -.24581 | .17081 | -.61216 | .12053 |
| Equal variances not assumed | | | -1.439 | 7.287 | .192 | -.24581 | .17081 | -.64650 | .15488 |

Sources: T-Test result computed from SPSS

5. Conclusion

The issue of discipline in the management of recourses cannot be over emphasised. This is because mismanagement, waste or indiscipline not only frustrate the achievement of budgetary objectives but is also iniquitous to the economy irrespective of whether the government is military or civilian. This paper had applied both theoretical exploration and simple quantitative techniques to compare budget discipline under military autocracy and civilian democracy. The findings are here under summarised;

- 1 Budget indiscipline is a characteristic feature of the Nigeria budgetary process.
- 2 There is no statistically significant difference between budget discipline under military regime and budget discipline under civilian democracy in Nigeria.
- 3 There is high proclivity to over spend during transition years (as evidenced in 1999 and 2003) than it is for other years.

From the findings, it is therefore not surprising why the Nigeria budgetary performance had been describe as disappointing as it has contributed to further under developing the nation and adding to the poverty crises. If this culture of fiscal rascality in the Nigerian budgetary process is not fought, it will not only continue to undermine our developmental effort but will also threaten the sustainability of Nigeria nascent democracy given the country's mono-product status. Worst still, is the fact that with respect to budgetary practices, the dichotomy between military and civilian regimes is only theoretical. Democracy anywhere is associated with the rule of law, probity and accountability among other tenets. It should not only guarantee prudence management of resources but ensure that there are managed for the common good of a greater number of the citizens.

It is to this end that we candidly recommend that the budget or the appropriation act should be accorded the same respect like any other act of the National Assembly as a justification for the democratic tenet of the rule of law. This will enable all stages of the budgetary process to be managed with a high sense of discipline and accountability, in order to guarantee the achievement of the lofty objectives that accompanies each year's budget, as well as reduce the negative pressure that budget indiscipline engenders.

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An Equilibrium Model for an Open Economy. Romania's Case

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Abstract: The model presented in this article is an adaptation of the IS-LM model for an open economy in which both the static aspects and dynamic ones are approached. Also, based on the model built, it is determined the level of potential GDP and the natural unemployment rate. The determination of marginal main indicators of GDP and interest rates, allow to identify problems and the directions of action to achieve economic equilibrium.

Keywords: equilibrium; GDP; investments; interest rate; consumption

JEL Code: E17; E27

1. Introduction

The economic equilibrium problem, whose origins and manifestations are lost in the mists of time, it is always new. After a number of approaches more or less rigorous, that have benchmarks the largest economic thinkers from different current and ideologies (François Quesnay, Léon Walras, Vilfredo Pareto, Alfred Marshall) John Maynard Keynes formulated a first economic equilibrium model for a closed economy without governmental sector.

The controversies on economic equilibrium get to the maturation and development of further researches, today being analyzed the fluctuations that accompany this process. Within theory of economic equilibrium, a synthetic analysis it is the IS-LM model consisting of simultaneous equilibrium in two markets, money market and the goods and services in an autarkic economy.

Based on Keynesian macroeconomic equilibrium, in 1937, Roy Harrod, James Meade and John Hicks tried to express mathematical majors relations of Keynes'

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theory, finally to elucidate the interrelationships between theory effective demand and liquidity preference theory. (Hahn, 1977)

John Hicks' IS-LL scheme (Hicks, 1937) is the predecessor IS-LM model, the author also trying to capture the real opposition between classical and Keynesian theory, much criticized by J.M. Keynes.

Subsequent developments of Alvin Hansen (based on LL-IS schema) of 1949 and 1953 play an important role in systematizing known IS-LM model and, also, its popularization. In his book (Hansen, 1959) in order to get the curve IS, Hansen calls the investment demand function of Keynes and the neoclassical paradigm and for the LL curve is the curve of points where supply and demand. (Beaud & Dostaler, 1996)

The IS-LM model (King, 1993; Lawn, 2003a; Lawn, 2003b; Romer, 1996; Romer, 2000; Smith & Zoega, 2009; Weerapana, 2003) was the basis for further researches and we refer both the theoretical and the empirical, the major aim being the theoretical reconstruction and development of the model and practical solutions to complex problems arising in the context of globalization. (Gali, 2000) Thus, Samuleson and Solow include the original model the Phillips curve (1960), Fleming Mundell and Fleming include balance of payments (1960 and 1962), Modigliani and Friedman use the consumption function (1954 and 1957), Tobin includes the demand for money (1958).

Until the mid 1990's, the most researches were focused on modeling a closed economy, then economic literature approached, with studies undertaken by Maurice Obstfeld and Kenneth Rogoff (1995), static and dynamic equilibrium in open economies.

Although economic literature that explores New Open Economy Macroeconomics (NOEM models) is not as rich as that of the closed economy model, it is a significant theoretical edifice for the current macroeconomic modeling: Bergin (2004), Schmitt-Grohe and Uribe (2002) Justiniano and Preston (2008 & 2010), Martínez-García and Vilán (2012). The new approach enables researchers to explain the new changes that have occurred in the international macroeconomic environment based on introspection but rather on empirical causal observations, and theory is empirically validated in these cases.

In this article we propose, based on ideological vision and studies of the most important researchers in the field to determine a model for an open economy, with applications on the Romanian case, with empirical arguments, meaning for each variable used in the model it is specified degree of influence.

2. The Model Equations

The first equation of the model is the formula of the aggregate demand:

$$(1) D=C+G+I+NX$$

where

- D – the aggregate demand;
- C – the actual final consumption of households;
- G – the actual final consumption of the government;
- I – the investments;
- NX – the net export.

A second equation relates the actual final consumption of households according to available income V:

$$(2) C=c_v V+C_0, C_0 \geq 0, c_v \in (0,1)$$

where c_v – the marginal propensity to consume, $c_v = \frac{dC}{dV} \in (0,1)$ and C_0 is the intrinsic achieved autonomous consumption of households.

We will assume below that G and NX are proportional to the GDP, denoted by Y, given that in the absence of GDP can not engage any government spending (excluding in this analysis foreign loans) and also can not conduct foreign trade.

$$(3) G=g_Y Y, g_Y \in (0,1)$$

$$(4) NX=v_Y Y, |v_Y| \in (0,1)$$

where:

- g_Y – the marginal government consumption;
- v_Y – the marginal net exports

Relative to investments, we will consider a direct linear dependence of the GDP level and inverse from the interest rate:

$$(5) I=in_Y Y+i_r r, in_Y \in (0,1), i_r < 0, I_0 > 0$$

- in_Y – the rate of investments, $in_Y \in (0,1)$;
- i_r – a factor of influence on the investment rate, $i_r < 0$;

The following equations express the dependence of the net income GDP, the government transfers (TR) and tax rate (TI):

$$(6) \quad V=Y+TR-TI, \quad TR>0$$

$$(7) \quad TR=\theta_Y Y, \quad \theta_Y \in (0,1)$$

$$(8) \quad TI=r_i Y+T_0, \quad r_i \in (0,1), \quad T_0 \geq 0$$

In equation (7) we assumed the linear dependence of transfers of GDP, assuming in the case of the fees an affine dependence, T_0 being the independent taxes from the income (property taxes and so on). Let note that: θ_Y – the marginal government transfers and r_i – the tax rate, $r_i \in (0,1)$.

The static equilibrium equation is:

$$(9) \quad D=Y$$

The following set of equations refers to monetary issues. We assume so:

$$(10) \quad MD=md_Y Y+m_r r, \quad md_Y > 0, \quad m_r < 0$$

where:

- MD – the money demand in the economy;
- md_Y – the rate of money demand in the economy;
- m_r – a factor of influencing the demand for currency from the interest rate, $m_r < 0$;
- r – the real interest rate.

The equilibrium equation being:

$$(11) \quad MD=M$$

where M represents the money supply.

The dynamic equations of the model are:

$$(12) \quad \frac{dY}{dt} = \alpha(D-Y), \quad \alpha > 0$$

$$(13) \quad \frac{dr}{dt} = \beta(MD-M), \quad \beta > 0$$

3. The Static Equilibrium

From (1)-(8) we get:

$$(14) \quad D=c_V V+C_0+g_Y Y+in_Y Y+i_r r+v_Y Y=Y(c_V+c_V \theta_Y-c_V r_i+g_Y+in_Y+v_Y)-c_V T_0+C_0+i_r r$$

Noting:

$$(15) \quad E = C_0 - c_v T_0$$

$$(16) \quad \omega = 1 + \theta_Y - r i_Y$$

$$(17) \quad \chi = 1 - c_v (1 + \theta_Y - r i_Y) - g_Y - i n_Y - v_Y = 1 - c_v \omega - g_Y - i n_Y - v_Y$$

let note first that from (2), (6)-(8): $V = Y(1 + \theta_Y - r i_Y) - T_0 = \omega Y - T_0$, and:

$$(18) \quad C = c_v (\omega Y - T_0) + C_0 = c_v \omega Y + E$$

As in the absence of GDP ($Y=0$) the consumption must be positive, follows that $E \geq 0$.

From the fact that $r i_Y \in (0, 1)$, $\theta_Y \in (0, 1)$ we get that: $\omega = 1 + \theta_Y - r i_Y \in (0, 2)$.

With the notations (15)-(17), equation (14) becomes:

$$(19) \quad D = Y(1 - \chi) + i_r r + E$$

The equilibrium condition $D=Y$ in (9) implies: $Y(1 - \chi) + i_r r + E = Y$ therefore:

$$(20) \quad Y = \frac{i_r}{\chi} r + \frac{E}{\chi}$$

The natural condition that at the increase of r , Y must decrease required: $\frac{i_r}{\chi} < 0$ so $\chi > 0$.

From the fact that $c_v, g_Y, i n_Y, |v_Y|, \theta_Y, r i_Y \in (0, 1)$ we get that $\chi > 0$ if and only if:

$$(21) \quad c_v < \frac{1 - g_Y - i n_Y - v_Y}{1 + \theta_Y - r i_Y}$$

Similarly, from equations (10),(11): $MD = m_d Y + m_r r = M$ therefore:

$$(22) \quad Y = -\frac{m_r}{m_d} r + \frac{M}{m_d}$$

The condition of equilibrium on the two markets (goods & services and monetary):

$$(23) \quad \begin{cases} Y = \frac{i_r}{\chi} r + \frac{E}{\chi} \\ Y = -\frac{m_r}{m_d} r + \frac{M}{m_d} \end{cases}$$

After solving the system we have:

$$(24) \quad \begin{cases} Y = \frac{Mi_r + Em_r}{i_r md_Y + m_r \chi} \\ r = \frac{M\chi - Emd_Y}{i_r md_Y + m_r \chi} \end{cases}$$

The equations (24) give the static equilibrium model.

Noting now, for simplicity:

$$(25) \quad \Lambda = \frac{1}{i_r md_Y + m_r \chi} < 0$$

$$(26) \quad \Gamma = (Mi_r + m_r E)\Lambda^2 < 0$$

follows:

$$(27) \quad md_Y E - \chi M = \frac{E\Lambda - \Gamma\chi}{i_r \Lambda^2} = \frac{md_Y \Gamma - M\Lambda}{m_r \Lambda^2}$$

$$(28) \quad \begin{cases} Y = \frac{\Gamma}{\Lambda} \\ r = \frac{\Gamma\chi - E\Lambda}{i_r \Lambda} = \frac{M\Lambda - md_Y \Gamma}{m_r \Lambda} \end{cases}$$

From formulas (24) we have therefore:

$$(29) \quad \frac{\partial Y}{\partial c_V} = m_r(\omega\Gamma - T_0\Lambda), \quad \frac{\partial Y}{\partial g_Y} = \frac{\partial Y}{\partial v_Y} = \frac{\partial Y}{\partial in_Y} = m_r\Gamma, \quad \frac{\partial Y}{\partial \theta_Y} = -\frac{\partial Y}{\partial ri_Y} = m_r c_V \Gamma,$$

$$\frac{\partial Y}{\partial i_r} = M\Lambda - md_Y \Gamma, \quad \frac{\partial Y}{\partial md_Y} = -i_r \Gamma, \quad \frac{\partial Y}{\partial m_r} = -i_r \frac{M\Lambda - md_Y \Gamma}{m_r}, \quad \frac{\partial Y}{\partial M} = i_r \Lambda$$

$$(30) \quad \frac{\partial r}{\partial c_V} = -md_Y(\omega\Gamma - T_0\Lambda), \quad \frac{\partial r}{\partial g_Y} = \frac{\partial r}{\partial v_Y} = \frac{\partial r}{\partial in_Y} = -md_Y \Gamma,$$

$$\frac{\partial r}{\partial \theta_Y} = -\frac{\partial r}{\partial ri_Y} = -md_Y c_V \Gamma, \quad \frac{\partial r}{\partial i_r} = -md_Y \frac{M\Lambda - md_Y \Gamma}{m_r}, \quad \frac{\partial r}{\partial md_Y} = -\chi \Gamma,$$

$$\frac{\partial r}{\partial m_r} = -\chi \frac{M\Lambda - md_Y \Gamma}{m_r}, \quad \frac{\partial r}{\partial M} = \chi \Lambda$$

$$(31) \quad \frac{\partial^2 Y}{\partial c_v^2} = 2(\omega\Gamma - T_0\Lambda)\omega m_r^2 \Lambda, \quad \frac{\partial^2 Y}{\partial g_Y^2} = \frac{\partial^2 Y}{\partial v_Y^2} = \frac{\partial^2 Y}{\partial in_Y^2} = 2m_r^2 \Gamma \Lambda,$$

$$\frac{\partial^2 Y}{\partial \theta_Y^2} = -\frac{\partial^2 Y}{\partial ri_Y^2} = 2c_v m_r^2 \Gamma \Lambda, \quad \frac{\partial^2 Y}{\partial i_r^2} = -2(M\Lambda - md_Y \Gamma)md_Y \Lambda, \quad \frac{\partial^2 Y}{\partial md_Y^2} = 2i_r^2 \Gamma \Lambda,$$

$$\frac{\partial^2 Y}{\partial m_r^2} = 2\chi i_r \Lambda \frac{M\Lambda + md_Y \Gamma}{m_r}, \quad \frac{\partial^2 Y}{\partial M^2} = 0$$

$$(32) \quad \frac{\partial^2 r}{\partial c_v^2} = -2(\omega\Gamma - T_0\Lambda)\omega md_Y m_r \Lambda, \quad \frac{\partial^2 r}{\partial g_Y^2} = \frac{\partial^2 r}{\partial v_Y^2} = \frac{\partial^2 r}{\partial in_Y^2} = -2m_r md_Y \Gamma \Lambda,$$

$$\frac{\partial^2 r}{\partial \theta_Y^2} = -\frac{\partial^2 r}{\partial ri_Y^2} = -2c_v m_r md_Y \Gamma \Lambda, \quad \frac{\partial^2 r}{\partial i_r^2} = 2\frac{md_Y^2}{m_r}(M\Lambda - md_Y \Gamma)\Lambda, \quad \frac{\partial^2 r}{\partial md_Y^2} = 2i_r \chi \Gamma \Lambda$$

$$, \quad \frac{\partial^2 r}{\partial m_r^2} = 2\chi^2 \Lambda \frac{M\Lambda + md_Y \Gamma}{m_r}, \quad \frac{\partial^2 r}{\partial M^2} = 0$$

To analyze the monotony of Y and of r, it is imperative to study the signs of $\omega\Gamma - T_0\Lambda$ and $M\Lambda - md_Y \Gamma$.

Noting:

$$(33) \quad \Phi_1 = \frac{c_v m_r \omega T_0^2 - Mi_r \omega T_0 + i_r md_Y + m_r \chi}{m_r \omega T_0}, \quad \Phi_2 = \frac{M\chi + c_v md_Y T_0}{md_Y}$$

we get that $\Phi_1 > \Phi_2$ if and only if $T_0 < \frac{md_Y}{\omega M}$.

On the other hand, since $E = C_0 - c_v T_0 \geq 0$ i.e. $C_0 \geq c_v T_0$ results:

$$\Phi_2 - c_v T_0 = \frac{M\chi}{md_Y} > 0 \text{ therefore: } \Phi_2 > c_v T_0 > 0, \quad \Phi_1 - c_v T_0 = \frac{-Mi_r \omega T_0 + i_r md_Y + m_r \chi}{m_r \omega T_0} > 0.$$

In conclusion, we get that:

$$\Phi_1 > c_v T_0 \text{ if } T_0 < \frac{md_Y}{M\omega} + \frac{m_r \chi}{Mi_r \omega} \text{ and } \Phi_1 \leq c_v T_0 \text{ if } T_0 \geq \frac{md_Y}{M\omega} + \frac{m_r \chi}{Mi_r \omega}$$

After these considerations, there are three main cases:

1. $T_0 < \frac{md_Y}{\omega M} \Rightarrow \Phi_1 > \Phi_2 > c_v T_0 > 0$

$$2. \frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega} > T_0 \geq \frac{md_Y}{\omega M} \Rightarrow \Phi_2 \geq \Phi_1 > c_V T_0 > 0$$

$$3. T_0 \geq \frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega} \Rightarrow \Phi_2 > c_V T_0 \geq \Phi_1.$$

On the other hand, the condition that $\omega\Gamma - T_0\Lambda > 0$ lead to $C_0 > \Phi_1$, and $M\Lambda - md_Y\Gamma > 0$ lead to $C_0 > \Phi_2$.

Regardless of the above, we have:

- Y is strictly increasing and strictly convex with respect to marginal government consumption g_Y , with respect to marginal net exports v_Y , with the rate of investments in_Y and the marginal government transfers θ_Y . Y is strictly decreasing and strictly concave with respect to the tax rate ri_Y . Y is strictly decreasing and strictly convex in relation to the rate of money demand in the economy md_Y . Y is strictly increasing and affine in relation to the money supply M .
- r is strictly increasing and strictly convex with respect to the marginal government consumption g_Y , with respect to the marginal net exports v_Y , with the rate of Investments in_Y and the marginal government transfers θ_Y . r is strictly decreasing and strictly concave with respect to the tax rate ri_Y . r is strictly increasing and strictly concave in relation to the rate of money demand in the economy md_Y . r is strictly decreasing and affine in relation to the money supply M .

We now have the following cases:

Case 1 $T_0 < \frac{md_Y}{\omega M}$ and $C_0 \in (c_V T_0, \Phi_2)$ implies: $\omega\Gamma - T_0\Lambda < 0$, $M\Lambda - md_Y\Gamma < 0$. In this case:

- Y is strictly increasing and strictly convex in relation to the marginal propensity to consume c_V and the factor of influencing the demand for currency from the interest rate m_r . Y is strictly decreasing and strictly convex in relation to the factor of influence on the investment rate i_r .
- r is strictly increasing and strictly convex in relation to the marginal propensity to consume c_V . r is strictly decreasing and strictly concave in relation to the factor of influence on the investment rate i_r and the factor of influencing the demand for currency from the interest rate m_r .

Case 2 $T_0 < \frac{md_Y}{\omega M}$ and $C_0 \in [\Phi_2, \Phi_1]$ implies: $\omega\Gamma - T_0\Lambda < 0$, $M\Lambda - md_Y\Gamma > 0$.

- Y is strictly increasing and strictly convex in relation to the marginal propensity to consume c_v and in relation to the factor of influence on the investment rate i_r . Y is strictly decreasing and strictly convex in relation to the factor of influencing the demand for currency from the interest rate m_r .
- r is strictly increasing and strictly convex in relation to the marginal propensity to consume c_v and the factor of influence on the investment rate i_r . r is strictly decreasing and strictly concave in relation to the factor of Influencing the demand for currency from the interest rate m_r .

Case 3 $T_0 < \frac{md_Y}{\omega M}$ and $C_0 \in (\Phi_1, \infty)$ implies: $\omega\Gamma - T_0\Lambda > 0$, $M\Lambda - md_Y\Gamma > 0$.

- Y is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . Y is strictly decreasing and strictly convex in relation to the factor of influencing the demand for currency from the interest rate m_r . Y is strictly increasing and strictly convex in relation to the factor of Influence on the investment rate i_r .
- r is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . r is strictly increasing and strictly convex in relation to the factor of influence on the investment rate i_r . r is strictly increasing and strictly concave in relation to the factor of influencing the demand for currency from the interest rate m_r .

Case 4 $\frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega} > T_0 \geq \frac{md_Y}{\omega M}$ and $C_0 \in (c_v T_0, \Phi_1)$ implies: $\omega\Gamma - T_0\Lambda < 0$, $M\Lambda - md_Y\Gamma < 0$.

- Y is strictly increasing and strictly convex in relation to the marginal propensity to consume c_v and the factor of influencing the demand for currency from the interest rate m_r . Y is strictly decreasing and strictly concave in relation to the factor of Influence on the investment rate i_r .
- r is strictly increasing and strictly convex in relation to the marginal propensity to consume c_v . r is strictly decreasing and strictly concave in relation to the factor of influence on the investment rate i_r and the factor of influencing the demand for currency from the interest rate m_r .

Case 5 $\frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega} > T_0 \geq \frac{md_Y}{\omega M}$ and $C_0 \in [\Phi_1, \Phi_2]$ implies: $\omega\Gamma - T_0\Lambda > 0$, $M\Lambda - md_Y\Gamma < 0$.

- Y is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v and the factor of influence on the investment rate i_r . Y is strictly increasing and strictly convex with respect to m_r .
- r is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v , the factor of influence on the investment rate i_r and the factor of influencing the demand for currency from the interest rate m_r .

Case 6 $\frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega} > T_0 \geq \frac{md_Y}{\omega M}$ and $C_0 \in (\Phi_2, \infty)$ implies: $\omega\Gamma - T_0\Lambda > 0$,

$$M\Lambda - md_Y\Gamma > 0.$$

- Y is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . Y is strictly increasing and strictly convex in relation to the factor of influence on the investment rate i_r . Y is strictly decreasing and strictly convex in relation to the factor of influencing the demand for currency from the interest rate m_r .
- r is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . r is strictly increasing and strictly convex in relation to the factor of influence on the investment rate i_r . r is strictly increasing and strictly concave in relation to the factor of influencing the demand for currency from the interest rate m_r .

Case 7 $T_0 \geq \frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega}$ and $C_0 \in (c_v T_0, \Phi_2)$ implies: $\omega\Gamma - T_0\Lambda > 0$, $M\Lambda - md_Y\Gamma$

$$< 0.$$

- Y is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v and the factor of Influence on the investment rate i_r . Y is strictly increasing and strictly convex in relation to the factor of Influencing the demand for currency from the interest rate m_r .
- r is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v , with the factor of influence on the investment rate i_r and the factor of influencing the demand for currency from the interest rate m_r .

Case 8 $T_0 \geq \frac{md_Y}{M\omega} + \frac{m_r\chi}{Mi_r\omega}$ and $C_0 \in [\Phi_2, \infty)$ implies: $\omega\Gamma - T_0\Lambda > 0$, $M\Lambda - md_Y\Gamma > 0$.

- Y is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . Y is strictly increasing and strictly convex in relation to the factor of influence on the investment rate i_r . Y is strictly decreasing and strictly convex in relation to the factor of influencing the demand for currency from the interest rate m_r .

- r is strictly decreasing and strictly concave in relation to the marginal propensity to consume c_v . r is strictly increasing and strictly convex in relation to the factor of influence on the investment rate i_r . r is strictly increasing and strictly concave in relation to the factor of influencing the demand for currency from the interest rate m_r .

4. The Determination of the Potential GDP. Okun's Law

Considering the money supply constant in time, we can consider as potential GDP value, the static equilibrium value:

$$(34) \quad Y^* = \frac{M i_r + E m_r}{i_r m d_Y + m_r \chi}$$

Once determined the potential level of GDP, we naturally put the problem of determining the natural rate of unemployment. The known expression of Okun's law is:

$$(35) \quad \frac{Y^* - Y}{Y^*} = c(u - u^*)$$

where:

- Y – the actual GDP;
- Y^* – the potential GDP;
- u – the unemployment rate;
- u^* – the natural rate of unemployment;
- c – a factor of proportionality.

Due to the difficulties in the appliance of Okun's law (consisting in the impossibility to determine the potential GDP - made in conditions of full employment of labor) and also the natural rate of unemployment, is used in practice, a modified form of it, as follows:

$$(36) \quad \frac{\Delta Y}{Y} = a - c \Delta u$$

The advantage of this is to eliminate the explicit expressions of the potential GDP and the natural unemployment. On the other hand, in our analysis, we will determine the value of the constant c using the relation (36) and then inserting it into (35) which allows the determination of the natural rate of unemployment at a given time.

Being so determined the constant c , we have from (34), (35):

$$(37) \quad u^* = u - \frac{Y^* - Y}{cY^*} = u - \frac{1}{c} + \frac{i_r md_Y + m_r \chi}{c(Mi_r + Em_r)} Y$$

From equation (37) it is observed that u^* increases with Y with the factor $\frac{i_r md_Y + m_r \chi}{c(Mi_r + Em_r)}$.

5. The Dynamic Equilibrium

The equations (12) and (13) is constituted as laws of dynamic equilibrium. Let so the system of first order differential equations:

$$(38) \quad \begin{cases} \frac{dY}{dt} = \alpha(D - Y) \\ \frac{dr}{dt} = \beta(MD - M) \end{cases}, \alpha, \beta > 0$$

From (10),(19) we can write (38) as:

$$(39) \quad \begin{cases} \frac{dY}{dt} = -\alpha\chi Y + \alpha i_r r + \alpha E \\ \frac{dr}{dt} = \beta md_Y Y + \beta m_r r - \beta M \end{cases}$$

Using the lemma from appendix A.1, it follows that: $\lim_{t \rightarrow \infty} Y(t) = \tilde{Y}$, $\lim_{t \rightarrow \infty} r(t) = \tilde{r}$, $\tilde{Y}, \tilde{r} \in \mathbf{R}_+$ if and only if:

1. $\Delta = (\alpha\chi + \beta m_r)^2 + 4\alpha\beta i_r md_Y = 0$ then:

$$(40) \quad \begin{cases} Y = \left(-\frac{\alpha\chi + \beta m_r}{2} Y_0 + \alpha i_r r_0 + \alpha \frac{2i_r \beta M + E(\alpha\chi + \beta m_r)}{\alpha\chi - \beta m_r} \right) te^{-\frac{\alpha\chi + \beta m_r}{2}t} + \\ \left(Y_0 + 4\alpha\beta \frac{m_r E + i_r M}{(\alpha\chi - \beta m_r)^2} \right) e^{-\frac{\alpha\chi + \beta m_r}{2}t} + \frac{i_r M + m_r E}{\chi m_r + i_r md_Y} \\ r = \left[r_0 - 4\alpha\beta \frac{-\chi M + md_Y E}{(\alpha\chi - \beta m_r)^2} \right] e^{-\frac{\alpha\chi + \beta m_r}{2}t} + \\ \left(-\frac{\alpha\chi + \beta m_r}{2} Y_0 + \alpha i_r r_0 + \alpha \frac{2i_r \beta M + E(\alpha\chi + \beta m_r)}{\alpha\chi - \beta m_r} \right) \frac{\alpha\chi + \beta m_r}{2\alpha i_r} te^{-\frac{\alpha\chi + \beta m_r}{2}t} + \frac{\chi M - md_Y E}{\chi m_r + i_r md_Y} \end{cases}$$

$$\text{and: } \begin{cases} \tilde{Y} = \frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} \\ \tilde{r} = \frac{\chi M - m d_Y E}{\chi m_r + i_r m d_Y} \end{cases}$$

2. $\Delta = (\alpha\chi + \beta m_r)^2 + 4\alpha\beta i_r m d_Y > 0$ and $\lambda_1 \neq \lambda_2$ are roots of the equation: $\lambda^2 + (\alpha\chi - \beta m_r)\lambda - \alpha\beta(\chi m_r + i_r m d_Y) = 0$ then:

$$(41) \begin{cases} Y = k_1 e^{\lambda_1 t} + k_2 e^{\lambda_2 t} + \frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} \\ r = \frac{\lambda_1 + \alpha\chi}{\alpha i_r} k_1 e^{\lambda_1 t} + \frac{\lambda_2 + \alpha\chi}{\alpha i_r} k_2 e^{\lambda_2 t} - \frac{m d_Y E - \chi M}{\chi m_r + i_r m d_Y} \end{cases}$$

where:

$$k_1 = \frac{(\lambda_2 + \alpha\chi)Y_0 - (\lambda_2 + \alpha\chi)\frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} - \alpha i_r r_0 - \alpha i_r \frac{m d_Y E - \chi M}{\chi m_r + i_r m d_Y}}{\lambda_2 - \lambda_1}$$

$$k_2 = \frac{\alpha i_r r_0 + \alpha i_r \frac{m d_Y E - \chi M}{\chi m_r + i_r m d_Y} - (\lambda_1 + \alpha\chi)Y_0 + (\lambda_1 + \alpha\chi)\frac{m_r E + i_r M}{\chi m_r + i_r m d_Y}}{\lambda_2 - \lambda_1}$$

$$\text{and: } \begin{cases} \tilde{Y} = \frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} \\ \tilde{r} = \frac{\chi M - m d_Y E}{\chi m_r + i_r m d_Y} \end{cases}$$

3. $\Delta = (\alpha\chi + \beta m_r)^2 + 4\alpha\beta i_r m d_Y < 0$ and $\lambda_1 = \mu + iv$, $\lambda_2 = \mu - iv$, $v \neq 0$ are roots of the equation: $\lambda^2 + (\alpha\chi - \beta m_r)\lambda - \alpha\beta(\chi m_r + i_r m d_Y) = 0$ then:

$$(42) \quad \begin{cases} Y = \left(Y_0 - \frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} \right) e^{\mu t} \cos vt + \\ \frac{1}{v} \left(\alpha i_r r_0 - \frac{\beta m_r + \alpha \chi}{2} Y_0 + \frac{(\beta m_r + \alpha \chi)(i_r M + m_r E) + 2\alpha i_r (-\chi M + m d_Y E)}{2(\chi m_r + i_r m d_Y)} \right) e^{\mu t} \sin vt + \\ \frac{i_r M + m_r E}{\chi m_r + i_r m d_Y} \\ r = \left(r_0 + \frac{-\chi M + m d_Y E}{\chi m_r + i_r m d_Y} \right) e^{\mu t} \cos vt + \\ \frac{1}{v} \left(\beta m d_Y Y_0 + \frac{\beta m_r + \alpha \chi}{2} r_0 + \frac{(\beta m_r + \alpha \chi)(-\chi M + m d_Y E) - 2\beta m d_Y (m_r E + i_r M)}{2(\chi m_r + i_r m d_Y)} \right) e^{\mu t} \sin vt + \\ \frac{\chi M - m d_Y E}{\chi m_r + i_r m d_Y} \end{cases}$$

$$\text{and: } \begin{cases} \tilde{Y} = \frac{m_r E + i_r M}{\chi m_r + i_r m d_Y} \\ \tilde{r} = \frac{\chi M - m d_Y E}{\chi m_r + i_r m d_Y} \end{cases}$$

We will call \tilde{Y} - the limit of the output and \tilde{r} - the interest rate limit.

6. The Analysis of the Romanian Economy

Using the data table A.1 and the results of analyzes from the appendix A.2 there are obtained the corresponding regression equations for Romania during 2001-2011.

Table 1

| The regression equation | The regression's coefficients | |
|----------------------------|-------------------------------|--------------------|
| $C=0.59526V+18527.39699$ | $c_v=0.59526$ | $C_0=18527.39699$ |
| $G=0.07703Y$ | $g_Y=0.07703$ | |
| $I=0.28077Y-79168.78775r$ | $i_{n_Y}=0.28077$ | $i_r=79168.78775$ |
| $NX=-0.08858Y$ | $v_Y=-0.08858$ | |
| $TR=0.09727Y$ | $\theta_Y=0.09727$ | |
| $TI=0.06905Y+5117.37477$ | $ri_Y=0.06905$ | $T_0=5117.37477$ |
| $MD=0.08850Y-59560.45339r$ | $md_Y=0.08850$ | $m_r=-59560.45339$ |

Substituting in relations (24) we obtain the values of static equilibrium are, for 2011 (expressed in 2000-national currency) and $M=11603.05$: $Y=130753.8$ and $r=-0.00053=-0.053\%$.

Considering the inflation rate from 2011 as $i=5.79\%$ we obtain using the formula: $rn=r(i+1)+i$ where rn is the nominal interest rate: $rn=5.73\%$.

On the other hand, the potential level of GDP calculated by formula (32) in the period was:

Table 2

| Anul | Y | Y* | Y-Y* | $\frac{Y - Y^*}{Y^*}$ |
|------|-------------|-------------|--------------|-----------------------|
| 2001 | 85841.1936 | 88910.28844 | -3069.094844 | -3.45% |
| 2002 | 89658.25153 | 89721.72265 | -63.47112168 | -0.07% |
| 2003 | 93904.04246 | 90443.68138 | 3460.361078 | 3.83% |
| 2004 | 102310.9459 | 94351.2625 | 7959.683385 | 8.44% |
| 2005 | 106421.2703 | 101420.1072 | 5001.163027 | 4.93% |
| 2006 | 114561.3451 | 112366.9512 | 2194.393982 | 1.95% |
| 2007 | 122371.7164 | 123753.4116 | -1381.695222 | -1.12% |
| 2008 | 135665.8673 | 134831.2139 | 834.6533952 | 0.62% |
| 2009 | 124029.6072 | 129248.2296 | -5218.622443 | -4.04% |
| 2010 | 124837.2351 | 128197.8657 | -3360.630587 | -2.62% |
| 2011 | 129050.5671 | 130753.8278 | -1703.26069 | -1.30% |

It can therefore be seen that in 2011, the Romanian economy was close to the potential output level, the only disturbing factor being the rate averaged 6.25% higher than those of equilibrium.

Relative to Okun's law, the data in table A.2, gives us a value for $c=1.707$.

From formula (35) follows, for Romania:

$$(43) \quad u^* = u - 0.5858 + \frac{14077.351}{135141.121M + 1573970536} Y$$

Considering the monetary base for the reference period, we get:

Table 3

| Year | The real unemployment rate (u) | The natural unemployment rate (u [*]) | Difference u-u [*] |
|------|--------------------------------|---|-----------------------------|
| 2001 | 8.60% | 6.59% | 2.01% |
| 2002 | 8.10% | 8.06% | 0.04% |
| 2003 | 7.20% | 9.42% | -2.22% |
| 2004 | 6.20% | 11.10% | -4.90% |
| 2005 | 5.90% | 8.77% | -2.87% |
| 2006 | 5.20% | 6.34% | -1.14% |
| 2007 | 4.10% | 3.45% | 0.65% |
| 2008 | 4.40% | 4.76% | -0.36% |
| 2009 | 7.80% | 5.45% | 2.35% |
| 2010 | 6.87% | 5.35% | 1.52% |
| 2011 | 5.12% | 4.36% | 0.76% |

The corresponding data from the tables 2 and 3 show that in 2003-2006 and in 2008 the Romanian economy was overheated, Romania's GDP being in excess in comparison to the potential level. Thus, in 2004, the relative difference was 8.44% being explained and justified by an ill-founded relative increase in the monetary base of 15.67% from the previous period when the increase was ranging between 2.98% and 3.47%. Since 2009 the situation has changed radically, its level being 4.04% less than the potential, the difference becoming smaller over time.

Relative to the unemployment rate, the phenomenon has evolved almost identical. If in 2003-2006 and in 2008 was an over-hiring (with a maximum difference of - 4.90% in the same year 2004), since 2009, the economic crisis set, the appropriate values over 1% (with a peak in 2009 of 2.35% above the natural level).

Relative to the rate evolution, we have:

Table 4

| Year | The nominal interest rate (rn) | The equilibrium nominal interest rate (r) | rn-r |
|------|--------------------------------|---|--------|
| 2001 | 38.80% | 42.87% | -4.07% |
| 2002 | 28.47% | 29.97% | -1.50% |
| 2003 | 18.84% | 22.21% | -3.37% |

| | | | |
|------|--------|--------|--------|
| 2004 | 20.27% | 17.95% | 2.32% |
| 2005 | 9.59% | 13.74% | -4.15% |
| 2006 | 8.44% | 9.38% | -0.94% |
| 2007 | 7.46% | 5.89% | 1.57% |
| 2008 | 9.46% | 7.13% | 2.33% |
| 2009 | 9.33% | 5.77% | 3.56% |
| 2010 | 6.67% | 6.44% | 0.23% |
| 2011 | 6.25% | 5.73% | 0.52% |

It is noted that in the periods 2001-2003 and 2005-2006, the NBR's (the National Bank of Romania) interest rate was below the equilibrium level. During the crisis, since 2009, it has overwhelmed the equilibrium (even with 3.56% in 2009) which led to the deepening crisis by discouraging investments.

Considering now the dynamic evolution of GDP and the money demand are obtained average values $\alpha=3.183904003$ and $\beta=7.57236 \cdot 10^{-6}$ where $\Delta < 0$.

The graphs of progression to equilibrium values are:

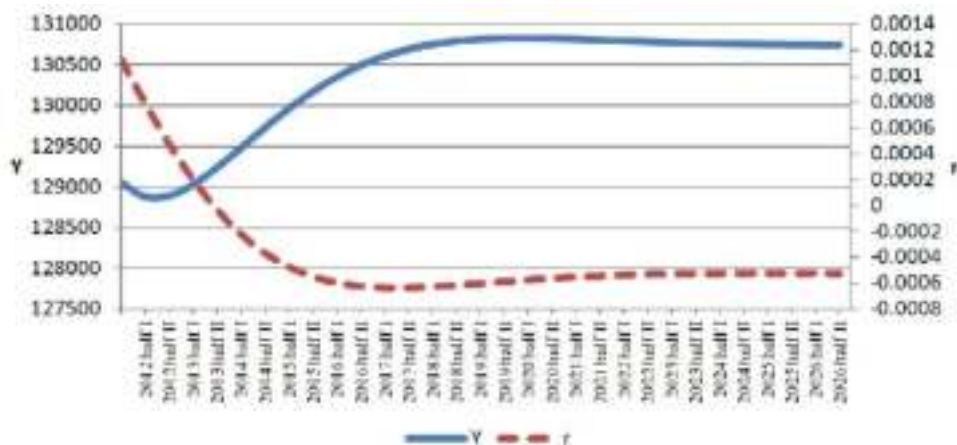


Figure 1. The evolution of GDP for $\Delta < 0$ (2000 national currency)

Considering now perturbed values $\alpha=3$ and $\beta=7,57236 \cdot 10^{-6}$ for which $\Delta=0$, we obtain graphs of evolution towards equilibrium values:

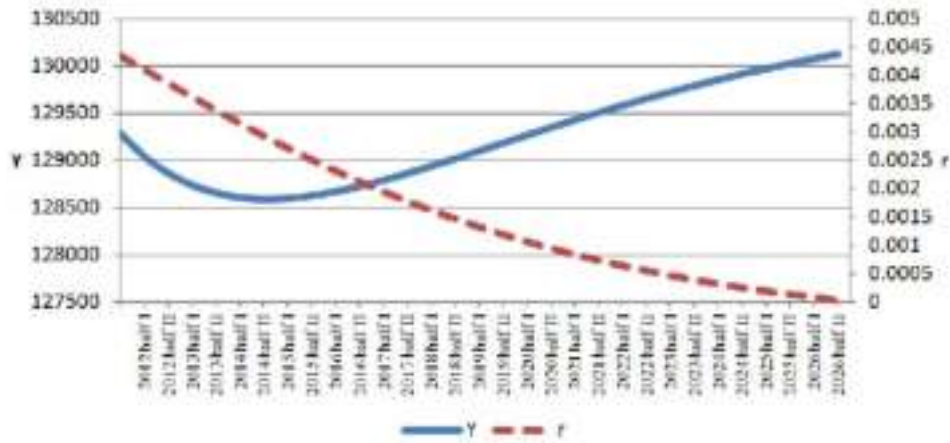


Figure 2. The evolution of GDP for $\Delta=0$ (2000 national currency)

Finally, considering now new perturbed values $\alpha=3$ and $\beta=10^{-6}$ for which $\Delta>0$, we obtain graphs of evolution towards equilibrium values:

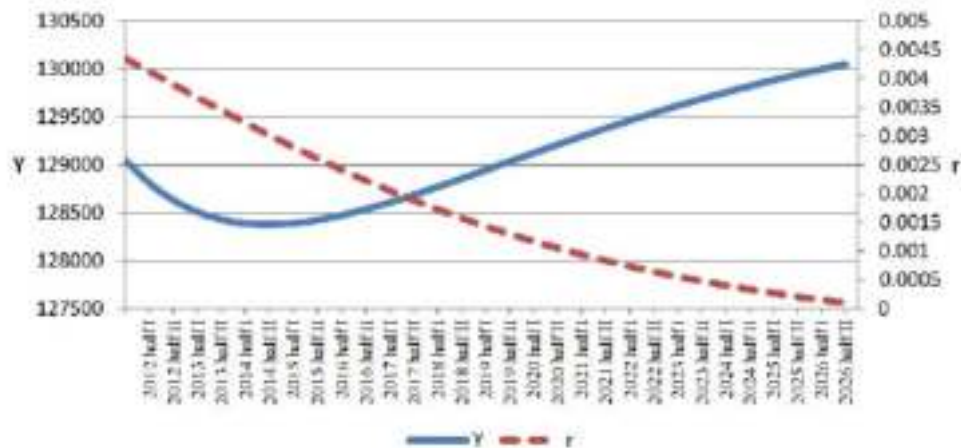


Figure 3. The evolution of GDP for $\Delta>0$ (2000 national currency)

From the graphs above, it appears that the most favorable situation to achieve potential output in terms of a minimum interest is the corresponding value of $\Delta<0$ in which approximately seven years to obtain optimum.

Otherwise there is a very weak decrease of the real interest rate which is kept at high enough levels, accompanied by a reduction in GDP over a period of about three years, which is unacceptable. Therefore the condition that $\Delta<0 \Leftrightarrow (\alpha\chi+\beta m_r)^2+4\alpha\beta i_r m_d < 0$ is the most convenient.

Considering: $\chi^2\alpha^2 + 2(\chi m_r + 2i_r md_Y)\alpha\beta + m_r^2\beta^2 < 0$ we find that:

$$\frac{\alpha}{\beta} \in \left(\frac{-(\chi m_r + 2i_r md_Y) - 2\sqrt{i_r md_Y(\chi m_r + i_r md_Y)}}{\chi^2}, \frac{-(\chi m_r + 2i_r md_Y) + 2\sqrt{i_r md_Y(\chi m_r + i_r md_Y)}}{\chi^2} \right)$$

Computing the partial derivatives of Y for the existing monetary basis in 2011, we get to a 0.01 variation of parameters:

$$\Delta Y \Big|_{\Delta c_Y=0,01} = 5472, \quad \Delta Y \Big|_{\Delta g_Y=0,01} = \Delta Y \Big|_{\Delta v_Y=0,01} = \Delta Y \Big|_{\Delta in_Y=0,01} = 5532,$$

$$\Delta Y \Big|_{\Delta \theta_Y=0,01} = \Delta Y \Big|_{\Delta ri_Y=0,01} = 3293,$$

$$\Delta Y \Big|_{\Delta md_Y=0,01} = -7353.$$

In relation to the above indicators, it is noted that in the case of IS variables, the largest GDP's growth is due to the rate of investments, net exports and marginal government consumption. A similar increase can be achieved also by an increasing in the marginal propensity to consume.

7. Conclusions

The model presented above shows a more flexibility in macroeconomic modeling, because it removes the common assumptions of constancy of variables. Thus, net exports, government consumption and transfers are approached by their econometric dependence of GDP. After the analysis of static equilibrium there are obtained the value of potential GDP and the interest rate.

The dynamic analysis revealed three cases of economic development in which both GDP and interest rates converge to limit values, clearly identical with those in the static equilibrium. The three cases which are dependent on statistical parameters, push faster or slower the economy to the equilibrium. From predicted equilibrium values, we have defined the potential GDP, based on which we determined (with Okun's law) the natural rate of unemployment.

Romania's situation, presented in the case study, reveals a contradictory economic policy. Thus, although econometric indicators leading to optimal convergence ($\Delta < 0$) of GDP to the potential, this is due to compensation data period. In fact, in 2003-2006 and 2008, the Romanian economy was overheated, with an overemployment of labor and a positive output gap. In the period of economic crisis, the unemployment has returned to a relatively normal situation, in turn the interest rate has increased unjustified (2008,2009) led to discouraging investments. Recent years (2010, 2011) approached the interest rate from equilibrium, which was reflected in an dynamic increased of investments. For Romania, the analysis of marginal indicators proposes as directions for growth, the increase of investments, net exports, government consumption marginal, but also the marginal propensity to consume (conditioned by the recovery of the trade balance which record a deficit and to stimulate the domestic production).

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Appendix A.1

A result on the stability of solutions of a system of differential equations of first order, linear, with constant coefficients satisfying some conditions

Lemma

Let the system of differential equations:

$$\begin{pmatrix} \frac{dX}{dt} \\ \frac{dY}{dt} \end{pmatrix} = \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} X \\ Y \end{pmatrix} + \begin{pmatrix} e \\ f \end{pmatrix}, \quad a, b, c, d, e, f \in \mathbf{R}, \quad a, b, d < 0, \quad c, e, f > 0, \quad X(0) = X_0, \quad Y(0) = Y_0.$$

Then $\lim_{t \rightarrow \infty} X(t) = \tilde{X}$, $\lim_{t \rightarrow \infty} Y(t) = \tilde{Y}$, $\tilde{X}, \tilde{Y} \in \mathbf{R}$ if and only if:

1. $\Delta = (a-d)^2 + 4bc = 0$ with the solution:

$$\begin{cases} X = \left(\frac{a-d}{2} X_0 + bY_0 + \frac{2bf + e(a-d)}{a+d} \right) te^{\frac{a+d}{2}t} + \left(X_0 + 4 \frac{de - bf}{(a+d)^2} \right) e^{\frac{a+d}{2}t} + 4 \frac{bf - de}{(a+d)^2} \\ Y = \left[Y_0 + 4 \frac{af - ce}{(a+d)^2} \right] e^{\frac{a+d}{2}t} - \left(\frac{a-d}{2} X_0 + bY_0 + \frac{2bf + e(a-d)}{a+d} \right) \frac{a-d}{2b} te^{\frac{a+d}{2}t} + 4 \frac{ce - af}{(a+d)^2} \end{cases}$$

2. $\Delta = (a-d)^2 + 4bc > 0$ and $\lambda_1 \neq \lambda_2$ are roots of the equation: $\lambda^2 - (a+d)\lambda + (ad-bc) = 0$: $e, f \in \mathbf{R}$ with the solution:

$$\begin{cases} X = k_1 e^{\lambda_1 t} + k_2 e^{\lambda_2 t} - \frac{de - bf}{ad - bc} \\ Y = \frac{\lambda_1 - a}{b} k_1 e^{\lambda_1 t} + \frac{\lambda_2 - a}{b} k_2 e^{\lambda_2 t} + \frac{ce - af}{ad - bc} \end{cases}$$

where:

$$k_1 = \frac{(\lambda_2 - a)X_0 + (\lambda_2 - a) \frac{de - bf}{ad - bc} - bY_0 + b \frac{ce - af}{ad - bc}}{\lambda_2 - \lambda_1}$$

$$k_2 = - \frac{(\lambda_1 - a)X_0 + (\lambda_1 - a) \frac{de - bf}{ad - bc} - bY_0 + b \frac{ce - af}{ad - bc}}{\lambda_2 - \lambda_1}$$

3. $\Delta = (a-d)^2 + 4bc < 0$ and $\lambda_1 = \alpha + i\beta$, $\lambda_2 = \alpha - i\beta$, $\beta \neq 0$ are the roots of the equation: $\lambda^2 - (a+d)\lambda + (ad-bc) = 0$: $e, f \in \mathbf{R}$ with the solution:

$$\begin{cases} X = \left(X_0 + \frac{de - bf}{ad - bc} \right) e^{\alpha t} \cos \beta t + \frac{1}{\beta} \left(bY_0 - \frac{d - a}{2} X_0 + \frac{(d - a)(bf - de) + 2b(af - ce)}{2(ad - bc)} \right) e^{\alpha t} \sin \beta t + \frac{bf - de}{ad - bc} \\ Y = \left(Y_0 + \frac{af - ce}{ad - bc} \right) e^{\alpha t} \cos \beta t + \frac{1}{\beta} \left(cX_0 + \frac{d - a}{2} Y_0 + \frac{(d - a)(af - ce) + 2c(de - bf)}{2(ad - bc)} \right) e^{\alpha t} \sin \beta t + \frac{ec - af}{ad - bc} \end{cases}$$

Appendix A.2

The linear regressions

| Regression | C=c _v V+C ₀ | G=g _v Y | I=i _v Y+i _r r | NX=v _v Y |
|--------------------------|-----------------------------------|--------------------|-------------------------------------|---------------------|
| Multiple R | 0.943514561 | 0.993477251 | 0.993921138 | 0.937078818 |
| R Square | 0.890219727 | 0.986997047 | 0.987879229 | 0.878116712 |
| Significance F | 1.30505E-05 | 5.31E-10 | 1.35E-08 | 1.37507E-05 |
| Intercept | 18527.39699 | - | - | - |
| t Stat (Intercept) | 2.395137666 | - | - | - |
| P-value (Intercept) | 0.04021722 | - | - | - |
| Lower 95% (Intercept) | 1028.66011 | - | - | - |
| Upper 95% (Intercept) | 36026.13387 | - | - | - |
| X Variable 1 | 0.595262357 | 0.077030115 | 0.280770328 | - |
| t Stat (X Variable 1) | 8.542946909 | 27.5509728 | 19.29838414 | - |
| P-value (X Variable 1) | 1.30505E-05 | 9.20E-11 | 1.2438E-08 | 6.98E-06 |
| Lower 95% (X Variable 1) | 0.437637942 | 0.070800433 | 0.25722237* | - |
| Upper 95% (X Variable 1) | 0.752886771 | 0.083259797 | 0.30431829* | - |
| X Variable 2 | - | - | -79168.78775 | - |
| t Stat (X Variable 2) | - | - | -1.621662639 | - |
| P-value (X Variable 2) | - | - | 0.139325564 | - |
| Lower 95% (X Variable 2) | - | - | 158185.0528* | - |
| Upper 95% (X Variable 2) | - | - | -152.52267* | - |

* Lower 86.0%, Upper 86.0%

| Regression | TR=θ _v Y | TI=ri _v Y+T ₀ | MD=md _v Y+m _r r |
|---------------------|---------------------|-------------------------------------|---------------------------------------|
| Multiple R | 0.982295421 | 0.78282238 | 0.985492081 |
| R Square | 0.964904293 | 0.612810878 | 0.971194641 |
| Significance F | 4.71E-08 | 0.004388116 | 4.35363E-07 |
| Intercept | - | 5117.374767 | - |
| t Stat (Intercept) | - | 2.478080246 | - |
| P-value (Intercept) | - | 0.035101828 | - |
| Lower 95% | - | 445.8932831 | - |

| | | | |
|--------------------------|-------------|-------------|--------------|
| (Intercept) | | | |
| Upper 95% (Intercept) | - | 9788.856252 | - |
| X Variable 1 | 0.097273692 | 0.069049932 | 0.088499489 |
| t Stat (X Variable 1) | 16.58116813 | 3.774182655 | 13.53248535 |
| P-value (X Variable 1) | 1.33E-08 | 0.004388116 | 2.7492E-07 |
| Lower 95% (X Variable 1) | 0.08420228 | 0.027663011 | 0.073705477 |
| Upper 95% (X Variable 1) | 0.11034511 | 0.110436852 | 0.10329351 |
| X Variable 2 | - | - | -59560.45339 |
| t Stat (X Variable 2) | - | - | -2.714135812 |
| P-value (X Variable 2) | - | - | 0.023835548 |
| Lower 95% (X Variable 2) | - | - | -109202.4447 |
| Upper 95% (X Variable 2) | - | - | -9918.46212 |

Table A.1

| Year | Actual final consumption of households (mil. lei 2000) - C - | Available income (mil. lei 2000) - V - | Actual final consumption of the government (mil. lei 2000) - G - | GDP (mil. lei 2000) - Y - | Investments (mil. lei 2000) - I - | Real interest rate (without inflation) - r - | Net export (mil. lei 2000) - NX - | Government transfers (mil. lei 2000) - TR - | Tax rates (mil. lei 2000) - TI - | Money demand -daily average (mil. lei 2000) - MD - |
|------|--|--|--|---------------------------|-----------------------------------|--|-----------------------------------|---|----------------------------------|--|
| 2001 | 67.086.8 | 85.192.1 | 6.225.9 | 85.841.2 | 19.058.37 | 0.0320 | -6.529.9 | 10.038.8 | 10.687.9 | 4.162.7 |
| 2002 | 68.944.0 | 88.712.9 | 6.029.5 | 89.658.3 | 19.726.21 | 0.0487 | -5.041.5 | 9.591.3 | 10.536.6 | 4.306.9 |
| 2003 | 71.058.3 | 91.729.8 | 9.238.3 | 93.904.0 | 20.628.51 | 0.0307 | -7.021.0 | 9.804.4 | 11.978.7 | 4.435.3 |
| 2004 | 79.203.6 | 98.023.5 | 8.088.2 | 102.310.9 | 24.216.75 | 0.0748 | -9.197.6 | 8.992.0 | 13.279.4 | 5.130.1 |
| 2005 | 83.577.3 | 103.294.1 | 8.879.4 | 106.421.3 | 24.781.49 | 0.0054 | 10.816.9 | 10.326.8 | 13.454.0 | 6.387.1 |
| 2006 | 89.229.5 | 110.726.8 | 8.784.1 | 114.561.3 | 30.310.85 | 0.0182 | 13.763.1 | 8.763.4 | 12.598.0 | 8.333.6 |
| 2007 | 92.137.1 | 117.981.3 | 9.328.8 | 122.371.7 | 37.904.81 | 0.0250 | 16.999.1 | 8.795.0 | 13.185.4 | 10.358.3 |
| 2008 | 100.453.4 | 131.734.0 | 10.493.1 | 135.665.9 | 42.409.59 | 0.0149 | 17.690.2 | 10.600.4 | 14.532.2 | 12.328.1 |
| 2009 | 89.197.8 | 125.597.9 | 10.858.5 | 124.029.6 | 31.465.90 | 0.0354 | -7.492.5 | 13.485.9 | 11.917.6 | 11.335.3 |
| 2010 | 91.374.4 | 124.220.9 | 8.926.7 | 124.837.2 | 30.999.47 | 0.0055 | -6.463.3 | 12.834.6 | 13.450.9 | 11.148.6 |
| 2011 | 90.396.4 | 130.417.6 | 8.118.7 | 129.050.6 | 37.178.33 | 0.0043 | -6.642.9 | 16.875.8 | 15.508.7 | 11.603.0 |

Source: The Statistical Yearbook of Romania

Table A.2. The relative variation of GDP and the absolute variation of the unemployment rate during 2001-2011

| | Relative variation of GDP (Y) | Absolute variation of the unemployment rate (u) |
|------|--------------------------------------|--|
| 2001 | 5.7 | -2.2 |
| 2002 | 5.1 | 1.2 |
| 2003 | 5.2 | -2.6 |
| 2004 | 8.5 | -0.8 |
| 2005 | 4.2 | -1 |
| 2006 | 7.9 | -0.4 |
| 2007 | 6.3 | -1.1 |
| 2008 | 7.3 | -0.3 |
| 2009 | -6.6 | 2.3 |
| 2010 | -1.6 | 1.3 |
| 2011 | 2.5 | -2.2 |

Source: The Statistical Yearbook of Romania

Table A.3. The unemployment rate during 2000-2011

| | Unemployment rate (u) |
|------|------------------------------|
| 2001 | 8.60% |
| 2002 | 8.10% |
| 2003 | 7.20% |
| 2004 | 6.20% |
| 2005 | 5.90% |
| 2006 | 5.20% |
| 2007 | 4.10% |
| 2008 | 4.40% |
| 2009 | 7.80% |
| 2010 | 6.87% |
| 2011 | 5.12% |

Source: The Statistical Yearbook of Romania

Filters or Holt Winters Technique to Improve the Forecasts for USA Inflation Rate?

Mihaela Bratu (Simionescu)¹

Abstract: In this study, transformations of SPF inflation forecasts were made in order to get more accurate predictions. The filters application and Holt Winters technique were chosen as possible strategies of improving the predictions accuracy. The quarterly inflation rate forecasts (1975 Q1-2012 Q3) of USA made by SPF were transformed using an exponential smoothing technique- Holt Winters- and these new predictions are better than the initial ones for all forecasting horizons of 4 quarters. Some filters were applied to SPF forecasts (Hodrick- Prescott, Band-Pass and Christiano-Fitzgerald filters), but Holt Winters method was superior. Full sample asymmetric (Christiano-Fitzgerald) and Band-Pass filter smoothed values are more accurate than the SPF expectations only for some forecast horizons.

Keywords: forecasts accuracy; prediction; Hodrick-Prescott filter; Band-Pass filter; Christiano-Fitzgerald filter

JEL Classification: E31; C81

1 Introduction

By assessing the forecasts accuracy, we have a mirror of forecasting process efficiency. If alternative predictions are made for the same variable, the interest is to choose the most accurate one. But starting only from the prediction made by one institution, new forecasts can be provided that could be better than the initial one.

Some techniques of transforming the forecasts were proposed and the accuracy of the new predictions was evaluated. An exponential smoothing technique and some filters were chosen for the inflation rate forecasts made by SPF.

Bratu (2012) utilized other strategies to improve the forecasts accuracy (combined predictions, regressions models, historical errors method).

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Razzak (1997) proved that the Hodrick-Prescott filter acts as true 'filter' at the end of the sample and as a "smoother" over the sample. The output gap from the true filter generates better out-of-sample predictions of inflation.

(Christiano & Fitzgerald, 2003) explained that Band-Pass filter is used to determine that component of the chronological series that is situated within a specific band of frequencies. (Baxter & King, 1995) built a bandpass filter of order K , where K -finite. If the analyzed time series is a random walk, its spectrum of a Band-Pass filter is:

Equation 6 Formula for the spectrum of random walk Band-Pass filter

$$f(\omega) = |\alpha^{(1)}(\omega)|^2 \cdot \frac{\sigma^2}{2\pi}, \text{ where } \omega \in [-\pi; \pi]$$

$$|\alpha^{(1)}(\omega)|^2 = \left(2 \cdot \sin\left(\frac{\omega}{2}\right) \sum_{j=1}^K a_j \cdot \sum_{h=-(j-1)}^{j-1} (j-|h|) \cos(\omega h) \right)^2$$

The peak that shows a spurious cycle is smaller in case of a Band Pass filter in comparison with the Hodrick-Prescott one.

$|\alpha^{(1)}(\omega)|^2$ is the ptf of the filter.

Christiano-Fitzgerald filter (CF filter) is an asymmetric one and it converges on long run to an optimal filter. It has a steep frequency response function at the limits of the band. The CF filter is computed, according to (Christiano & Fitzgerald, 2003), as:

Equation 7 Formula for CF filter

$$c_t = B_0 \cdot inf_t + B_1 \cdot inf_{t+1} + \dots + B_{T-t-t} \cdot inf_{T-1} + B_1 \cdot inf_{t-1} + \dots + B_{t-2} \cdot inf_2 + B_{t-1} \cdot inf_1$$

$$B_0 = \frac{b-a}{\pi}, \quad a = \frac{2\pi}{p_u}, \quad b = \frac{2\pi}{p_l}$$

p_u, p_l - parameters that are cut-off cycle length in month

c - cycle term

Equation 8 Formula for coefficients of CF filter

$$B_j = \sin(jb) - \sin(ja), \quad j \geq 1$$

$$B_k = -\frac{1}{2} B_0 - \sum_{j=1}^{k-1} B_j$$

Holt-Winters Simple exponential smoothing method is recommended for data series with linear trend and without seasonal variations, the forecast being determined as:

Equation 9 Formula for the forecast based on Holt-Winters method

$$\text{inf}_{n+k} = a + b \times k .$$

$$a_n = \alpha \times \text{inf}_n + (1 - \alpha) \times (a_{n-1} + b_{n-1})$$

$$b_n = \beta \cdot (a_n - a_{n-1}) + (1 - \beta) \cdot b_{n-1}$$

Finally, the prediction value on horizon k is:

Equation 10 Formula for the predicted value

$$\text{inf}_{n+k}^{\hat{}} = \hat{a}_n + \hat{b}_n \times k$$

3 The Assessment of Forecasts Accuracy

The most utilized measures of forecasts accuracy, recalled by (Fildes & Steckler, 2000), are:

- Mean error (ME)

Equation 11 Formula for mean error

$$ME = \frac{1}{n} \sum_{j=1}^n e_X(T_0 + j, k)$$

- Mean absolute error (MAE)

Equation 12 Formula for mean absolute error

$$MAE = \frac{1}{n} \sum_{j=1}^n | e_X(T_0 + j, k) |$$

- Root Mean Squared Error (RMSE)

Equation 13 Formula for root mean squared error

$$RMSE = \sqrt{\frac{1}{n} \sum_{j=1}^n e_X^2(T_0 + j, k)}$$

U Theil's statistic is calculated as U1 and U2 and it is used to make comparisons between forecasts.

Notations used:

r- the registered results;

f- the forecasted results;

t- reference time;

e- the error ($e=r-f$);

n- number of time periods.

Equation 14 Formula for U1

$$U_1 = \frac{\sqrt{\sum_{t=1}^n (r_t - f_t)^2}}{\sqrt{\sum_{t=1}^n r_t^2} + \sqrt{\sum_{t=1}^n f_t^2}}$$

A value of U_1 closer to zero implies a higher accuracy.

Equation 15 Formula for U2

$$U_2 = \sqrt{\frac{\sum_{t=1}^{n-1} \left(\frac{f_{t+1} - r_{t+1}}{a_t} \right)^2}{\sum_{t=1}^{n-1} \left(\frac{r_{t+1} - r_t}{r_t} \right)^2}}$$

If $U_2=1 \Rightarrow$ the same accuracy for the two predictions.

If $U_2 < 1 \Rightarrow$ the prediction to compare more accurate than the naive one.

If $U_2 > 1 \Rightarrow$ the prediction to compare more accurate than the naive one.

One-year-ahead quarterly forecasts of the inflation rate made by the Survey of Professional Forecasters are utilized in this study, the predictions horizon being 1975 Q1-2012 Q3.

The main accuracy indicators were computed and the results are presented in **Appendices**. In most cases the simple SPF forecasts for a horizon of one year are more accurate than those based on econometric filters, according to U1 statistic. Full sample asymmetric (Christiano-Fitzgerald) smoothed values are more accurate for some forecast horizons. Only few values based on Band-Pass filter gave the better forecasts than the original ones. The application of a filter could give better results only in some cases. All the Holt Winters smoothed values are the most accurate ones for each forecast horizon. So, this exponential smoothing technique is the best strategy to be applied. Most of the SPF forecasts are better than the naïve ones.

The results for the last five years are presented in the following tables. The mean errors presented in **Table 1** show that full sample asymmetric values provided the most accurate predictions. These forecasts are overestimated for the entire horizon while all the other forecasts are underestimated.

Table 1. The values of mean errors for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon 2007-2011)

| Forecast horizon | Mean Errors (ME) of: | | | | | |
|------------------|----------------------|----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick-Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | Holt Winters smoothed values |
| 2007 | 1.0217 | 1.2561 | 1.0218 | 1.0222 | -0.8514 | 1.00561 |
| 2008 | 0.8550 | 0.8837 | 0.8546 | 0.8526 | -0.3657 | 0.78837 |
| 2009 | -1.2351 | -1.5658 | -1.2346 | 1.2319 | -0.4238 | -1.15658 |
| 2010 | 0.0291 | -0.1697 | 0.0284 | 0.0241 | -0.3241 | -0.01697 |
| 2011 | 1.6476 | 1.7961 | 1.6505 | 1.6680 | -0.3700 | 1.37961 |

Source: Own calculations using EViews and Excel

The values of U1 Theil’s statistic from **Table 2** show that the predictions smoothed by Holt Winters technique are the most accurate. This conclusion implies the fact that USA inflation rate forecasts depend mostly on recent values of the indicator and less on the inflation registered in the far past.

Table 2. The values of U1 for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon 2007-2011)

| Forecast horizon | U1 Theil’s statistic of: | | | | | |
|------------------|--------------------------|----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick-Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | Holt Winters smoothed values |
| 2007 | 0.9231 | 1.2304 | 1.0511 | 1.0472 | 1.1394 | 0.341019 |
| 2008 | 0.9129 | 1.5169 | 1.3397 | 1.3455 | 1.4665 | 0.079623 |
| 2009 | 0.8555 | 2.7806 | 2.4199 | 2.3954 | 2.8334 | 0.016668 |
| 2010 | 1.0307 | 0.8615 | 0.8288 | 0.8269 | 0.8045 | 0.059355 |
| 2011 | 0.9246 | 1.2148 | 1.2157 | 1.2138 | 1.3154 | 0.018942 |

Source: Own calculations using EViews and Excel

In **Table 3** the values of U2 are displayed in order to compare the mentioned predictions with the naïve ones. Excepting 2010, all the predictions based on Holt Winters technique are better than the naïve ones while the SPF forecasts are better than those based on random walk model.

Table 3 The values of U2 for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon 2007-2011)

| Forecast horizon | U2 Theil's statistic of: | | | | | Holt Winters smoothed values |
|------------------|--------------------------|----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick-Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | |
| 2007 | 0.9231 | 1.2304 | 1.0511 | 1.0472 | 1.1394 | 1.0943 |
| 2008 | 0.9129 | 1.5169 | 1.3397 | 1.3455 | 1.4665 | 1.3659 |
| 2009 | 0.8555 | 2.7806 | 2.4199 | 2.3954 | 2.8334 | 2.1695 |
| 2010 | 1.0307 | 0.8615 | 0.8288 | 0.8269 | 0.8045 | 0.9278 |
| 2011 | 0.9246 | 1.2148 | 1.2157 | 1.2138 | 1.3154 | 1.3811 |

Source: Own calculations using EViews and Excel

The predictions based on Holt Winters smoothing technique are recommended for the USA inflation rate. A good strategy of improving the SPF forecasts is to smooth the original predictions using this method that gives a higher weight to recent values than to the older ones.

4. Conclusions

The results of this empirical research highlight that for the USA quarterly inflation rate predictions made by SPF for a horizon of one year in 1975-2011 a good strategy of improving the forecasts accuracy is the smoothing of the values using Holt Winters technique, an exponential smoothing method that considers exponentially decreasing weights over time.

Applying a certain filter to the initial predictions of SPF is not always the best method of improving the accuracy. Starting from the results of this study we recommend the use of exponential techniques to smooth the SPF predictions in order to improve the forecasts accuracy of USA inflation rate.

It is important to choose the best prediction in order to improve the decision process or to establish a better government policy. Choosing the best inflation rate will improve the monetary policy and the best solutions to control the inflation will be taken in time.

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Appendix 1

The values of mean errors for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon= 4 quarters)

| Forecast horizon | Mean Errors (ME) of: | | | | | Holt Winters smoothed values |
|------------------|----------------------|----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick-Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | |
| 1976 | -0.2002 | -0.5362 | -0.1999 | -0.1981 | -0.4344 | -0.2613 |
| 1977 | 0.5501 | -0.2068 | 0.5499 | 0.5489 | -0.5440 | 0.6655 |
| 1978 | 0.9995 | 0.4768 | 0.9982 | 0.9899 | -0.5833 | 1.3425 |
| 1979 | 3.3751 | 3.7658 | 3.3738 | 3.3658 | -0.3979 | 3.7075 |
| 1980 | 4.6141 | 6.0347 | 4.6180 | 4.6418 | -0.1716 | 4.9692 |
| 1981 | 2.0928 | 3.1570 | 2.0937 | 2.0992 | -0.0858 | 1.6881 |
| 1982 | -0.0220 | -0.3686 | -0.0215 | -0.0189 | -0.1241 | -0.4454 |
| 1983 | -1.8434 | -2.4956 | -1.8436 | -1.8445 | -0.0108 | -1.7989 |
| 1984 | -0.5711 | -0.6771 | -0.5717 | -0.5756 | 0.3961 | -0.6972 |
| 1985 | -0.5857 | -0.8526 | -0.5847 | -0.5782 | 1.0064 | -0.8526 |
| 1986 | -1.1282 | -2.0933 | -1.1341 | -1.1699 | 1.8265 | -2.0933 |
| 1987 | -0.1792 | -0.1942 | -0.1771 | -0.1639 | 2.7248 | -0.1942 |
| 1988 | -0.0060 | 0.2303 | -0.0062 | -0.0075 | 3.5724 | 0.2303 |
| 1989 | 0.4736 | 1.0373 | 0.4743 | 0.4787 | 4.5271 | 1.0373 |

| | | | | | | |
|------|---------|---------|---------|---------|---------|---------|
| 1990 | 1.3539 | 1.7185 | 1.3551 | 1.3620 | 5.4132 | 1.7185 |
| 1991 | 0.3555 | 0.2208 | 0.3549 | 0.3515 | 5.6893 | 0.2208 |
| 1992 | 0.2621 | -0.0857 | 0.2615 | 0.2581 | 5.6312 | -0.0857 |
| 1993 | -0.0677 | -0.1963 | -0.0685 | -0.0729 | 4.9484 | -0.1963 |
| 1994 | -0.2766 | -0.0798 | -0.2762 | -0.2737 | 3.8215 | -0.0798 |
| 1995 | 0.2208 | 0.1717 | 0.2204 | 0.2176 | 3.4084 | 0.1717 |
| 1996 | 0.4540 | 0.5669 | 0.4555 | 0.4640 | 2.7510 | 0.5669 |
| 1997 | -0.3855 | -0.2906 | -0.3854 | -0.3845 | 1.9616 | -0.2906 |
| 1998 | -0.2700 | -0.5147 | -0.2718 | -0.2829 | 1.4594 | -0.5147 |
| 1999 | 0.7311 | 0.5639 | 0.7309 | 0.7300 | 0.3703 | 0.5639 |
| 2000 | 1.1657 | 1.4409 | 1.1670 | 1.1751 | -0.6647 | 1.4409 |
| 2001 | 0.3634 | 0.3455 | 0.3625 | 0.3568 | -1.3820 | 0.3455 |
| 2002 | 0.0969 | 0.0586 | 0.0979 | 0.1038 | -2.0159 | 0.0586 |
| 2003 | 0.2947 | 0.0387 | 0.2932 | 0.2838 | -2.5156 | 0.0387 |
| 2004 | 1.0093 | 0.9827 | 1.0094 | 1.0097 | -2.5483 | 0.9827 |
| 2005 | 1.3279 | 1.4724 | 1.3288 | 1.3341 | -1.9404 | 1.4724 |
| 2006 | 0.6616 | 0.8460 | 0.6612 | 0.6585 | -1.4885 | 0.8460 |
| 2007 | 1.0217 | 1.2561 | 1.0218 | 1.0222 | -0.8514 | 1.2561 |
| 2008 | 0.8550 | 0.8837 | 0.8546 | 0.8526 | -0.3657 | 0.8837 |
| 2009 | -1.2351 | -1.5658 | -1.2346 | -1.2319 | -0.4238 | -1.5658 |
| 2010 | 0.0291 | -0.1697 | 0.0284 | 0.0241 | -0.3241 | -0.1697 |
| 2011 | 1.6476 | 1.7961 | 1.6505 | 1.6680 | -0.3700 | 1.7961 |

Source: Own calculations using EViews and Excel

Appendix 2

The values of U1 for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon= 4 quarters)

| Forecast horizon | U1 Theil's statistic of: | | | | | |
|------------------|--------------------------|-----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick- Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | Holt Winters smoothed values |
| 1976 | 0.6544 | 1.6041 | 0.8413 | 0.8337 | 1.2885 | 0.000898 |
| 1977 | 2.1219 | 0.6492 | 0.8014 | 0.8310 | 0.3761 | 8.23E-05 |
| 1978 | 1.4810 | 1.2315 | 1.5413 | 1.5319 | 1.0419 | 0.002578 |
| 1979 | 0.9432 | 3.9720 | 3.5510 | 3.5420 | 3.7664 | 0.026233 |
| 1980 | 0.8341 | 5.2174 | 4.0563 | 4.0781 | 4.8589 | 0.001023 |
| 1981 | 0.7985 | 2.4827 | 1.7571 | 1.7459 | 2.2030 | 0.048258 |
| 1982 | 0.5407 | 0.9317 | 0.5980 | 0.5799 | 1.1116 | 0.004442 |
| 1983 | 0.7916 | 3.8381 | 3.0869 | 3.0412 | 3.9097 | 0.012992 |
| 1984 | 1.5657 | 0.9287 | 0.8149 | 0.8175 | 0.5213 | 0.011349 |
| 1985 | 1.6837 | 2.4449 | 1.7492 | 1.7106 | 1.0434 | 0.028849 |
| 1986 | 0.7306 | 4.2584 | 2.4947 | 2.5617 | 3.4001 | 0.043886 |
| 1987 | 1.0205 | 1.2985 | 1.1562 | 1.1209 | 1.1386 | 0.069176 |
| 1988 | 0.3788 | 0.9997 | 0.3794 | 0.3695 | 1.0060 | 0.09358 |
| 1989 | 0.5943 | 2.3639 | 1.1045 | 1.1093 | 1.8576 | 0.128365 |
| 1990 | 0.9678 | 2.3975 | 1.7661 | 1.8131 | 1.8172 | 0.131054 |
| 1991 | 1.1128 | 1.1456 | 1.1540 | 1.1362 | 1.0397 | 0.159573 |
| 1992 | 0.6287 | 1.8868 | 2.0084 | 1.8748 | 3.2302 | 0.237398 |
| 1993 | 1.7591 | 0.8861 | 1.5568 | 1.4805 | 0.8931 | 0.168107 |
| 1994 | 1.8883 | 0.9941 | 1.1253 | 1.1150 | 0.5970 | 0.079322 |
| 1995 | 0.3911 | 0.8593 | 0.6623 | 0.6715 | 1.6953 | 0.085313 |
| 1996 | 0.8073 | 3.4008 | 3.1215 | 3.1229 | 3.8666 | 0.023088 |
| 1997 | 0.8242 | 0.9054 | 0.9217 | 0.9359 | 1.1158 | 0.005032 |
| 1998 | 0.6387 | 3.0903 | 2.5880 | 2.5616 | 4.0595 | 0.052562 |
| 1999 | 1.2172 | 1.2149 | 1.4439 | 1.4274 | 1.1893 | 0.027111 |
| 2000 | 0.8645 | 3.6724 | 3.1361 | 3.1548 | 3.6242 | 0.000216 |
| 2001 | 0.8086 | 1.7281 | 1.5348 | 1.5331 | 1.8988 | 0.000653 |
| 2002 | 1.1341 | 1.2574 | 1.1678 | 1.1579 | 1.0312 | 0.003713 |
| 2003 | 0.9858 | 1.0542 | 1.2825 | 1.2777 | 1.3018 | 0.052012 |
| 2004 | 1.0912 | 1.1006 | 1.1809 | 1.1750 | 1.0833 | 0.184135 |
| 2005 | 1.0067 | 2.6362 | 2.4210 | 2.4210 | 2.4049 | 0.199776 |
| 2006 | 0.9814 | 1.6117 | 1.4492 | 1.4491 | 1.4767 | 0.396261 |
| 2007 | 0.9231 | 1.2304 | 1.0511 | 1.0472 | 1.1394 | 0.341019 |
| 2008 | 0.9129 | 1.5169 | 1.3397 | 1.3455 | 1.4665 | 0.079623 |
| 2009 | 0.8555 | 2.7806 | 2.4199 | 2.3954 | 2.8334 | 0.016668 |
| 2010 | 1.0307 | 0.8615 | 0.8288 | 0.8269 | 0.8045 | 0.059355 |
| 2011 | 0.9246 | 1.2148 | 1.2157 | 1.2138 | 1.3154 | 0.018942 |

Source: Own calculations using EViews and Excel

Appendix 3

The values of U2 for the SPF quarterly inflation rate forecasts and the SPF smoothed predictions (forecasts horizon= 4 quarters)

| Forecast horizon | U2 Theil's statistic of: | | | | | Holt Winters smoothed values |
|------------------|--------------------------|----------------------------------|-----------------------------|---------------------------|--|------------------------------|
| | SPF forecasts | Hodrick-Prescott smoothed values | Baxter-King smoothed values | Band-Pass smoothed values | Full sample asymmetric (Christiano-Fitzgerald) smoothed values | |
| 1976 | 0.6544 | 1.6041 | 0.8413 | 0.8337 | 1.2885 | 0.9893 |
| 1977 | 2.1219 | 0.6492 | 0.8014 | 0.8310 | 0.3761 | 1.1219 |
| 1978 | 1.4810 | 1.2315 | 1.5413 | 1.5319 | 1.0419 | 2.0023 |
| 1979 | 0.9432 | 3.9720 | 3.5510 | 3.5420 | 3.7664 | 3.9022 |
| 1980 | 0.8341 | 5.2174 | 4.0563 | 4.0781 | 4.8589 | 4.3711 |
| 1981 | 0.7985 | 2.4827 | 1.7571 | 1.7459 | 2.2030 | 1.3941 |
| 1982 | 0.5407 | 0.9317 | 0.5980 | 0.5799 | 1.1116 | 0.6777 |
| 1983 | 0.7916 | 3.8381 | 3.0869 | 3.0412 | 3.9097 | 2.7525 |
| 1984 | 1.5657 | 0.9287 | 0.8149 | 0.8175 | 0.5213 | 1.1444 |
| 1985 | 1.6837 | 2.4449 | 1.7492 | 1.7106 | 1.0434 | 1.9742 |
| 1986 | 0.7306 | 4.2584 | 2.4947 | 2.5617 | 3.4001 | 2.4150 |
| 1987 | 1.0205 | 1.2985 | 1.1562 | 1.1209 | 1.1386 | 0.6643 |
| 1988 | 0.3788 | 0.9997 | 0.3794 | 0.3695 | 1.0060 | 0.9081 |
| 1989 | 0.5943 | 2.3639 | 1.1045 | 1.1093 | 1.8576 | 1.1024 |
| 1990 | 0.9678 | 2.3975 | 1.7661 | 1.8131 | 1.8172 | 2.0011 |
| 1991 | 1.1128 | 1.1456 | 1.1540 | 1.1362 | 1.0397 | 0.9407 |
| 1992 | 0.6287 | 1.8868 | 2.0084 | 1.8748 | 3.2302 | 1.4357 |
| 1993 | 1.7591 | 0.8861 | 1.5568 | 1.4805 | 0.8931 | 1.8478 |
| 1994 | 1.8883 | 0.9941 | 1.1253 | 1.1150 | 0.5970 | 0.8075 |
| 1995 | 0.3911 | 0.8593 | 0.6623 | 0.6715 | 1.6953 | 0.7841 |
| 1996 | 0.8073 | 3.4008 | 3.1215 | 3.1229 | 3.8666 | 3.8737 |
| 1997 | 0.8242 | 0.9054 | 0.9217 | 0.9359 | 1.1158 | 1.0629 |
| 1998 | 0.6387 | 3.0903 | 2.5880 | 2.5616 | 4.0595 | 2.8688 |
| 1999 | 1.2172 | 1.2149 | 1.4439 | 1.4274 | 1.1893 | 1.8382 |
| 2000 | 0.8645 | 3.6724 | 3.1361 | 3.1548 | 3.6242 | 3.6443 |
| 2001 | 0.8086 | 1.7281 | 1.5348 | 1.5331 | 1.8988 | 1.5230 |
| 2002 | 1.1341 | 1.2574 | 1.1678 | 1.1579 | 1.0312 | 0.9311 |
| 2003 | 0.9858 | 1.0542 | 1.2825 | 1.2777 | 1.3018 | 1.2705 |
| 2004 | 1.0912 | 1.1006 | 1.1809 | 1.1750 | 1.0833 | 1.4139 |
| 2005 | 1.0067 | 2.6362 | 2.4210 | 2.4210 | 2.4049 | 2.5995 |
| 2006 | 0.9814 | 1.6117 | 1.4492 | 1.4491 | 1.4767 | 1.5687 |
| 2007 | 0.9231 | 1.2304 | 1.0511 | 1.0472 | 1.1394 | 1.0943 |
| 2008 | 0.9129 | 1.5169 | 1.3397 | 1.3455 | 1.4665 | 1.3659 |
| 2009 | 0.8555 | 2.7806 | 2.4199 | 2.3954 | 2.8334 | 2.1695 |
| 2010 | 1.0307 | 0.8615 | 0.8288 | 0.8269 | 0.8045 | 0.9278 |
| 2011 | 0.9246 | 1.2148 | 1.2157 | 1.2138 | 1.3154 | 1.3811 |

Source: Own calculations using EViews and Excel

An Analysis of the Romanian Macroeconomic Conditions that Favored the Economic Crisis

Gina Ioan¹

Abstract: The paper treats a number of aspects of economic errors made in the management of Romanian economy that favored economic crisis. It identifies an excessive propensity to consume of population, an economic growth which has not led to improved openness of the Romanian economy, a pronounced development of non-tradable sector, services (trade) and construction and a more difficult development of the tradable sector: industry and agriculture and a mismatch economic policy mix with the cycle phases.

Keywords: crisis; GDP; inflation

JEL Classification: E44; O11

1. The Propagation of Crisis in Romanian Economy

Since 2008, the world economy is facing with the biggest financial and economic crisis since the Great Depression. In the last twenty years, the emerging economies have been economic and financial crisis, the magnitude of which being smaller and also the economic recovery being faster. Causes of the current financial and economic crisis should not be sought in the behavior of emerging countries, but in periods of monetary expansion promoted by the Federal Reserve Bank (FED).

Interest promoted by FED, reached historically low, encouraged and discouraged borrowing and consumption savings, debt burden but a real threat to the economy. To stimulate growth, the same policy of cheap money has been promoted by the Bank of Japan and European Central Bank. U.S. financial crisis has rapidly become one global affecting both developed and emerging countries. First, developed countries have been affected due to the high degree of exposure of the banking system, especially the European one, to U.S. toxic assets. Once the crisis included the real sector, emerging countries were not spared, the most affected being the countries of South Eastern Europe.

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Strong financial and trade links between the countries of the world were the main channel for transmit the economic crisis to the emerging countries, vulnerable to external shocks. Countries whose vulnerability was increased and already faced with structural crises longer, imported by the contagion effect the financial crisis originating in the United States of America. (Rijckeghem & Weder, 1999)

Thus, despite efforts to shelter through various economic policies, most emerging countries have been affected by the sudden contraction of credit and capital flows as a result of the economic crisis. The connection of the Romanian economy to international economic flows and also endogenous causes, favored the spread of the financial crisis on Romania. An emerging economy like Romanian, opened to the international market, vulnerable, with an artificially sustained annual growth rate, could not be affected by adverse economic circumstances.

The economic crisis facing Romania is an internal crisis, of structure and of over-consumption, superposing the international crisis, being only the trigger. The correct identification of the economic crisis transmission channels is particularly important in the adoption, by responsible decision makers, of efficient economic policies, designed to limit the negative effects of the financial crisis before it irreversibly affecting economic structures.

Analyzing the Romanian economy connections to the global economy, the actual crisis has spread in the country through several transmission channels targeting both the real economy and nominal economy:

1. **through the financial channel**, was limited the access to external financing and lending volume shrank affecting the financing capacity of the domestic private sector which, in the last, led to disequilibriums at the real level of economy. Relatively high share of foreign capital in the Romanian banking system made a vulnerability to Romania with reduced funding from parent banks. Reducing the liquidities in the banking system was due, also, to tighter credit conditions on the international money market, this being reflected in the increased cost of internal non-governmental credit. Also, the reduction of external financing reflected in national currency depreciation, felt in the first months of 2009, leading to an increase in interest rates for loans. Most of the non-governmental loans were denominated in foreign currency, which is a further application for income households with debt, generating also a decrease in disposable income.

2. **through the trade channel**, Romania's exports fell due to the economic difficulties experienced by major trading partners, especially from the euro area. This meant that the national economy was a decrease in growth rate and consequently a lowering of imports. According to the National Bank Financial Stability Report for 2009, in the first quarter of 2009, Romania's exports were less affected compared to countries in Eastern Europe. In late 2009, the exports reduced compared to 2008 by 5.5%, while imports had diminished more drastically, by

20.6%. A consequence of the reduction in exports was deteriorating trade balance, with negative impact on the current account and external debt. The decline observed on international financial markets have resulted, also, the reduce of foreign direct investment in Romania, with negative impact on the labor market.

3. **through the distrust channel** were affected both nominal and the real variables of the economy. Following the analysis of the rating agencies which place and still places Romania among the countries with a high vulnerability to the effects of the financial crisis (below investment grade), the limiting of the external financing was due mainly to the skepticism of the international lenders in to provide the necessary liquidity. According to Eurostat data, the reducing of the investor confidence in the markets of Central and Eastern Europe, led to the drastic reduction of investments in these countries. In Romania, the incomes of foreign direct investments were recorded at 6.8% in 2008 (percentage of GDP), knowing a continuous decrease over 2009 (2.9% of GDP) and 2010 (1.8% of GDP) and in 2011 (according to IMF forecasts) were seen in a rebound shy (2.9% of GDP). The feeling confidence not only diminished among lenders and investors, but also among the population, severely damaging one of the main engines of economic growth – the consumption. Also due to mistrust foreign, the exchange market has become increasingly vulnerable, exposed to speculative attacks, such as in October 2008, which damaged the structure of liquidity flows between commercial banks and hence a higher volatility in the interbank market.

2. The Analysis of the Macroeconomic Context during 2000-2008

In late 2008 and early 2009, on the deteriorating economic and financial situation, the Romanian economy, after a period of growth at high rates, has seen the first signs of the financial crisis. Signals marked the beginning of the economic crisis in Romania were currency depreciation, rising external debt, current account deficit increased on the background of deteriorating trade balance, the decline in foreign investment, limiting lending and stock market volatility.

Economic growth of the Romanian economy to onset of the crisis was accompanied by accumulation of external deficit and also the increase in external debt, which which facilitated the spread of the crisis, with negative consequences for the economy and the financial system, highlighting the unsustainable nature of the policies applied in previous years. The main engines of the Romanian economy: consumption, construction and industrial production were affected.

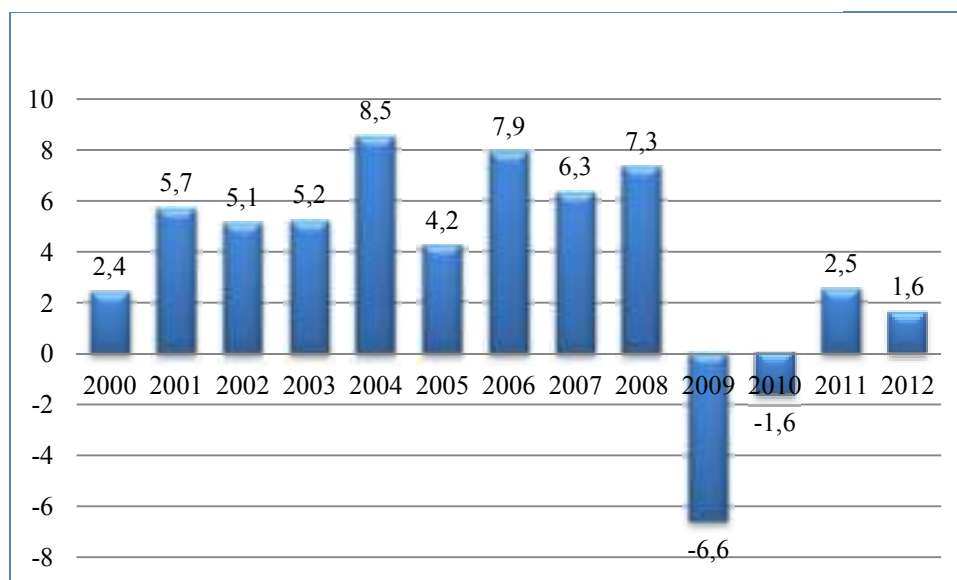


Figure 1. The evolution of the growth rate of GDP in Romania during 2000-2012 (%)

Source: Eurostat

Based on data from Figure 1, after calculating the average growth rate after the formula $r = \sqrt[n]{(1+r_1) \dots (1+r_n)} - 1$ is obtained for $n=9$ (for the period 2000-2008) $r = 5.83\%$.

We also note that the highest growth rates were recorded in 2004, 2006 and 2008. Propagation crisis in the Romanian economy has led to a significant decrease in economic growth in 2009 and 2010, the upward trend being resumed in 2011, the prediction for 2012 placing economic growth under the previous year.

The analysis of domestic macroeconomic environment in the period 2000-2008 is essential in understanding the causes of domestic economic crisis superposed global economic crisis. During the eight years of economic growth, we observe a period of macroeconomic stability, 2000-2003, but which are prerequisites for economic expansion next period, 2004-2008.

After three consecutive years of negative economic growth rates, 2000 is the first year that there has been a growth of 2.4% (yoy change). Also, in 2000 there was an improvement in international macroeconomic environment, particularly in the developing countries and those in transition in Central and Eastern Europe.

The acceleration of the transition in Romania led to the strengthening of the private sector, occupying the largest share, since 1996, in GDP (from 16.4% in 1990 to

70.3% in 2009). In the following years, 2001, 2002 and 2003, the real growth of GDP has not fluctuated major hovering around 5%.¹

In conditions of an apparent macroeconomic stability in this period, it can be argued that the economic policies adopted at the national level were perfectly harmonized. Monetary and fiscal policies play an important role in controlling nominal and real macroeconomic variables, having an important role in smoothing the business.

During that period, mismatch economic policy mix was reflected in high levels of inflation well above the inflation target set by the Central Bank of Romania.

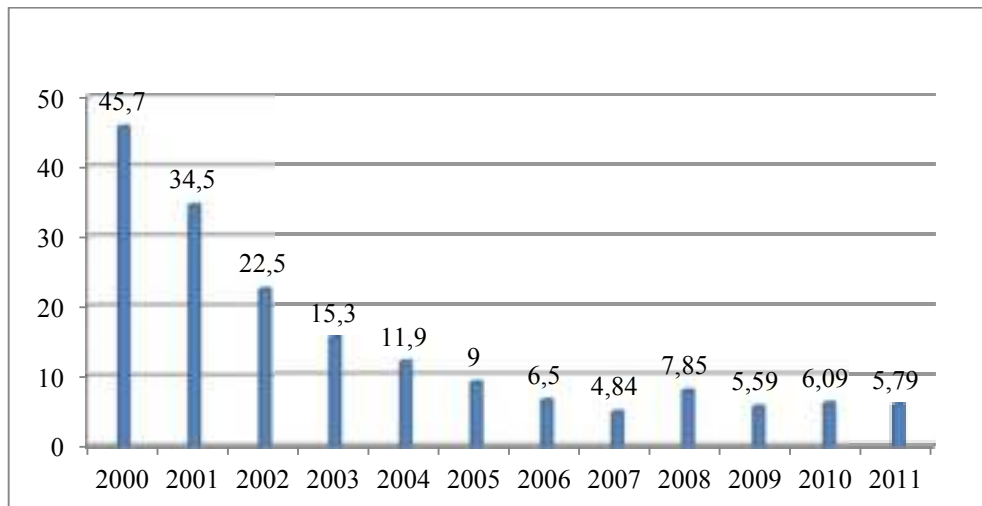


Figure 2. The annual inflation rate during 2000-2008

Source: INSSE

In 2005, the Central Bank of Romania officially adopted inflation targeting strategy, because the use of the exchange rate as a nominal anchor anti-inflationary, was abandoned as a result of capital account liberalization.

According to economic literature and previous factual evidence, in the relationship between price stability and financial stability, inflation is considered the main source of financial instability (Rijckeghem & Weder, 1999).

Authorities failure to achieve the objective in terms of inflation was caused by the compromise made by less restrictive economic policies, especially fiscal and income policy, characteristic of the elections calendar (2000, 2004, 2008). One factor that may influence the disinflation process was the appreciation of the domestic currency against the currency of reference, even if the effect is

¹ Banca Națională a României, Raportul anual 2004/National Bank of Romania, Annual Report 2004.

asymmetric, meaning that domestic currency influences less consumer price index, while the depreciation is much stronger. (Benetrix & Lane, 2010) Thus, the depreciation of the national currency held positive gap between the actual level of inflation and inflation by the Central Bank's objective.

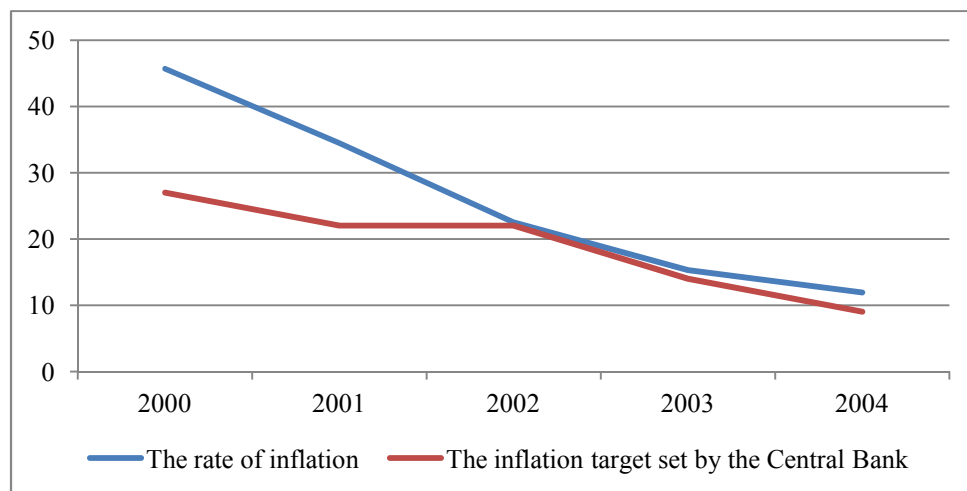


Figure 3. The difference between the actual rate of inflation and the inflation target set by the Central Bank

Source: INSSE, BNR

The achieve of the inflation target in 2002, was attained mainly due to the real appreciation of the national currency against the default basket of currencies (60% EUR, 40% USD) of about 4.4% in real terms compared to 2%.¹ in the previous year and due to wage moderated increases which are not generate inflationary pressures. Despite an apparent period of macroeconomic stability, Romania was bypassed by FDI, it is true, first because of external factors (the sovereign debt crisis in Russia), but also because of internal factors such as lack of a sound macroeconomic framework, situation perceived as unfavorable for investors interested by our country.

¹ Banca Națională a României, Raportul anual 2002/National Bank of Romania, Annual Report 2002.

3. The Analysis of GDP by Category of Resources during 2000-2008

As regards the real economy, the GDP formation, the most important sectors (as a share of GDP) were in services and industry. Other resources that contributed to GDP were net taxes (taxes on products minus the subsidies on products), agriculture, construction and trade.

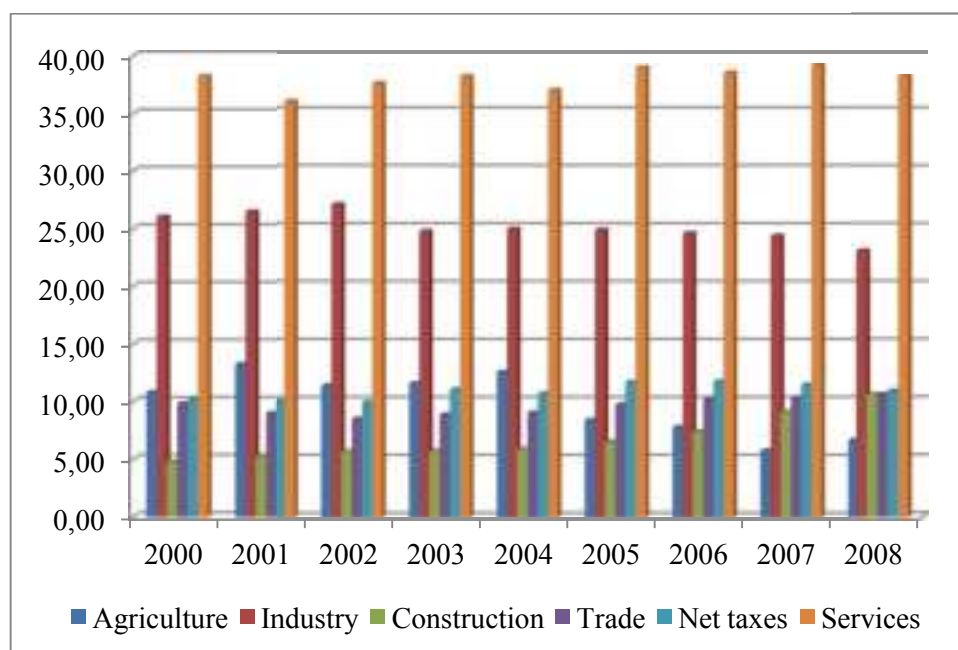


Figure 4. Contributions to GDP growth by resource category in 2000-2008 (% of GDP)

Source: INSSE

Among all the components of GDP formation by resource category, we remark a sinuous evolution regarding the agriculture. Regarding the annual percentage change in the composition of the major areas of GDP, the most dynamic were agriculture and construction.

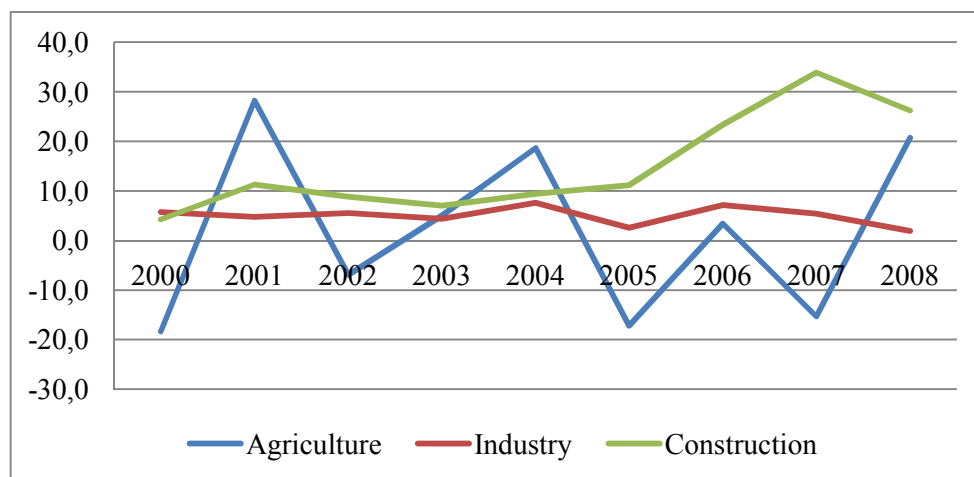


Figure 5. The dynamic growth of the main categories of resources in GDP composition (% yoy)

Source: INSSE

Looking at Figure 5, we see that the construction sector experienced a positive development in the eight years of economic boom. GVA growth in real terms (4.3% in 2000, 9.4% in 2004, 33.9% in 2007 and 26.2% in 2008), was mainly due to private sector and diversification of construction, all of which being supported by the expansion of domestic demand.

Unlike the construction sector, which has developed in parallel with the period of economic boom, in the case of agriculture, we see that the most volatile sector, recording significant growth in 2001 (28.2%), 2004 (18.7%) and 2008 (20.7%) and decreases as significant in 2000 (18.4%), 2005 (17.2%) and 2007 (15.3%). Fluctuations in this sector were less influenced by economic factors and more by exogenous factors such as meteorological conditions favorable or unfavorable to agriculture. In the years when gross value added in agriculture dropped sharply, there was an increase in inflationary pressures due to supply-side shocks. An objective radiography of the agricultural sector reveals that agricultural modernization could and can still lead to unlocking economic potential available to the sector. Thus, we have faced with a rigidity of offer under uncontrolled expansion of demand, which was to widen the negative balance of net exports, jeopardizing the anti-inflationary process.

Industry has fared somewhat uniform in 2000-2003 (between 4.4% and 5.8%), big fluctuations of the rate being observe in the period 2004-2008 (between 1.9% and 7.6 %). Slowing growth in industrial activity took place in 2005 to 2.6% and in 2008 to 1.9%.

In 2005, the flat tax and capital account liberalization have argued appreciation in real terms by 15.1%¹ of the national currency against the euro, which are reflected in the loss of competitiveness of products from almost all industries to European markets. To these were added also contextual factors that affected the industry indirectly. The low annual growth rate of 1.9% (2008) already can be attributed to the economic crisis since at the end were visible signs of economic decline. According to the National Institute of Statistics, in the first nine months of 2008, the monthly growth rate of industrial production was between 2.7% and 13.3%, strong downward trend since October 2008 decreased by 3% to reach from 18% in December.

4. Analysis of GDP by Category of Use in 2000-2008

Regarding the composition of GDP by category of use, in the period 2000-2008, the most dynamic components influencing growth were final consumption and gross investment (gross fixed capital formation and changes in inventories), net exports having a negative trend.

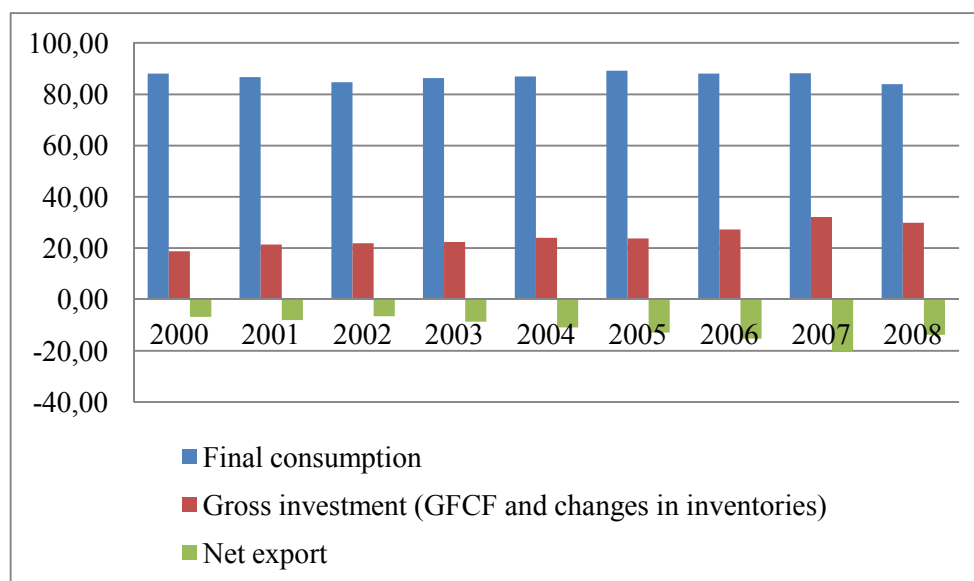


Figure 6. Contributions to GDP by type of use in 2000-2008 (% of GDP)

Source: INSSE

In terms of aggregate demand, its main component – actual final consumption of households, it increased significantly during this period, supported by measures to

¹ Banca Națională a României, Raportul anual 2005/ National Bank of Romania, Annual Report 2005.

relax lending (particularly foreign), the expansionist policies of income and not finally, the political character of the business cycle.

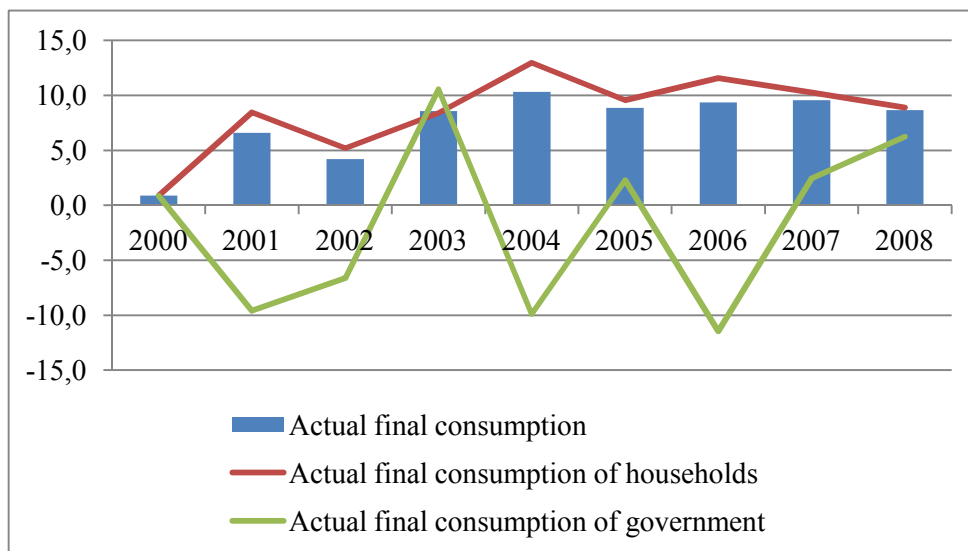


Figure 7. The dynamic evolution of actual final consumption growth (% yoy)

Source: INSSE

From the data, transposed graphic above, we see that the largest growth rate of household consumption was recorded in 2004 (13%). The increase of final consumption, as mentioned above, was based on a growing demand, driven by fiscal and budgetary policies, the continuing appreciation of the national currency and the strengthening of anti-inflationary process. In this year (2004) the currency loans was increased by 56.7% because people perceived them as more attractive because the difference of interest between them and credits in national currency. To counteract inflationary pressures, Central Bank policy was restrictive in early, increasing the real interest rate. A positive effect of this decision was the resumption in 2004 of the process of saving people, and another effect, less positive, was speeding forex loans. In response to forex loans, the Central Bank raised the reserve ratio on foreign currency deposits.¹ Financial intermediation (NGO's credits GDP) increased from year to year, modifying the structure of loans, for loans in national currency, or foreign currency for credit. To better manage foreign exchange effects due to massive capital inflows, beginning with the second half of 2004, the Central Bank lowered the benchmark interest rate gradually, going from 21.25% in January 2004 to 17 % since the end of the year. Massive

¹ Banca Națională a României, Rapoarte anuale 2000-2010/ National Bank of Romania, Annual Reports 2000-2010.

inflows of foreign capital in Romania were due mainly to improve investor sentiment on the Romanian economic environment with integration of Romania in the North Atlantic in April 2004. Excessive growth of domestic consumption, which can be an engine of growth in normal economic conditions, represented a major risk for the control of inflation and external balance. In terms of growth of general government final consumption effectively, it decreased, except in 2003 when its growth rate exceeded that of final household consumption. This increase was driven by grant programs and grant payments from public sector layoffs. Alongside the final consumption, the most dynamic component of aggregate demand was the gross fixed capital formation, changes in inventories having a negligible contribution to GDP growth. Accelerate capital accumulation occurred mainly in the private sector, a process that was generated from the access increasingly larger at the internal resources and external financing.

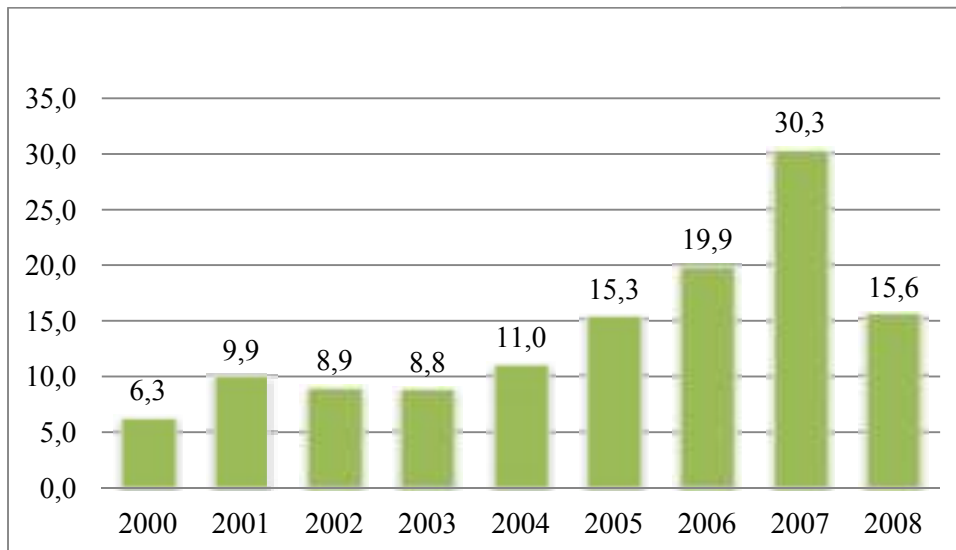


Figure 8. Annual percentage change in gross fixed capital

Source: INSSE

From the above, we see that since 2004 (second quarter), the economy showed visible signs of overheating, GDP actually hovering over actual capacity factors of production. According to estimates by experts NBR, the potential GDP based on production function method, the annual growth rate of potential GDP in 2003-2006 was projected between 5.5% and 6.4% to around 6% in 2007-2008. The potential GDP is that GDP level that can ensure sustainable growth in terms of efficient use of production factors and without generating macroeconomic imbalances (inflation pressure and accumulation of deficits). The main role played in overheating was the aggregate demand which could be controlled through prudent economic

policies and at the same time anti-cyclical. While monetary policy was often prudent, its effectiveness was weakened by easing fiscal policy, wage policy, non-governmental credit expansion that added during this period an increase of remittances.

The mismatch economic policy mix in our country can be identified as the main cause of macroeconomic imbalances and non-sustainability of economic growth, taking into account the following aspects:

- the excessive propensity to consume of population was not reflected in this period of economic boom in stimulating domestic production, imports covering most of the demand, while the demand was rigid;
- the economic growth has not led to improved openness of the Romanian economy (measured as the ratio of exports adds with imports and GDP), this being on a position inferior to the countries of Central and Eastern Europe. The support openness by exports was below 40%;
- from the analysis of GDP by type of resources, we observe a pronounced development of non-tradable sector, services (trade) and construction and a more difficult development of the tradable sector: industry and agriculture;
- the mismatch economic policy mix with the cycle phases.

Fiscal and wage policies, influenced by elections calendars, favored a failure correlation between labor productivity in all sectors of the population and increasing disposable income, an important indicator that shows the competitiveness of an economy. In 2007, this correlation has been violated, the growth of net real wage growth outpacing labor productivity.

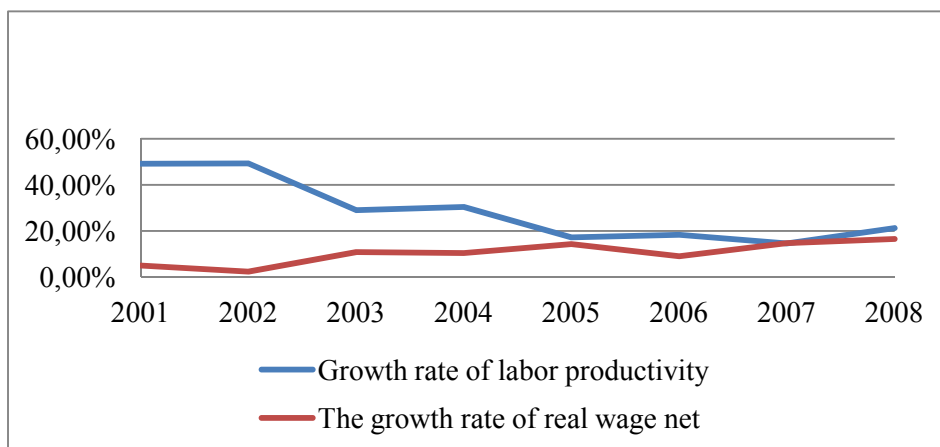


Figure 9. The evolution of labor productivity and average real net wage (% yoy)

Source: INSSE, Own calculations

5. Conclusions

The objectives of economic policy (fiscal policy, budget policy, monetary policy, structural reforms) have not targeted a healthy economic growth and macroeconomic stability. Thus, the pro-cyclical nature of fiscal policy in the period 2000-2008 was a major risk factor of particular relevance during the peak of the economic crisis (2009, 2010) and even to this day. (Benetrix & Lane, 2010) In the economic context discussed above, in late 2008, the economic and financial crisis hit Romania, demonstrating the inability of institutions supervision, inadequate management of the boom period and market realities.

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Tourism and Sustainable Development

Sustainable Agriculture - Mandatory Approach for Regional and National Economic Development. Case Study: Tecuci Plain

Iulian Adrian Șorcaru¹

Abstract: Romania has a considerable agricultural potential, Tecuci Plain being one of the national agricultural regions with high potential, which can generate economic growth at regional and also national level. The study main objective is to analyze the dynamics of the main crops, livestock and crop production in the region, for each administrative unit, between 1970-2011 trying to determine the major trends and patterns, identifying the favorable and restriction factors and also the possibilities of the development of primary economic activities by practicing a sustainable agriculture. The research used the data obtained from the Bucharest National Institute of Statistics, but also from local institutions (Galati&Vaslui County Department of Statistics and Galati & Vaslui Department for Agriculture and Rural Development). We also used the cartographic method in order to highlight the dynamics of the agricultural activities which can be anytime analyzed by the local authorities directly responsible for the evolution of the region's agriculture in the last two decades. The results reflected significant agricultural disparities between the rural administrative units from the centre of the region (near Tecuci City) and the ones from north and south, disparities which we believe are closely related to the implementation of sustainable agriculture.

Keywords: sustainable development; sustainable agriculture; agricultural potential; agricultural production

Jel Classification: Q1; Q15

1. Introduction

The specific of the economy of Tecuci plain is determined by primary economic activities, agriculture having the largest share in the region. Besides agriculture, industry, transport and trade ensure economic links at national and international level and continuously contribute to maintain and improve the population living standards.

The most important factors which influenced the economic specific of the human settlements from our region are: the geographical position doubled by high

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accessibility, water resources and agricultural potential. These factors significantly influenced the demographic growth of rural settlements, large and very large ones being currently predominant.

In the last four years, the global economic crisis led to a reduction in international migration in the region, massive after 1990, when most of the workforce was forced to seek work abroad (Italy, Spain). Now, along with rural migrants, many urban dwellers who have regained ownership of agricultural land after 1990, return to their villages, the labor force employed in the primary sector starting to increase after year 2000. In these circumstances the study aims to make a pertinent analysis of the dynamics of agriculture (main crops, livestock, crop production) between 1970-2011, proposing restructuring measures specific to sustainable agriculture.

2. Sustainable Development and Sustainable Agriculture-Theoretical Highlights

The concept of “sustainable development” is currently a favorite theme in various specialized works being approached by numerous specialists. Although represents the basis of the development strategies and is currently analyzed at world summits and international conferences, this concept has been launched since 1987 by the Brundtland Report published by the UN World Commission on Environment and Development and institutionalized by the United Nations Conference on Environment and Development (1992 Rio Conference). During this period, studies which approach sustainable development, although sometimes can vary significantly, manage to establish some common issues:

- the content of sustainable development must ensure economic development, protecting the basic resources and the environment for further generations;
- overcoming poverty in order to satisfy the population basic needs (providing employment, housing, food, water, energy, health care);
- controlled population growth;
- reorientation of technology and risk oversight;
- decentralization of the forms of government;
- using analytical methods to evaluate some important aspects of sustainable development based on indicators included in the integrated system of human development;
- lack of synthetic methods of evaluation and an aggregate indicator of sustainable development similar to Human Development Index (HDI).

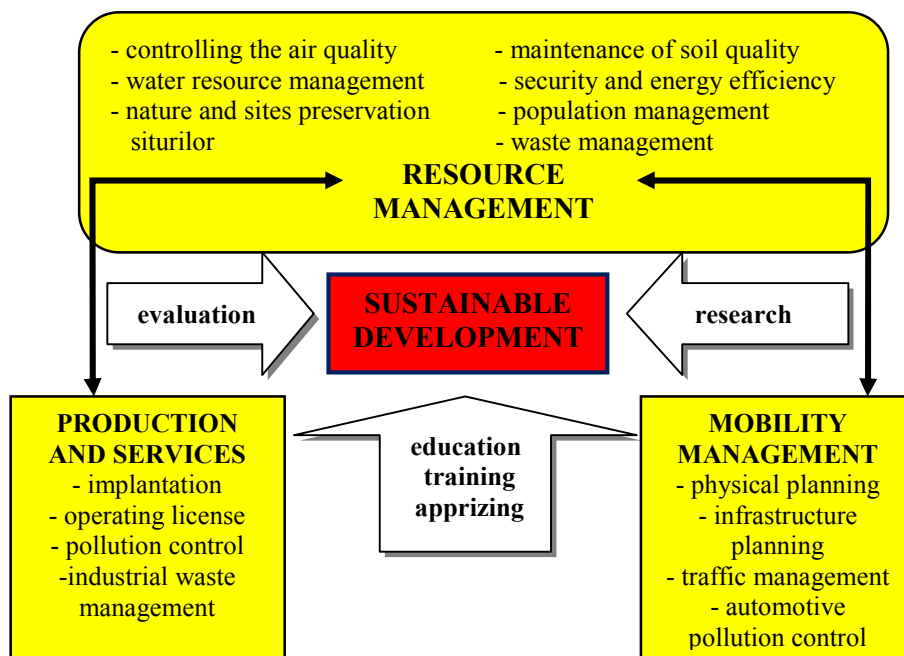


Figure 1. Sustainable development

Source: (Erdeli, 1999)

In conclusion, we can say that sustainable development has an aggregate objective targeting economic efficiency, social equity and at the same time caution to the environment.

Like sustainable development, sustainable agriculture is a current concept being analyzed at national and especially European level.

Sustainable agriculture aims to achieve soil cultivation systems to meet the current needs of the population both in quantity and quality, proposing in the same time, as sustainable development, not to compromise the options of future generations and damage irreversibly the natural environment. This desideratum, which implies the transition to sustainable agriculture, can be achieved through a slow process of changes that enables the maintenance of the environmental quality on long-term. Therefore sustainable agriculture involves the use of economically viable technologies, providing on medium and long-term rich crops with lower costs.

The basic conditions which must be met by any agricultural system to be sustainable and viable are:

- maintaining and improving the environment and also the ability to withstand the external pressures;
- the ability to support the food demand;
- ensuring a level of social and economic welfare of farmers through constant financial support from the state, avoiding degradation and of agricultural areas and impoverishment of the producers;
- reducing pollution to a safety level and preserving the biodiversity;
- protecting the environment by adopting risk prevention strategies and distributing wealth fairly.

The purpose of practicing sustainable agriculture is to restore and support rural areas to achieve high performance ensuring increased quality of life. Therefore some specialists believe that sustainable agriculture must be based on the requirements, duties and aspirations of farmers themselves, but also on the restrictions they face both in agricultural and non-agricultural activities.

In conclusion, both sustainable development and sustainable agriculture aim at medium and long-term changes in the economic, administrative and technological domains and also at the mentality, education level and finally lifestyle of the population.

3. The Use of Farmland and the Agricultural Profile of the Settlements in Tecuci Plain

Having complete data on the structure and land use for all administrative units of Tecuci Plain in the period 1960-2011 I could highlight the evolution of the agricultural area of the region, on the one hand, and its structure (*arable land, grassland, meadows, vineyards and vine nurseries, orchards and tree nurseries*) on the other. Analyzing the **agricultural area** by its ratio to the total area of each commune in the region, we can say that the plain didn't register major changes, the agricultural area ranging from 80.7% in 1960 to 82.9% in 2011. At territorial level, most of the communes have values between 80-90%, the highest values in 2011 exceeding 90% (Cudalbi-96%, 95% Grivița, Matca-93.8%). The lowest values were registered by Movileni (52.7%), Umbrărești (69.6%) and Nicorești (71.9%). Unfortunately the growth of about 2% is not real, as the plain agricultural area decreased from 138631 ha in 1990 to 130547 ha in 2011. This percentage decrease is attributed to the reduction of the areas of some communes due to administrative-territorial reorganization after year 2004.

Analyzing the structure of the agricultural area, we notice that the largest share, normally for a plain region, is occupied by the *arable land* which increased its share from 83% to 84.9% in the period 1960-2011. This increase is, as in the agricultural area, an artificial one, arable land registering a decrease, in absolute values, from 116180 ha in 1990 to 110919 ha in 2011. At commune level, with high levels of arable land, we notice the same administrative units which had the largest agricultural areas in 2011 (Cudalbi-93.9%, Matca-93.2%), Cosmești (93.5%) or Movileni (92.4%), most of them having shares between 75% and 85%. The lowest value was recorded by Nicorești, with an arable land of only 65.1% share of the agricultural area. This evolution of the arable land is caused, on the one hand, by the growth of the degraded areas specific to the communes with a downward trend (Tudor Vladimirescu, Nicorești, Munteni etc.) or the expansion of the arable areas inside the settlements (Tecuci, Barcea, Corod, Cerțești, etc.), where water resources are not an issue and crops can be watered, on the other hand. In some cases the increase of the arable land is due to some degraded areas-on the slopes of the valleys- which have been also used for cultivation certain crops.

Meadows and grasslands represent, by their nutritional value the forages for the livestock. The natural conditions of the region are responsible for the existence of two types of meadows: *floodplain meadows* more extended on Barlad, Berheci, Corozel and Geru floodplains and terraces and *steppe meadows* which occupy smaller areas of northern parts of the region. Unlike floodplain meadows, which have great power of nutrition (more than 20 sheep / ha) and a longer grazing period, the steppe ones have low nutritional power (15-16 sheep / ha) and a much shorter grazing period. The evolution of their surface during 1960-2011 was downward, although meadows recorded a slight increase of their share, due to agricultural land which decreased after 1990. Thus, the plain meadows decreased by about 295 ha, with a share of 8.21% in the last agricultural census. A similar situation was encountered by grasslands, where the reduction was about 120 ha in the period 1990-2011. At administrative level, the highest values were recorded in 2011 by the villages from north- Gohor (19.2%), Ghidigeni (15.5%) and Pochidia (15.1%).

Vineyards and vine nurseries have always enjoyed the suitability of the geographical position and the plain natural conditions, the slopes with southern, eastern and western exposure and also the terraces or interfluvies with sandy substrate being occupied by the most important vineyards of the region. Thus, the largest vineyards are partially owned by Nicorești-Poiana vineyard and fully by Hanu Conachi- Ivești. Nicorești-Poiana vineyard, within Tecuci plain includes the wine centers like Dobrinești, Sârbi and Cosmești, known for producing red wines that exploit the local grape variety (Băbească Neagră). Vineyard Ivești-Hanu Conachi exploits the sandy soils from the southern part of the plain, the most important wine centers being Ivești, Liești, Umbrărești, Drăgănești, Barcea,

Movileni and also the most important wine-growing areas in the villages Negrileşti, Cudalbi, Valea Mărului and Corod.

The dynamics of vineyards and wine nurseries surface during 1960-2011 reflects a continuous decline for the entire plain, from 10744 ha in 1960 (7.8%) to 7602 ha (5.8%) in 2011. We can also notice this fall to the administrative units that partially or entirely overlap the two vineyards, Nicoreşti decreasing by 601 ha in the same period and Iveşti by 237 ha.

Orchards and tree nurseries are currently occupying, along with grasslands, less than 1% of the agricultural area of the region (0.77% in 2011), decreasing by 496 ha in the period 1990-2011. Basically, orchards and tree nurseries in Tecuci plain currently have an area and a share in the agricultural land almost identical to the year 1960 (1004 ha- 0.74%). The geographical distribution of orchards in the region shows that the largest areas are owned in 2011 by Tecuci city (221 ha), Iveşti (208 ha) Valea Mărului (202 ha), Munteni (126 ha), Drăgăneşti (45 ha), Lieşti (40 ha), Matca (24 ha). Unfortunately, the only administrative units which registered a growth of orchards surface during 1990-2011 were Drăgăneşti (42 ha +0.78%) and Matca (24 ha +0.3%). Most of them registered considerable decreases, in some communes the reduction being of 100%, due to their shifting to arable land. Establishing patterns of the agricultural land use in 1960 and 2011 in Tecuci plain is a delicate approach, because all administrative units of the region always had high shares of arable land, crop production being the main agricultural activity of the region. However, a detailed analysis of the structure of the agricultural land in the two years allowed us to identify four specific functional profiles of administrative units of the region whose share has recorded small changes in the years 1960 and 2011.

Thus, **the first agricultural profile** includes in year 1960, 2 communes (Cudalbi and Matca) plus two more in 2011 (Cosmeşti and Movileni). In this profile arable land exceeds 90%, with an average of 92.8% in 1960 and 93.3% in 2011. Unlike arable areas, the other agricultural areas are negligible (meadows-2.2% in 1960 and 3.1% in 2011, vineyards- 4.6% in 1960 and 3.4% in 2011, orchards-0.1% in 1960 and 0.08% in 2011).

The second functional profile comprises 15 administrative units in both years (Tecuci, Barcea, Cerţeşti, Corod, Drăgăneşti, Fundeni, Ghidigeni, Griviţa, Iveşti, Lieşti, Munteni, Negrileşti, Tudor Vladimirescu, Umbrăreşti, Pochidia in 2011) being characterized by an average arable area of 84.2% in 1960 and 84.6% in 2011, while meadows and vineyards are about 9% and 5% of the agricultural area. In this profile meadows and orchards also occupy extremely low surfaces, less than 1%, reflecting the agricultural cereal profile of the most settlements from the region.

The third agricultural profile includes 5 administrative units in 1960 (Tecuci, Ghidigeni, Gohor, Iveşti, Umbrăreşti) and only 3 in 2011 (Gohor, Valea Mărului,

Tutova). This profile has an arable area of about 77%, followed by meadows with a share that increased from 10.7% in 1960 to 15.2% in 2011.

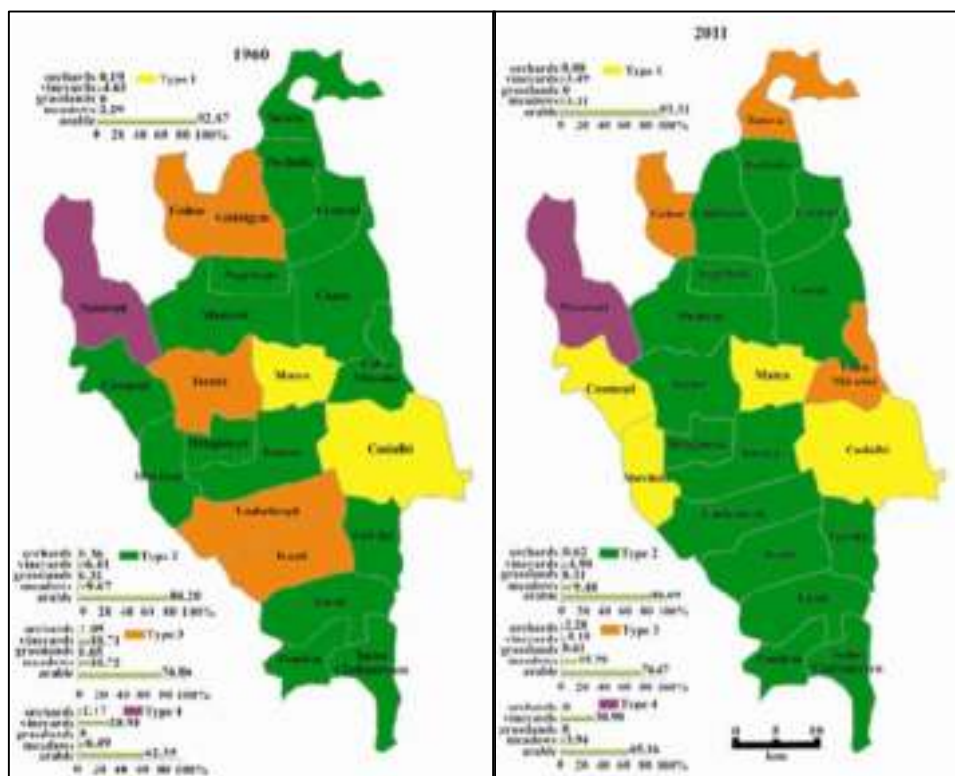


Figure 2. Agricultural profile of administrative units by the use of agricultural land in 1960 and 2011

Source: DJS Galați&Vaslui; Direcția pentru Agricultură și Dezvoltare Rurală Galați&Vaslui /Galati&Vaslui County Department Of Statistics; Galati&Vaslui Department For Agriculture And Rural Development

This increase of meadows area occurred to the detriment of vineyards which decreased by about 5%. In this profile meadows had tiny percentages too, less than 1%, while orchards increased by 1.2%, the profile average being 2.2% in 2011.

The last agricultural profile includes only commune Nicorești, who has the lowest arable area (62.3% in 1960 and 65.1% in 2011) but also the highest vineyards area (28.9% in 1960 and 30.9% in 2011), percentages justifying the location of more than half of the commune territory in the Poiana Nicorești Piedmont.

In conclusion, the high percentage of the arable land, clearly shows the region predisposition for crop production, especially grains, the important agricultural

potential of the region being severely affected nowadays by the lack of agricultural facilities and land improvements.

4. The Dynamics of Crops and Vegetal Production

The first of the two major branches of agriculture, *plant cultivation* was and still is representative for the plain economy, being supported by favourable natural conditions of the region. Human factor also occurred, the most important achievements for the plain agriculture being the planning of the irrigation systems from Cosmești interfluvium area, the location of the main communication paths along the embankments, the anthropic terraces on Barlad, Corozel and Călmățui river basins, the impoundment of Barlad river, the hydrotechnical development from Cosmești -Movileni area.

Unfortunately, especially after 1990, these measures didn't continue, most agricultural production remaining at the "mercy of the nature" encountering fluctuations from one year to another.

To analyze the dynamics of crops and vegetal production we chose the period 1990-2011 because 1990 marks the end of the communist period and therefore the effect of planned agricultural economy whose productions were often questionable, the high values recorded during 1980 - 1989 being often only "on paper".

After 1990 we notice a real evolution, most peasants cultivating their land after their needs on the open market. The increase or decrease of the prices for certain crops, depending on production costs, the improvement of the cultivated varieties quality, or excessive fragmentation of ownership are just a few factors that have influenced the overall dynamics of plain main crops in postcommunist period. Here we can also add the maintenance of a diet in which cereals are still perceived as basic plants.

Unfortunately, after Romania joined the European Union, the extensive farming practiced on grinded areas with rudimentary means of production was preserved, the weak attraction of the European funds and the lack of state subsidies for farmers generating high costs for agricultural products.

European requirements (appearance, packaging) generated in the end a reorientation of many farmers that could not keep up with imported products distributed in hypermarkets which were often more competitive than the local ones.

The analysis of the major crops (wheat and rye, corn, sunflower, potatoes, vegetables, fruits, grapes) shows that corn culture occupies the first place both in 1990 and in 2011. The causes are many and lie in great adaptability and natural conditions favorable to this culture and of course its large share in human food and animal nutrition. Thus, the area cultivated with *corn* increased by 31.2% in the

plain, from 36972 ha in 1990 to 48512 ha in 2011. At territorial level, a significant increase in the period 1990-2011 was recorded by Tecuci city (716.1%), and its neighboring communes Barcea (94.3%), Cosmești (94.9%), Corod (35%), Matca (20.4%). However a few communes recorded a significant decrease, among which we can mention Fundeni (-53.9%), Tudor Vladimirescu (-32%) and Nicorești (-30.2%).

At the village level, *the largest areas occupied by corn cultures* which registered shares above 75% of arable land are in Ivești and Cârломănești estates, Tecuci City having a share between 60-75%. Unlike these, Valea Mărului, Matca and Drăgănești estates recorded shares between 15-30%, although the administrative units which include them recorded a growth in 2011.

The growth of the cultivated area, generated also an increase of the *absolute corn production* in the plain, by 126.2% from 69701 tons in 1990 to 157691 tons in 2011. The most spectacular production increases were recorded by Tecuci City (+820.8%), Drăgănești (+605.4%), Cosmești (234.9%), Corod (+115.4%). The production per hectare also increased from 1.88 t/ha in 1990 to 3.25 t/ha in 2011, in territorial the best productions being obtained in 2011 by communes Drăgănești (4.77t/ha), Tudor Vladimirescu (4.69 t/ha) and Cosmești (4.51 t/ha).

The area cultivated with *wheat and rye* occupies the second place in Tecuci plain during 1990-2011, despite its significant decrease (-39.8%) from 30134 ha in 1990 to 18111 ha in 2011. The restriction of the areas cultivated with wheat and rye was made in favor of other crops, more profitable (sunflower), being influenced by droughts in the recent years which have discouraged farmers or by the fluctuating demand recorded in the bakery industry. This decrease can also be explained by the fact that wheat involves a series of mechanized farming activities plus the need for herbiciding the culture which can be performed on large areas.

Significant decreases were registered by Cosmești (-84.6%), Valea Mărului (-76.2%), Barcea (-64.6%) while only three communes registered increases (Drăgănești+59.8% -, Cerțești+ 39.7%, Cudalbi - +12.8%).

Unfortunately *the absolute production* followed the same trend, the plain production decreasing by 30.3% from 66380 tons in 1990 to 46264 tons in 2011. The largest decreases were registered by Cosmești (-95.3%), Gohor (-85%) and Valea Mărului (-77.5%). Increases in production of wheat and rye have been registered by only 4 communes: Drăgănești (+985.1%), Fundeni (+83.4%), Cerțești (+22.4%), Cudalbi (+5.1%).

The production per hectare increased slightly in the plain, from 2.2 t/ha in 1990 to 2.5 t/ha in 2011, due to incredible productions obtained by some communes which recorded increases of the cultivated areas too. Thus, Drăgănești recorded a production of 9.6 t/ha in 2011, followed by Barcea (3.7 t/ha) and Corod (3.2 t/ha).

The area cultivated with sunflower recorded, along with corn, an increase, being nowadays, one of the highly profitable crops. The extraction of oil from sunflower seeds and their use in food after refining, food industry (margarine, canned), pharmaceutical (lecithin), and so on, increased the area cultivated at national level, peaking in 1999 and 2004 when were cultivated over 1 million hectares.

In Tecuci plain whose natural conditions are extremely favorable for sunflower crops, the cultivated area increased by 31.8% from 6941 ha in 1990 to 9149 ha in 2011. In territorial, spectacular increases were recorded by Gohor (2246%, from 15 ha in 1990 to 352 ha in 2011), Cosmești (532%), and Tecuci city (+452.7%).

Total production and the average production per hectare registered an increase at the plain level by 82.6% (from 7623 ha in 1990 to 13925 ha in 2011) and 50% (from 1000 kg/ha in 1990 to 1500 kg/ha in 2011), significant increases, sometimes incredible, being recorded by Tecuci city (2657%, from 26 tons in 1990 to 717 tons in 2011- **total production**, +391.6% from 0.24 t/ha in 1990 to 1.18 t/ha in 2011- **average production per hectare**) and Tudor Vladimirescu commune(1023%, from 78 tons in 1990 to 876 tons in 2011- **total production**, +196.6% from 0.6 t / ha in 1990 to 1.78 t / ha in 2011- **average production per hectare**).

The vegetable crops, although recorded a slight decrease (-8.2%, from 5041 ha in 1990 to 4627 ha in 2011), occupy large areas of Tecuci city extravillan (581 ha in 2011) but also of the villages estates located in its vicinity (Matca-1200 ha in 2011, 25.9% of the total area of the region; Cosmești-379 ha in 2011, Draganesti-159 ha in 2011, Barcea-138 ha in 2011). Important areas were also cultivated in the same year in villages from central and southern parts of the plain: Umbrărești-470 ha, Fundeni-190 ha, Liești-187 ha, Cudalbi -180 ha, Ivești-175 ha. Cultivating vegetables on large surfaces, for fresh consumption and also for canning, is favored by the natural conditions of the plain (the large extension of river terraces and floodplains, optimal climate, fertile soils, high irrigation potential). Among the vegetable crops, the largest crop areas are occupied by tomatoes, which have expanded considerably after building the canning factory in Tecuci City.

The highest productions are obtained for the vegetables (tomatoes, cucumbers) cultivated in greenhouses and solariums, their dynamics from 1990 to 2011 being remarkable for some communes. Thus, if **the plain total production** increase was +59.9% from 70542 tons in 1990 to 112798 tons in 2011, in territorial the largest increase was recorded in Matca (1895% from 2812 tons in 1990 to 56100 tons in 2011) famous at national level and being one of the most important vegetable basins of Romania. From the 1200 hectares cultivated with vegetables in 2011, about 600 hectares were cultivated in greenhouses owned by the inhabitants of the commune, the **average production per hectare** increasing from 6.9 t / ha in 1990 to 46.7 t / ha in 2011. Higher average production per hectare were also obtained by Cosmești (18.9 t/ha in 1990 and 18.7 t/ha in 2011), Umbrărești (12.1 t/ha in 1990

and 27 t/ha in 2011), Barcea (17.4 t/ha in 1990 and 18.9 t/ha in 2011) and Tecuci city (22.5 t/ha in 1990 and 10.6 t/ha in 2011), while the plain average production per hectare increased from 13.9 t/ha in 1990 to 24.3 t/ha in 2011. The surface cultivated with *potatoes* decreased (-43.2%) from 1990 to 2011 and also *the absolute production* (-40.1%).

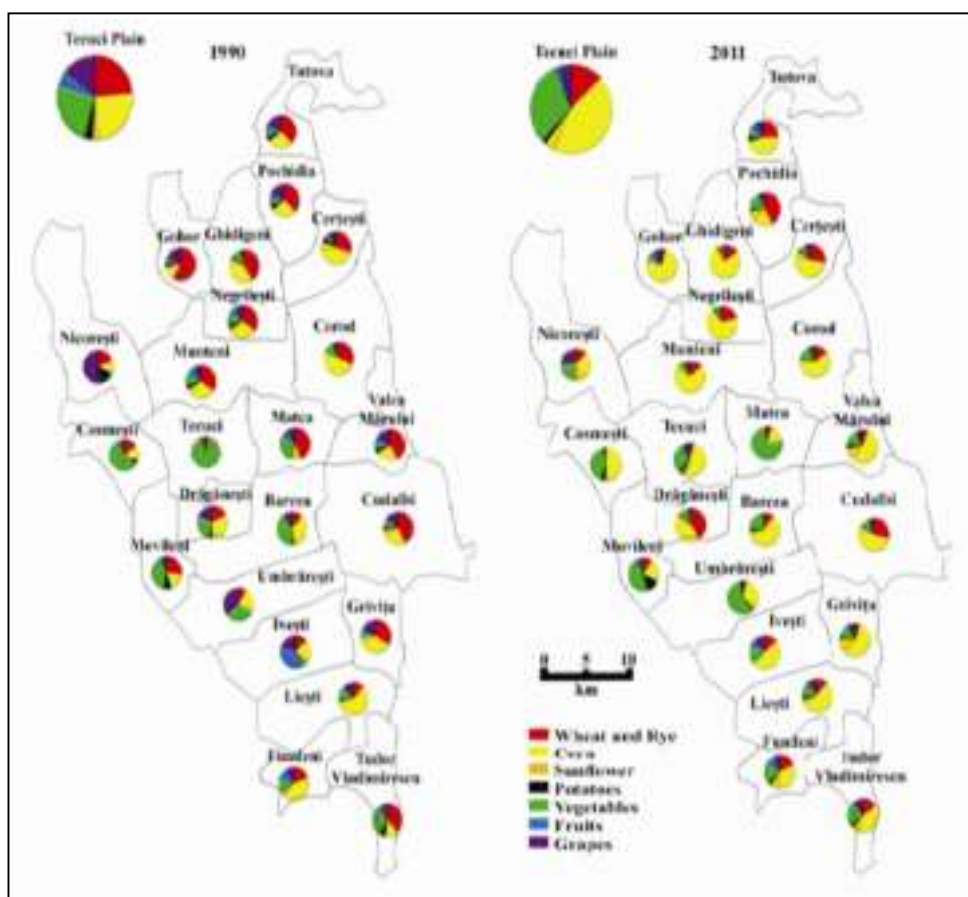


Figure 3. Vegetal Production (tons) in 1990 and 2011 in Tecuci Plain

Source: INS București; Direcția pentru Agricultură și Dezvoltare Rurală Galați&Vaslui/ National Institute of Statistics, Bucharest; Galați&Vaslui Department For Agriculture And Rural Development

In territorial, the highest decreases for the cultivated areas were registered by Munteni (-97.1%), Tudor Vladimirescu (-85%), Nicorești (-76.4%) and for the *absolute production* by Nicorești (-98.1%), Munteni (-95.8%) and Gohor (-81.1%).

However, despite the downward trend registered in the plain, 9 administrative units (Tecuci, Barcea, Corod, Cosmești, Cudalbi, Fundeni, Ivești, Liești, Umbrărești) recorded significant increases both in cultivated areas and absolute production.

The decreases of the cultivated areas and productions after 1990 were caused by the reduction in number of the agricultural machinery which are extremely useful in potato cultivation, knowing that this culture requires a lot of physical work. Also many pests that affect this crop (Colorado beetle, wire worms, etc.) significantly reduce absolute and average production, requiring meticulous spraying operations.

Fruit production also registered a decrease (-58.2%), from 18029 tons in 1990 to 7524 tons in 2011, in territorial, the highest productions being recorded both in 1990 and in 2011 by Tecuci city and Ivești commune which have the largest orchards in the region as we mentioned in the previous chapter. Analyzing the production by species, we can mention the significant variation from one year to another, in 2011 the hierarchy being as follows: apples-53.1%, plums-20%, cherries and sour cherries -9.2%.

Grape production decreased by 60.9% in the period 1990-2011, the major causes being excessive fragmentation of ownership, lack of the modern systems of culture (intensive and suprainensive), adverse climatic conditions occurred in the last years and the reduction of the cultivated areas. Thus, most administrative units in the region decreased their production in 2011, the most significant being recorded by Umbrărești (-95.4%) and Nicorești (-78.5%).

5. The Livestock

Livestock remains the second core activity in agriculture, contributing significantly to the welfare of the population from rural regions. The lack of large areas covered with natural meadows and grasslands in the region (less than 9% of the agricultural area) was supplemented over time by forage crops plus large quantities of corn and potatoes which completed the required quantity of forages for the livestock. However, the analysis of the dynamics of livestock and its density shows that the livestock sector has occupied a secondary place, the agricultural profile of region settlements, as we mentioned in the previous chapter, being mostly a vegetal one (cereals, vegetables, vineyards).

Cattle farming is the most important branch in the livestock sector, milk and beef being two basic agricultural products in the diet of the population of any region. In Tecuci plain, the cattle number increased during 1970-1990, followed by a significant decrease in postcommunist period. Thus, in 1990 the plain recorded the highest number of cattle (61724 heads) which decreased considerably in 2011 reaching only 13464 heads (-78.1%).

At territorial level, the largest numbers were owned in 1990 by the administrative units of central and northern parts of the plain (Tecuci city-5193 heads, Tutova-6840 heads, Movileni-5111 heads). In 2011, the largest numbers still belonged to the central and northern communes, but rarely exceeded 1000 heads (Cudalbi-1518 heads, Ghidigeni-1245 heads, Draganesti-1122 heads, Corod-1034). Basically in the postcommunist period most of the administrative units of the region recorded decreases over 50%, some even exceeding the percentage of 80-85% (Tutova). The major cause that determined this evolution was the shift from socialist agriculture to market agriculture which decimated most of the state-subsidized livestock farms, which operated mainly in rural areas before 1990.

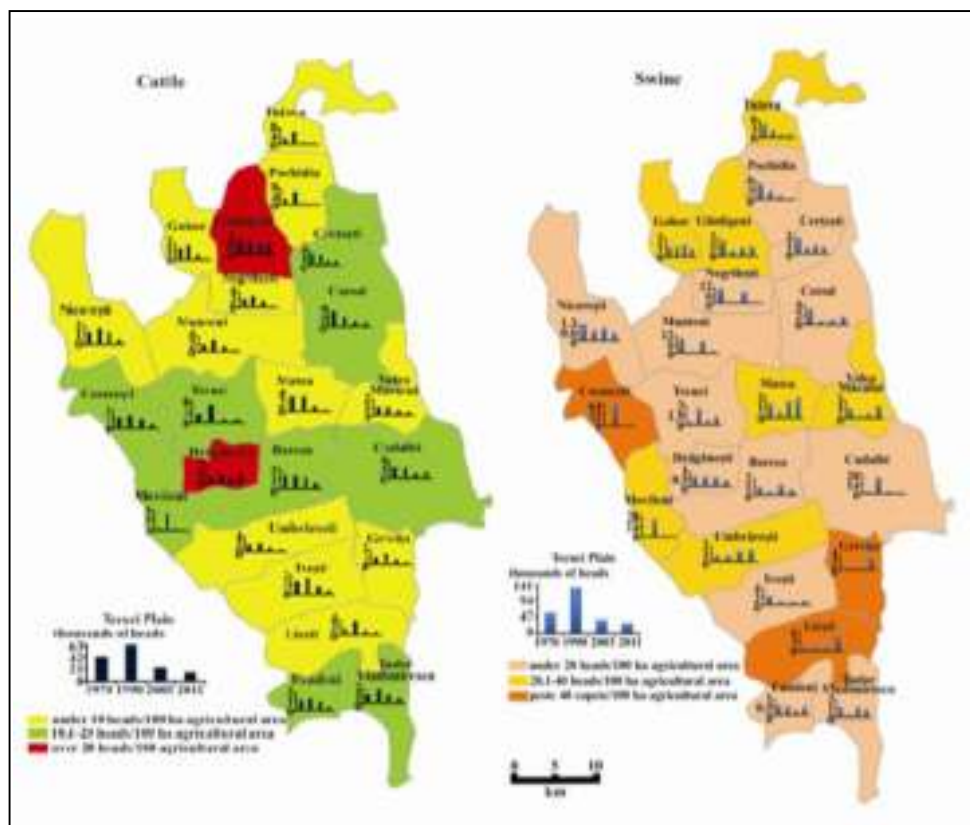


Figure 4. The Dynamics of Cattle and Swine (1970-2011) And Their Density (2011) in Tecuci Plain

Source: DJS Galați&Vaslui; INS București; Direcția pentru Agricultură și Dezvoltare Rurală Galați&Vaslui/ Galați&Vaslui County Department Of Statistics; National Institute of Statistics, Bucharest; Galați&Vaslui Department For Agriculture And Rural Development

With the entry into the European Union, European directives regarding the production of milk increased considerably the production and processing costs, farmers not being supported by state protectionist policies. Thus, production costs have exceeded those for sale, many of the animals being slaughtered for meat.

Swine farming represents the second important branch in the region, after cattle, recording the same evolution: upward during 1970-1990 with an increase of 130.6% (from 57365 heads in 1970 to 132307 heads in 1990) and downward following the year 1990, in 2011 the number being only 30416 heads. The increase during the period 1970-1990 was caused by the opening of breeding and fattening swine farms, at Cosmești and Movileni, which in 1990 had 62093 heads (46.9% from the plain) and 26246 heads (19.8% from the plains). They were also completed by Cudalbi commune with 24041 heads (18.1% from the plain).

The decrease after 1990 was caused by the same political and economic changes that occurred in 1990 that ended state-owned swine units from Tecuci plain. They have not been backed up against imports of subsidized agricultural products from the neighboring countries (Hungary) or other EU (Germany, Netherlands, Spain, Belgium, Denmark, Austria) and therefore they were shut down. Other factors that caused the reduction of swine number, which are now raised only for own consumption, were the forages which became more expensive and the high costs for opening breeding farms after Romania joined the EU.

Thus, if we follow the evolution of the three communes mentioned above, we notice that in 2011 Cosmești had only 1325 heads, Movileni only 598 heads and Cudalbi only 2804. Most administrative units had in 2011 below 2000 heads, the highest number being owned by Liești with 4809 heads.

Sheep farming also recorded a downward trend throughout the period 1970-2011, although the 2010 General Agricultural Census reflected an increase at the national level by 16.2% since 2002. Thus, the region recorded a - 67.9% decrease from a number of 181453 heads in 1970 to 58068 heads in 2011. The largest flocks were owned both in 1970 and in 2011 by rural communities from Matca (20839 heads in 1970, 3006 heads in 2011), Munteni (20008 heads in 1970 and 5280 heads in 2011), Cudalbi (9438 heads in 1970 and 4305 heads in 2011) and Corod (8738 heads in 1970 and 4837 heads in 2011). This decrease is based on the factors mentioned also at the cattle and swine farming (forages price increases, lack of subsidies for farmers, low consumption of meat and milk plus the small area of meadows).

Poultry farming is an agricultural sector which is practiced mainly in the households of the population from the rural settlements of the plain.

Unlike cattle, swine and sheep, poultries number has increased significantly in the period 1970-2003 (+168.9%, from 436,894 heads in 1970 to 1175168 heads in 2003), recording a slight decrease from 2003 to 2011 (-16.8%, 977284 heads in

2011). As sheep farming, we can notice, when we analyze the dynamics of poultries, at territorial level, a close correlation between their number and the demographic size of human settlements in the plain. Thus, the highest values were and still are owned by Matca (6.6% from the plain number in 1970, 10.1% from the plain number in 2003 and 34.8% from the plain number in 2011), Liești (4.3% from the plain number in 1970, 9.6% from the plain number in 2003 and 5% from the plain number in 2011), Cudalbi (3.6% from the plain number in 1970, 1.5% from the plain number in 2003 and 6.3% from the plain number in 2011) and Tecuci city (5.3% from the plain number in 1970, 8.1% from the plain number in 2003, 4.6% from the plain number in 2011). One of the factors that increased the poultries number during 1970-2003 is demographic aging, farmers growing much harder swine, cattle or sheep unlike poultries which are much easier to raise. In the last years, low incomes, expensive forages and grains due to low productions have caused also the decrease of the poultries number.

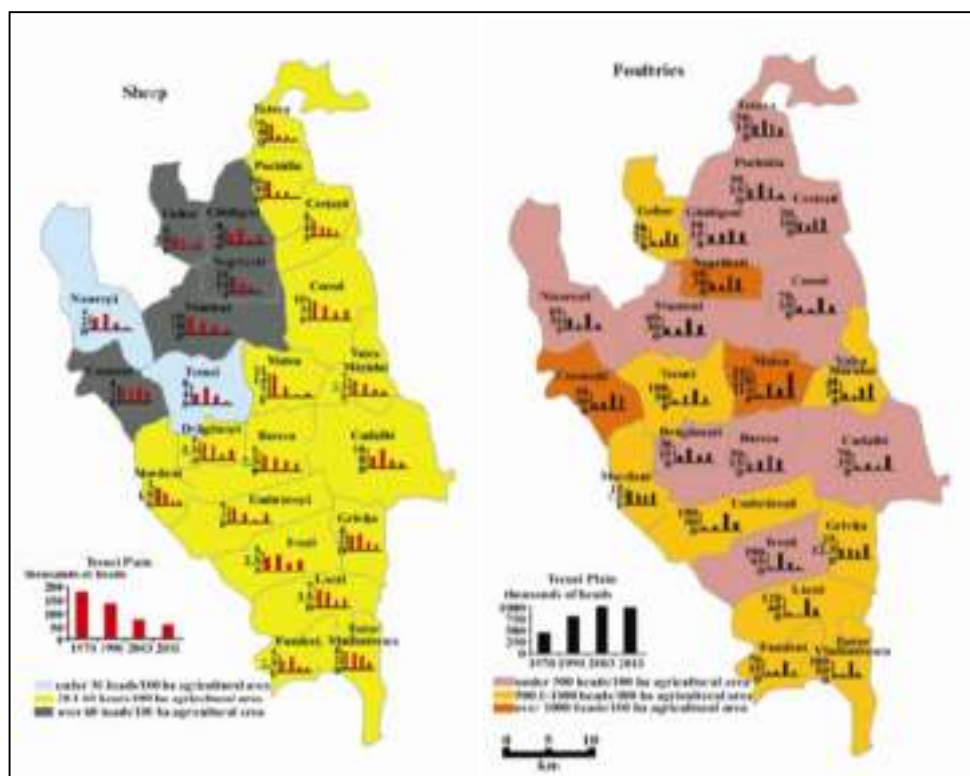


Figure 5. The Dynamics of Sheep and Poultries (1970-2011) and their Density (2011) In Tecuci Plain

Source: DJS Galați&Vaslui; INS București; Direcția pentru Agricultură și Dezvoltare Rurală Galați&Vaslui/ Galați&Vaslui County Department Of Statistics; National Institute of Statistics, Bucharest; Galați&Vaslui Department For Agriculture And Rural Development

6. Measures for Sustainable Agricultural Development in Tecuci Plain

Restructuring traditional agricultural practiced in Tecuci Plain and developing sustainable agriculture is an approach that includes a series of complex measures, the most important being:

- ***changing the population mentality*** - quite delicate goal now that the people in rural areas are poorly informed, are very reluctant to change. This situation is compounded by the fact that very few farmers are aware of the long term effect of the current agricultural practice, still practicing subsistence agriculture;
- ***maximizing production while minimizing costs*** - aims to increase production in order to ensure the food needs of the population of the region, useful raw material for industries and also the organization of a modern agriculture. These developments depend heavily on mechanization and chemical treatment, and on the introduction of advanced agronomic methods resulting from applied research.
- ***preservation and environmental protection*** - intended to protect its main components: the atmosphere, hydrosphere and pedosphere. In Tecuci plain, they are affected in some regions from the practice of the improper agriculture requiring a series of preventive measures. Livestock farming is a cause of pedosphere degradation by grazing, compaction and erosion; the hydrosphere by animal waste and atmosphere by carbon dioxide emissions from manure used as fertilizer plus the vegetable sector which sometimes affect the environment by improper chemicalization (contamination of water sources with heavy metals, nitrates, etc., species extinction or natural predators).
- ***investments in human resources*** to provide support for young farmers and training facilities;
- ***development of agricultural holdings*** by delimiting the areas of new owners, creation of associations, defining the road network and linking the properties boundaries with the hydrotechnics scheme of the land improvement;
- ***developing a sustainable agriculture on ecological principles to produce organic agricultural products that are not affected by pollution;***
- ***providing regular financial support for farmers*** (state subsidies) and organizing tutorials for the preparation of projects in order to attract European funds.

7. Conclusions

Unfortunately, extensive agriculture practiced in Tecuci plain, has not been replaced, as it happened in most agricultural regions in Western Europe, with an intensive one, benefiting from modern technologies of production and land improvements, agricultural situation being currently extremely difficult.

Political and economic changes in 1990 did not produce significant changes in the agriculture, factors that widened the difficult situation in the present being:

- the lack of investment in modern agricultural production technologies to support privatization of agriculture conducted by the 1991 Land Law (Law no. 18/1991) completed by “Lupu Law” from 2000 (Law No.1/2000). The lack of subsidies or their reduced value made it impossible for farmers to access modern production technologies to support a real private agriculture. Here we can add the damages or theft of the irrigation facilities, which led to a drastic reduction in crop productions.
- the dissolution of the collective and state farms established during the communist period represented the end of state agriculture, considered by many specialists a viable alternative to the private one, which currently uses more and more intermediaries who increase considerably the final price of agricultural products;
- excessive fragmentation of the property also affected the chances of practicing a modern agriculture, usually covering large areas such as farms or associations.

In the end we can affirm again that restructuring the current agriculture and developing the sustainable agriculture, using the proposed measures, is urgently needed on medium and long term to fully exploit the considerable agricultural potential of Tecuci plain.

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History of Economic Thought

The Forgotten Austrian Economics Language

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Abstract: In light of the current events, namely the crisis that economy has to face for quite some years now, plenty of questions are raised, not only among specialists in the field but also among ordinary people as they prove to be most impoverished by these imbalances. Thus, this paper aims, as a first objective, to explain, from a general perspective and using an inductive-subjective methodology based on a brief survey as well as on observation, two of the most important causes that, according to the Austrian Business Cycle Theory, are the leading motives for triggering crises. We are referring particularly to an excessive state interventionism manifested throughout its expansionary monetary policy. Secondly, we seek to establish the interconnections between these elements and the case of the Great Depression as well as the current recession. The results we came across point out towards the same pattern designed by the Austrian economists, although the circumstances are, each time, different. Hence, the contribution of this paper consists of handling the details that surround the subject by extracting only the essential aspects regarding the triggering of crises; we refer to the main ideas that need to be underlined for a better comprehension of the topic.

Keywords: Austrian School; crisis; business cycle; Great Depression.

JEL Classification: B13, B25, E20, E32, E40, E50, N12.

1. Introduction

“The great inflations of our age are not acts of God. They are man-made or, to say it bluntly, government-made. They are the offshoots of doctrines that ascribe to governments the magic power of creating wealth out of nothing and of making people happy by raising the “national income.” (Mises, 1953, p. 1)

We chose to use a quote from Mises' *Theory of Money and Credit* as a starting point for our analysis because we consider it to be quite relevant when trying to synthesize the general Austrian point of view regarding the triggering of crises. Hence, the economic imbalances contain precious information that, if used properly, is able to lead the way towards prosperity. From this point of view, crises should be viewed as meaningful lessons. They manage to reveal significant clues

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regarding the crucial aspects of an imbalance and how to overcome them, in the future. Unfortunately, these relevant details are neglected or ignored. Once the crisis vanishes, the triggering causes are as good as forgotten, therefore, the measures that would help avoid further imbalances are completely abandoned. It seems as if only quite a few have eyes to actually observe and subsequently preach them.

Nevertheless, it is quite certain that every crisis is different and, without any doubt, every time we have to deal with new, challenging and persistent factors. However, the pattern is, in most cases, the same although the circumstances could be and, in most cases, are, indeed, different. This skeleton dresses each time new clothes, under the form of various factors, which determine the particularity of every situation. Just as on the operating table of a surgeon are placed various tools which will be used during the procedure, from the same chain of ideas, we can talk about the case of economists who use certain economic indicators, which take the place of the medical utensils, to analyze and determine the disease known under the name of crises. To this analogy we could add the experience, as well as the particular type of work embraced by every doctor who, most certainly, differs from the others from his branch. Thus, the economic tools used for operating and recovering the economic apparatus differ from one doctrine to the other. The present “operation” finds its path under the aegis of the Austrian School of economics, more specifically, it is accomplished through the vision of the Austrian Business Cycle Theory. Although, philosophically speaking, we breathe the same economic air, the key answer stands in the perspective from which we analyze the situation.

The particularity of their approach manifested through a totally different manner regarding the onset of crises, altogether with the recommended therapeutics, a point of view which carries a distinct mark compared with the one chosen by most of the mainstream economists nowadays, led us to deciding upon this topic. Our first preoccupation, the case of the 1929-1933 crisis is, without any doubt, a particular one as it is the most violent of its kind. Although the phenomenon that unleashed itself during that period is a very complex one and it determined economists all over the world to unbury the past and develop complex studies in order to find precise answers, the inflicts are countless and it is quite difficult to determine an accurate ongoing of the events. The same problematic stands upon nowadays economic issues. Thus, it determined us to try and answer, as clearly and simply¹ as possible, to the following questions: *Under which circumstances did the economists belonging to the Austrian School, particularly the deans Ludwig von Mises and Friedrich August Hayek, managed to observe the clues and launch*

¹ We are using the word simply because we want to induce the idea that this article is not addressed only to specialist but to ordinary people as well; their understanding of the situation is crucial and might be considered as one of the saving solutions.

warning signals before the actual triggering of the Great Depression started? And, to what extent did the contemporary Austrian economists follow the path marked by their predecessors considering the foreseeing of the current events?

For someone who understands how a healthy economic mechanism should function and who, under these given conditions, masters a rather well developed spirit of observation it is easy to solve the puzzle containing the direction towards which to tip the balance. The hints that predicted the 1929 depression as well as the 2007 - present recession were, in the opinion of Austrian economists, quite obvious and revealed themselves particularly under the form of two important elements.

The first clue is related to the **expansionist monetary policy** that led to a deterioration of credit and brought a high level of inflation. The second sign derives from the implementation of a series of protectionist measures or, in other words, the embrace of excessive **state interventionism**.

2. Predictions, Then Crisis

It is now a wider and wider accepted the fact that two of the most influential economists of their times who truly managed to foresee the 1929 crisis were part of the Austrian School of Economics. While Irving Fischer and John Maynard Keynes were overflowing with optimism, arguing that global economy is flourishing, Mises and Hayek were the ones who were launching alarm signals, warning that U.S. economy is on the verge of a big collapse. Therefore, in the late 1920s, Mises (1953, 2006) was convinced that a crisis is lurking just around the corner. His conviction was drawn from the fact that U.S. economy had known a series of technological innovations that increased productivity and thus turned into an expanding supply of consumer goods, a rising stock market and a massive real estate boom; and all this was happening while prices roses by 2% per year. In his opinion, it was undoubtedly the hands of Central Banks maneuvering the reins of monetary policy¹. Meanwhile, Mises realized that the credit expansion, performed abusively during that period, would lead sooner or later to an economic disaster: *“The economic consequences of credit expansion are due to the fact that it distorts one of the items of the speculator’s and investor’s calculation, namely, interest rates. He who does not see through this, falls victim to an illusion; his plans turn out wrong because they were based on falsified data. Nothing but a perfect familiarity with economic theory and a careful scrutiny of current monetary and credit phenomena can save a man from being deceived and lured into malinvestments”* (Mises, 1953, pp. 251-252).

¹ For Austrians, economic regulation is always destructive of prosperity because it misallocates resources and it disturbs the natural way in which a market economy functions.

The Misesian perspective is, from certain points of view, different from the Hayekian one. However, we will not insist upon this particular aspect as it does not represent the focus point of our research. The significant part consist of the fact that both of them manage to submit, quite clearly, the mechanism through which monetary expansion, accompanied by loans that exceed the rate of voluntary saving, can determine a misallocation of resources, particularly affecting the structure of capital.

According to Hayek (1931, 1933), when the quantity of money is increased, the new money is injected in some particular way, either via Central Banks through freshly printed money or via Commercial Banks through the channel of fractional reserves system, actions which temporarily distort relative prices causing the price system to communicate false information about consumer preferences and resource availabilities. Hayek also showed, along his research, that money-induced movements in the interest rate prove to affect the capital structure. The cluster of these circumstances would eventually lead to an economic collapse. His theory is rather complex and detailed and it does not represent the purpose of this paper as it deserves a separate approach.

For Mises and Hayek, the trade cycle theory was an attempt to integrate an understanding of a complex capital structure into a monetary exchange economy (Boettke, 2001, p. 34). Nevertheless, a very brief representation of the mechanism elaborated by the Austrian economists would look like this: **State -> FED -> Commercial Banks -> Capitalists -> Erroneous Investment -> Depression.**¹

The general pattern that sprung under the form of the already mentioned interventionist monetary policy can fit the present recession as well. The crisis erupted when the U.S. real estate bubble exploded in 2007. Commercial banks, hungry for maximizing their profits, began to give „identity card only” credit (to use the Romanian version) to customers who were not capable of carrying such a credit. Thus, a large number of *subprime loans*² were launched, most of them having a mortgage nature. We are referring to those types of loans that bared a high degree of risk as they were granted without any warranty and a prior verification of their worthiness. This cheap currency, once launched on the market, led to a boom in the real estate, encouraging the „trend” of having more properties than can be occupied. Looking from an aggregate perspective, *lax standards for approving loans, the initial beneficial terms and the long-term projections of growth in the real estate sector* were the factors that determined the bubble burst. Housing prices recorded a noteworthy increase between 1997-2006, particularly an increase of 124%. Compared with the average annual income, the average price of housing increased approximately from 3 to 4,6 times more in 2006. High-risk mortgage

¹ See in this context Vieru (2011).

² Subprime loans are the type of loans given to people who either have a repayment history, or have poor financial possibilities, in terms of conventional banks.

loans (the subprime) increased from 5% in 1994 to 20% in 2006. The use of new types of loans, the so called NINJA (No Income No Job No Assets) had led to real problems. As a consequence of the real estate bubble burst, all those who were drawn into investing in this sector have suffered enormously. The panic signs determined financial institutions to realize the subprime mortgage loses and tried to follow a series of recovery measures. But it was already too late.

Not many alarm signals were launched before 2006 as there were quite a few who benefited from the situation. However, before the onset of the crisis, Shostak (2003) was launching a rather rhetorical question whether the housing bubble that was forming during that period might be considered a myth or a reality. As a continuation, Mayer (2003) further developed the housing bubble problematic, exposing the grave situation towards which the economy was heading. The data analysis comes to support their arguments.

Further, White (2006, p. 1) pointed out that “...*persistently easy monetary conditions can lead to the cumulative build-up over time of significant deviations from historical norms—whether in terms of debt levels, saving ratios, asset prices or other indicators of ‘imbalances.’*” White is followed by other Austrian economists, like Taylor (2007) or Reisman (2007) who discover and further explained the mechanism behind the triggering of crises, with particular interest on the Great Recession that exploded in 2007.

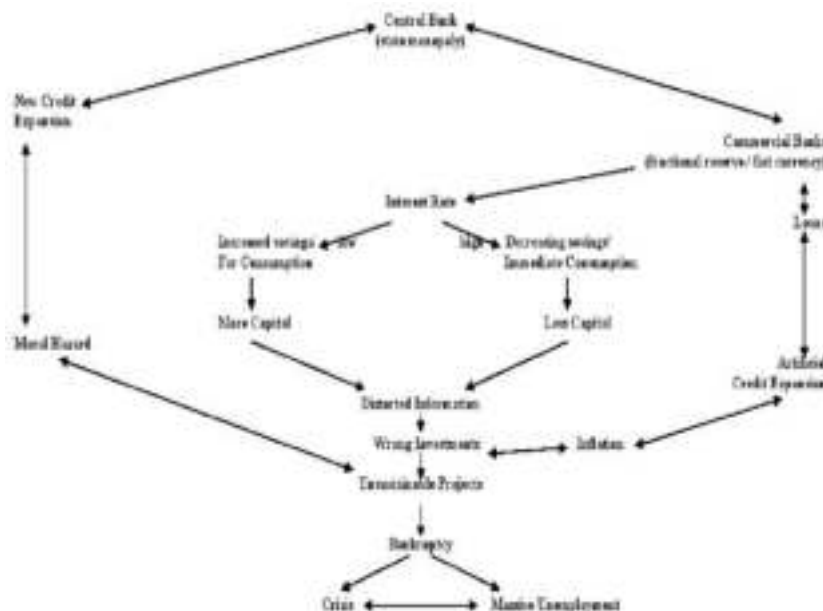


Figure 1. Austrian Business Cycle

Source: own creation

Therefore, the main problem that determined the triggering of the studied crises, the key element, was undoubtedly artificial credit expansion. Why is it named artificial? What does this expansion basically entail? The explanation is rather simple and easy to follow.

3. The Answer: Austrian Business Cycle

Artificial credit expansion is considered to be an artificial one as it doesn't have a correspondent increase in the voluntary savings of population. Doubtless, in a healthy economic environment investment is financed out of loans granted by banks and based on the resources drawn from citizen's voluntary savings. We are referring to the term deposits, meaning the money that population is willing to give up, temporarily and consciously, in exchange for the benefits arising from interest.

By granting credits out of resources that are part of demand deposits, interest rate, a true market signal, is going below its natural and normal value. Therefore entrepreneurs have to face distorted information about consumer preferences related both to consumption and to the action of saving. Consequently, we can admit, without any doubt, the fact that this leads to erroneous investment which eventually prove unprofitable and mark the way towards massive unemployment and severe crises. This was, in a very brief manner, the story behind the outbreak of the analyzed crises.¹

Our first focus represents the twenties, or better known as the Roaring Twenties², a period that can best be described as the time when the United States embarked on the vessel of progress and innovation. This was the time when the impetuous started to unleash itself; it was the pre-crisis phase that lasted roughly eight years. The blame for the great number of investment errors can be casted upon the expansionary monetary policy supported by the FED during the 1920s. The cluster of failed entrepreneurship plans as well as the elaborated bailout system brought upon the worst crisis that the XXth century came to know. The first and most relevant period for our hypothesis is 1921-1925. That is, most certainly, when the highest amount of injections took place as the level of commercial bank inflation increased with over 37% in money supply, precisely \$6.9 billion. The years 1925-1929 revealed a lower level of inflation, when compared to the previous period, but it can still be view as a significant perturbation as it provided an increase of 15.3%, meaning \$3.9 billion in money supply. The origins of these substantial injections were laid by the increase in total reserves which registered an augmentation of 35.6% in the 1921-1925 period and of 8.7% between 1925-1929. The discrepancy was due to an augmentation from 11.7:1 to 12.5:1 in the reserve ratio which,

¹ See in this context Mises (1953, 2006).

² For details concerning the Roaring Twenties see for example Robbins (1934) and Rothbard (1972).

consequently, determined the creation of several dollars in deposits corresponding to every dollar held as a reserve.¹

Having a constant fear of deflation, which was considered as an enormous impediment on the path that was leading towards industrial development and, nevertheless, economic progress, casted a veil upon Coolidge's, Hoover's and then Roosevelt's eyes, urging them to take the economic reins and to guide them towards a higher amount of involvement manifested through a lowering of the level of interest rates below their natural values (Robbins, 1934). Thereby, by maintaining a depreciated level of the refinancing rate, FED borrowed massively during the twenties, continuously feeding the impetuous of inflation and not of prosperity as they thought they would. Without any doubt, the first answers regarding the recognition of the triggering of crises come from FED and its functioning mechanism. However, the most consistent ones can be found if we dig the commercial banks underneath's; and here we place a significant accent on how they manage to juggle with the two totally different types of deposits, the time and demand ones. These jugglers are viewed as primarily responsible for the massive monetary inflation of the 1920s (White, 2010). The explanation is rather simple as it comes from the required reserve ceiling. Hence, while demand deposits required a reserve of 10%, time deposits claimed only 3%. Consequently, while demand deposits increased by only 30.8% during 1921-1929, time deposits grew double in value by no more and no less than 72.3% (Rothbard, 1972, p. 99).

From this first main cause that we described above derives implicitly a second one. Both are tightly related and might be considered as one and the same as the expansionist procedure derives from the state involvement, it is recommended to discuss them separately. Hence, according to the business cycle theory, a hypothesis first formulated by Mises and then upgraded by Hayek, crises like the 1929 one cannot be caused by individual trading decisions, but they stay in the shadow of Central Bank (in the case of U.S. we are referring to the FED) action to issue money without coverage.

There is one important aspect that we should strongly take into consideration, an issue that is still raising numerous questions, namely the level of governmental interventionism during the 1920s period. The same problem keeps economy in chains nowadays also. It has been proven that, during the period of the Great Depression, this level reached high quotas, higher than before. One of the proofs is the fact that a special governmental agency had been created precisely to prevent crises or other associated problems such as for example banking panics. This agency we are talking about is the Federal Reserve Board (FED) and it had and still has the role of lender of last resort for banks. Its main purpose was therefore to prevent collapses and "save" the economy from recessions. However, Austrian

¹ All data are taken from Rothbard's *America's Great Depression* (1972).

economists manage to reveal how its role proved to be the exact opposite as: „Before the establishment of the Federal Reserve System, national banks were not legally permitted to pay interest on time deposits, and so this category was confined to the less important state banks and savings banks. The Federal Reserve Act permitted the national banks to pay interest on time deposits. Moreover, before establishment of the Federal Reserve System, banks had been required to keep the same minimum reserve against time as against demand deposits. While the Federal Reserve Act cut the required reserve ratio roughly in half, it reduced required reserves against time deposits to 5 percent and, in 1917, to 3 percent.” (Rothbard, 1972, p. 100). Therefore, according to Austrian School economists, namely Rothbard (1972), Robbins (1934), White (2010) and Smiley (2008), the evil unleashed itself once the invention of FED took place.¹

The reason for the boom and the inevitable depression was due to the monetary policy played by FED before and after 1929. Under the influence of some economists, including Irving Fisher, the FED sought stabilization of the general price level on the ground that both inflation and deflation were harmful. Given the expansion of goods and services during the Roaring Twenties, the level of prices was expected to decline slowly, and this would have probably happened if it weren't for FEDs intervention in such a complex system called economic mechanism.

The cause that determined the authorities to pump additional amounts of money and credit in the market, thus leading to a monetary expansion, was clearly the thought that the decline in prices might be a sign of “bad”² deflation. The intention was seeking to prevent prices from falling. The problem was that it wasn't the case to adopt those measures as the falling prices were a simple consequence of the fast development of economy. Therefore, under these circumstances, the results were disastrous. Hence, banks were able to lend the newly baked money by lowering interest rates below what Austrian economists call their natural, wicksellian³ level. Since the monetary expansion prevented prices from falling, no inflation appeared to be harmful. Therefore, the extent of monetary inflation was well hidden by the

¹ It is confined by the Austrian economists that, since the creation of the Federal Reserve System, the value of the dollar declined around 98% and that the blame should not fall on the shoulders of the market but on the ones belonging to the central bank, whose institutional logic carries it on an inflationary wave of counterfeit money.

² According to their opinion, the deflation is a real threat to the industries as a low price level is not able to support the production process by giving entrepreneurs their anticipated profit.

³ The idea behind the equilibrium interest rate was advanced by the Swedish economist Knut Wicksell who argued that an increase in the normal price level had their origins in an excessive increases in the monetary base. Through the natural rate concept, his purpose became to clarify the mechanism behind the expansionist manoeuvres as well as to disentangle the root of the connections between the monetary base, banks' credit expansion, aggregate demand, and inflation. Wicksell based his theory on a comparison between the marginal product of capital and the cost behind money borrowing.

apparently stable level of prices. However, the distorted investment and the savings-investment imbalance were as real as possible.

By the late 1928 and the early 1929, FED had eventually woken up from its beautiful dream and displayed concern regarding the fact that its expansionist monetary policy was threatening a significant increase in the price level. Along with that came the fear concerning the collapse of the currency, an immediate consequence of an ill economy which was fed with hyperinflation. Monetary breaks were finally pulled and by the end of 1929 the stock, investment and real estate markets went down the drain, one after another. The real crisis had begun.

What can be inferred from the ideas mentioned above is that the magnitude of crises can be predicted by monitoring the level of inflation through the involvement of central and commercial banks; the former operates with interest rates while the latter uses both the time and demand deposits under the same basis. These are the leading anticipative methods known and used by Austrian economists, the ones that have been used, as well, by Mises and Hayek to foresee the Great Depression.

Following the same pattern, inside the current economic events, the main accusation brought by the Austrian economists is linked to the action of artificial credit expansion. The many investment errors that caused the current crisis sprang from the monetary expansion that took place during the tenure of Alan Greenspan at the Fed. The old fear concerning the prospect of a possible deflation, following the bust of "dot.com" from 2000 and the events that took place on September 9, 2001, determined the Fed to revive the credit decision through a series of interest rate cuts in the interbank market, cuts that have gone from 6.5% in November 2000 and arrived in July 2003 to 1%. This incredibly small amount remained at the same value for approximately one year, until June 2004 (Reisman, 2007).

The latest events seem to prove, one again, that the history really does repeat itself and that the consequences are increasingly wider, pressing heavily on the shoulders of the economy.

4. Conclusions

Admitting that it is hard to distinguish booms from sustainable growth, our research tried to provide a helping hand under the form of a better understanding of the separation between these two phases of economy; we pointed towards the evolution of two of the most powerful crises that economy had to face: the Great Depression and the Great Recession.

Expansion and excessive **interventionism**; these are the two words that can synthesize and characterize, in light of the Austrian point of view, the triggering of the 1929-1933 plus the 2007-present crises. Presented in a simplistic yet

comprehensive manner, these are the Austrian hints that could have helped prevent or, at least, diminish the harmful and destructive effects of what we consider to be two of the most violent crisis of the XX, respectively the XXI century. These are the indicators that have raised numerous question marks, firstly, among both Mises and Hayek and secondly among contemporary Austrian economists, determined them to launch signals about the hazardous state in which the economy was heading towards.

When economy meets a powerful impetus people embark on an optimistic ship, without even considering seeking its true nature or the triggering causes of the boom that is forming under their eyes. During these precise moments Austrian economists are the only pessimist ones. When crises occur roles are reversed as people become worried while the Austrians become optimistic. At a first glance, this seems like a completely absurd approach. However, Austrian economists rush to give this statement a sense as their explanations sustain the fact that the crisis represents a natural way of correcting the errors that economy encountered up until then, a path that leads towards recovery and the healing of an economic system which has been suffering from a grinding disease. The recession is, therefore, the needed treatment; and sometimes medicine tastes bad but one still has to swallow it in order to get better.

Although more than 80 years have passed since the triggering of the Great Depression, the events that shook the pillars of the economic structure are still raising various problems and generating controversy. The last crisis that the economic apparatus had to endure since 2007 was, in many ways, similar to the one in 1929, therefore this can only mean the refusal to learn the obvious lessons that history could have taught during the years. The Austrian School, through their Business Cycle Theory, embrace the hypothesis that the more intervention economy has to face the worst the scenario of the recession will be and truly consider that a **free-banking system**, without the bailing central bank and with the commercial banks working based on the **100% reserve system** might actually do the trick¹. Less debt and more savings were crucial back in 1930s as they are nowadays. Although accused by most economists who pull up the sleeves and think they are giving a helping hand to cure the disease, Austrian economists, guided by the leading views of Mises and Hayek, prefer not to react to the ongoing of a depression as they truly believe in self-regulated markets. The free markets, and only them, are able to coordinate the connection between time and interest, such an important aspect for further economic development. By choosing to get involved, the majority ceases to see their actual leading towards creating the problems and not solving them. Hence, the healing mechanism suggested by its representative figures, especially the one proposed in a very detailed manner by Jesus Huerta de Soto in his treatise *Money, Credit and Business Cycle* must not be

¹ See Huerta de Soto (2010).

neglected: “*The solution lies in the following: the privatization of money and the introduction of a rigid monetary system such as the pure gold standard; the establishment of a 100% reserve requirement on demand deposits, as with any other deposit of a fungible good, such as wheat or oil; and the elimination of central banks, which in modern market economies are the only socialist planning agencies in the monetary sphere that remain operative.*” (Huerta de Soto, 2010, p. 782)

Austrian economists strongly believe in their reform¹ and are completely aware of the tragedy that lies underneath the line of events that are affecting the economy. Among the already mentioned series of causes that bear the guilt of economic imbalances, they are convinced that a very important yet tragic part is actually the lack of veracious information. Understanding the true causes that are leading to the triggering of crises might represent a real solution.

The complete comprehensibility of the Austrian theory transposes the multitude of errors from theoretical towards the factual realm, one who became as real as possible. Therefore, things can be seen either in black or white. White is represented by the Austrian libertarians, while the mainstream interventionists occupy the black segment. A middle solution does not exist as gray is nowhere to be found in the color palette that describes the economic sphere. This could be explained by the fact that the necessary change must be a radical one, capable to reform the foundations of the dominant economic system from 1920 up until today. Being such a vast and alive subject, our further challenge consists of the attempt to model some of the indicators that act as a warning signal for Austrian economists, namely interest rate, inflation etc.

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¹ Austrians believe in their approach and propose a fundamental reform of economic environment. The Misesian perspective convokes the return to the 100% gold standard as well as the renunciation of fractional-reserve commercial banking and the abolition of the central bank, while Hayekians advocate a system where consumers reign as they are able to choose the currency, from a variety of alternatives that fits them best.

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Cinderella Revisited: A Historical Perspective to Graduate Work in Retailing

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Abstract: The retail industry has been employing more graduates in recent years but unfortunately, it has been met with limited success. The purpose of this paper is to provide a historical perspective to the employment of graduates in the retail industry by firstly examining the nature of retail work and how it has changed over the last century. Subsequently, the paper examines the debate on the role of education and training in the retail industry. Drawing on these examinations, the paper concludes that retailers need to realign their graduate employment policies to match what they are able to offer to what graduates need.

Keywords: recruitment; graduate employment; retail work; historical analysis; education and training

JEL Classification: M12

1. Introduction

The retail industry has been employing more graduates. In part, this is because retailers believe that with increasing competition, they will need to recruit better-qualified employees who can demonstrate a higher level of competency and hence, give themselves a competitive edge over their rivals. However, it has not been easy recruiting and retaining graduates in the retail industry. As graduates spend a longer time in educational institutions, they have higher expectations of their jobs. There is resistance in taking up retail jobs where lower pay, longer hours and subservient roles are the norm. It is no surprise then that such graduate employment initiatives have met with limited success so far.

This paper aims at providing a historical perspective to graduate employment in the retail industry as this may allow for new theorising (Hollander, 1986; Rassuli & Hollander, 1987). The paper begins with a historical review of work in the retail industry followed by an examination on the role of education and training in the retail industry. The last section discusses the implications of the review and suggests that retailers need to realign their graduate employment strategies in matching what graduates want to what retailers can offer.

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2. Cinderella of Occupations

Working in the retail industry had been described as the Cinderella of occupations in the early 20th century. At one end, there is toil, tedium and poverty and at the other, there is glamour, fulfillment and financial security (Benson, 1986).

Retail work is hard work and involved irregular hours. It does not pay as well as clerical work but for a woman in the early 20th century without the necessary educational qualification for a clerical job, retail work was considered an attractive and a readily-available means to a white-collar job. More importantly, when compared to workers in the manufacturing industry, retail employees enjoyed shorter working hours, earned more money and were less likely to be laid off. Thirty-one of the forty-six studies conducted in the period from 1880 to 1940 in various states of the United States showed that women in stores earned more than women in manufacturing or all women workers. In addition, two separate studies conducted in New York and Ohio showed that the earnings of women working in stores increased more rapidly than the earnings of women working in other industries during this period (Benson, 1986).

Workers in the retail industry also often enjoyed discount on purchases, medical benefits and paid vacation. Two separate surveys conducted in 1918 and 1936 found that stores were more likely to provide some type of health care. Studies during this period also showed that a higher proportion of store workers had paid time off as compared to factory workers. For example, employees working for J.L. Hudson and R.H., Macy were given four weeks of paid vacation leave after 10 and 25 years of service respectively (Benson, 1986).

The financial security and other benefits made retail jobs attractive to women workers especially for those who do not have the necessary qualifications for a clerical job. However, besides the hard work and irregular hours, there were other downsides to working in the retail industry.

Retail work required employees to be in contact with the public and the social norms of the time considered such work disrespectful. In the United Kingdom in the late 19th century, female retail workers were often perceived to be immoral and possibly working as prostitutes. Many of the retail workers were subjected to sexual harassment both by other employees and customers. When female sales assistants were hired by Harrod in the United Kingdom in 1888, they noted how “several of the junior members of the staff peered round showcases to see the beauty chorus arrive” (Rappaport, 2000).

It did not help that the rags-to-riches story of working class girls was popular in theatrical productions of the time. Like Cinderella, such productions showed how the working class girl used commodities to create a glamorous persona to capture the attention of gentlemen and move up the social ladder by marrying them. In

effect, such productions continued to fuel the impression that retail workers were of loose morals and worked as retail assistants for the sole purpose to get hitched (Benson, 1986; Rappaport, 2000).

Another negative aspect of retail work required employees to take on subservient roles in their contact with customers. This further contributes to the lowly status for employees working in the retail industry and expanded the opportunities for retail workers to be exploited. This was also reflected in theatrical plays and books of the period. The female shop assistant was often cast as a victim of upper-class greed and vanity, with male customers or the storeowner typically sexually harassing the shop girls. For example, "The Working Life of Shop Assistants" published in the United Kingdom in 1910, noted how female shoppers in the upper social classes derived their pleasure from retail workers' labour (Benson, 1986; Rappaport, 2000).

The situation was not different in Asia. In Hong Kong, Sincere, a departmental store retailer, tried to emulate the west by introducing women to replace men as sales assistants in their stores in 1900. Traditionally, Chinese women worked only in small family-run shops. Fashionably dressed salesgirls in departmental stores were such a novelty that they led to gawking crowds and disrupted business. After a few months, Sincere was forced to lay off the salesgirls because it was put into disrepute (Chan, 1998). This led Wing On, another retailer in Hong Kong, to decide against employing female sales assistants in 1907 when it opened its store (Yen, 1998). It was not until the late 1930s that women sales clerks finally became an accepted and common feature in China's department store business. In neighboring Japan, shop girls successfully replaced men in the retail trade only slightly earlier during the 1920s (Chan, 1998).

By the mid-century, there seems to be little change in the social status of retail workers. For example, in Priestley's (1947) play "An Inspector Calls" which was popular in Europe at the time, the lowly position of retail assistants of the period was demonstrated through Eva Smith. The protagonist was bullied out of employment as a sales assistant by the daughter of the rich Birling family and eventually forced to commit suicide. Eva was perceived to be of loose moral character by the older members of the Birling family but interestingly, found some acceptance among its younger members. In the United States, a collection of experiences of workers published in 1972 concurs that the improvement in the social status of retail workers remains marginal.

"There's some, they say 'a checker - ugh!'...They belittle me sometimes. They use a little profanity sometimes." - Babe Secoli, Supermarket Checker (Terkel, 1972).

"You have to be terribly subservient to people: 'Ma'am can I take your bag?' 'Can I do this?'" - Brett Hauser, Supermarket Box Boy (Terkel, 1972).

The climb to respectability for a retail job had been slow. By the turn of the century, while working in the retail industry was no longer disrespectable, it was still of low status. In Martin's (2000) film "Shopgirl", the protagonist Mirabelle continues with the depiction of the lowly sales assistant working behind a counter in Nieman Marcus, a departmental store in the United States. While her work was regarded as an acceptable form of employment, she was still a victim to a rich man's fantasies in the guise of Ray Porter who is twice her age. It is a modern Cinderella tale, albeit an older Prince Charming, of a lowly sales assistant waiting to be rescued.

More recently, biographical accounts of work in the retail industry in the United States reaffirms that there had not been much of an elevation of status among retail employees. Retail workers are still expected to be subservient to customers. While sexual harassment is only a remote possibility today, other forms of harassment by customers are still common (Feuti, 2007; Hall, 2010).

The above discussion has shown that there is little positive change in the status of retail work over the last century. While the retail industry was able to attract employees with its relatively higher salaries and other benefits in the past, this differential has been eroded with time. For example, shop assistants in Singapore are earning an average of S\$1,751 per month in 2010. This is lower than the average monthly wages of plant and machine operators and clerical support officers of \$2,094 and \$2,152 respectively (Singapore, 2011).

As such, in today's context, working in the retail industry is no longer appealing and a retail job is often seen as an occupation of last resort (Akehurst & Alexander, 1995; A. Broadbridge, 2003; A. M. Broadbridge, Maxwell, & Ogden, 2009; Swinyard, Langrehr, & Smith, 1991). Retail jobs offer the prospect of access to work, but rarely the opportunity to develop sustainable career paths (Lindsay, 2005).

The above discussion described how retail work has evolved and become less attractive over time. In the next section, the review will focus on how the retail industry views the importance of education and training of its employees over time and the implications this has on the employment of graduates in the retail industry.

3. Employing Graduates in the Retail Industry

The importance of education in retail work had remained contentious over the years. Historically, jobs in retailing were viewed as simple and basic. There was little need for formal training since it was work experience that developed skills and retailer-specific knowledge (Beckley, 1949; Hudson, 1978; Strawbridge, 1978). Coupled with the fact that many retail establishments in the past were family businesses, and that knowledge and skills were learnt through hard work

and experience, retailers were more likely to see practical experience as more important than educational qualifications (Goldstucker, 1963). Hence, retailers opted to recruit employees with little qualifications and sought to provide the necessary training through internships and work experience.

This view has not changed much over the years. Most retailers still do not place emphasis on formal educational qualifications when recruiting their frontline employees as retail workers are only expected to do simple routine jobs. Subsequently, many retailers tend to view training to be of limited benefits (Byrom, Harris, & Parker, 2000). Training, when provided by retailers, is limited to the usual induction programmes for new recruits and programmes designed to ensure employees work to agreed standards of performance. Such training is not extensive and do not allow workers to develop a broad range of skills that will enable their progress in their careers. Retailers that saw training as a long-term investment are the exception rather than the norm (Barcala, Pérez, & Gutiérrez, 1999; Lindsay, 2005; Penn, 1995; Robinson, 1990). This is because in the service industry, personal qualities are valued above that of professional skills (Illeris, 2002).

For some retailers, economic considerations favour the status quo in recruiting employees with low qualifications and providing little training. Retailers need to employ a large number of frontline employees. Adopting a Taylorist approach and simplifying tasks keeps the requirements for the job low and allows for the employment of workers with minimum qualifications at a low wage level. More importantly, this arrangement also allows for the employment of part-time workers which further reduces the labour cost for retailers (Levy & Weitz, 2011).

However, the choice of such a strategy is not open to all retailers. The reduction of costs had to be balanced against the value of the activity's contribution to the store's individuality (Hollander, 1964). For retailers who are seeking to differentiate themselves from the competition through better service, they have to employ better qualified retail workers and provide training to enhance the customer's shopping experience (Bent & Freathy, 1997; Gutek, 1995; Illeris, 2002; Langeard, Bateson, Lovelock, & Eiglier, 1981; Lashley & Taylor, 1998).

Research conducted at Sears established that the employment of better employees has an impact on the profitability of the company. The research found that a 5% improvement in employee attitudes could lead to 1.3% improvement in customer impression and an increase in 0.5% of revenues (Martinez & Madigan, 2001). This was not limited to departmental stores like Sears. Other sectors including the supermarket sector recognize that better-trained retail workers will offer significant long-term differentiation (Seth & Randall, 1999).

This has led to some retailers to start recruiting graduates into frontline positions that are traditionally filled by non-graduates. In the United Kingdom, for example,

graduate share of employment in the retail industry had grown from 3.3% in 1988 to 6.5% in 1998 in Britain (Mason, 2002). Retailers believed that graduates possess a higher level of interpersonal skills, greater commercial awareness and an ability to learn the ropes faster (Gush, 1996; Mason, 2002). This will give retailers the competitive advantage that they need to differentiate themselves from the competition.

Retailers are aware of the advantages of a highly qualified workforce and have been warmly receptive of retail management programmes offered by universities. Some retailers have gone further and are actively working with universities to develop retail education and management programmes that are more relevant to the needs of the industry including the development of internship programmes (Hurst & Good, 2010; Jones & Vignali, 1994).

However, studies have shown that graduates have difficulties in assimilating to work in the retail industry. Retail workers with higher levels of education were more likely to be dissatisfied in their jobs (Bent & Freathy, 1997; Whysall, Foster, & Harris, 2009). With a higher number of years spent in educational institutions, graduates have higher expectations of their jobs when compared to non-graduates. These include the expectations of having the opportunity to develop their skills and building relationships with other people (A. M. Broadbridge, et al., 2009).

Graduates enjoy challenging work. They are interested in developing their skills and being recognized for their ability (Arnold & Davey, 1999; A. M. Broadbridge, Maxwell, & Ogden, 2007; A. M. Broadbridge, et al., 2009; Sturges & Guest, 2001). Unfortunately, in the retail industry, most graduate employees find themselves in jobs which could easily be, and often are, filled by people with much less formal education (Mason, 2002). As these jobs underutilize their skills and knowledge, there is little opportunity for graduates to develop their skills and be recognized for their ability.

In the short term, the retail industry does provide some challenges to graduate employees. Due to pressures to meet sales targets and train employees quickly, graduate employees are often put on accelerated training programs. While the job responsibilities of many graduates are no different from that of general sales assistants, some are given positions of significant challenge and responsibility. Even then, many of these jobs do not require the skills and knowledge of an employee with degree-level education. After a period of time, the graduate employee will soon realise the lack of intellectual skills required of the job and feels over-qualified by their education. It is not surprising then that turnover among graduate employees in the retail industry remain high (A. M. Broadbridge, et al., 2007; Gush, 1996; Mason, 2002).

The high turnover rate among graduate employees further perpetuates the problem. Retailers do not expect graduates to stay with the company for long and hence do

not have any motivation to modify the job scope to suit the needs of the graduate employee. When graduate employees succeed in obtaining employment in the retail industry which makes better use of their skills, this is more likely to occur through their promotion out of low-level jobs (Mason, 2002).

Graduates also value good relationships with colleagues as such relationships enable them to enjoy their work and feel connected to the organization. In addition, good relationships with other employees can be sources of emotional support for the graduate employee, especially when they are employed in their first job (Arnold & Davey, 1999; A. M. Broadbridge, et al., 2007; Sturges & Guest, 2001).

Unfortunately, such positive relationships with colleagues in the retail industry will be difficult for graduate employees to establish. Despite the recent employment of graduates in the retail industry, the majority of employees in the industry are still non-graduates. As the two groups have different expectations, behaviors and interests, it is difficult for members of the different groups to establish strong relationships with each other. In addition, many non-graduate employees view graduate employees as a threat to their livelihood. They are concerned that employers will favour graduates in terms of promotion or they may be disadvantaged in any decision that the company may make (Goldstucker, 1963; Leng, 2008).

Positive working relationships with colleagues in the retail industry is important because of the long working hours which necessitates constant interaction and a high level of teamwork and co-operation among employees. Frontline service workers often turn to other employees in a similar position for support, friendship, respect and admiration because no one else can understand the sufferings that they go through (Höpfl, 2002). In part, because there is a perceived sense of a common enemy, the customer in this case, a sense of camaraderie can develop among retail employees.

“We serve them but we don't like them (customers)... there was a camaraderie of sorts (among employees).” - Brett Hauser, Supermarket Box Boy (Terkel, 1972).

Indeed, the retail employee can often select their response to customers and in certain cases, exact revenge when the opportunity arise (Benson, 1986; Terkel, 1972). Even till today, and even in upmarket departmental stores, the story of the retail employee making the consumption process difficult for the consumer is not uncommon (Feuti, 2007; Hall, 2010). For example, shoppers were slighted by salespeople in Barneys during its heyday as the purveyor of fashion when the opportunity presented itself (Levine, 1999).

Good relationships with colleagues in the retail industry can be a source of motivation and job satisfaction (Bent & Freathy, 1997; Huddleston & Good, 1999). Given the centrality of positive working relationships with colleagues in the retail industry, failure among graduate employees to develop positive relationships with

other employees can adversely affect their success and eventually their continued employment in the retail industry.

The above discussion traced the arguments for the need of educated employees in the retail industry. While some retailers do not see the need for highly educated employees or are driven by economic considerations to employ workers with little qualifications, others have embarked on graduate employment programmes only to be met with limited success. Graduates have different expectations from non-graduates. They prefer jobs that provide them with personal development opportunities and an environment that allows them to form good relationships with their colleagues. Retailers have so far been limited in their success in meeting these different expectations.

The next section considers how a historical review of retail work and the role of education and training in the retail industry offer an alternative perspective to the issue of graduate employment in the retail industry.

4. Fitting The Glass Shoe

The discussion so far followed the evolution of retail work over the last century and the debate surrounding the importance of education and training in the retail industry. Retail work is not perceived to be of high social status although conditions of employment are not nearly as bad as the popular image of the poor, down-trodden salesgirl would suggest. A retail employment position is not considered as an attractive employment opportunity but as an occupation of last resort. It is no wonder then that the retail industry faces difficulty in recruiting and retaining graduates. After all, employees who feel stigmatized because of the low social status of their work will not only leave the industry, but will also not recommend a job in the same industry to a friend or family member (Wildes, 2005).

Goldstucker (1963) suggested that since there is little that can be done to alter the status of a retailing career, it may be pointless to beleaguer the issue. History had shown that the employment of a new group of employees in the retail industry is often fraught with difficulties as society is unable to accept such new working groups readily. However, with time, it is possible that the society will grow to accept these groups in a limited manner. In the late 19th century to early 20th century, female sales assistants were not accepted in their new roles in the retail industry. Today, while a retail job is still of low status, female sales assistants are no longer perceived as women of loose morals or prostitutes.

Graduates in the retail industry may be facing the same circumstance as female sales assistants in the past. While retail jobs are not appealing to graduates at the moment, with time, graduate employment in the retail industry may be something

that will be accepted to a larger extent. Already, many retailers are actively recruiting graduates. Interestingly, cultural conservatism in Asian countries had played a part in prolonging the acceptance of the employment of female sales assistants in Asian countries compared to the West. Whether that same conservatism will play a part in prolonging the acceptance of the employment of graduate employment in Asian countries remains to be seen.

Due to the different human resource strategies employed by retailers and the type of merchandise sold, it might be possible to see certain sub-sectors of the retail industry being more open and accepting of graduate employees (Dawson, Findlay, & Sparks, 1986). For example, many book retailers have established graduate employment programmes. Graduates are more open to work for book retailers because they believed that their qualifications can be useful in their work, they have an interest in books and that it is more respectable than the other sub-sectors of the retail industry due to the perceived higher intellectual capabilities of book sellers (Leng, 2008). Indeed, such sub-sectors can be agents for change in the graduate employment trend in the retail industry.

Across time, it can also be established that the positive aspects of retail work have diminished. Retail jobs were attractive to women early in the 20th century due to its relative merits over a job in the manufacturing industry and as a readily-available alternative to a white-collar job. However, workers in the retail industry are not paid as well compared to the other industries today. More importantly, as graduates in today's world are trained and have many opportunities open to them, many of which offer better terms of employment than the retail industry, the attraction of a retail job is not obvious to the graduate employee.

Fortunately, an attractive job is not only about pay levels. It is also about whether the job is interesting and contributes to employees' professional development. While retailers had some success in giving graduates challenging work with accelerated training programmes, they have not considered how quickly graduates learn and challenges dissipate. When that happens, graduate employees become bored and dissatisfied with their work.

Some retailers have attempted to resolve the issue by moving graduates across different functions and geographical locations. While this achieves the aim of continuously challenging graduates with new job responsibilities and helping them to assimilate into the company by knowing more people, this is only a short term solution. The long term solution lies in reviewing the need for graduates in the organization in the first instance and devising jobs that suit the needs of graduates.

The earlier discussion on the role of education in the retail industry and how retailers view work in the industry shed light on the resistance by retailers to systematically review the need for graduates in the industry. Retail work had for a long time been considered simple and required little formal qualifications. Hence,

without realizing the need and usefulness of better-educated employees, many retailers, especially the smaller ones, do not see the need for change (Barcala, et al., 1999; Byrom, et al., 2000). Coupled with economic considerations, it is not surprising that many retailers have decided to remain with the status quo.

For larger companies, even when they have decided to adopt a graduate employment strategy, there may still be resistance to graduate employment. Implementation of graduate employment programmes may be half-hearted when some quarters subscribe to the view that retail work is simple and that graduates are unable to make a difference to the company. Even when graduates are employed, they may not be able to gain acceptance from other non-graduate employees. Hence, the lack of support may force graduates to leave the company earlier than intended.

For retailers, this suggests that a successful graduate employment strategy does not stop at the management level. While a review of policies and guidelines as suggested by other researchers are important in ensuring the success of a graduate employment programme, retailers should also work on the informal support provided by employees, especially the non-graduate employees. Addressing the concerns of the non-graduate employees and building relationships between graduates and non-graduates employees will be critical aspects of any graduate employment programme.

Clearly, retailers need to re-visit what they require from employees. If retailers believe that formal education is not necessary for a successful retail career, then they should not continue to source for employees from colleges and universities. More importantly, if graduates are needed to fill in positions, retailers should not kid themselves that graduates are willing to accept wages that do not reflect their higher qualifications or jobs that do not require their level of knowledge of skills (Goldstucker, 1963).

The above discussion has focused on the demand perspective of graduate employment in the retail industry. Due to higher literacy levels in developed countries, the growing number of graduates gives a supply perspective to the issue as well. For example, the 1990s in the United Kingdom saw an increasing substitution of graduates for non-graduates in a range of occupational areas. While some of the substitution were driven by rising employer demand for skills and knowledge, others were due to the availability of an increasing number of graduates applying for previously non-graduate jobs (Mason, 2002).

This may have led to two different forms of service employment. In mainstream recruitment, graduates are employed into the company through formal training schemes into positions requiring graduate skills and knowledge in functions such as marketing and human resource management. Such graduates are generally within the radar of head office. This number is however, generally small. Non-

mainstream recruitment involves the employment of graduates into entry-level positions in sales, clerical and administrative areas alongside non-graduates entering the same kinds of jobs. These are generally supply-driven and head office has little or no data on these employees. Hence, mainstream employees usually enjoy substantial benefits in terms of initial salary, structured training and development programmes and promotion opportunities relative to non-mainstream graduates whose paper qualifications give them no advantage at all (Mason, 2002).

This provides a possible explanation to the graduate employment problem. Retailers perhaps do require graduates to work in head office positions but are either confused or succumbed to competitive pressures that they have expanded graduate employment to other functional areas without a corresponding change in their employment policies. Such a situation though plausible remains to be researched further.

If working in the retail industry was considered the Cinderella of occupations in the past, do graduates working in the retail industry today consider themselves as Cinderellas? Clearly, the potential glamour of the retail trade is lost to the modern graduate. The graduate of today is offered more glamorous opportunities in other industries compared to hard work, long hours and low pay in the retail industry. Retailers, like fairy god-mothers, must provide the necessary glamour, glass shoes, evening gowns and all. Failing that, retailers may find that the strategy of employing graduates to be more competitive will turn out to be just another fairy-tale.

5. The Modern (Graduate) Cinderella: Myth or Reality?

Savitt (1989) had noted that a review of history can enhance an understanding of how environmental forces had shaped decisions. The objective of this paper was to frame the issue of graduate employment in the retail industry in its historical context and in so doing, understand how environmental factors have shaped the decisions of both employers and employees. This perspective had revealed that retail work had historically not been the most attractive career both in terms of conditions of employment and social prestige. In addition, the importance of education in retail work has remained debatable. With this historical baggage, it is unlikely that graduates will be working in the retail industry in large numbers in the near future until retailers have addressed this.

Still, while a career in retailing is not attractive among graduates, this is mediated by personal interest, exposure to retail-related subjects and academic performance in retail-related subjects (Commins & Preston, 1997; Swinyard, et al., 1991). Considering that retail employment among students is common, there then exists

an opportunity for retailers to correct the perception and engage these employees for the longer term (A. M. Broadbridge, et al., 2007).

This paper concurs with Freathy (1997) that employment structures do not operate in isolation from the wider structural transformations operating in the retail sector. The historical review of work in the retail industry and the perception of the role of education in retail work demonstrate that understanding the past is central in contextualizing change.

6. References

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The Romanian Economy in the Second Half of the XIXth Century

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Abstract: At the beginning of the twentieth century, the Romanian society was facing a unprecedented challenge in its history. The main problem was the effort for modernization, due to the large costs which were threatening to radically transform the political, social and workforce between land owners and those who worked the land. The Agrarian reform of 1864 only partially fulfilled the expectations of all the involved parties, therefore the solving of this problem was major given that the agriculture area preserved itself as the main economic branch.

Keywords: land production relations; industrial workers; agricultural workers; customs protectionism; economic modernization

JEL Classification: N0; O10

At the mid of the XIXth century, after the disintegration of the Ottoman trade monopoly (Peace of Adrianople, 1829), the Romanian Principalities managed to register a significant progress in terms of production and exchange relations. In a short period of time (1829-1848), the Romanian Principalities were connected to the European economic system, the trade quota reaching higher values if compared to the ones from the previous period. The Romanian Revolution (1848) paved the way for social and political upheaval generated by the increasing trade volume and Principalities' strong connection with the major European countries. In the first half of the nineteenth century, Transylvania was still one of the most disadvantaged provinces of the Habsburg Empire. Thus, compared to the other Romanian states, it represented itself better regarding on the number of commercial enterprises and development of new industrial sectors (construction, metallurgy, wood processing industry, textile, paper, leather, etc.). (Muresan & Muresan, 2003, pp. 70-84)

The Transylvanian trade orientation in terms of volume was still excessive compared to Moldavia and the Romanian Country, and regarding the exchanges with the other provinces of the empire, Transylvania registered major capital losses

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due to a lower economic level. This situation continued roughly in the second half of the XIX century spreading across Transylvania, Banat and Bucovina once with the emergence of financial self-help aid companies which focused on domestic capital and enabled massive investments within the industry field. An important reference point of the economic development was the railway number of kilometers which in the early twentieth century exceeded the one of the old kingdom. The development of the banking system enabled also the emergence of modern exchange relations within the territories under Austrian domination helping among other things to the Romanians' representation in these areas and supporting the social and national ideals. (Constantinescu, 2000, pp. 35-90)

In Moldavia, between Prut and Dniester, a particular situation was to be found because, in the early years of Czarist domination (since 1912), since there were not registered any major changes in the organization of the province, but right after the revolution from 1848, the forced Russian process would prevent the national development of the province, the main efforts being channeled towards the preservation of the national identity. With few exceptions, agriculture remained the main economic branch and consequently, there could be noticed a poor development of social and economic relations as the Czarist Russia would further continue to be a conservative and rather feudal state.

1) Economic and social projects set forth in the Romanian Revolution of 1848

The burst of the Romanian revolution in 1848 was a moment of utmost importance in terms of national identity and expression of social and political grievance, demand) favored by the general economic growth. The European Revolution from 1848 "was the occasion and cause of the burst of Romanian revolution" (Nicolae Balcescu). In Western Europe, the social class ruling the revolution was the bourgeoisie whodue to her number, role and economic strength wanted to obtain political positions nationally speaking and in order to acquire success in the fight against old nobility, suggested the adoption of radical economic, social and political programs aiming by these measures to gain over other social groups, especially the industrial workers. Consequently, the revolution's objectives from the West European continent (in the economically developed states) were more social and economic, and were considering the adoption of measures for the liberalization of social relations and the development of the economic situation. Unlike Western Europe, in Central and South-Eastern Europe, there was an entirely different context characterized by the fact that people in this geographical area were under foreign domination, and consequently, their economic development was poorer than on the West side of the continent. Agriculture was still organized according to feudal criteria and continued to represent the main economic branch generating profit while in the West its place was replaced with the one of the industry.

The immobilization of the social economic land relation along side with the number of those engaged in commercial activities (the bourgeoisie's one) was utterly inferior if compared to the West side of the continent and consequently, the old economy of the bourgeoisie was rather modest: the main economic role belonged to the large landowners (boyars and nobility). From a social perspective, a clear distinction was to be made, namely the unequal economic development between the West characterized by a numerous proletariat and the Central and Eastern side of the continent, where its number and strength had little significance, the peasantry remaining the main social category. While in the West, the bourgeoisie was leading and organizing the revolution proposing radical social and economic measures, at east of Elba, the revolution was held by the boyars and nobles, and it had a more moderate revolutionary program with political and national objectives aiming to achieve either national unity, either independence, or both. The Romanian Principalities made no exception to this general framework, and consequently the main measures and revolutionary programs had a moderate character, whereas the role of the bourgeoisie class was held primarily by representatives of liberal boyars who, schooled in the West, had come home to put into practice of new ideas and reforms. However, they had to face the opposition of boyars who did not like the sharp changes in the social landscape which might have threatened their position. Therefore, two camps were already established:

- the reformer one (represented by liberal boyars);
- conservative.

The main programmatic documents of the Revolution were:

1. The Petition of Proclamation: March 15, 1848, Iasi;
2. The National Petition Blaj, May Transylvania;
3. The Proclamation from Islaz, June, Romanian Country;
4. The Desires of the National Party from Moldavia, Brasov, August 1848.

All these documents had rather a national character revolutionary and less social or economic because they were written by the representatives of the nobility and these ones were not prepared for making social changes and reforms. Consequently, the support provided to revolution by the main social class (the peasantry) was minimal because it offered nothing to them in exchange. Specifications for imposing social reforms such as the one of Moldavian revolutionaries "... urgent improvement of the villagers' state ..." did not express anything other than a society's awareness and not that of measures to be adopted. This situation was found in Romanian Country where the revolutionary government led it for 2 months willing to put into practice only sharp decisions aiming to defend the revolution from the foreign intervention. However, the popular support of the urban population proved to have been organized, alongside with the two coup d'état attempts, by the Conservative party. The failure of the Romanian revolution (and that of European one) had as main cause the intervention of foreign military

army on the Romanian territories (the Tsarist, Ottoman and Habsburg one). Yet, though the organic regulations were being restored through the work of revolutionaries of the 1848, most of them sent into exile, a positive propaganda would be made abroad with respect to the political ideals (national) of Moldavia and the Romanian Country. (Ciachir, 1999, pp. 120-148)

2. The Economic and social development during the reign of Alexandru Ioan Cuza

The failure of the Romanian revolution from 1848 did not represent the abandoning of national and independence ideals which would be happily fulfilled after the Crimean War (1853-1856). During the Paris Peace Conference, there was discussed the Principalities situation, the consulting of the people's will through ad hoc meetings and the dispute between the Unionist Party and the one opposing to the Principalities unification was analyzed in 1859 on the occasion of the double election of Al. Ioan Cuza, in Iasi and Bucharest, as prince of Moldavia and Wallachia. This way, there could be found a mean which reconciled, momentarily, the union followers and those who opposed it inside the country and abroad. Al Ioan Cuza's reign began with a set of reforms, social, political and economic meant to achieve the unification of administration, legislation and economic development of the two principalities. Economically and organizationally, the main measures adopted by Cuza and his close ones, would focus on redistributing the national wealth through two secularization laws, namely 'The Law of the secularization of Monastery estates through which 11% of the arable land of the principalities (and related income) was reintegrated in the national circuit and 'The Agrarian Reform' according to which, nearly half a million of peasants, divided into 3 categories, were granted with land through. New allotment plots could not sell their land for 15 years and were forced to pay a financial contribution to the state. (Axenciuc, 1997, pp. 87-150)

With the income from compensation, former owners could either make major investments in agriculture or in industry, because the areas of arable land which totaled 500 ha were exempted, without rivers, orchards, vineyards, ponds, and pastures being calculated and the 500 ha of arable land were considered per family member. Socially and economically, the measure was welcomed on medium and long term, but on short term, it was catastrophic because in 1864 and 1865 agricultural production had been much lower than the previous level.

Al Ioan Cuza's reign was important because, through his economic and social reforms, he made the return to the previous situation impossible, and Romania joined on the road of modernization of social, economic and political relations. Romania is now a modern state, capable of taking advantage of the international character and to gain its independence in 1877. By the outbreak of World War I,

Romania's economic development and political stability would be the success of the modernization of Romanian society. The 1859-1866 economic development of Romania was marked by profound changes due to both demographic factors and especially the United Principalities opening to the West. Through the ports on the Danube, especially Galati, large quantities of grain, timber, oil, wine, salt and other manufactured goods were exported, whereas from France and England, machines, tools, textiles, luxury products, etc, were imported. The Porto-Franco status that both Galati and Braila had already been in 1837, fostered the economic development of the areas adjacent to the two ports, so that both Braila and especially Galati, registered unprecedented urban economic development. At the end of Cuza's reign, the Romanian state had firmly stepped towards social and political modernization. With his abdication from the throne and the arrival of Prince Charles I of Hohenzollern as Prince of the Principalities in May 1866, a period of true progress and economic and legislative stability would be established, modern Romania thus offering the legal imperative to develop along the lines already drawn by Western Europe until 1914. Both before and after gaining the independence in 1878, the main landmarks of Romanian economic development were mining industry, oil processing and banking. Revenues generated into the state budget would give the possibility to make major investments in transport, a field which was deficient in Romania. (Constantinescu, 2000, pp. 145-177)

3. Economic and political doctrines in the Romanian Space

Although significant steps had been made to increase the living standards of the rural population, a feature of Romania's economic development remains the ability of rural population to purchase at minimum standards, which implies limited possibilities of expansion of the industry. However, at the end of the XIX century and early twentieth century, during 5 decades of economic, social and political upheaval, modern Romania completed the transition from feudal economy to market economy, from the agricultural consent system to the two major land reforms in 1864 and later in 1921. The Great Unification of 1918 would address the fundamental principles of social, political and economic democracy in the constitution of 1923. In terms of doctrine, political parties disputed the monopoly over the steps to follow regarding the economic development of Romania, both the Liberal and the Conservative parties proposing solutions for economic development according to the interest groups they promoted when they were governing. The Liberals, for instance, were adepts to the development of manufacturers' industry and industrialization of the national economy through domestic capital ("by ourselves") while conservatives brought the solution of agriculture and related industries in steps (small steps policy). In the second half of the nineteenth century, Romanian economy was involved in the European economic circuit, as agriculture was the main economic branch of the country and,

on these grounds Romanian economy was absolutely complementary to that of Western countries. Economic growth was based not only on more powerful trade with Western Europe, but also on other factors contributing to the growth of the state's and contributors' revenues, such as:

- gaining of independence in 1878;
- demographic growth;
- accelerated development of urban areas; around Bucharest and Iasi other cities appear: Galati, Ploiesti, Braila, Pascani, Craiova;
- period of relative stability (peace);
- the existence of a uniform, legislative, national framework;
- the encouragement of the emergence and development of new industries such as: mining and quarrying, oil processing, banking, cellulose and paper, glass, cement, food, clothing, vehicle construction and both road and especially fluvial and maritime transport. (Constanta).

Factors that hinder development economic:

- lack of consistency in promoting protectionist policies;
- concluding defective trade and customs agreements for the national economy with Austria and Hungary;
- lack of social policies to help small landowners in rural areas (peasants);
- poor infrastructure.

From a financial perspective, after 1878, Romania was forced to seek foreign loans to compensate for the shortfall of domestic credit so that foreign capital made its appearance in the form of Marmorosh Bank, Albina Romanian Bank. Capital accumulation caused by protectionist measures (soil and subsoil richness law) led to massive investments in industry and agriculture, contributing, on the one hand, to the increase of the number of workshops, factories, machinery, tools and, on the other hand, to the raise of employed people in agriculture (agricultural workers). Although agriculture was not the most powerful economic sector, it was the population's main source of income, thanks to its potential and investments made in 1900, about 70% of the population contributing to exports. (Muresan & Muresan, 2003, pp. 200-235)

4. Romania at the turn of the nineteenth and twentieth century; economics, society and culture

Social, political and economic relations were obvious, thus the authorities, especially the Liberal and Conservative political parties publicly affirmed their desire to favorably solve this aspect of the agrarian problem, constituted of a more equitable redistribution of agricultural and electoral land. Frequent social unrest

from the late nineteenth century had already prefigured the great peasant uprising broke out in 1907 amid deepening disputes between peasants and landowners. In principle, it is about the over 1 million ha of agricultural land owned by the estate owners, over 1000 ha of vast property, intended for expropriation. Also, the problem of changing the electoral law and granting universal suffrage would be called into question, reform without which the realization of contemporary Romania would have remained a mere project. (the share of agriculture in creating the social product, national income, population employment highlights the economic importance of agriculture).

The social structure fully reflected reality, in 1913 over 81% of the population still living in rural areas. Between 1901 and 1914 the growth of the social product of Romania was on average 7.5% and 5.6% the national income. The growth rate of industrialization of the national economy would allow, on the one hand, to emphasizing the share of industry in achieving social income from 20% in 1901-1902 to 25% in 1912-1913 and on the other hand, it would help to lower national income from social product from 65% in 1901-1902 to 55.7% in 1912-1913 as a result of expenditures necessary for the introduction of machines, tools and machinery in the production process. With all the efforts to modernize the economy, the industry failed to meet domestic requirements, low processing of products and raw materials contributed to reducing efficiency by 2-3 times less in comparison with industrialized states. (Axenciuc, 1997, pp. 201-235) Efforts made towards protecting national industry - see customs war with Austria-Hungary, Costinescu 1904 customs tax, providing local entrepreneur with facilities, etc. – would permanently face the need to attract fiscal resources to the state budget and therefore contribute to the contraction of both external and internal loans, public debt rapidly increasing. The small proportion in concentrating industrial capital was highlighted by the size of companies, most of them nothing more but workshops with a small number of employees.

A inquiry done in 1913 by the authorities identified 379 of the 629 companies with more than 100 workers. A serious obstacle in the development of the Romanian society, the raising of living standards was certainly represented by a lack of unity of the Romanian provinces, most of the territory and of the Romanian population living under foreign domination in historical Romanian lands such as Bessarabia, Crisana, Maramures, Transylvania. To fulfill these historical ideals, Romania had to take historic decisions and opportunities would arise soon with the First World War.

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Miscellaneous

**General Aspects on Oral-Dental Care Social
Services for Children in Galati County, Romania**

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Abstract: This presentation aims to describe the structure and treatments supplied by oro-dental providers (dentists) working within the social health (publicly funded) insurance scheme in Galati county for 0-18 year-olds over a four year period. Galati County is representative of Romania in terms of its population demographics, the number of inhabitants and the need for social oro-dental care. Data on activity were collected from the treatment and activity records of the dentists who provided care within the national health insurance scheme. It provides an overview of the current state of publicly funded dental care for 0-18 year-olds. As the data were consolidated and no patients could be identified from the data, it was deemed unnecessary to seek ethics approval for the study. The number of dentists (117) working for the public insurance scheme remained constant over the four years period. Eighty percent of the work that they performed on 0-18 year-olds involved active treatment of teeth (fillings, etc). Those who work for the National Health Insurance scheme are limited to the provision of care and treatment within a maximum of 200 Euros per month in fees and within this ceiling have limited capacity to provide services.

Keywords: social services; social health insurance; structure indicators

Jel Classification: G2; I13

Introduction

Worldwide dental problems, particularly cavities and parodontopathies have a top place in the morbidity of the population, with a well-determined influence on the state of immuno-prophylaxy of certain organs and systems (digestive, cardiovascular, endocrine systems). Special attention should be granted to the 0-18 age group, as specialised literature has shown that oral pathology in children and teenagers is very high, due to both the changes in dental status during this life stage, and the considerable differences in the access to oral care services.

In this context, WHO (2002) recommends the development of oral health services focused on priority directions for the control of oral problems, and the ease of access to prophylactic and treatment services for this age group.

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In Europe the systems of oro- dental care are financially and organisationally modelled on two main topologies: the model of health care insurance (Bismark) and the model of the national health care system (Beveridge). Both models provide most services with a reimbursement percentage of up to 50% - 100% for children.

In Romania, the social health care insurance is the main system whereby the population may get access to health care services, including a service package for dental care divided into prophylaxis, treatment, and emergency care for the 0-18 and over 18 year-olds. Children are provided the entire range of specific services with a reimbursement of up to 100%. Thus, financial cover is also provided for services involving the dental technique laboratory, for orthodontic apparatuses and prosthetics.

To date there are no national studies analysing the time evolution of oro-dental care services provided by the Romanian social health care system. A county of the size of Galati ranks among the first ten in the country in point of population - 544000 inhabitants – and has a number of cases pertaining to the 4-19 age group susceptible of a rich oro-dental pathology of 98443; thus it may provide a general image of the present state of the oro-dental assistance within the framework of the Romanian health care insurance system as a result of the present study.

The purpose of this study is to review the types of oro-dental services provided to the 0-18 year-olds by the health care insurance.

The analysis of the oro-dental services was performed by using specific indicators: structure indicators, indicators of prophylactic orientation. The chosen method allows for the comparison of basic information obtained by statistic calculations with the standards.

The topic under analysis is the oro-dental services provided by various dentists in the county of Galati.

Thus, the services provided by a slightly variable number of doctors under contract with the National House of Health Care Insurance (CNAS) were analysed per year.

| Year | 2008 | 2009 | 2010 | 2011 |
|-----------------|-------------|-------------|-------------|-------------|
| No. of dentists | 122 | 122 | 117 | 105 |

The information background consisted of the statistical data resulting from the services reported during these years.

The specific indicators used are:

- *Structure indicators for treatment activities* (S1 - S6) representing the ratio of certain groups of procedures out of the total treatment services.

- S1 – the percentage of consultations (%)
- S2 – the percentage of orthodontal treatments (%)
- S3 – the percentage of parodontal treatments (%)
- S4 – the percentage of surgical procedures (%)
- S5 – the percentage of orthodontic treatments (%)
- S6 – the percentage of prosthetic treatments (%)

The standards of performance are: S1 – 12%; S2 – 38%; S3- 15%; S4 – 8%; S5 + S6 – 27%.

When establishing the performance standards it is taken into account that the finite procedures account for about 35% of the dentist's entire activity, the remainder being unfinished procedures. The favourable evolution of these indicators to the purpose of reducing morbidity through oral disease is the following: decreasing the number of primary consultations, surgical treatments and prosthetic services; increasing the number of orthodontal, parodontal and orthodontic services.

- *Structure indicators for prophylactic activities (S1p – S4p)* represent the ratio of certain groups of procedures out of the total prophylactic activities.

- S1p – the percentage of prophylactic consults (%)
- S2p – the percentage of professional dental brushings (%)
- S3p – the percentage of topical fluoridation procedures (%)
- S4p – the percentage of sealing procedures (%)

The favourable tendency is seen in the decrease of the prophylactic consultations and the increase in the other service types.

- *Prophylactic indicators (of prophylactic orientation OPI – OP4)*

OP1 – the ratio between the total number of finite services for the simple fillings and those for the complex fillings. The values above 1 refer to a prophylactic attitude, and those equal to and under 1 signify non-prophylactic activity, hospitalisation inefficiency or hospitalisation absence.

Performance standard – a ratio above 1 (as high as possible).

OP2 – the ratio between the total number of obturations (for the simple and the complex fillings) and the total number of extracted teeth. The values above 1 signify a prophylactic, conservative attitude, and the values equal to and below 1 signify a non-prophylactic attitude.

Performance standard – a ratio above 1 (as high as possible).

OP3 – the ratio between the extracted teeth and the number of reconstructed missing teeth.

Values above 1 indicate a non-prophylactic orientation, while those equal to 1 show a good prophylactic activity; there can be no values below 1 for this indicator.

Performance standard – ratio equal to 1.

OP4 – the ratio between the number of prophylactic services and the number of therapeutic services.

Values above 1 signify a predominantly prophylactic activity. Values under 1 signify the presence of therapeutic acts to the detriment of prophylactic ones.

Performance standard – a ratio above 1.

Results

The evolution of the structure indicators for the curative activities may be seen in Table 1.

Table 1. Structure indicators for the curative activities

| Indicator | 2008 | 2009 | 2010 | 2011 | High standard | Final results | Trend |
|---|---|---|---|---|---------------|-----------------------|-----------------------|
| S1 - % consultations | 1.31% 390 | 0.11% 313 | 1.69% 364 | 1.62% 468 | >12 | Increase | Reduction |
| S2 - % dental treatments | 40.64% 22350 | 36.81% 18108 | 35.9% 17102 | 33.2% 14913 | >38 | Reduction | Increase |
| S3 - % periodontal treatments | 3.43% 1795 | 6.38% 2356 | 6.04% 1896 | 5.91 1826 | <15 | Increase | Maintenance |
| S4 - % surgical procedures | 18.56% 7076 | 18.03% 6148 | 17.20% 5725 | 15.91% 4581 | <8 | Reduction | Reduction |
| S5 + S6 - % orthodontic procedures (S5) + prosthetic (S6) | 1.092% 418 -0.08% 32 -1.012% 386 | 0.84% 289 -0.13% 45 -0.73% 244 | 0.93% 311 -0.27% 91 -0.66% 220 | 0.99% 287 -0.34% 98 -0.63% 189 | >27 | Increase Reduction | Increase Reduction |

➤ The number of consultations, new cases of patients increased by 0.31%.

- The number of odontal treatments gathering all the procedures for simple and the complex fillings decreased by 7.44%.
- The number of parodontal treatments cumulating procedures of dental plaque removal, alveolar curettage, and medication of stomatites increased by 0.48%.
- The number of surgical procedures including the procedures of simple and complex extractions for deciduous and permanent teeth decreased by 2.65%.
- The number of orthodontic treatments, i.e. mobile braces increased by 0.26%.
- The number of prosthetic treatments viz. fixed prosthetics for permanent teeth decreased by 0.36%.

For the prophylactic activity the structure indicators have the time evolution shown in Table 2:

Table 2. Structure indicator for prophylactic activities

| Indicator | 2008 | 2009 | 2010 | 2011 | Final results | Trend |
|------------------------------------|----------------|----------------|----------------|----------------|---------------|-----------|
| S1p - % prophylactic consultations | 77.28% 6837 | 71.74% 6357 | 64.68% 5057 | 58.94% 3768 | Reduction | Reduction |
| S2p - % professional brushing | 8.41% 592 | 8.26% 732 | 9.69% 758 | 10.98% 702 | Increase | Increase |
| S3p - % local fluoridation | 6.39% 359 | 5.66% 502 | 10% 610 | 10.14% 649 | Increase | Increase |
| S4p - % sealing | 11.3% 796 | 13.04% 1156 | 16.69% 1305 | 17.08% 1092 | Increase | Increase |

- The number of prophylactic consultations decreased by 18.3%.
- The number of professional brushings increased by 2.57%.
- The number of topical fluoridations increased by 3.75%.
- The number of sealings increased by 5.8%.

The structure indicators for the entire evolution evince the following:

Table 3. Prophylactic indicators (prophylactic orientation)

| Indicator | 2008 | 2009 | 2010 | 2011 | High standard | Final results | Orientation |
|---|------|------|------|------|-----------------------------------|---------------|------------------|
| OP1 – no. filling of simple / complicated cavities | 3.35 | 3.39 | 3.76 | 3.76 | As big as possible improper ratio | >1 | Prophylactic |
| OP2 – total no. fillings / total no. extracted teeth | 1.45 | 1.35 | 1.43 | 1.26 | As big as possible improper ratio | >1 | Prophylactic |
| OP3 – total no. extracted teeth / no. absent restored teeth | 1.39 | 1.68 | 1.6 | 1.7 | Equivalent ratio | >1 | Non-prophylactic |
| OP4 – no. prophylactic services / no. curative services | 0.24 | 0.25 | 0.23 | 0.22 | As big as possible improper ratio | <1 | Non-prophylactic |

- The number of obturations for the simple cavity increased by 0.41%.
- The total number of obturations decreased by 0.19%.
- The number of extracted teeth rose by 0.31%.
- The number of prophylactic services decreased by 0.02%.

Discussion

Oro-dental healthcare is dominated by curative therapeutic acts, accounting for about 80% of the total dental services for the 0-18 year-olds.

The values of the structure indicators for curative service evince the following:

- High-performance standards only for odontal treatments, but against a background of regression in time of 7.44%.

- Favourable trends for surgical procedures (decrease), orthodontic procedures (increase) and prosthetic procedures (decrease).

The primary prophylactic activity is under-represented, only 20% out of the total procedures for this age group; the structure indicators in this case show the following:

- Favourable trends for all the service types.
- Every year a top spot is assigned to prophylactic consultations which include, besides the determination of the index of bacterial plaque and gum inflammation, the education for oral health. Taking into account the age group for this type of oral health education, the educational effort may be salutary, as education in itself as a process may lead to durable results.
- the slightly decreasing trend over the analysed period is compensated by the 5.78% increase in the sealing procedures, which is one of the most important procedures of preventing tooth decay in children.
- a favourable evolution for the topical fluoridation procedures is all the more beneficial as in Romania there are no oral prevention programmes through mass fluoridation (like water, milk, salt fluoridation).

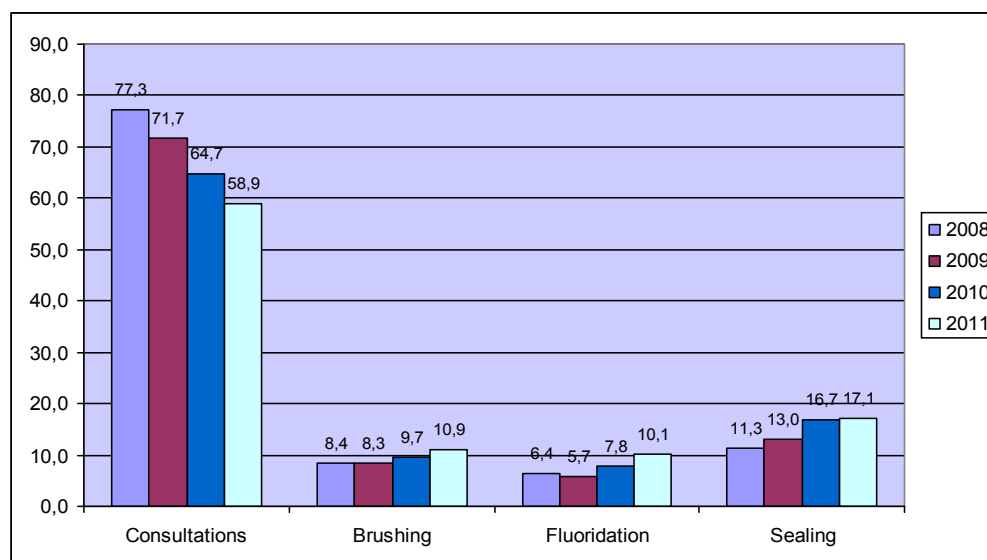


Figure1. The evolution of the prophylactic services in the health care system

The indicators of the entire range of dental services show the following:

- the prophylactic trend of the activity from the point of view of simple cavity obturations as compared to complex cavity ones and the total number of obturations as compared to extracted teeth;
- the non-prophylactic trend seen in the low number of restorations of the extracted permanent teeth as compared to the total number of curative services.

Conclusions

The correlation of several specific indicators for the oro-dental services in the county of Galati over a period of 4 years (2008-2011) evinced the following aspects:

- In most of the services provided the performance standards are not reached;
- There is a prophylactic-curative orientation and curative-conservative of the providers' activity, but without notable time evolutions;
- the data obtained cannot suggest a lack of efficiency as the activity reported by the service providers is within the limits of the contracted ceiling value, and does not include the extra activity above this ceiling;
- although the health services only account for 15-20% in the health state of the population, the optimisation of these services from the point of view of orientation and structure correlated with an intense financial effort may have a positive impact on the population's oro-dental health.

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